POLK
COUNTY

2025
Multi-jurisdictional
Local Mitigation Strategy

PREPARED BY
THE POLK COUNTY LOCAL MITIGATION STRATEGY WORKING GROUP

March 1, 2025

PROMULGATION STATEMENT

With this notice, we are pleased to promulgate the Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy (LMS). The LMS provides a structure for identifying hazards and vulnerabilities, assisting jurisdictions and partners and the County to plan for those hazards and vulnerabilities, and mitigating hazards using local, State, and Federal funding sources, making Polk County more resilient.

The Polk County Division of Emergency Management shall be responsible for coordinating the preparation and update of the LMS through the LMS Working Group and subgroups and will ensure that this document is consistent with similar Federal, State, and municipal plans. The LMS will become effective upon official adoption by the Polk County Board of County Commissioners (BoCC), and effective for municipalities, Polk County Public Schools, and partnering jurisdictions upon their individual adoption.

Brian Thurston
Chairperson
Local Mitigation Strategy Working Group

Paul Womble
Director
Division of Emergency Management

POLK COUNTY

2025 Multi-jurisdictional Local Mitigation Strategy

PREPARED BY

THE POLK COUNTY LOCAL MITIGATION STRATEGY WORKING GROUP

March 1, 2025

Document prepared with technical assistance from:

Central Florida Regional Planning Council

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

APPENDICES

EXECUTIVE SUMMARY

Polk County, its jurisdictions, and partners face natural and human-caused hazards that may affect the lives and property of residents and visitors. The Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy (LMS) is a mechanism for the County and its jurisdictions to reduce or eliminate exposure to impacts of hazards. The 2025 update of the LMS is a result of a coordinated, cooperative effort within Polk County.

The LMS Working Group identified and prioritized project-planning goals for the LMS following the completion of an updated hazard identification and risk assessment. With the updated analysis, the LMS Working Group identified, justified, and prioritized proposals for projects and programs that may avoid or minimize vulnerabilities in the future, resulting in a Mitigation Action Plan (MAP) for Polk County.

The LMS Working Group has submitted the LMS to the Florida Division of Emergency Management (FDEM) for review and approval. FDEM has the authority to review the LMS on behalf of the Federal Emergency Management Agency (FEMA). FDEM utilizes the Local Hazard Mitigation Plan Review Tool, which includes the 2025 Florida Local Mitigation Strategy Crosswalk to review the LMS. Appendix E includes Polk County's 2025 LMS Crosswalk.

Once FDEM issues a decision that the updated LMS adequately addresses these requirements, the LMS Working Group will vote to adopt the LMS and submit to the jurisdictions' governing bodies for formal adoption and approval and to the participants identified in Section III for letters of commitment. Appendix G includes the adoption resolutions from each jurisdiction and letters of commitment from the identified participants. The governing bodies of the jurisdictions will consider the final draft LMS for final approval and adoption. Consistent with Florida's open meetings statutes, the public will have an opportunity to comment on each jurisdiction's adoption of the LMS during public meetings. In accordance with Federal practice, the jurisdictions have one year from the date of State approval of the LMS to complete the formal adoption. The following jurisdictions may adopt the final draft of the LMS.

- Polk County
- Polk County Public Schools
- City of Auburndale
- City of Bartow
- City of Davenport
- Town of Dundee
- City of Eagle Lake
- City of Fort Meade
- City of Frostproof
- City of Haines City
- Village of Highland Park
- Town of Hillcrest Heights
- Town of Lake Alfred
- Town of Lake Hamilton
- City of Lake Wales
- City of Lakeland
- City of Mulberry
- City of Polk City
- City of Winter Haven
- Golden Lakes Community Development
- Polk County School Board
- Lake Region Lakes Management District

The LMS Working Group completed the update with the assistance of County staff and Central Florida Regional Planning Council staff. The LMS includes the best available information at the time the document was prepared. As new information becomes available, the LMS Working Group intends to provide ongoing updates to ensure this document remains current.

SECTION I - INTRODUCTION

The Federal Emergency Management Agency (FEMA) defines mitigation as "Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards." Hazard mitigation focuses attention and resources on community policies and actions to produce cumulative benefits over time. A mitigation plan states the goals and actions a community intends to follow to reduce vulnerability and exposure to future hazard events. A systematic process centered on participation of residents, businesses, public officials, and other community stakeholders is the basis of the Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy (LMS).

A local mitigation plan is the written representation of a jurisdiction's commitment to reduce risks from hazards. Local officials may refer to the plan in day-to-day activities and decisions regarding regulations, permitting, and funding capital improvements and other community initiatives. The local mitigation plan serves as the basis for the State to prioritize future grant funding as it becomes available.

Community stakeholders may utilize the LMS as a tool to increase public awareness about local hazards and risks while providing options and resources available to reduce those risks. Teaching the public about potential hazards will help each jurisdiction protect itself against the impacts of hazards and will enable informed decision making on where to live, purchase property, or locate businesses.

Background

Natural hazards such as hurricanes, floods, extreme heat, and tornadoes are a part of the world around us. Their occurrences are natural and inevitable. The LMS considers hazards as significant threats to human life, safety, and property.

Polk County, located in central Florida, is vulnerable to a wide range of natural hazards, including hurricanes, severe thunderstorms, flooding, tornadoes, extreme heat, and wildfires. The County is also vulnerable to human-caused hazards including cyber-attacks, hazardous material spills, and civil disturbances. These hazards threaten the life and safety of residents and have the potential to damage or destroy both public and private property, disrupt the local economy, and affect the overall quality of life of individuals who live, work, and visit in the community. While jurisdictions cannot eliminate natural hazards, they can take actions to lessen the potential impacts on the community.

FEMA Definition of Hazard Mitigation:
"Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards."

Hazard mitigation techniques include structural measures, such as strengthening buildings and infrastructure from the destructive forces of potential hazards, and non-structural measures such as adoption of sound land use policies and the creation of public awareness programs. A comprehensive mitigation approach addresses hazard vulnerabilities existing today and in the near future. The LMS is

essential to evaluate projected patterns of future development and consider them in terms of how growth will increase or decrease a community's overall hazard vulnerability.

Key components of the comprehensive approach to hazard mitigation are developing, adopting, and updating as needed, a local hazard mitigation plan. A local hazard mitigation plan establishes a broad community vision and guiding principles for reducing hazard risk and proposes mitigation actions to eliminate or reduce identified vulnerabilities.

The Polk County 2025 Multi-Jurisdictional Strategy (LMS) forms the basis for incorporating hazard mitigation principles and practices into the routine government activities and functions of Polk County and the jurisdictions within the County. The LMS recommends actions to protect residents from losses to hazards that pose the greatest threats. The mitigation actions recommend structural solutions to reduce existing vulnerability, such as elevation, retrofitting, and acquisition projects. Local policies governing community growth and development, incentives for natural resource protection, and public awareness and outreach activities are examples of additional actions to reduce Polk County's future vulnerability to identified hazards. The LMS is a living document, with implementation and evaluation procedures established to help achieve meaningful objectives and successful outcomes over time.

This LMS relates to the following jurisdictions in Polk County:

- Polk County
- Polk County Public Schools
- City of Auburndale
- City of Bartow
- City of Davenport
- Town of Dundee
- City of Eagle Lake
- City of Fort Meade
- City of Frostproof
- City of Haines City
- Village of Highland Park
- Town of Hillcrest Heights
- Town of Lake Alfred
- Town of Lake Hamilton
- City of Lake Wales
- City of Lakeland
- City of Mulberry
- City of Polk City
- City of Winter Haven
- Golden Lakes Community Development
- Polk County School Board
- Lake Region Lakes Management District

Each municipality in the County may adopt the LMS and identified participants may issue a letter of commitment once FEMA and Florida Division of Emergency Management (FDEM) have approved the LMS document.

SECTION I: INTRODUCTION

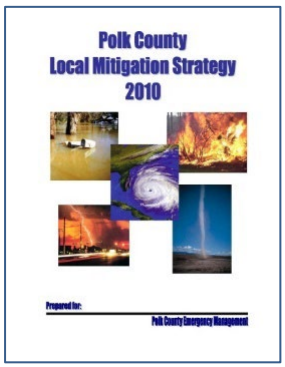
Disaster Mitigation Act of 2000

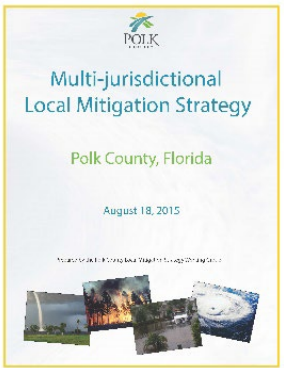
To reduce mounting natural disaster losses, the U.S. Congress passed the Disaster Mitigation Act of 2000 (DMA 2000) to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Act), and to invoke new and revitalized approaches to mitigation planning. Section 322 of DMA 2000 emphasizes the need for close coordination on mitigation planning activities by State and local government entities. The Act makes the development of a hazard mitigation plan an eligibility requirement for any local government applying for Federal mitigation grant funds. These funds include the Hazard Mitigation Grant Program and the Pre-Disaster Mitigation program. FEMA administers both programs under the Department of Homeland Security. Communities with an adopted and Federally approved hazard mitigation plan thereby become pre-positioned and are more apt to receive available mitigation funds before and after the next disaster occurs.

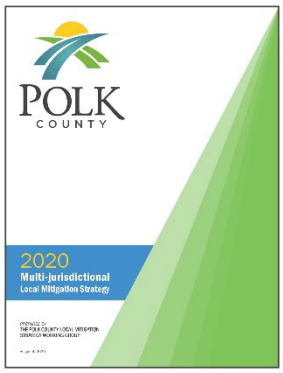
FEMA set forth guidelines for the LMS in the Interim Final Rule in the Federal Register of 44 Code of Federal Regulations (CFR) Part 201. These requirements instruct that a Local Mitigation Strategy identify natural hazards and their impacts, identify actions to reduce losses resulting from the hazards, and create a process for the implementation of the LMS. For Polk County and its jurisdictions to remain eligible for Federal mitigation funds, the County must review, revise, and resubmit an updated LMS for approval every five years.

Polk County LMS History

Polk County and its jurisdictions created the Polk County LMS in 1999. In 2010, the County and its jurisdictions updated the LMS. In 2015, the update included a reorganization of the document. The 2020 and 2025 updates to the LMS were prepared in coordination with FEMA Region IV and FDEM to ensure that the LMS meets all applicable DMA 2000 and State requirements.







Purpose

The purpose of the LMS is to develop and execute an ongoing strategy for reducing the community's vulnerability to identified natural, technological, and human-caused hazards. The LMS provides a rational, managed basis for considering and prioritizing hazard-specific mitigation options and for developing and executing cost-effective mitigation projects. Additionally, the LMS provides a foundation for justifying the solicitation and use of local, State, Federal, and other funding to support hazard mitigation projects and initiatives.

SECTION I: INTRODUCTION

The LMS establishes an ongoing process that integrates hazard mitigation into the entire community including the public and private sectors and residents. The LMS serves as a bridge between local governments' comprehensive growth management plans, the County Comprehensive Emergency Management Plan (CEMP), land development regulations, and relevant ordinances and codes such as floodplain management policies. The LMS integrates mitigation initiatives set forth in various policies, programs, and regulations into a single stand-alone document.

Authority

The LMS Working Group developed the LMS in accordance with current State and Federal rules and regulations governing local hazard mitigation plans. Polk County and its jurisdictions will adopt the LMS in accordance with standard local procedures. Section VIII includes copies of local adoption resolutions. The LMS partners shall routinely monitor, review, and revise the LMS, as necessary, to maintain compliance with the following provisions, rules, and legislation:

- Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted by Section 104 of the Disaster Mitigation Act of 2000 (P.L. 106-390);
- FEMA's Interim Final Rule published in the Federal Register on February 26, 2002, at 44 CFR Part 201;
- Flood Insurance Reform Act of 2004 (P.L. 108-264); and
- Biggert-Waters Flood Insurance Reform Act of 2012.

LMS Contents

The LMS includes the following sections to address FEMA requirements for a local mitigation plan.

- Section I: Introduction
- Section II: What's New
- Section III: Planning Process, Evaluation, and Maintenance
- Section IV: Community Profile
- Section V: Hazard Identification and Analysis
- Section VI: Hazard Vulnerability and Risk Assessment
- Section VII: Mitigation Plan
- Section VIII: LMS Adoption
- Section IX: Resources
- Appendices

SECTION II – WHAT'S NEW

The What's New Section outlines updates and changes between and during local mitigation strategy updates by cataloging changes to the overall document.

The 2025 LMS Update

The Polk County 2025 Polk County Multi-jurisdictional Local Mitigation Strategy (LMS) included the addition of Harmful Algal Blooms to the list of hazards. The LMS Working Group removed Climate Change as a hazard and instead address it under each hazard, consistent with requirements of the 2023 LMS Crosswalk.

LMS Successes and Challenges since 2020 Update

Successes

- Jurisdictions completed several projects identified in the Mitigation Action Plan.
- The LMS Working Group submitted all eligible projects for Hurricane Ian Hazard Mitigation Grant Program funding.
- All municipalities continue to include mitigation practices in development and redevelopment projects through inclusion in comprehensive plans, capital improvement plans, and development regulations.
- The first Polk County Vulnerability Assessment will be completed after the adoption of this document. The Vulnerability Assessment determines the vulnerability of geographical areas and critical assets within Polk County and its municipalities to current and future flood conditions.
- At the time of this update, Polk County is creating their first Adaptation Action Areas (AAA), which will be incorporated as an Appendix into the next update of the LMS. AAAs are identified and prioritized based on the critical assets, exposure, and sensitivity analysis on each flood scenario from the Vulnerability Assessment flood modeling with the intention to improve resilience to flooding.

Challenges

The LMS Working Group did not implement all the strategies as outlined in the Plan Monitoring, Maintenance, and Evaluation Section. The annual LMS Working Group meetings did not update the LMS document to address changes that occurred in the prior year. All jurisdictions did not work to incorporate the LMS into other planning mechanisms.

The 2020 LMS Update

The Polk County 2020 Multi-jurisdictional Local Mitigation Strategy (LMS) includes minor changes to the structure of the LMS. The LMS includes a new section titled – Section II: What's New. In this section, the LMS Working Group identified the strategy status and successes for each update period. The 2015 LMS update included a separate Planning Process section and Maintenance and Evaluation section. The LMS

SECTION II: WHAT'S NEW

Working Group voted to combine these sections into the Planning Process section since they are interrelated.

The LMS Working Group voted to amend the hazard vulnerability risk level for the LMS from the current form indicating Low, Moderate, High, and Very High to the approach utilized in the 2018 Florida Enhanced State Hazard Mitigation Plan outlined below.

- Low (One Occurrence every 10 years)
- Medium (One occurrence every 5-7 years)
- Medium/High (One occurrence every 3 years)
- High (One or more occurrence each year)

The LMS Working Group established a Community Rating System (CRS) Subgroup to ensure the LMS meets the floodplain management plan requirements and provides tools necessary to assist existing and prospective CRS communities.

The LMS extends the hazards analysis to include civil disturbances and terrorism, cyber-attacks, and transportation incidents. To meet the requirement that the project list include a comprehensive range of projects for each hazard and not be on a "grant wish list." The project list identifies ongoing projects and one-time (long-range) projects.

The LMS Working Group sought participation from municipal and County departments and community organizations that implement mitigation actions or policies. Efforts included invitations to attend meetings and to serve on the LMS Working Group, access to the project website, e-mail updates, strategy development workshops, and opportunities to comment on draft deliverables.

The COVID-19 pandemic impacted the second stage of the public engagement component of the LMS as described in Section III. Social distancing and safer-at-home orders limited the opportunities for in-person public engagement. The Working Group utilized a more extensive online platform for public input.

Addressing 2015 LMS Challenges

To address the challenges identified since the 2015 LMS, the LMS Working Group will hold semi-annual meetings to promote greater attendance and participation. The LMS Working Group will provide an increased focus on incorporating mitigation information into planning mechanisms by facilitating meetings with local planners and public works departments to ensure review and consideration of identified hazard areas when addressing proposed development options. The LMS Working Group will identify opportunities for partnership to ensure information regarding potential hazards and risks is available to the public.

SECTION II: WHAT'S NEW

LMS Successes and Challenges since 2015 Update

Successes

- Jurisdictions completed several projects identified in the Mitigation Action Plan.
- The LMS Working Group submitted all eligible projects for Hurricane Irma Hazard Mitigation Grant Program funding.
- The Federal Emergency Management Agency verified the City of Lake Alfred for Community Rating System (CRS) Participation.
- All municipalities continue to include mitigation practices in development and redevelopment projects through inclusion in comprehensive plans, capital improvement plans, and development regulations.
- Several municipalities, with the assistance of the Southwest Florida Water Management District, have completed stormwater master plans. These plans are critical to improving drainage and reducing flooding. These plans provide a guide for capital improvement spending.
- The municipalities participating in the National Flood Insurance Program adopted updated flood maps in 2016.

Challenges

The LMS Working Group did not implement all the strategies as outlined in the Plan Monitoring, Maintenance, and Evaluation Section. The annual LMS Working Group meetings did not update the LMS document to address changes that occurred in the prior year. Jurisdictions did not work to incorporate the LMS into other planning mechanisms.

The 2015 LMS Update

The LMS Working Group prepared the 2015 LMS update with assistance from the Central Florida Regional Planning Council. LMS Working Group Chair Paul Womble, Polk County Emergency Management, led the update process. The update of the LMS began in August 2014. The 2015 LMS update included a restructuring of the LMS. All partners adopted the 2015 LMS update.

SECTION III – PLANNING PROCESS, EVALUATION, AND MAINTENANCE

44 Code of Federal Regulations	
44 CFR §201.6(b):	Planning process. An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process must include:
44 CFR §201.6(b)(1):	The planning process shall include an opportunity for the public to comment on the plan during the drafting stage and prior to plan approval.
44 CFR §201.6(b)(2):	An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process.
44 CFR §201.6(b)(3):	Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.
44 CFR §201.6(c)(1):	Documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.
44 CFR §201.6(c)(4)(i):	A section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.
44 CFR §201.6(c)(4)(ii):	A process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.
44 CFR §201.6(c)(4)(iii):	Discussion on how the community will continue public participation in the plan maintenance process.

This Section presents the planning, evaluation, and maintenance process that ensures the Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy (LMS) remains an active and relevant document. This section discusses how the public will continue to be involved in a sustained hazard mitigation planning process.

Overview

Local hazard mitigation planning is the process of organizing community resources, identifying and assessing hazard risks, and determining how to best minimize or manage those risks. This process culminates in a hazard mitigation plan that identifies mitigation actions, each designed to achieve short-term planning objectives and a long-term community vision.

To ensure the functionality of a hazard mitigation plan, the LMS includes the person, department, or agency responsible for each proposed mitigation action and a schedule or target completion date for each action's implementation. The LMS includes procedures for routine monitoring implementation progress and the evaluation and enhancement of the LMS. These LMS maintenance procedures ensure the LMS remains a current, dynamic, and effective planning document over time that becomes integrated into the routine local decision-making process. Communities that participate in hazard mitigation planning may experience many benefits, including:

- Saving lives and property;
- Saving money;
- Accelerating recovery following disasters;

- Reducing future vulnerability through wise development and post-disaster recovery and reconstruction;
- Expediting receipt of pre-disaster and post-disaster grant funding; and
- Demonstrating a firm commitment to improving community health and safety.

Mitigation planning has the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of hazard mitigation are investments made before a hazard event will significantly reduce demand for post-disaster assistance by lessening the need for emergency response, repair, recovery, and reconstruction. Mitigation practices enable residents, businesses, and industries to re-establish themselves in the wake of a disaster, getting the community and economy back on track sooner and with less interruption.

Benefits of mitigation planning go beyond reducing hazard vulnerability. Measures of acquisition or regulation of land in known hazard areas may help achieve multiple community goals such as preserving open space, maintaining environmental health, and enhancing recreational opportunities. Local governments should integrate the mitigation planning process with other concurrent local planning efforts, and any proposed mitigation strategies should consider other existing community goals and initiatives that will either complement or hinder implementation.

History of Hazard Mitigation in Polk County

Polk County and its jurisdictions formally adopted the first Polk County LMS in 1999. The Florida Department of Community Affairs/Florida Division of Emergency Management (FDCA/FDEM) funded initial development of the LMS, in part, with Federal Emergency Management Agency (FEMA) funds earmarked for development of comprehensive hazard mitigation planning.

The LMS continues to operate in accordance with the prevailing Federal, State, and local guidelines and requirements. In 2010, the County and its jurisdictions updated the LMS in accordance with all FEMA and State of Florida guidelines. The 2015 LMS update included reformatting the document to increase public accessibility and user friendliness. The 2020 and 2025 updates to the LMS have been prepared in coordination with FEMA Region IV and FDEM to ensure that the LMS meets all applicable DMA 2000 and State requirements. Appendix C includes copies of announcements, invitations, and minutes. Section II of this document includes information on the changes for each update.

The 2025 LMS Update

The LMS Working Group prepared the 2025 LMS update with assistance from the Central Florida Regional Planning Council (CFRPC). The LMS Working Group Chair, Brian Thurston, Polk County Division of Emergency Management led the update process, which began in August 2024.

The Polk County LMS Working Group utilized the mitigation planning process recommended by FDEM to complete the update. A Local Mitigation Plan Crosswalk, located in Appendix E, provides a detailed summary of FEMA's minimum standards of acceptability for compliance with DMA 2000 and notes the location of each requirement within the LMS. Part 201 of the 44 Code of Federal Regulations is the standard for the requirements.

SECTION III: PLANNING PROCESS, EVALUATION, AND MAINTENANCE

The LMS update process identified additional hazards, updated the risk assessment using the most recent and best data available, and evaluated existing mitigation goals, projects, and programs for overall effectiveness. The hazard analysis includes the hazards from the 2025 LMS hazard profile, information from the 2023 Florida Enhanced State Hazard Mitigation Plan, and hazards identified in other emergency management plans for Polk County. The LMS follows FEMA's 2023 Crosswalk and the associated planning guidance.

The LMS Working Group prepared the 2025 LMS update using and incorporating relevant content from the 2020 Polk County Local Mitigation Strategy. The LMS Working Group updated relevant sections of the LMS.

For the 2025 LMS update, staff met with local planners, agencies, and other organizations to gather information and review concepts. The LMS Working Group held public meetings throughout the update process to review the existing LMS and discuss potential amendments. The meetings included representatives from jurisdictions and community organizations. Attendees provided input at key stages of the process. Appendix C includes sign-in sheets and meeting summaries for each of the LMS Working Group meetings.

Multi-Jurisdictional Participation

The LMS includes one county, its unincorporated areas, and 17 municipalities. To satisfy multi-jurisdictional participation requirements, FEMA requires the County and jurisdictions to perform the following tasks:

- Participate in mitigation planning workshops;
- Provide data for the Hazard Analysis and Risk Assessment, as needed;
- Identify completed mitigation projects, if applicable; and
- Adopt the LMS.

Each of the jurisdictions listed below contributed to the planning process and are seeking approval of the LMS. The following jurisdictions may adopt the LMS.

- Polk County
- City of Auburndale
- City of Bartow
- City of Davenport
- Town of Dundee
- City of Eagle Lake
- City of Fort Meade
- City of Frostproof
- City of Haines City
- Village of Highland Park
- Town of Hillcrest Heights
- City of Lake Alfred
- Town of Lake Hamilton
- City of Lake Wales
- City of Lakeland
- City of Mulberry
- City of Polk City
- City of Winter Haven
- Polk County School Board
- Golden Lakes Community Development
- Lake Region Lakes Management District

The public, along with local agencies, businesses, academia, and other stakeholders, could participate in the mitigation planning process. Participating Agencies, as listed in Appendix C, must submit a letter of commitment supporting the Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy (LMS).

Local Mitigation Strategy (LMS) Working Group

The LMS Working Group is a partnership of government entities, public and private organizations, and individuals with a shared interest in producing proactive initiatives for prevention and protection from hazards. The LMS Working Group serves as an umbrella organization coordinating all mitigation programs and activities, supplies staffing for sub-committees, and is the primary forum for exchanging information and mobilizing the expertise and resources of the community. The LMS Working Group helps collect and disseminate information and policies relevant to the community. The LMS Working Group is the lead coordinating and facilitating body for hazard mitigation in the County and continues to serve as the focal point for community and private and public involvement in hazard mitigation activities. The LMS Working Group includes representatives that implement or have expertise in the different activities that could prevent or reduce the severity of the impacts from hazards identified in the LMS. These departments include utilities, law enforcement, fire, building, code enforcement, engineering, land use and planning, public works, emergency management/public safety, public information, environmental protection/public heath, parks and recreation, city management, and housing/community development. Appendix C includes the LMS Working Group Membership Roster, List of participating agencies, sign-in sheets, notices, agendas, presentation materials, and minutes. All meetings of the LMS Working Group are open to the public.

Figure III.1: LMS Working Group; Source: CFRPC

Local Mitigation Strategy Coordinator

The LMS Working Group designates the Polk County Division of Emergency Management as the LMS Coordinator. The LMS Coordinator is a staff member within the Emergency Management Division who serves as the coordinator for all mitigation projects, subgroups, and mitigation funding designated for the County. The LMS Coordinator facilitates group and subgroup meetings and may serve as a County representative on outside committees. Additional LMS Coordinator responsibilities include:

- Supervise all revisions and updates to the LMS every five years.
- Incorporate minor changes and additions to the LMS during interim periods (Section II, What's New).
- Monitor changes in Federal, State, and local laws in mitigation that may affect the County.
- Propose the LMS for approval by FDEM, and adoption by the Polk County Board of County Commissioners, the Polk County Public Schools, and local municipalities.
- Store and file documents pertaining to mitigation issues.
- Coordinate the Multi-jurisdictional Mitigation Action Plan (MAP) and the prioritization process that scores and ranks projects in the County that may be eligible for Federal funding.
- Interface with appropriate governmental and non-governmental agencies and offices to ensure LMS goals, objectives, and priorities are consistent with and cross-referenced with those articulated in other existing plans including the County's Comprehensive Emergency Management Plan (CEMP).
- Monitor, maintain, and evaluate the LMS, as described later in this section.
- Seek opportunities at the regional, County, and municipal levels to:
    - Update plans, policies, regulations, and other directives to include hazard mitigation priorities;
    - Encourage the adoption of mitigation priorities within capital and operational budgets and grant applications;
    - Share information on grant funding opportunities;
    - Offer guidance for conducting mitigation actions;
    - Explore opportunities for collaborative mitigation projects and initiatives; and
    - Facilitate and coordinate the application process and serve as a primary communicator with funding agencies.

LMS Subgroups

The LMS process established and utilized a Goals and Objectives Subgroup and a Community Rating System Subgroup.

Goals and Objectives Subgroup

The LMS Working Group established a Goals and Objectives Subgroup during the 2025 LMS update to review and update the Goals and Objectives of the LMS. This subgroup prepared recommended amendments to the LMS goals and objectives. The LMS Working Group reviewed and voted to adopt the recommended Goals and Objectives from the Goals and Objectives Subgroup. While this is not a standing subgroup, the LMS Working Group may reinstate it if necessary. This subgroup was not utilized in the 2025 LMS update as the LMS Working Group determined no changes were needed to the Goals and Objectives.

Community Rating System (CRS) Subgroup

Comprised of representatives of the County's CRS Communities, this subgroup meets semi-annually to discuss issues regarding CRS updates, to collaborate on best practices for assisting jurisdictions to achieve a higher rate class and therefore an increase in the flood insurance discount rate for its citizens, and to share information regarding CRS-related training. This group collaborates with other local governments,

local business leaders, and members of the public on a full range of Outreach Projects Strategy (OPS) initiatives to promote CRS participation. This subgroup reviews the floodplain management portions of the LMS and all initiatives relating to the CRS to ensure the information is current.

During the 2025 LMS Update, this subgroup met to address CRS requirements, discussing how members could support each other, and other jurisdictions interested in becoming a designated CRS community. The information pertaining to the CRS subgroup meetings is located in Appendix C.

Participation Requirements

Since the LMS Working Group writes the LMS using input from all stakeholders, it is important to make sure there is representation from the entire Polk County community. Each stakeholder has different participation requirements and the LMS Working Group encourages all stakeholders to participate in the process.

Jurisdictions

County, municipal, and government agency participation is critical to the success of the LMS. To retain LMS voting rights, qualify for Federal mitigation assistance consideration, and otherwise remain a member in good standing, FEMA requires all jurisdictions to conform to the following standards:

- Participation of the representative or alternate in the semi-annual LMS Working Group meetings; or participation in a majority of the LMS subgroup meetings; and
- Have an officially executed resolution adopting the revised LMS on file with the County. A jurisdiction must have an officially adopted resolution to be eligible for Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance Program (FMAP), and Pre-Disaster Mitigation (PDM) funding programs.

The LMS Coordinator will notify all jurisdictions of meetings via email at least one week in advance and will provide meeting summaries thereafter.

Non-Governmental Organizations (NGO), Other Governmental Entities, and Stakeholders (Participating Agencies)

The LMS Working Group encourages participation by non-governmental organizations (NGO), other governmental entities, and stakeholders. To qualify for LMS grant sponsorship, NGOs, and other governmental entities must:

- Have a duly executed letter of commitment to the LMS on file with the County; and
- Actively participate in and support LMS activities.

The Public and Private Sector

Broad community support, including ongoing public and private sector involvement, is important to the success of the LMS. While participation by private organizations and the public is voluntary, the LMS Working Group, through the LMS Coordinator, seeks, invites, monitors, and fully documents the attendance, comments, contributions, and support from private organizations and the public. To promote the opportunity for broad participation, the LMS Coordinator posts notices and agendas for general

meetings of the LMS through press releases, social media, postings on County and municipal websites, announcements in the County and municipal newsletters and calendars, and e-mail to past participants. According to the County's Communication Division, social media reaches the most people in Polk County. The LMS Coordinator actively solicits new LMS members by reaching out to private sector and nonprofit organizations to encourage participation.

Public Involvement, Citizen Input, and Stakeholder Involvement

In addition to LMS Working Group meetings, Polk County encouraged more open and widespread participation in the mitigation planning process by extending its local outreach efforts through community events and the dedicated project website, with the option to provide anonymous comments and to use social media. Providing information at public events helps increase public involvement. These efforts provide opportunities for local officials, residents, businesses, academia, and other private interests in the County to be involved and offer input throughout the local mitigation planning process.

As citizens become more involved in decisions that affect their safety, they are likely to gain greater appreciation of the hazards present in the community and to take steps necessary to reduce their impacts. Public awareness is a key component of any community's overall mitigation strategy aimed at making a home, neighborhood, school, business, or city safer from the potential effects of hazards. The LMS Working Group sought public input using methods discussed below.

Community Events and Meetings

Community events occurred during two stages of the planning process: 1) the document drafting stage (prior to March 2025); and 2) following the completion of the draft plan prior to LMS approval (after March 2025).

The purpose of attendance at community events is to present the findings of the risk and capability assessments, and to garner input regarding unique hazard concerns and possible mitigation actions for potential inclusion in the LMS, including ideas for policies and projects. This public outreach effort is also an opportunity for neighboring municipalities, agencies, businesses, academia, nonprofit organizations, and other interested parties to be involved in the planning process. Appendix C includes information from each event, including sign-in sheets, presentation materials, and photos.

November 12, 2024 – Polk County Comprehensive Plan Community Workshop

Polk County held a Community Workshop on November 12, 2024, to discuss the update to the Comprehensive Plan for the County. CFRPC staff provided information to workshop participants on the LMS update. Participants were able to review materials, ask questions, and provide input on hazard mitigation through a survey.

Figure III.2: Polk County Comprehensive Plan Workshop
Source: CFRPC

November 13, 2024, Great American Teach-In at Rosabelle W. Blake Academy

The Great American Teach-In (GATI) is an annual event that unites professionals from diverse industries with local students, offering them a chance to explore real-world careers and ideas in a fun, engaging way. CFRPC staff presented hazard mitigation and the update of the Local Mitigation Strategy to third and fourth grade students at Rosabelle W. Blake Academy in Lakeland. The students thought hurricanes and quicksand are some of the hazards with the greatest impact to where they live.

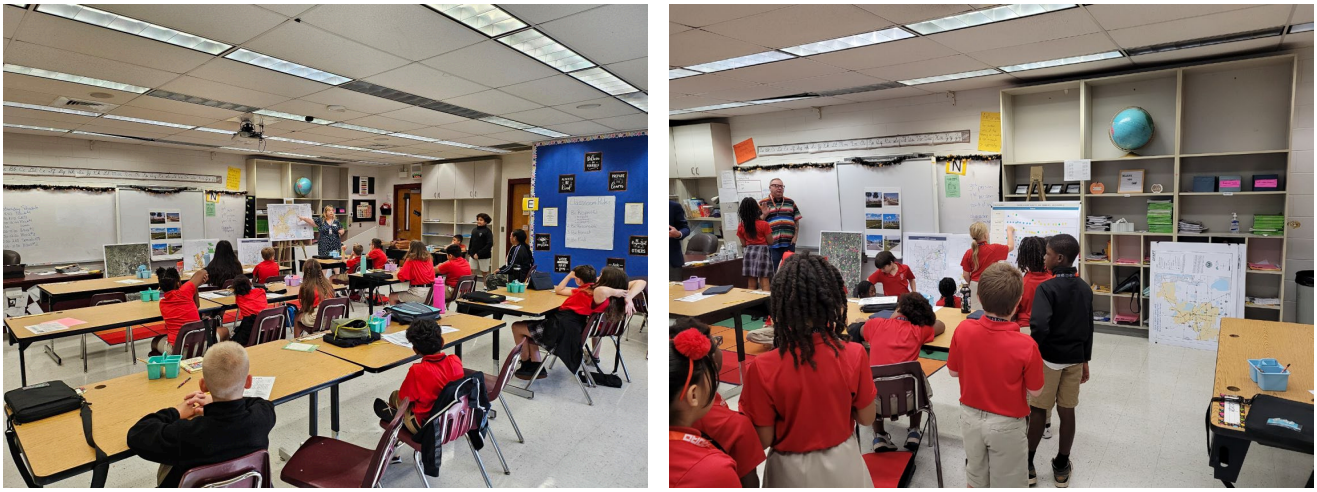


Figure III.3: Great American Teach-In at Rosabelle W. Blake Academy
Source: CFRPC

December 10, 2024 – Circle B Bar Reserve

Polk County held a public meeting at the Circle B Bar Reserve on December 10, 2024. CFRPC staff attended and provided information to participants on the LMS update. Participants were able to provide input on hazard mitigation through the LMS survey.

January 10, 2025 – Emergency Preparedness Advisory Council Workshop

Staff provided an update on the 2025 LMS update and invited people to participate in the update process. A copy of the agenda from the meeting is in Appendix C.

February 27, 2025 – Davenport Community Workshop

The City of Davenport held a community workshop to discuss the future of the city and the update to the Comprehensive Plan. The workshop included breakout groups where resiliency and hazard mitigation were discussed. The LMS survey was provided for participants to complete.

Figure III.4: Davenport Community Workshop
Source: CFRPC

Spring/Summer 2025 – Local Government Meetings

The public may view the LMS updated information at a Board of County Commissioners' meeting on a date to be determined. People attending the meeting or doing business in the County Administration Building may review and comment on the information placed at the information station. During the Board of County Commissioners meeting, staff will present information regarding the update process and solicit comments from the public. Polk County televises the Board of County Commissioners meetings. Appendix C will include sign-in sheets and minutes from the event.

Website

To facilitate review and participation by the LMS Working Group and to provide other avenues for public involvement, staff developed a website dedicated to the update of the LMS: www.polkcountylms.org. The website provides information on the purpose of the LMS, the update process, meetings and events, and opportunities for public involvement. The elements of the draft LMS are available for review and comment. The website includes a link to the survey utilized at the public outreach events.

In addition to the project website, jurisdictions' websites have included information relating to the LMS and LMS events.

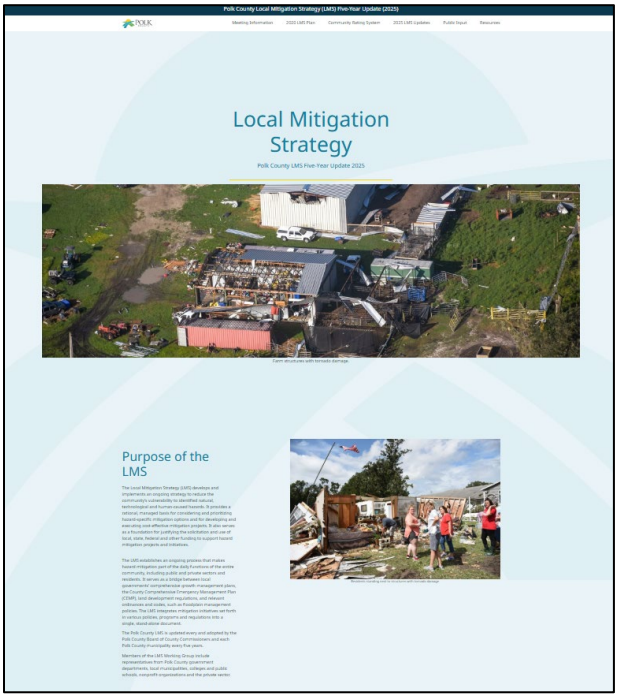


Figure III.5: LMS website

Facebook and Social Media

The LMS Working Group utilized social media to increase exposure to the LMS update to as many people as possible. County staff posted information related to the LMS Update Community Workshop on Polk County's Facebook page, and those posts carried through to other Facebook pages.

Incorporation of Public Comments and Feedback

Throughout the drafting and review process, the LMS Working Group sought input from the public through a variety of mediums. Most of the feedback received related to the information presented on maps and in figures and graphs. The LMS Working Group gave the public opportunities to complete the LMS survey during the drafting stage and the review stage. Appendix C includes the survey results. The LMS Coordinator forwarded all stakeholder and the public comments related to information included in the LMS and proposed projects to the LMS Working Group for review and potential incorporation into the LMS.

Adoption and Support of LMS

Jurisdictions wishing to participate in and share in the benefits of the LMS must complete and file a fully executed resolution which conforms to the adoption standards established and amended by the Polk County Board of County Commissioners and the LMS Working Group. Participating Agencies wishing to participate in and share in the benefits of the LMS must execute a Letter of Commitment. Section VIII includes a sample resolution and letter of commitment. Appendix H includes the adoption resolutions of the jurisdictions and the executed Letters of Commitment.

SECTION III: PLANNING PROCESS, EVALUATION, AND MAINTENANCE

LMS Monitoring, Maintenance, and Evaluation

The LMS Working Group, through the LMS Coordinator, monitors, maintains, and evaluates the LMS to meet the changing needs of the community. The LMS Coordinator will monitor the LMS on a continuous basis to ensure that pre-disaster planning and mitigation initiatives are attainable and cost effective. To ensure that implementation continues throughout the duration of the LMS, each agency or jurisdiction responsible for specific mitigation projects will provide status updates to the LMS Coordinator as project changes occur and on an annual basis.

The criteria used to evaluate the LMS and activities should include, but not be limited to:

- Federal and State requirements.
- Changes in development trends and land use that could affect infrastructure (water, sewer, stormwater, roads, traffic, etc.).
- Storms, other natural processes, and human-caused events that have altered Polk County's hazard areas (wind damage, flooding, extreme heat, erosion, etc.).
- Completion of existing mitigation projects and introduction of new goals.
- Changes in policy, procedure, or codes.
- Changes in building codes and practices.
- Legislative actions that could affect funding of mitigation efforts; and
- Changes in Flood Insurance Rate Maps, National Flood Insurance Program, etc.

LMS Updates

The LMS Working Group will review the LMS on a semi-annual basis to consider changes and amendments needed between the update periods or after a major disaster declaration in which jurisdictions need to propose new mitigation initiatives based on damage assessments. In a non-disaster situation, the LMS Coordinator, based upon a determination of personnel and resource availability, will determine the revision period. The LMS Working Group will meet to review, evaluate the effectiveness of, and revise (if necessary) the LMS under the following circumstances:

- On a semi-annual basis;
- Within 90 days after a major disaster declaration;
- When events substantially alter or negate parts of the strategy;
- At the request of at least three members of the LMS Working Group; or
- At the request of an adopting jurisdiction.

Annual LMS Update Requirement

Florida Administrative Code (FAC) Chapter 27P-22 (Hazard Mitigation Grant Program) requires submittal of an annual LMS update to FDEM by the last working weekday of each January. To meet this deadline, the LMS Working Group will update the LMS annually in December/January. The LMS Coordinator will complete this update with input from LMS Working Group members. Per FAC 27P-22.004, the annual LMS update shall address, at a minimum, the following items:

- LMS Working Group membership with designated Chairperson and Vice-Chairperson;
- Documentation to indicate that within the preceding year the LMS Working Group issued a written invitation to each municipality, private organization, civic organization, Native American

Tribe or authorized tribal organization, water management district, independent special district, and non-profit organization, as applicable;
- Changes to the hazard assessment;
- Changes to the project priority list;
- Changes to the critical facilities list;
- Changes to the repetitive loss list; and
- Revisions to maps.

The LMS Working Group will evaluate the effectiveness of the LMS at achieving the adopted goals and objectives and make any necessary changes. The LMS Working Group will evaluate each initiative incorporated into the MAP (Section VII and Appendix B) for status and priority level. The entity responsible for each initiative shall provide an update on the proposed project(s) including:

- Changes to the hazard assessment in relation to the proposed project;
- Changes in community and political acceptance of implementation or maintenance of the proposed project; and
- Current probability of receiving implementation funding.

Five-Year LMS Update Requirement

The LMS Working Group will conduct a formal LMS update every five years, in accordance with 44 CFR §201.6(d)3, revise the LMS if necessary, to reflect any changes in priorities, and resubmit for approval to continue to be eligible for mitigation grant funding. To meet the five-year LMS Update requirement, the LMS Coordinator (with input from LMS Working Group members) will review the entire document to be sure that the information included accurately reflects the status of the County and its jurisdictions. The LMS Working Group will update all sections of the LMS document, as necessary.

The five-year update process will begin approximately 18 months prior to the expiration of the LMS. This will allow the LMS Working Group to begin meeting with ample time to review the LMS and make updates with public involvement and agency collaboration. Staff will be able to complete the necessary work as part of the State review process with time for the LMS Working Group to make necessary revisions prior to the expiration of the LMS.

Continued Public Involvement

The LMS Working Group recognizes public participation is vital to the mitigation planning process. The LMS Working Group is committed to continued public involvement in the planning and review process. During all phases of LMS maintenance, the public will have the opportunity to provide feedback. The LMS Working Group will maintain the LMS and make it available for use and review on the website. Individuals will have an opportunity to submit comments for the LMS update at any time through the website, email, phone, or mail. The LMS Coordinator will compile all comments and present them at LMS Working Group meetings where members will consider them for incorporation in the update.

The LMS Working Group strives to include the public in the LMS update process. To encourage public participation and awareness of the LMS, efforts to involve the public in the maintenance, evaluation, and revision process may include:

- Advertise meetings of the LMS Working Group in local newspapers, public bulletin boards, jurisdiction bulletin boards, public notice spaces at libraries and other public locations, and social media;
- Work with local news media to update the public on any maintenance or review activities;
- Make the LMS available for review on the County's website, at the County Administration Building, and jurisdiction administration buildings;
- Utilize websites of LMS Working Group member organizations to provide information and links to the LMS update and announcements of future LMS Working Group meetings;
- Utilize email and other technological services such as social media and online survey websites to communicate and receive input from LMS Working Group members and the public;
- Participate in events such as the annual Public Works Week, the Hurricane Expo, and street fairs to provide information and opportunities for citizen participation;
- Collaborate with local businesses such as grocery stores to include information in annual hurricane preparation community outreach efforts;
- As time and budget allow, mail notices about meetings and information about the LMS process to different organizations throughout the community. These may include local Lions Clubs, chapters of Kiwanis International, Women's Clubs, gardening clubs, and homeowners' associations; and
- As time and budget allow, the LMS Working Group shall provide presentations to local governments, schools, clubs, and other potential stakeholders to expand participation in the planning process.

These efforts provide the public with an opportunity to express concerns, opinions, and ideas about updates and changes proposed to the LMS. Finding ways to interest and involve more people and organizations in the overall process is a challenge the LMS Working Group will continue to address throughout the LMS maintenance process.

Incorporation into Existing Planning Mechanisms

As part of the LMS update process, the LMS Working Group identified current plans, programs, policies, ordinances, studies, and reports to augment and support mitigation planning efforts. Several existing plans, programs, policies, and ordinances incorporate the LMS including:

- Polk County Comprehensive Emergency Management Plan – The CEMP incorporates the LMS by reference and utilizes the LMS as the plan's mitigation section.

- Polk County Post Disaster Redevelopment Plan (PDRP) – The PDRP references the LMS providing corresponding goals and utilizes the LMS hazard analysis. The mitigation actions in the LMS help address the issues addressed in the PDRP.

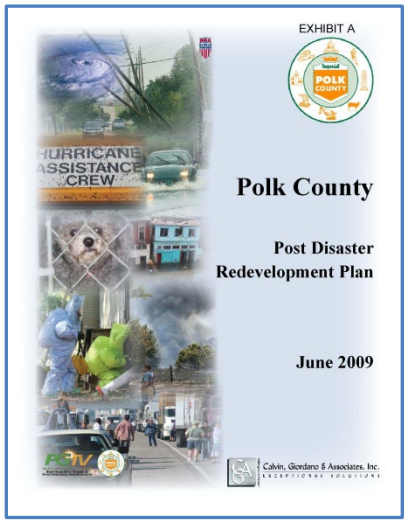


Figure III.6: Cover of Polk County Post Disaster Redevelopment Plan June 2009

- Community Rating System (CRS) – The CRS plans for the City of Lakeland, City of Lake Alfred, City of Winter Haven, and unincorporated Polk County reference the LMS.

- Comprehensive Plans – Polk County and the 17 municipalities within Polk County have incorporated Hazard Mitigation goals and objectives into their Comprehensive Plans through the Future Land Use, Intergovernmental Coordination, Transportation, and Capital Improvement Elements.

- Central Florida Regional Planning Council – Strategic Regional Policy Plan (SRPP) – The SRPP makes emergency preparedness a priority in the central Florida region.

- Floodplain Management Plan – Polk County and municipalities utilize the LMS as their floodplain management plan, including the risk assessment, National Flood Insurance Program compliance, and flood related mitigation actions.

Integration Process

Members of the LMS Working Group will work with the entities they represent to incorporate, where applicable, the LMS into other planning mechanisms. Throughout the LMS maintenance cycle, the LMS Working Group will work with appropriate governmental and non-governmental agencies to ensure LMS goals, objectives, and priorities are consistent and cross-referenced with those articulated in other existing plans. The Member organizations of the LMS Working Group will seek opportunities at the regional, County, and municipal levels to:

- Update work plans, policies, regulations, procedures, and other directives to include hazard mitigation concepts and priorities.
- Encourage the adoption of mitigation priorities within capital and operational budgets and grant applications.
- Share information on grant funding opportunities.
- Offer guidance for conducting mitigation actions.

- Explore opportunities for collaborative mitigation projects and initiatives.
- Incorporate references to the LMS into the comprehensive plans of all outstanding municipalities; and
- Add hazard mitigation elements to redevelopment plans.

Members of the LMS Working Group will follow the process below to ensure widespread integration of hazard mitigation principles into local planning mechanisms in Polk County.

1) The LMS Working Group will invite each local planning director and/or representative planner for each jurisdiction to attend meetings to discuss ways in which hazard mitigation can be best integrated into planning matters.

2) The LMS Working Group will ask each director to work with their planning staff to develop a strategy to integrate hazard mitigation into planning programs and to evaluate whether their regulations address hazard mitigation, and if found to be lacking, identify several possible alternatives.

3) The local planning director and/or representative planner for each jurisdiction will report on the status of their community and identify changes to the LMS Working Group.

4) The LMS Working Group will make identified changes through the LMS amendment process as discussed in the Incorporation of LMS into local government comprehensive plans and land development regulations section.

A similar process will be used by the LMS Working Group to study the feasibility and implementation mechanics relative to other planning processes active in the County such as the Polk County Transportation Planning Organization (addressing transportation matters), State Housing Initiatives Partnership (active with low-income housing issues), and the CFRPC (works at a regional level).

Incorporation of LMS into Local Government Comprehensive Plans and Land Development Regulations

To ensure the full implementation of the Polk County LMS, all participating local governments shall incorporate references to the LMS into their respective comprehensive plans following the procedures outlined in Section 163.3191, Florida Statutes (FS). The municipalities shall incorporate the LMS in their preparation of the required Evaluation and Appraisal Reports (Section 163.3191, FS).

Jurisdictions within Polk County shall use the provisions set forth in Section 163.3178 FS to review and update mitigation strategies post-event and shall also consider post-event interagency hazard mitigation reports. Consistent with the provisions for identifying and funding capital improvement projects found in Section 163.3177 FS, local governments shall continue to develop funding mechanisms to use for approved County-wide mitigation initiatives.

Consistent with the provisions of Section 163.3177 FS, local governments shall emphasize mitigation goals during the annual preparation of capital improvement budgets, with special attention paid to the prioritization of regional, interlocal, and local projects.

SECTION III: PLANNING PROCESS, EVALUATION, AND MAINTENANCE

Participating local governments shall emphasize mitigation funding during the annual budget process pursuant to the provisions of Section 163.3177 FS.

Polk County has plans other than the Comprehensive Plan that implement hazard mitigation activities including pre-disaster mitigation, event coordination and post disaster redevelopment. In 2004, Polk County incorporated the LMS as the floodplain plan. Polk County has developed, adopted, and implemented the following plans and programs:

- Community Rating System;
- Local Mitigation Strategy;
- Comprehensive Emergency Management Plan; and
- Post Disaster Redevelopment Plan.

While the Polk County Division of Emergency Management serves in the leadership role for the Polk County LMS, many County divisions, jurisdictions, non-governmental agencies, and private sector organizations have programs, resources, and capabilities that will be invaluable in efforts to improve the disaster resilience of the communities in Polk County.

While not specifically designed for specific hazard mitigation purposes, some programs still result in a reduction in potential human or economic losses from disasters. For example, the original mandate for the protection of wetlands was to preserve environmental resources and habitat. However, it also has the effect of reducing vulnerability of populations and property in the hurricane evacuation zones and floodplain areas.

As part of the update process, the LMS Working Group is responsible for reviewing local agency activities and identifying all relevant programs and policies that have some impact on mitigation. To complete this task, members of the LMS Working Group have conducted local and countywide meetings and interviews to identify mitigation programs and policies.

Typically, activities fall into the following general categories:

- Emergency Management – planning, training, exercise, response, and recovery;
- Floodplain Management Programs – preventive, property protection, structural projects;
- Comprehensive Planning – preventive activities;
- Emergency Services – prevention and outreach
    - Law enforcement and security issues
    - Fire prevention, response, and safety
    - Hazardous material prevention, response, and safety
    - EMS, Health Care Risk Assessment, security, response;
- Critical Facilities and Infrastructure Vulnerability Assessment and Protection; and
- Communications – outreach, warning, education.

Located in Appendix D, Tables D-1 through D-18 list the policies and regulations in each jurisdiction that support the local mitigation strategy. The language included in these tables is verbatim from each jurisdiction's plan.

SECTION III: PLANNING PROCESS, EVALUATION, AND MAINTENANCE

Ability to Expand on and Improve the Policies and Programs Identified

As the population grows in Polk County, the County and the jurisdictions within the County must ensure hazard mitigation laws address construction of new structures in areas susceptible to hazards either through prohibition, limitation, or additional requirements to reduce potential losses.

Local governments and the private sector shall provide ongoing training and information sessions for the public. Clear, unbiased knowledge is a key ingredient for the safety of the public. Ongoing training may include public information notices and continuous training sessions online and at libraries, hospitals, and schools. Training and equipment to prepare for and subsequently resolve hazardous situations are necessary and vital. Jurisdictions must identify alternative financial resources and include these costs in respective governmental budgets.

Periodic review and revision of the local government ordinances, policies, and programs shall occur no less than once every other year.

Each municipality that has not yet done so should adopt a floodplain management ordinance and participate in the CRS. At the present time, the LMS serves as a jurisdiction's floodplain management plan when a municipality adopts the LMS as their floodplain management plan.

Integration with Other Plans

Review of Existing Plans and Information

Throughout the LMS update, review of existing plans, reports, and other sources of information occurred. The list below provides an example of reviewed plans. Section IX: Resources, lists information sources references in the update process.

Local Plans

- Comprehensive Plans for all municipalities
- Land Development Codes for all municipalities
- Polk County Comprehensive Emergency Management Plan
- Polk Transportation Planning Organization 2045 Long Range Transportation Plan
- Polk County Communitywide Wildfire Protection Plan
- Polk County Post Disaster Redevelopment Plan
- Polk County Disaster Debris Management Plan

Other Plans

- 2023 Florida Enhanced State Hazard Mitigation Plan
- Central Florida Regional Planning Council Strategic Regional Policy Plan
- Florida Division of Emergency Management Statewide Emergency Shelter Plan
- U.S. Census Bureau 2020 Census
- Florida Housing Data Clearinghouse – Polk County Profile
- Florida Geological Survey information
- National Climatic Data Center storm reports
- Newspaper articles

The LMS update incorporates information from the above listed plans, reports, and data sources, and utilizes the information resources included in Section IX. These sources allowed staff and the LMS Working Group to measure existing mitigation-related activities already in place within the County, identify additional hazards, understand the community's existing vulnerability, predict future impacts, and establish a strategy to mitigate those impacts.

Incorporation of LMS into Other Plans

Polk County, its jurisdictions, and partners, have incorporated the LMS into a variety of plans. The LMS partners will continue to work to incorporate and reference the LMS in other plans as appropriate.

SECTION IV – COMMUNITY PROFILE

44 Code of Federal Regulations

44 CFR §201.6(c)(2)(ii)(c):	Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

Geography and the Environment

Polk County is Florida's fourth largest county with a total area of 2,011 square miles, of which approximately 85,000 acres are lakes. Polk County is also Florida's ninth largest county by population with an estimated 797,616 residents in 2023. Although they account for only 3.5 percent of the total population of Florida, approximately 11.3 million people reside within a 100-mile radius of Polk County making this area one of the largest concentrations of population in the Southeast. Eight counties border Polk County: Lake and Sumter to the north; Pasco and Hillsborough to the west; Hardee and Highlands to the south; Orange and Osceola to the east; Manatee to the southwest, and Okeechobee to the southeast.

Polk County includes 17 municipalities, which range in population and size from 240 people to 121,968 people and 1.08 square miles to 75.25 square miles. The municipalities in Polk County include:

- City of Auburndale
- City of Bartow
- City of Davenport
- Town of Dundee
- City of Eagle Lake
- City of Fort Meade
- City of Frostproof
- City of Haines City
- Village of Highland Park
- Town of Hillcrest Heights
- City of Lake Alfred
- Town of Lake Hamilton
- City of Lake Wales
- City of Lakeland
- City of Mulberry
- Polk City
- City of Winter Haven

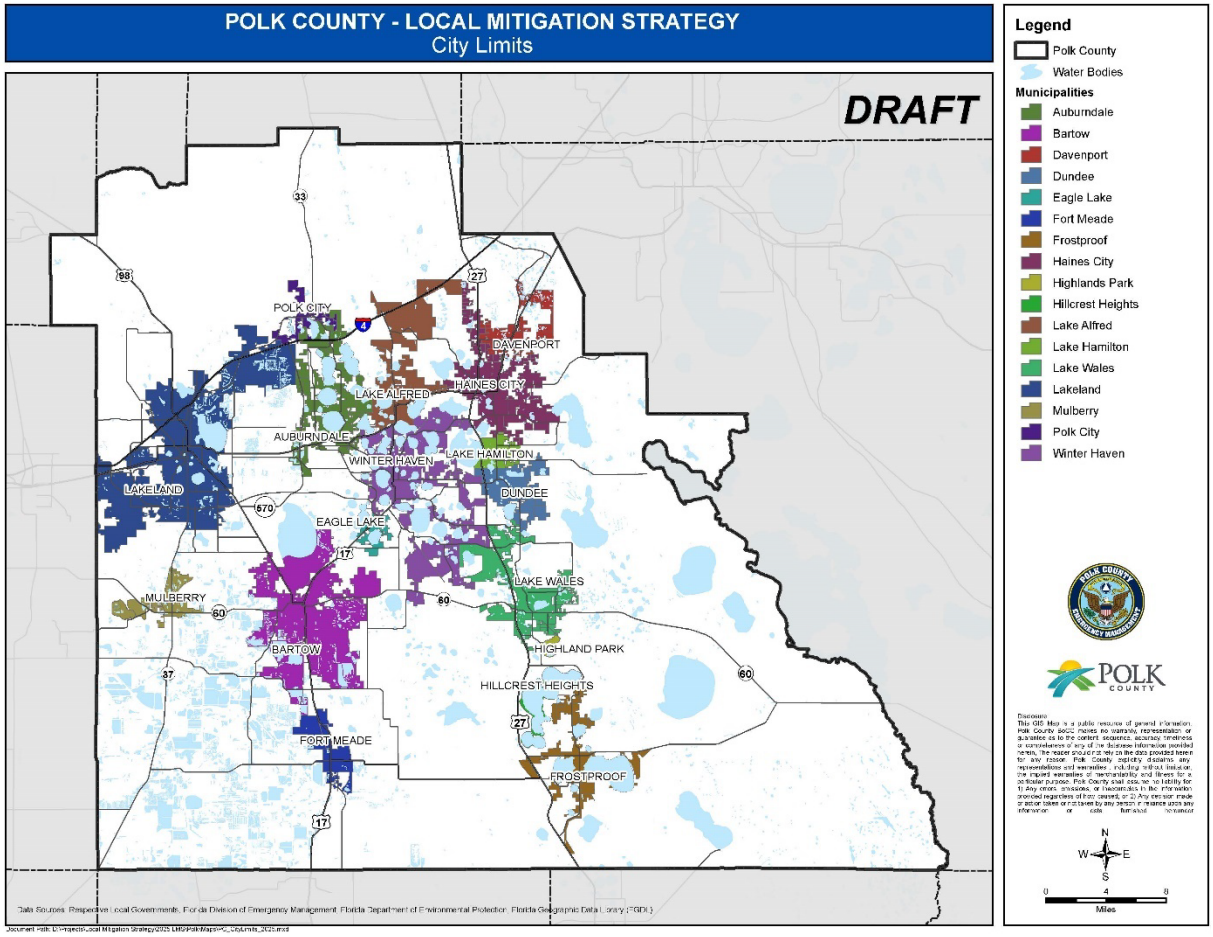


Figure IV.1: City limits

Polk County is home to many ecologically sensitive areas including the Green Swamp, Lake Wales Ridge, and environmental areas designated through the County's Environmental Lands Program. The southeastern portion of the County abutting Highlands County is located within the Avon Park Air Force Range and also contains many areas of ecologically sensitive lands.

Polk County's climate is a humid subtropical climate generally consisting of hot, wet summers and mild, relatively dry winters. The mean annual temperature is 73 degrees, and the mean monthly temperature ranges from 61 degrees in January to 83 degrees in August. Temperatures commonly exceed 90 degrees from June to September and may fall below freezing for a few days in the winter months. Distribution of rainfall is uneven throughout the year. Approximately 55 percent of the annual rainfall results from thunderstorms that occur frequently between June through September. Thunderstorms can produce heavy but localized rainfall, resulting in several inches of precipitation falling in one location and little or none falling a few miles away. Tropical storms and hurricanes bring heavy precipitation into the area in the summer and fall. In the winter, rainfall is associated with frontal system activity, which is usually of a longer duration and more uniform than summer thunderstorm-related precipitation. April and November typically are the driest months.

Polk County contains the headwaters of five river basins—the Alafia, Hillsborough, Peace, Ocklawaha, and Withlacoochee Rivers. The County also contains 544 lakes and part of the Kissimmee River Basin. Surface water drainage from the County primarily occurs through the Peace and Kissimmee Rivers. Many changes to surface water drainage patterns have occurred since the late 1800s. For flood control purposes, the US Army Corp of Engineers channelized the Kissimmee River downstream from Lake Kissimmee and modified many other lake outlets, either by constructing structures to regulate lake levels or constructing canals to connect previously unconnected lakes (Spechler and Kroening, 2007).

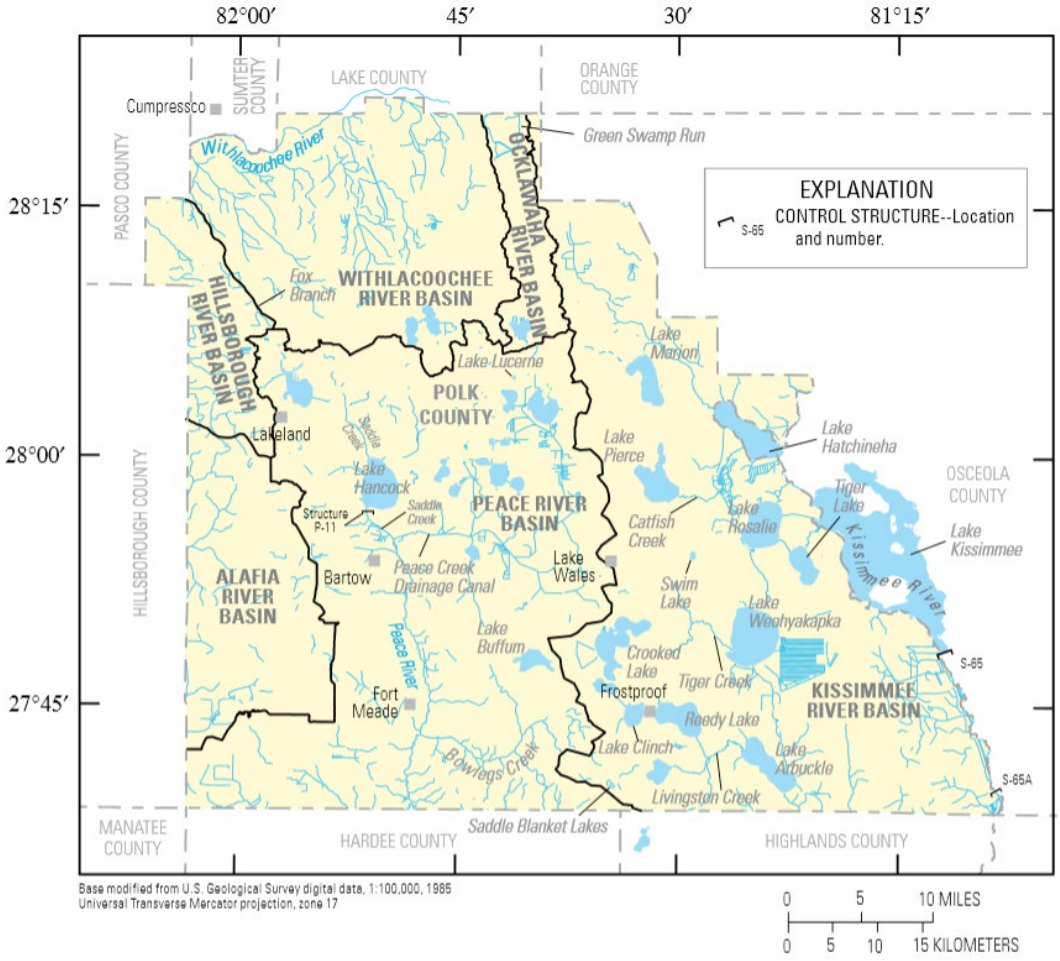


Figure IV.2: Major surface-water drainage basins, tributaries, and lakes
Source: Hydrology of Polk County, US Geological Survey, 2007

Mean annual runoff for individual basins in the County range from 6.6 to 16.1 inches. Streamflow is generally greatest in September and October, which is near the end of the wet season. The lowest streamflow usually occurs in May or June (Spechler and Kroening, 2007).

Land Area

Unincorporated Polk County includes approximately 83 percent of the County's 1.28 million acres. Lakeland, Bartow, and Winter Haven are the largest incorporated areas with 3.7 percent, 2.6 percent, and 2.1 percent of the County, respectively. Highland Park is the smallest incorporated area with 690 acres and 0.1 percent of the County. While the municipalities comprise 17 percent of the County acreage, they house 40 percent of the County's population (Tables IV-1 and IV-3).

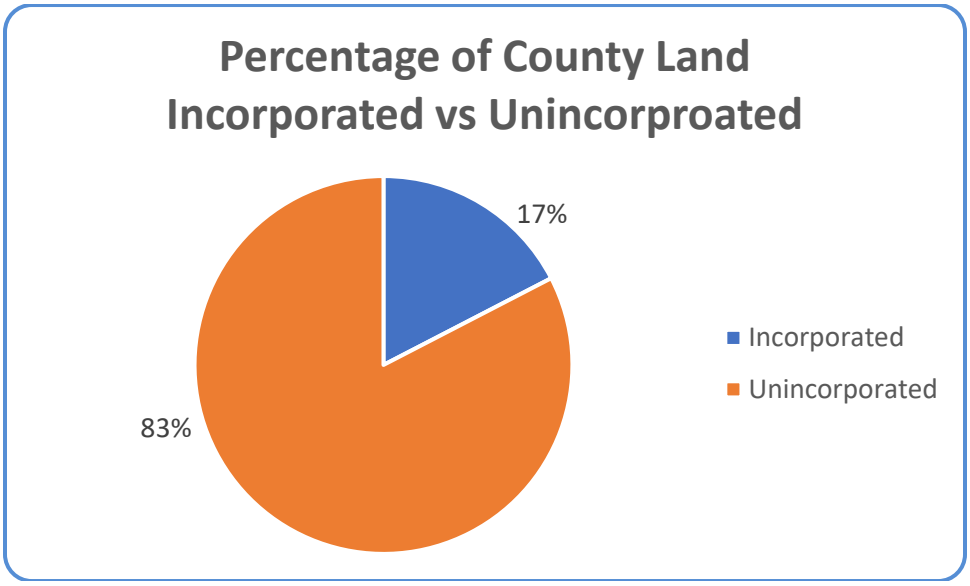


Figure IV.3: Acreage by unincorporated vs incorporated county Source: Polk County Property Appraiser and Jurisdictions

TABLE IV-1:
ACREAGE OF MUNICIPALITIES AND UNINCORPORATED AREAS IN POLK COUNTY

Municipalities	Acreage	Percent (%) of County
Auburndale	16,993	1.3
Bartow	33,746	2.6
Davenport	5,507	0.4
Dundee	7,912	0.6
Eagle Lake	2,802	0.2
Fort Meade	5,469	0.4
Frostproof	12,756	1.0
Haines City	16,135	1.3
Highland Park	690	0.1
Hillcrest Heights	5,529	0.4
Lake Alfred	15,988	1.2
Lake Hamilton	3,645	0.3
Lake Wales	14,022	1.1
Lakeland	48,161	3.7
Mulberry	4,799	0.4

Municipalities	Acreage	Percent (%) of County
Polk City	3,241	0.3
Winter Haven	26,587	2.1
Incorporated Area Total	**223,984**	**17.4**
Unincorporated Area Total	1,063,003	82.6
Total County	**1,286,987**	**100.0**

Source: Jurisdiction property boundaries

Population and Demographics

According to the US Census Bureau, the 2020 population of Polk County was 725,046. This represents a 20.4 percent increase from 2010, when the population was 602,095, and a higher percent change compared to the State increase of 14.5 percent. Table IV-3 provides the 2020 populations of incorporated and unincorporated areas within Polk County, along with the 2024 population estimates as provided by the Bureau of Economic and Business Research (BEBR). During this period, Polk County experienced a 12.4 percent increase, while the State of Florida experienced a 6.9 percent increase. All municipalities in Polk County experienced increases in population from 2020 to 2024 except Hillcrest Heights and Highland Park. Eagle Lake, Davenport, Haines City, Auburndale, and Lake Alfred experienced the greatest percent changes in population, and Fort Meade, Frostproof, and Bartow experienced the smallest percent changes.

BEBR's Rank of Top 100 Cities in Florida by Population Size, 2010 to 2023 includes three municipalities in Polk County. Lakeland is the 18th largest incorporated area in the State, with an estimated 2023 population of 121,968. Winter Haven is the 56th largest incorporated area in the State, with an estimated 2023 population of 55,764. Haines City is the 87th largest incorporated area in the State, with an estimated 2023 population of 35,285.

Eleven of the municipalities in Polk County are included in BEBR's Rank of Top 100 Cities in Florida by Percent Change in Population, 2020 to 2023. Table IV-2 includes the municipalities, which rank from 7th to 89th.

TABLE IV-2:
POLK COUNTY CITIES INCLUDED IN BEBR'S RANK OF TOP 100 CITIES IN FLORIDA BY PERCENT CHANGE IN POPULATION, 2020 TO 2023

Municipality	Rank	Percent (%) Change
Davenport	7	37.3
Haines City	8	32.3
Eagle Lake	11	28.4
Auburndale	12	23.6
Lake Alfred	23	15.2
Winter Haven	31	13.3
Mulberry	52	9.9
Polk City	56	9.6
Lakeland	63	8.3
Dundee	67	8.0
Lake Wales	89	6.3

Source: Bureau of Economic and Business Research, Table 1: Estimates of Population by County and City in Florida: April 1, 2024

TABLE IV-3:
POPULATIONS OF MUNICIPALITIES AND UNINCORPORATED AREAS IN POLK COUNTY

Municipality	2020 Population	2024 Population Estimate	Percent (%) Change
Auburndale	15,616	20,186	29.3
Bartow	19,309	20,502	6.2
Davenport	9,043	13,630	50.7
Dundee	5,235	5,762	10.1
Eagle Lake	3,008	4,902	63.0
Fort Meade	5,100	5,219	2.3
Frostproof	2,877	3,032	5.4
Haines City	26,669	39,514	48.2
Highland Park	251	245	-2.4
Hillcrest Heights	243	234	-3.7
Lake Alfred	6,374	8,037	26.1
Lake Hamilton	1,537	1,702	10.7
Lake Wales	16,361	17,558	7.3
Lakeland	112,641	123,760	9.9
Mulberry	3,952	4,483	13.4
Polk City	2,713	3,049	12.4
Winter Haven	49,219	57,923	17.7
Incorporated Total Population	**280,148**	**329,738**	**17.7**
Unincorporated Total Population	444,898	496,352	11.6
Total County	**725,046**	**826,090**	**13.9**

Source: Bureau of Economic and Business Research, Table 1: Estimates of Population by County and City in Florida: April 1, 2024

Figure IV.4 illustrates the population estimates for Polk County. Using an average of BEBR Medium and BEBR High estimates, Polk County's population is projected to grow to 1,039,450 by 2035. BEBR Medium/High average estimates show Polk County's population increasing to 1,233,050 by 2050.

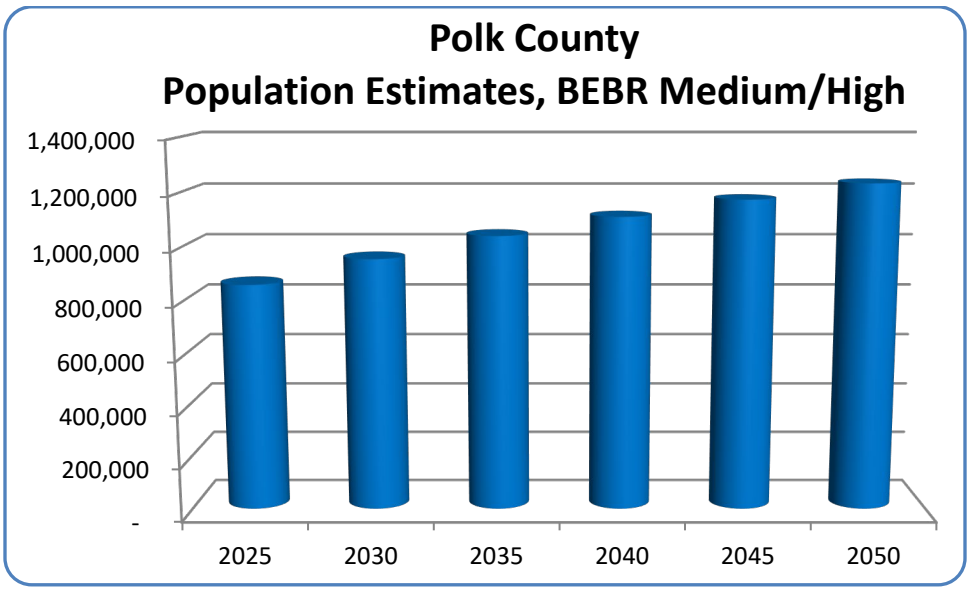


Figure IV.4: Population estimates Source: Bureau of Economic and Business Research

Polk County is ranked 19th in the State for population per square mile. In 2000 and 2010, Polk County was 19th in the State. In 2020, Polk County was 21st in the state. The population per square mile increased from 269 in 2000, to 335 in 2010, and 403 in 2020. The 2023 estimate is 444 persons per square mile.

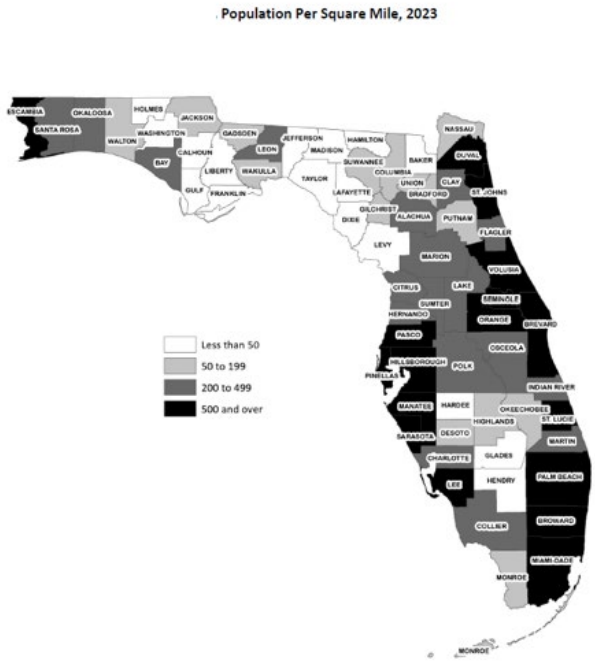


Figure IV.5: Population density per square mile for Florida counties 2022
Source: Bureau of Economic and Business Research

According to the American Community Survey, 13.9 percent of the County's population and 42.4 percent of the population over 75 years old have a disability. The Population Below Poverty Level Map shows the locations of population below the poverty level in the County. Approximately 12.8 percent of the County's population falls below the poverty level. Approximately 5.3 percent of the households are limited English-speaking households. The Limited English-Speaking Households Map illustrates the distribution of limited English-speaking population over 14 years old in Polk County (Appendix A).

Homelessness

The Homeless Coalition of Polk County, Inc. conducts annual counts of homeless people sheltered in emergency shelters, transitional housing, and safe havens on a single night during the last 10 days of January, as required by the Department of Housing and Urban Development (HUD). Per HUD, the criterion defining homeless include:

1. Those living in a publicly or privately-operated shelter providing temporary living arrangements;

2. Those people whose primary nighttime residence is a public or private place not intended to be used as an accommodation for human beings, such as a car, park, abandoned building or campground;

3. A person who is exiting from an institution, where he or she lived for 90 days or less, and who was otherwise homeless immediately prior to entering that institution;

4. A person who is fleeing from a domestic violence situation; or

5. A person who will lose their primary night-time residence within 14 days, where no subsequent dwelling has been found and the individual lacks the resources to obtain permanent housing.

The 2024 Point in Time Counts survey found 55 percent of the homeless households were unsheltered in 2024. As shown on Table IV-4, that is an increase from the previous Point-in-Time Counts. Like many communities across the nation, Polk County continues to address assisting its homeless population. Nonprofit organizations and ministries work with government agencies to reduce homelessness and provide aid.

TABLE IV-4:
HOMELESS POINT-IN-TIME COUNTS FOR HOUSEHOLDS

Year	(Sheltered) Emergency Shelter	(Sheltered) Transitional Housing	Unsheltered	Total	Percent Unsheltered
2020	170	148	174	492	35.4
2021*	126	150	--	276	--
2022	119	154	116	389	29.8
2023	256	152	142	550	25.8
2024	222	158	470	850	55.3

*Due to the COVID pandemic, only a Sheltered homeless count was performed in 2021
Source: Homeless Coalition of Polk County Point-in-Time Surveys; https://polkhomeless.org/point-in-time-surveys/

Housing

Most of the housing in Polk County is comprised of detached single-family dwelling units (64.7%). All of the cities have a higher percentage of single-family dwelling units except for three: Frostproof (57.7%), Lakeland (54.4%), and Mulberry (43.4%). Hillcrest Heights and Lake Hamilton have more than 90 percent of the housing stock as single family residential, 94.9 percent and 90.9 percent, respectively. Approximately 20 percent of the housing units in Polk County are mobile homes or trailers. Of the 17 municipalities, Mulberry has the highest percentage of mobile homes or trailers (47.7%). Frostproof has the second highest amount (35.1 percent). Highland Park and Hillcrest Heights have one percent or less.

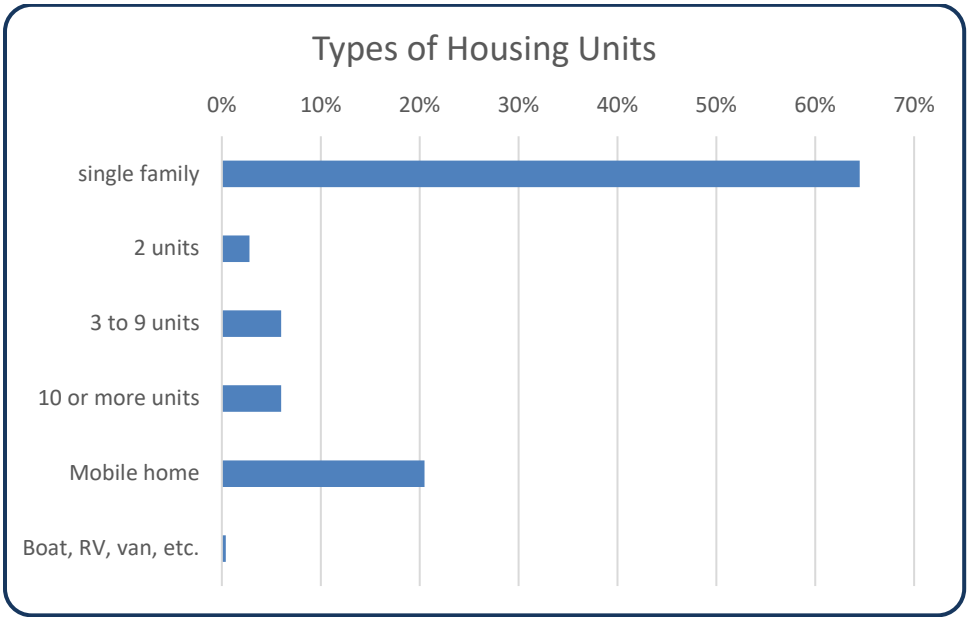


Figure IV.6: Housing units by units in structure; Source: American Community Survey, 2023 5-Year Estimate, Table DP-04

According to American Community Survey data, approximately 18 percent of housing structures in Polk County are over 50 years old (constructed prior to 1970). Three jurisdictions have a lower percentage than Polk County: Davenport (1.4%), Haines City (16.0%), and Polk City (5.7%). The remaining areas have a higher percentage of structures over 50 years old than the County, with Highland Park at 51 percent and Hillcrest Heights at 46.3 percent.

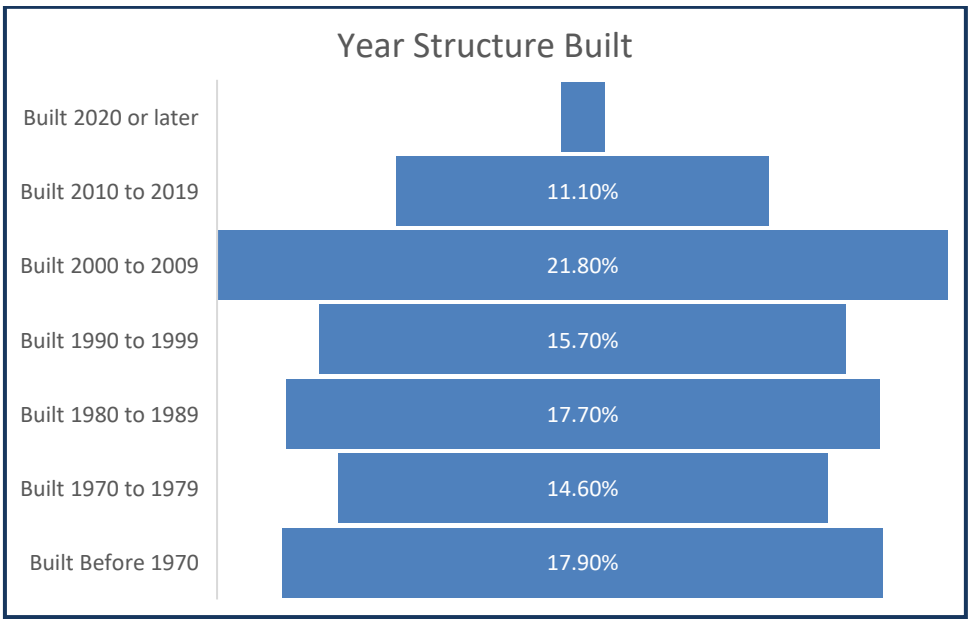


Figure IV.7: Year housing structure built; Source: American Community Survey, 2023 5-Year Estimate Table DP-04

As shown in Table IV-5, Polk County's vacancy rate is 17.5 percent. The vacancy rate in unincorporated Polk County is higher than the vacancy rate for the incorporated county, 19.2 percent versus 15.0 percent, respectively. The three municipalities with the highest vacancy rates are Frostproof (28.9%), Highland Park (25.5%), Fort Meade (21.5%), and Haines City (19.0%). The three municipalities with the lowest vacancy rates are Bartow (8.9%), Polk City (10.0%), and Mulberry (11.3%).

TABLE IV-5:
VACANCY AND OCCUPANCY STATUS, 2019-2023 5-YEAR ESTIMATE

Municipality	Occupied	Vacant	Total	Percentage of Housing Units that Are Vacant (%)
Auburndale	5,968	983	6,951	14.1
Bartow	6,956	679	7,635	8.9
Davenport	3,406	709	4,115	17.2
Dundee	1,945	307	2,252	13.6
Eagle Lake	1053	222	1275	17.4
Fort Meade	2,173	595	2,768	21.5
Frostproof	1,407	571	1,978	28.9
Haines City	10,362	2,434	12,796	19.0
Highland Park	76	26	102	25.5
Hillcrest Heights	117	19	136	14.0
Lake Alfred	2,538	540	3,078	17.5
Lake Hamilton	514	114	628	18.2
Lake Wales	6,560	1401	7,961	17.6
Lakeland	46,339	7,587	53,926	14.1
Mulberry	1,715	219	1,934	11.3

Municipality	Occupied	Vacant	Total	Percentage of Housing Units that Are Vacant (%)
Polk City	1052	117	1169	10.0
Winter Haven	19,691	3,253	22,944	14.2
Incorporated Polk Total	**111,872**	**19,776**	**131,648**	**15.0**
Unincorporated Polk Total	152,273	36,102	188,375	19.2
Total County	**264,145**	**55,878**	**320,023**	**17.5**

Source: US Census Bureau, American Community Survey 2023 5-Year Estimate, Table DP04

Infrastructure

The Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy categorizes infrastructure as transportation and utilities since these elements are imperative during a disaster event, for evacuation and response and recovery efforts.

Transportation

Interstate 4 traverses Polk County, running southwest to northeast connecting Hillsborough County to the west and Osceola and Orange Counties to the east. Four Federal highways (US 17, US 98, US 27, and US 92) run through Polk County. Several of these roads serve as evacuation routes. There are 748 miles of evacuation routes mapped in the County.

The Florida Department of Transportation (FDOT), Florida's Turnpike Enterprise (Enterprise) is conducting an Alternative Corridor Evaluation (ACE) for Central Polk Parkway East from SR 60 to US 17/92. The ACE will evaluate corridor alternatives for a new, tolled, limited-access highway from SR 60 to US 17/92.

The proposed highway will provide a direct link to Interstate 4 and SR 429 (Western Beltway) through the future Poinciana Connector (SR 538). It would serve as a high-speed, alternate travel route to US 27, where heavy traffic congestion regularly impacts the communities now and is forecasted to get worse in the future due to population growth and increased travel demand. Figure IV.8 illustrates the identified alternative corridor evaluation.

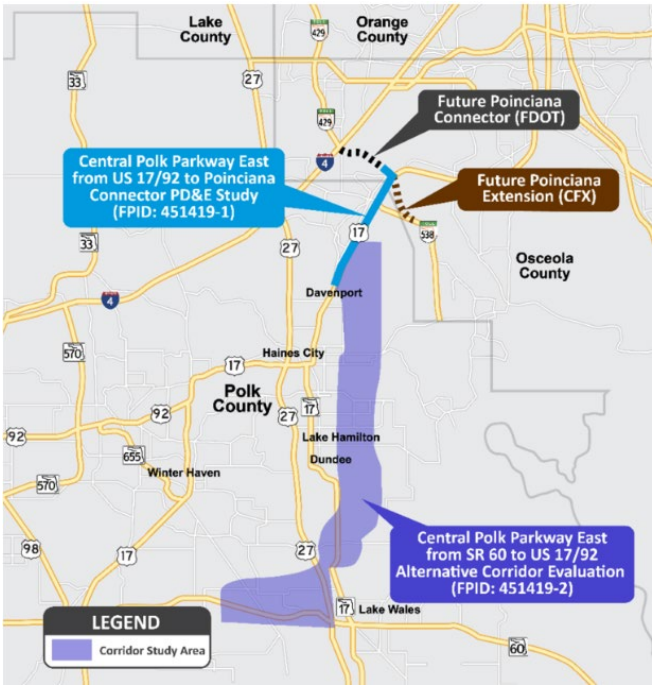


Figure IV.8: Central Polk Parkway East Alternative Corridor Evaluation; Source: Floridaturnpike.com

According to FDOT, there are 254 bridge crossings in Polk County, the majority of which (65.4%) are in unincorporated areas. Of the incorporated jurisdictions, Lakeland has the most bridges, with 22.8 percent of the County's bridge crossings.

TABLE IV-6:
NUMBER OF BRIDGES CROSSINGS OVER ROADS IN POLK COUNTY

Municipality	Number of Bridges	Percent (%) of County
Auburndale	4	1.6
Bartow	6	2.4
Fort Meade	1	0.4
Haines City	3	1.2
Lake Wales	4	1.6
Lakeland	58	22.8
Polk City	3	1.2
Winter Haven	9	3.5
Incorporated Total	**88**	**24.6**
Unincorporated Total	166	65.4
Total County	**254**	**100.0**

Source: Florida Department of Transportation

Appendix A includes maps illustrating the evacuation routes in the County and bridge locations.

There are also two major railway transportation providers, Amtrak and CSX, and one international airport, Lakeland Linder Regional Airport. Two additional international airports, Tampa and Orlando, are located within approximately an hour's drive of Polk County.

Utilities

Duke Energy Florida, Lakeland Electric, Tampa Electric Company, City of Bartow, City of Fort Meade, Peace River Electric Cooperative, and Withlacoochee River Electric Cooperative, Inc. serve the electricity needs in Polk County. The natural gas suppliers include Florida Public Utilities (Central Florida Gas) and TECO Peoples Gas. Most municipalities, and the County, provide potable water, wastewater, and stormwater utility services. As infrastructure systems age, utilities can potentially fail due to stress and/or design constraints where the system is unable to handle increased service demands.

Figure IV.9: Sinkhole/Depression middle of Kathleen Road September 2012; Source: The Ledger

Employment

Approximately 57 percent of Polk County's population over 16 years old is in the labor force and 56 percent are employed (Table IV-7). As of October 2024, there are 16 employers with over 1,000 employees. The Publix Super Markets and Polk County Public Schools have the most employees (Table IV-8).

TABLE IV-7:
EMPLOYMENT STATUS FOR 2018 ESTIMATED POPULATION OVER 16 YEARS OLD

Employment Status	Area in Labor Force	Population	Percent (%) of Total
In Labor Force		349,469	57.1
	Armed Forces	611	0.01
	Civilian – Employed	333,548	55.5
	Civilian – Unemployed	15,310	2.5
Not in Labor Force		262,997	42.9
Total Population		**612,466**	**100.00**

Source: US Census American Community Survey 2023 5-Year Estimate, Table B23025

TABLE IV-8:
TOP EMPLOYERS WITH OVER 1,000 EMPLOYEES IN POLK COUNTY, OCTOBER 2024

Company Name	Description	Total Employees
Publix Super Markets	Headquarters, Distribution, Manufacturing and Super Markets	21,618
Polk County School Board	Administration, Staff and Educators	13,500
Lakeland Regional Health	Main Hospital and Clinic Operations	7,865
Walmart	E-commerce, Distribution and Retail Stores	5,523*
Amazon	Prime Air and Fulfillment	5,500
Geico	Insurance Center	3,000
BayCare	Hospital Locations and Services	3,332
City of Lakeland	All City Operations	2,696
Polk County Board of County Commissioners	All County Operations	2,270
Polk County Sheriff's Office	Administration, Staff and Deputies	1,950
Winter Haven Hospital	Main Hospital and Clinic Operations	1,900
Watson Clinic	All Clinic Operations	1,797*
Advent Health	Hospital Locations and Services	1,712
Mosaic	Manufacturing and Office Operations	1,707*
Legoland	Legoland Florida Resort and Hotels	1,500+
Polk State College	Administration, Staff and Educators	1,250

*** Numbers Previously Reported from 2023**
Source: Central Florida Development Council

Land Use and Development Trends

Polk County

Florida was first settled by European explorers in 1565, though Native American tribes had inhabited the region for thousands of years prior. Many scholars associate the county's Native American inhabitants with the Tocobaga people of Tampa Bay and their close relatives, the Mocosos, who lived east of the bay and along the Alafia and Hillsborough rivers. The Seminole Indians, which were descendants of Georgia's Creek Indians, did not settle the areas in and around Polk until the 1700s. Polk quickly underwent a period of growth and change during the 19th century. The county's first courthouse was constructed in 1867 in Bartow on land donated by cattle baron Jacob Summerlin. By the 1880s, the development of various industries, including citrus, cattle, and phosphate, and the arrival of the railroad caused a boom in land prices.

The population of the county doubled as a new wave of visitors and workers settled in Polk. Henry Plant's South Florida Railway crossed the county and reached Tampa in 1884, linking central Florida with a massive transportation network. Locally produced goods were shipped by rail to national and international markets – Florida oranges could now reach major metropolitan areas like New York City, Philadelphia, and Baltimore in less than a week. Phosphate mining also benefited from improvements in the transportation infrastructure and quickly became one of Polk County's largest industries.

SECTION IV: COMMUNITY PROFILE

Today, Polk County is a leading contributor to the state's economy. Citrus, cattle, agriculture, and the phosphate industry still play vital roles in the local economy, along with an increase in tourist revenue in recent years. The county's location between both the Tampa and Orlando metropolitan areas has aided in the development and growth of the area. Residents and visitors alike are drawn to the unique character of the county's numerous heritage sites and cultural venues, stunning natural landscapes, and many outdoor activities, making Polk the heart of central Florida. (Florida History Center)

Historically, development has occurred around the cities of Lakeland and Winter Haven, but the last 30 years have seen development on the two primary ridges in Polk County with focus areas being the Lakeland Highlands, northwest Lakeland, south Winter Haven and most densely in north of Haines City along US 27 to the Osceola County border. The recent hurricanes of 2023 and 2024 which impacted Polk County highlighted storm water impacts in the more stressed basin areas of the County.

The Polk County Land Development Code defines development as "any man-made change to improved or unimproved real estate" and states that development means "any building activity or material change in the use or appearance of any structure or land." County divisions directly involved in permitting include the Building Division and the Land Development Division. These Divisions review and permit both horizontal (site improvements) and vertical (building) construction. Additionally, the Polk Transportation Planning Organization (TPO) assists the County and cities in major traffic studies and the implementation of roadway improvements.

From the Green Swamp in the north, to riverine systems in the south, to the unique and endangered scrub of the Lake Wales Ridge to the east, Polk County's natural features are diverse. The Lake Wales Ridge scrub is home to one of the rarest collections of plants and animals in the world. A network of preserves protects much of the area and many of these species.

There are 1,028,947.3 acres of land in unincorporated Polk County. The map below illustrates the Future Land Use designations in the unincorporated County in 2025. Much of the land remains in active agriculture use.

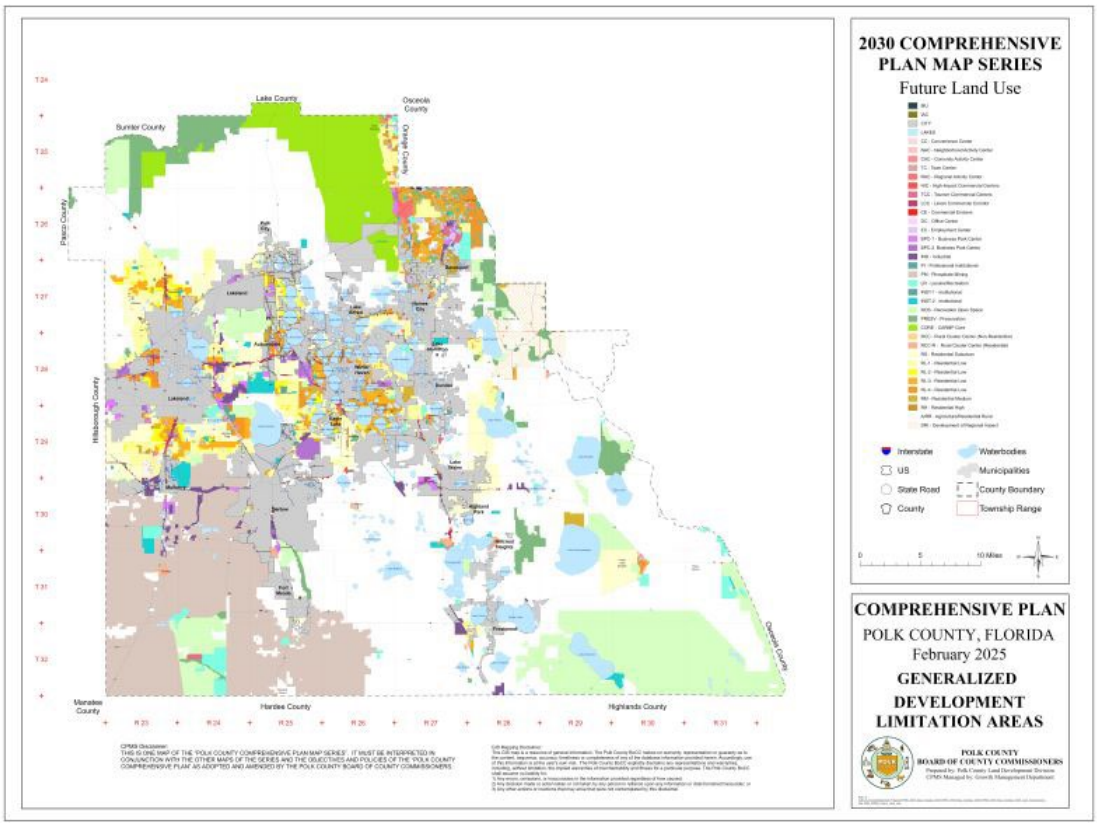


Figure IV.10: Polk County Future Land Use Map 2025

Polk County's continued growth underscores the need for planning, quality development, and safe building practices. Between 2000 and 2020, Polk County added over 200,000 residents to its permanent population. According to the 2020 Census, Polk County had a permanent population of 725,046, of which 444,898 (61.4%) were living within the unincorporated area. According to the estimates provided by the Bureau of Economic and Business Research (BEBR) at the University of Florida dated April 1, 2024, the unincorporated area has grown by 51,454 permanent residents since the 2020 Census data was released.

Polk County is an urbanized County. Over half of Polk County residents live in an urban area, and eight out of ten unincorporated residents live in an urban setting. New development has clustered in expanding urban areas, especially in northeast Polk County, which is the fastest growing area.

Municipalities within Polk County

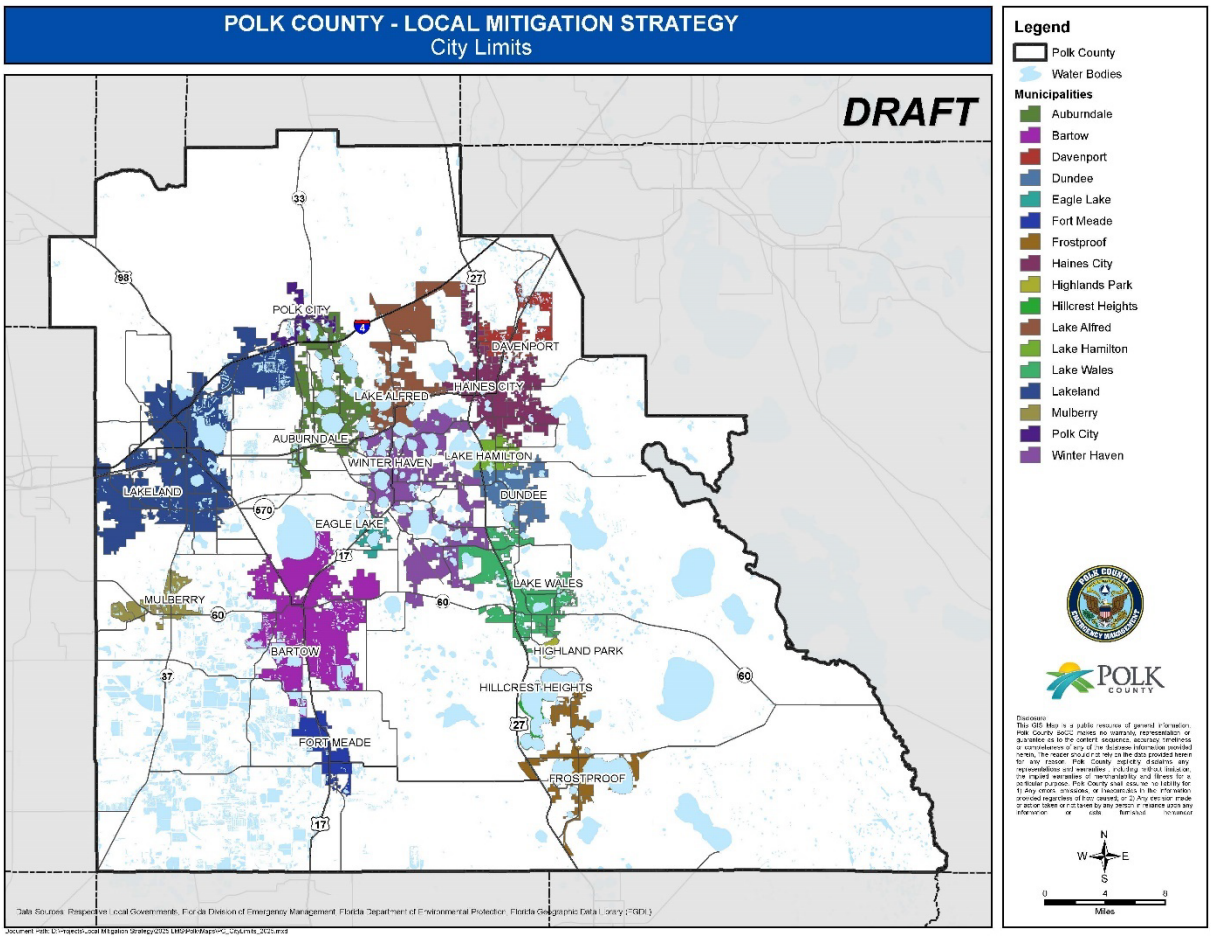


Figure IV.11: Polk County municipalities

Auburndale

The City of Auburndale, located in north central Polk County, is the fifth-largest city in population according to the most recent estimates for the County's 17 municipalities. The city is situated mostly south of the Green Swamp Area of Critical State Concern and lies between Lakeland and Winter Haven. US-92 traverses from west to east through the southern part of the city, while Interstate 4 runs west to east through the north part of the city.

Auburndale's historical development centered along, and radiated from, the railroad line that runs through the city's downtown area. The city has preserved the downtown core area as a vibrant focal point for retail and services, city administrative offices, the civic center, a park, and recreation facilities. Two areas of industrial land use are concentrated along the railroad on the east and west sides of downtown. Auburndale High School, Stambaugh Middle School, and Auburndale Central Elementary School are located on the periphery of the downtown core.

The oldest residential areas in Auburndale are located contiguous to the downtown area on four sides. As Auburndale developed, the residential land use pattern formed in a ring around Lake Ariana, north and west of downtown. More recent residential growth is occurring in annexed areas further north, east, and west of SR 559, up to CR 559A. Lot sizes typically become larger, and density lower, as distance from the core area increases.

Auburndale and Polk County have established a Joint Planning Area (JPA) geographically based on the city's Utility Service Area. The JPA establishes Polk County's intention to render land use approvals that are consistent with the Auburndale's future land uses and vision of the future. The JPA facilitates the integration of properties in the Auburndale Utility Service Area as people annex them into the city. Planned land uses include Tourism Commercial Centers that support the sports complex and the Interstate 4 Corridor Gateway to the city. The JPA will also support the Florida Polytechnic University and the developing technology corridor along Interstate 4. (Auburndale Evaluation and Appraisal Report)

Bartow

The City of Bartow, the county seat of Polk County, lies south of Lakeland. SR 60 crosses the city from west to east and US 98 and SR 17 enter the city from the north then US 98 joins SR 17 and continues south. The County's main courthouse and administrative offices are adjacent to the downtown core. Downtown Bartow is the historic center of retail shopping and business services and remains a vibrant hub of commercial and government activity. East and south of downtown are historic homes in several historic districts. Extending out from the city's core, primarily to the southeast, southwest, and northwest, is most of Bartow's residential development. As distance from the core increases, lot sizes increase, and densities are lower. This trend does not hold true for recent housing projects built since 2001 on the outer edges of the city. These projects generally retain the same densities as older areas of Bartow but utilize building lots that are smaller given the need to install common infrastructure (e.g., stormwater management areas, open space tracts, etc.) that were not required in older projects.

There is a concentration of highway-oriented commercial activity and shopping centers near the intersection of US 98 (North Broadway Avenue) and SR 60 (Van Fleet Drive) north of downtown and radiate along US 98 northwest to the city Limits. Most of Bartow's industrial development is located west of the downtown area and along SR 60 West, and south and east of downtown along US 17. Since 2000, other than infill development, urban growth has taken place in residential subdivisions to the northwest along Lyle Parkway and EF Griffin Road, on the south end of the city, and most recently in the vicinity of Old Bartow – Eagle Lake Road east of US 98. Growth in the US 98 corridor includes Bartow Memorial Hospital and a major vehicle dealership.

Much of Bartow's land area consists of post-phosphate mining land reclamation and agricultural activities, which Clear Springs Land Company, LLC owns. The Bartow City Commission approved the Clear Springs Sector Plan (CSSP) which includes a Conceptual Plan Overlay containing a mix of urban development, rural development, recreation/open space, and conservation. This property borders both sides of the Peace River. The CSSP project offers a unique opportunity for industrial and commercial development in Bartow. (Bartow Evaluation and Appraisal Report)

Davenport

The City of Davenport is approximately 7 square miles located in northeastern Polk County, situated along the US 17/92 corridor, south of Interstate 4, and east of US 27. Existing development occupies the heart of Davenport with commercial and industrial uses located along US 17/92. The city approved more than

2,000 new residential units for development in the city during the past 15 years, located mostly in new residential subdivisions east of US 27 and west of US 17/92. Many of the approved subdivisions are located along CR 547, the major east/west roadway corridor that traverses the city.

Davenport is located directly south of Polk County's North Ridge Selected Area Plan in which the County has intensified the land uses in the unincorporated areas from agriculture to medium density residential, business park center, tourism commercial center, and industrial as well as leisure recreation uses. Ernie Caldwell Boulevard is located north of Davenport and south of Interstate 4 and connects US 27 east to US 17/92, providing a needed east/west connector roadway in northeast Polk County. (Davenport Evaluation and Appraisal Report)

Dundee

The Town of Dundee is situated on the eastern ridge of the County, south of Haines City and Lake Hamilton, and east of Winter Haven. US 27 runs north and south through the west side of the town while SR 17 runs north and south through the core of the town. Existing developments have been upgraded in the downtown area. The agricultural lands that remain in the northeast and southeast sections of the community are continuing to dwindle and have become residential neighborhoods. The Town is planning for future development potential of the annexed active agricultural lands.

Dundee and Polk County recognize that intergovernmental coordination is essential for growth management and engaged in a joint effort to comprehensively plan certain areas within the town limits, as well as areas located in unincorporated Polk County. Dundee and Polk County worked together to develop the East Polk Selected Area Study (SAS). The East Polk SAS is a joint planning study that includes land within the Town of Dundee, its utility service area, and some of the surrounding unincorporated areas. The East Polk SAS establishes Dundee and Polk County's intention to render land use approvals consistent with the vision of the future as developed through the process. (Dundee Evaluation and Appraisal Report)

Eagle Lake

The 3.75 square mile City of Eagle Lake is located approximately 8 miles northwest of Bartow and approximately 4 miles southwest of Winter Haven. US 17 is the major highway serving the city.

Eagle Lake has a small central business district centered around the US 17 corridor which includes commercial, industrial, and government buildings. The city is close to the Bartow Executive Airport and related industrial development areas. The city has recreational opportunities including access to Eagle Lake and Lake McLeod. The city's original core area includes primarily residential development and is bisected by the US 17 one-way pairs. A commercial corridor extends the US 17 corridor including within the large median created by the one-way pairs with few remaining residential properties in that area. (Eagle Lake Evaluation and Appraisal Report)

Fort Meade

Founded in 1849, Fort Meade is Polk County's oldest city. Originally confined by the Peace River to the east and mining company lands to the west, the city's borders extended north to 9th Street North and south to 9th Street South. In recent decades, Fort Meade has expanded to accommodate growth and development. To the north, the city annexed commercial and industrial properties along US 17/98 and to the south, primarily residential areas were added. The city's eastward expansion across the Peace River brought in the 120-acre Fort Meade Outdoor Recreation Area, a popular spot for outdoor enthusiasts.

The city's historic downtown district, centered on West Broadway Street, remains a cherished part of its identity. Commercial development has flourished along US 17, creating a vibrant corridor that complements the city's residential neighborhoods. Local businesses on East Broadway Street and Dr. Martin Luther King Jr. St. SW serve many of the needs of the community. As Fort Meade continues to grow, the city is committed to attracting new businesses that enhance its character and meet the evolving needs of its residents.

Frostproof

The City of Frostproof is situated in an area of Florida known as the Lake Wales Ridge for its long, rolling sand and limestone hills with the 26,000-acre Lake Wales Ridge State Forest located east of Frostproof. The Nature Conservancy's Tiger Creek Preserve, consisting of 4,805 acres of protected lands, is located to the north and east of Frostproof and includes the pristine blackwater stream that forms the spine of the preserve. The 106,000-acre Avon Park Air Force Range is located southeast of the city. Pastureland, citrus groves, and retirement communities surround the remainder of the city. US 27 runs along the western side of the city while SR 17 (Ridge Scenic Highway) runs north and south through the center.

Most of the existing development has occurred between Lake Clinch and Lake Reedy and along the Ridge Scenic Highway, the major north/south collector road that bisects the city. A significant amount of land designated as active agriculture is in the northern, southern, and eastern areas of the city. The city is planning development for these areas including a residential development north of CR 630A, east of SR 17. Industrial lands east of Silver Lake and directly east of the SR 17 have developed with the location of Ferguson Enterprises, Inc. Distribution Center. Lowe's Flatbed Distribution Center is located south of Ferguson with direct access to the rail spur. Several properties in this area are ready for development, as utilities and a rail spur service in the area.

Three schools are located within the city limits: Ben Hill Griffin Elementary; Frostproof Elementary; and Frostproof Middle/Senior High School. The schools are located north of CR 630, west of SR 17.

Haines City

The City of Haines City is in northeast Polk County, 35 miles southwest of Orlando. The city is bounded by the municipalities of Davenport to the north, Lake Alfred to the west, and Lake Hamilton to the south. Poinciana is to the east. Haines City is located at one of the major transportation crossroads in Polk County including US 27, US 17 /92, and SR 17, which all pass through the downtown area. Located 8 miles south of Interstate 4, along the rapidly developing US 27 corridor, the city has undergone significant residential and commercial growth in recent years, expanding to a service area of approximately 23.6 square miles.

Haines City's beginnings, like many Florida communities, expanded outward from the rail lines that traversed north, south, and west through the city. Haines City was platted in 1885, and at that time was known as Clay Cut. The City's pioneers agreed to change the name to Haines City, honoring a prominent railroad official, in exchange for the railroad building a station in the city.

The current population (April 1, 2024, BER) of 39,514 is an increase of 48.2percent since the 2020 census. The more recent residential and commercial development has occurred outside the traditional City along major roadways. Parts of the city remain agricultural, with citrus and pasture.

Haines City is home to seven public parks, two athletic complexes, and the Haines City Trail. Lake Eva Community Park is a host site for the renowned Iron Man competition, concerts, and many community and special events.

Highland Park

The Village of Highland Park is located on the Lake Wales Ridge, south of Lake Wales and north of Frostproof. State Road 17, also known as South Scenic Highway, runs north and south along its western boundary. Development is located on the north side of Lake Easy and surrounding Lake Amoret. A large area of Highland Park consists of a golf course, and several Village lots line the course.

With 107 platted lots originally recorded in 1919, today Highland Park is comprised of 113 residences. The Village has no plans at the present to further expand its boundaries. However, individual property owners have expressed interest in changing their property use to allow higher densities and changing the land development code to allow redevelopment of existing uses in case of natural disaster. (Highland Park Evaluation and Appraisal Report)

Hillcrest Heights

The Town of Hillcrest Heights is a small residential community nestled along the southern lakeshore of Crooked Lake south of Lake Wales and 5 miles north of Frostproof.

The predominant land use within Hillcrest Heights is residential. Approximately, 68.9 acres of the total 100.9 acres are single-family residential units. There are no commercial or industrial land uses and there is no land designated or zoned for such purposes. The town has no plans to expand its boundaries. With 4.79 acres of undeveloped land in the town limits, new development will be minimal. (Hillcrest Heights Evaluation and Appraisal Report)

Lake Alfred

The City of Lake Alfred covers approximately Approx 5,814 acres in northeastern Polk County along the US 17/92 corridor, south of Interstate 4 and west of US 27. The northern half of the city is in the Green Swamp Area of Critical State Concern.

The city has experienced significant residential development due to its proximity to Walt Disney World, LEGOLAND, and other major tourist attractions in central Florida and the greater Orlando area. Developers have built numerous subdivisions in the city on land formerly used for citrus production. Lake Alfred is developing a commercial district highlighted by an antique market and expanding retail and restaurant services. The city has a growing industrial base fueled by the citrus industry, trucking, and one distilling and bottling operation. In 2009, the Florida Department of Transportation constructed one-way pairs on US 17/92 through the heart of downtown, to reduce traffic congestion while providing for an increase in commercial opportunities to serve the growing population.

Development in Lake Alfred includes residential development east and west of the commercial corridor along US 17/92 and north on both sides of CR 557 to I-4. The CSX railroad mainline divides the northern and southern portions of the city. At the south entrance to the city, US 17 (from Winter Haven) and US 92 (from Auburndale) converge and become US 17/92. Business commercial development in Lake Alfred is within a block of this thoroughfare. The historic downtown business core is at the intersection of Lake Shore Way (US 17/92) and Haines Boulevard. The city's government center is also located there. Older

residential areas are located east and west of the corridor, extending to Lake Haines on the east side and Lakes Cummings and Echo on the west. New residential areas expand the city to the west and north.

There are a few older residential neighborhoods in the Lake Swoope/Twin Lakes area located on the north side of the CSX railroad. Continuing northward, developers are planning newer single-family residential subdivisions, mainly in an area lying within the Green Swamp Area of Critical State Concern, which limits densities to three units per acre. This area of future growth connects to the center of Lake Alfred by SR 557, the city's primary access to Interstate 4 to the north. These northern areas, and the area along Lynchburg Road west of the 1999 city limits, are where most annexations in Lake Alfred have taken place in the last decade. Along the CSX railroad is Lake Alfred's industrial land use base. The industrial area is expanding to the east where Polk County has built a new Polk County Government Center to serve the growing area.

A new water treatment plant is planned off CR 557 to service the North end of the city to facilitate needs of new communities.

Historical Hazards: The city has 3 improved areas with a history of flooding. Sunset Mobile home park is located off Lynchburg Road. The area near Lake Mariana is in Flood Hazard Zone AE. Echo Terrace is located South of Lake Echo. There is a delineated wetland area near Echo Park with a few residential lots located in Flood Hazard Zone AE. Lake Alfred Mobile Home Park located on 17-92 has several units within flood hazard zones. Special card through code enforcement is ongoing in this neighborhood. Any permitting in these zones is reviewed by the flood plain manager and are subject to FEMA guidelines

Lake Hamilton

The Town of Lake Hamilton is situated on the Lake Wales Ridge, south of Haines City, east of Winter Haven, and north of Dundee. The town is located east of Lake Hamilton, which is part of the headwaters of the Peace River. The Town comprises approximately 4.17 square miles, approximately 0.98 square miles of which is water, including the town's namesake Lake Hamilton. Six major lakes lie within the community: Crystal Lake, Lake Gordon, Lake Ida, Lake Sara, Lake Lee, and Lake Hamilton.

The town accesses both the Ridge Scenic Highway and US 27, a major north-south arterial roadway through Polk County. The town anticipates development patterns and pressures to continue along the US 27 corridor.

Lake Hamilton is typical of the many small communities which sprang up in central Florida's early history along the State's highways and railroads. The original alignment of US 27 passed through the central portion of the community, giving birth to the initial commercial area and influencing development patterns. A north-south railroad line also passed through the center of town, resulting in the location of the citrus packing plant in the north-central area. The later re-alignment of US 27 along a right-of-way at the town's western edge, and the abandonment of the railroad line dramatically altered the growth and development patterns. Most of the development lately has been occurring to the east of town with some development along US 27. The town now offers wastewater treatment to new developments and has performed some septic to sewer conversions.

Lake Wales

The City of Lake Wales is located at the intersection of US 27 and SR 60, approximately an hour south of Interstate 4, and is situated on the Lake Wales Ridge. The city can support growth, as much of the land in the city is vacant and intended for residential development. Undeveloped residential tracts are located southeast of Thompson Nursery Road and US 27, northeast of Chalet Suzanne Road and US 27, and areas south of SR 60. Citrus has been a mainstay of the economy. In recent years light manufacturing, construction, and electronics firms have added diversity to the economy. (Lake Wales Evaluation and Appraisal Report)

Lakeland

The City of Lakeland corporate limits encompass approximately 75.3 square miles and have remained relatively constant over the past decade. Lakeland is the most populous municipality in Polk County, with an estimated population of 123,760 as of April 1, 2024. This estimate is 11,119 persons higher than the estimate provided in the 2020 census. This represents a 1.46 percent annual year-over-year growth rate. Interest in Lakeland continues to expand along with its population. Located between Tampa and Orlando, Lakeland and Polk County have consistently been named as one of the fastest growing metro areas over the past several years based upon employment opportunities, wage growth and real estate affordability. Lakeland's economic base continues to shift with logistics, manufacturing and distribution continuing to grow while adding room for Lakeland's expanding professional services and entrepreneurial market. The City of Lakeland expects the job market to increase by 42.5 percent over the next 10 years. This growth will outpace the national average by approximately 20 percent.

Construction of new residential units to accommodate growth is occurring through a combination of new residential subdivisions in the suburban area and through infill development occurring on existing lots within the central city. In 2023, the city permitted 388 new single homes and 577 multifamily units. These multi-family units were balanced between north, south and central Lakeland, whereas the single-family homes were primarily concentrated in southwest Lakeland. Also, during 2023, non-residential construction was steady but had shown a decrease from the accelerated market that existed in 2020 - 2022. Cumulatively between residential and commercial, Lakeland issued 8,927 building permits in 2023 with an associated construction value of $580 million. Single family residential and multi-family construction accounts for three quarters of all permits issued but makes up only 30% of the construction value of all projects. Warehousing and distribution uses driven by advancement of e-commerce and Lakeland's centralized location dominate the central Florida market. With Lakeland's expanding population, the city is seeing significate job growth in healthcare, education and business, and professional services. These growing employment sectors, along with the new jobs they are creating, have helped Lakeland establish a diverse and balanced workforce.

Mulberry

The City of Mulberry, located in the southwestern portion of Polk County, is 10 miles west of Bartow and 10 miles south of Lakeland. Historically, the city grew from the late 19th century phosphate mining industry and considers itself the "Phosphate Capital of the World". The Mosaic Company is the largest phosphate producer in the world and has a major presence in Mulberry.

All commercial and industrial businesses are in the vicinity of two major highways, SR 37 and SR 60, which intersect in the city. The historic core centers around this intersection. Older commercial structures and the city's government center are also located there. Highway commercial type uses line SR 60 from east to west. Two of Mulberry's three industrial areas are near SR 60, one near the east entrance to the city,

and the other on the western edge. A third industrial area lies along Mulford Road west of SR 37. Most of SR 37 runs north of SR 60, toward the south Lakeland area. Smaller businesses line SR 37. Further north, where SR 37 intersects Carter Road and Shepherd Road, is Mulberry's growth area for retail commercial properties.

Mulberry's residential areas are in all quadrants surrounding the city's historic center including older, developed neighborhoods. Many of the older homes are beginning to show signs of structural deterioration. Except for a new residential subdivision on SR 37, little new residential growth has occurred since 1990.

Several rail lines cross the city, most of the train traffic on these lines serve phosphate mining and related activities to the south of the city. Mulberry surrounds early phosphate mining extraction sites which have left a series of man-made lakes and channels within urban and outlying portions of the city. (Mulberry's Evaluation and Appraisal Report)

Polk City

Polk City, located in north central Polk County, near the intersection of SR 33 (Commonwealth Boulevard) and SR 655 (Berkley Road), is located within the Green Swamp Area of Critical State Concern. A portion of the city is in the Polk City Exemption Area, which is exempt from the regulations of the Green Swamp. The City anticipates growth due to the city's location along Interstate 4 between Tampa and Orlando. Older residential properties and mixed uses surround the downtown area. Redevelopment and infill development are occurring. There is a substantial amount of vacant developable property, much of which Polk City has annexed since 2000. (Polk City Evaluation and Appraisal Report)

Winter Haven

The City of Winter Haven is in central Polk County along the Winter Haven Ridge, which runs north/south along the Florida peninsula at an elevation of approximately 150 feet. Downtown Winter Haven is approximately 12 miles south of Interstate 4 and 6 miles east of the Polk Parkway (SR 570). There are approximately 50 lakes within, or touching, the city limits, 22 of the lakes are connected by canals forming the North Chain and the South Chain. The North Chain has 8 connected lakes, and the South Chain has 14 connected lakes. The canals connecting these lakes were constructed in the early 20th Century to float citrus from the groves to packing houses located along the railroad lines. Today, the Chain of Lakes serves as a recreation amenity for residents and tourists.

Winter Haven is the 2nd largest City in Polk County, with a 2024 population of 57,923 (UF-BEBR), and serves a regional market that includes eastern Polk County and parts of Highlands, Osceola, Orange, and Lake Counties. Primary access to the city is via US Highways 17, 27, and 92, as well as State Roads 60, 540, 542, 544, and 655. Major employment sectors include hospitality and tourism, medical, warehouse and manufacturing, and construction. The city has experienced rapid growth over the previous 10 years, growing in population by approximately 56.5% and annexing more than 750 acres of land since 2014. While growth during this time period has been primarily residential, with approximately 7,200 single family and 1,900 multi-family residential units permitted, the city experienced significant growth in non-residential sectors as well. Hospitality and tourism continue to expand with 5 new hotels constructed, multiple new attractions at LEGOLAND Florida Resort, and the construction of the Advent Health Fieldhouse and Conference Center. Warehousing and manufacturing have increased city wide, most notably with the addition of Florida Can Manufacturing and a new 1.2 million square foot warehouse at the expanding Central Florida Integrated Logistics Park on the south side of the city. The medical sector

has also grown with the addition of several new facilities including Bond Clinic and the Advent Health Emergency Center with planned expansion for a 180-bed hospital. Finally, Downtown Winter Haven continues to grow and redevelop into a regional attraction for food, beverage, entertainment, and now residential living.

The city expects the market for development in Winter Haven to remain strong. The city is actively planning, budgeting, and carrying out many capital improvements to keep up with this demand. Projects include utility expansions, transportation improvements, parks and recreation expansions, enhanced services for the growing population, and implementation of the One Water Master Plan to include construction of a regional water storage and recreational amenity known as the Saphire Necklace.

Development Changes

As Polk County's population grows, the need for expanded and improved mitigation techniques grows exponentially. Municipalities continue to annex land, and as developers turn former agricultural land into housing. Infrastructure throughout the County is aging, which leads to increased impacts from hazard events. Development in the 100-year flood risk area must meet the strict National Flood Insurance Program (NFIP) floodplain management standards. Comprehensive Plan policies and permitting processes help protect wetlands. These actions result in more disaster-resistant communities. An informed and educated populace is a necessity. As growing demands continue to challenge first responders and resources, it is imperative that Polk County residents are knowledgeable and prepared to face and recover from disasters. Providing information and training to Polk County residents helps save lives, spares property, and helps return life to normal more rapidly after a disaster.

National Flood Insurance Program Compliance and Community Rating System Participation

National Flood Insurance Program

The NFIP is a Federal program created by Congress to mitigate future flood losses nationwide through community-enforced building and zoning ordinances and to provide access to affordable, Federally backed flood insurance protection for property owners. The NFIP provides an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.

Participation in the NFIP is based on an agreement between local communities and the Federal government stating that if a community adopts and enforces a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas (SFHAs), the Federal government will make flood insurance available within the community as a financial protection against flood losses. Table IV-7 includes the National Flood Insurance Program participation status of Polk County municipalities.

After an incident has occurred, damage assessment teams are deployed to impacted areas to begin the initial damage assessments. Some areas may not be accessible due to flooded areas or roadways. These areas will be assessed once it is safe to do so. The Floodplain Manager or designee and other staff work on areas that have been impacted to start on Substantial Damage/Substantial Improvements (SD/SI)

letters for residents. A field visit is conducted to assess the property, if allowed by the residents. Once a permit is applied for, a review of all documents for SD/SI are reviewed and determined if it meets the requirements. If residents are caught having work completed without permits, Polk County Code Enforcement will respond to post the property and stop the work until proper permits are applied for and issued. If determined the property falls under the SD/SI requirements, the resident will need to bring the structure into current regulations. The permits are monitored to ensure compliance is met before the structure passes all inspections.

TABLE IV-9
NATIONAL FLOOD INSURANCE PROGRAM PARTICIPATION

Community Name	NFIP Status	Appointee
Auburndale	Participating	Building Official
Bartow	Participating	Building Official
Davenport	Participating	Building Official
Dundee	Participating	Town Manager
Eagle Lake	Participating	City Manager
Fort Meade	Participating	County Floodplain Mngr.
Frostproof	Participating	Building Official
Haines City	Participating	Public Works Director
Highland Park	Not Participating	Village Clerk
Hillcrest Heights	Not Participating	Town Clerk
Lake Alfred	Participating	Floodplain Manager
Lake Hamilton	Participating	Planner
Lake Wales	Participating	Building Inspector
Lakeland	Participating	Floodplain Manager
Mulberry	Participating	City Manager
Polk City	Participating	Dev. Svcs. Director
Winter Haven	Participating	Floodplain Manager
Unincorporated Polk County	Participating	Floodplain Manager

Source: Federal Emergency Management Agency NFIP Community Status Book, Downloaded June 25, 2024

Through the NFIP, each participating municipality will:

1. Continue to enforce its adopted Floodplain Management Ordinance requirements, which include regulating all new development and substantial improvements in SFHA;
2. Continue to maintain all records pertaining to floodplain development, which shall be available for public inspection;
3. Continue to notify the public when there are proposed changes to the floodplain ordinance or Flood Insurance Rate Maps;
4. Maintain the map and Letter of Map Change repositories; and
5. Continue to promote flood insurance for all properties.

The Village of Highland Park and the Town of Hillcrest Heights have chosen not to participate in the NFIP. The municipalities cite their size, limitation of resources, and location as reasons not to participate. According to the April 1, 2024, Estimate of Population by BEBR, Highland Park has 245 people and Hillcrest Heights has 234 people. With such small populations, they have limited resources and manpower. They also are small municipalities and most land and structures do not lie within the 100-year floodplain.

TABLE IV-10
NFIP INSURANCE POLICIES AS OF JANUARY 31, 2025

Municipality	Policies in Force	Total Premium ($)	Total Coverage ($)
Auburndale	72	$38,835	$24,500,000
Bartow	72	$71,219	$16,304,200
Davenport	40	$25,850	$12,049,000
Dundee	15	$11,573	$4,191,200
Eagle Lake	15	$6,665	$4,845,000
Fort Meade	4	$2,028	$660,000
Frostproof	12	$12,742	$2,818,400
Haines City	123	$67,971	$32,506,200
Lake Alfred	29	$13,640	$9,759,000
Lake Hamilton	4	$2,847	$1,414,000
Lake Wales	63	$45,013	$22,356,000
Lakeland	917	$484,308	$231,087,200
Mulberry	28	$18,984	$8,159,000
Polk City	14	$6,940	$4,037,000
Winter Haven	382	$200,416	$114,492,600
Unincorporated Polk County	5,912	$3,503,227	$1,568,388,400

Sources: Flood Policy Information by State and Community, FEMA, Data as of January 31, 2025

Polk County 2024 NFIP Insured Repetitive Loss Properties

Jurisdiction	Residential	Commercial	Industrial	Total
Auburndale				
Bartow				
Davenport				
Dundee				
Eagle Lake				
Fort Meade				
Frostproof				
Haines City				
Highland Park				
Hillcrest Heights				
Lake Alfred				
Lake Hamilton				
Lake Wales				
Lakeland				
Mulberry				
Polk City				
Unincorporated Polk				
Winter Haven				

Polk County 2024 Non-NFIP Insured Repetitive Loss Properties

Jurisdiction	Residential	Commercial	Industrial	Total
Auburndale				
Bartow				
Davenport				
Dundee				
Eagle Lake				
Fort Meade				
Frostproof				
Haines City				
Highland Park				
Hillcrest Heights				
Lake Alfred				
Lake Hamilton				
Lake Wales				
Lakeland				
Mulberry				
Polk City				
Unincorporated Polk				
Winter Haven				

Polk County 2024 Severe Repetitive Loss Properties

Jurisdiction	Residential	Commercial	Industrial	Total
Auburndale				
Bartow				
Davenport				
Dundee				
Eagle Lake				
Fort Meade				
Frostproof				
Haines City				
Highland Park				
Hillcrest Heights				
Lake Alfred				
Lake Hamilton				
Lake Wales				
Lakeland				
Mulberry				
Polk City				
Unincorporated Polk				
Winter Haven				

Community Rating System (CRS)

The NFIP's Community Rating System (CRS) is a voluntary incentive program that recognizes communities for implementing floodplain management practices that exceed the Federal minimum requirements of the NFIP to provide flood protection. The goals of the CRS are to reduce flood damage to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management. FEMA developed the CRS to provide incentives in the form of premium discounts for communities to go beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding.

Once a community applies to the appropriate FEMA region for the CRS program and FEMA verifies its implementation, FEMA sets the CRS classification based upon credit points. This classification determines the premium discount for policyholders in the participating community. There are 10 CRS classes: Class 1 requires the most credit points and gives the greatest premium discount; Class 10 identifies communities that do not participate in the CRS or have not earned the minimum required credit points and receive no premium discount. As recognition of the floodplain management activities instituted in a community, eligible policies written in a community receive premium discounts ranging from 5 percent (Class 9) to a maximum of 45 percent (Class 1).

FEMA recognizes 19 activities as measures for eliminating exposure to floods and assigns credit points to each activity. The activities fall into four main categories: Public Information; Mapping and Regulation; Flood Damage Reduction; and Warning and Response.

More than 1,500 communities from 50 states participate in the CRS. These CRS communities have over 3.6 million policyholders, accounting for more than 70% of all NFIP flood insurance policies. Lakeland, Lake Alfred, Winter Haven, and unincorporated Polk County participate in the CRS and have CRS classifications of 6, 7, or 8 (Table IV-11).

TABLE IV-11
COMMUNITY RATING SYSTEM (CRS) ELIGIBLE COMMUNITIES EFFECTIVE OCTOBER 1, 2014

Community Number	Community Name	CRS Entry Date	Current Effective Date	Current Class	Discount for SFHA	Discount for Non-SFHA
120667C	Lake Alfred	10/01/18	05/01/19	6	20%	10%
120267C	Lakeland	10/01/04	10/01/09	7	15%	5%
120261	Unincorporated Polk County	10/01/92	10/01/11	6	20%	10%
120271C	Winter Haven	10/01/17	10/01/17	8	10%	5%

Note: SFHA = Special Flood Hazard Area
Source: Florida Division of Emergency Management Community Status Book Report

Polk County Public Schools

The Polk County Public School District is one of the larger school districts in the nation, with over 120 schools serving more than 117,000 students through traditional K-12 schools and various other programs.

While expanding its physical footprint, Polk County Public Schools have also earned a reputation for educational excellence. This is demonstrated by its nearly 30 nationally accredited workforce academies, six Florida Arts Model Schools, and an increasing number of schools offering Advanced Placement and Cambridge International programs. In 2018, the district gained national recognition by becoming one of the first to implement a school safety guardian program. Developed in collaboration with the Polk County Sheriff's Office, this program ensures that every campus has either an armed school district employee or a law enforcement officer on site.

Polk County Public Schools have cultivated strong, mutually beneficial relationships with the county's 17 municipalities, county government, Sheriff's Office, higher education institutions, chambers of commerce, economic development councils, and numerous nonprofit organizations. These partnerships have led to initiatives like the School Safety Guardian program and the ELITE teacher education program, both of which have served as models for other districts.

Additionally, the school district serves as the primary source of hurricane shelter facilities, ensuring the safety and well-being of the community during severe weather events.

Tables IV-12, IV-13, and IV-14 include lists of institutions providing primary and secondary education in Polk County.

TABLE IV-12
ELEMENTARY SCHOOLS WITHIN THE POLK COUNTY SCHOOL DISTRICT

Elementary School	Location
Achievement Academy	Bartow
Achievement Academy	Lakeland
Achievement Academy	Winter Haven
Alta Vista Elementary	Haines City
Alturas Elementary	Alturas
Auburndale Central Elementary	Auburndale
Bartow Elementary Academy	Bartow
Bella Citta	Davenport
Ben Hill Griffin Jr Elementary	Frostproof
Berkley Elementary	Auburndale
Bethune Academy	Haines City
BridgePrep Academy Polk	Davenport
Carlton Palmore Elementary	Lakeland
Chain of Lakes Elementary	Winter Haven
Citrus Ridge: A Civics Academy	Davenport
Clarence Boswell Elementary	Auburndale
Cleveland Court Elementary	Lakeland
Combee Elementary	Lakeland
Crystal Lake Elementary	Lakeland
Cypress Junction Montessori	Winter Haven
Dale R. Fair Babson Park Elementary	Babson Park
Davenport School of the Arts	Davenport
Dixieland Elementary	Lakeland
Doris A Sanders Learning Center	Lakeland
Dr. N.E. Roberts Elementary	Lakeland
Dundee Elementary Academy	Dundee
Eagle Lake Elementary	Eagle Lake
Eastside Elementary	Haines City
Edgar L. Padgett Elementary	Lakeland
Elbert Elementary	Winter Haven
Floral Avenue Elementary	Bartow
Frank E. Brigham Academy	Winter Haven
Garden Grove Elementary	Winter Haven
Gause Academy of Leadership	Bartow
Gibbons Street Elementary	Bartow
Griffin Elementary	Lakeland
Hartridge Academy	Winter Haven
Highland City Elementary	Highland City
Highlands Grove Elementary	Lakeland
Hillcrest Elementary	Lake Wales
Horizons Elementary	Davenport
IDEA Lakeland	Lakeland
Inwood Elementary	Winter Haven
James E. Stephens Elementary	Bartow

Elementary School	Location
James W. Sikes Elementary	Lakeland
Janie Howard Wilson Elementary	Lake Wales
Jean O'Dell Learning Center	Bartow
Jesse Keen Elementary	Lakeland
Jewett School of the Arts	Winter Haven
John Snively Elementary	Winter Haven
Karen M. Siegel Academy	Lake Alfred
Kathleen Elementary	Lakeland
Lake Alfred Elementary	Lake Alfred
Lake Shipp Elementary	Winter Haven
Lakeland Montessori Schoolhouse	Lakeland
Language and Literacy Academy	Winter Haven
Laurel Elementary	Poinciana
Lena Vista Elementary	Auburndale
Lewis Anna Woodbury Elementary (4-5)	Fort Meade
Lewis Elementary (PK-3)	Fort Meade
Lincoln Avenue Academy	Lakeland
Loughman Oaks Elementary	Davenport
Magnolia Montessori Academy	Lakeland
Mater Academy	Davenport
McKeel Central Academy	Lakeland
Medulla Elementary	Lakeland
Navigator Academy of Leadership (K-8)	Davenport
North Lakeland Elementary School of Choice	Lakeland
Oscar J. Pope Elementary	Lakeland
Palmetto Elementary	Poinciana
Philip O'Brien Elementary	Lakeland
Pinewood Elementary	Eagle Lake
Polk Avenue Elementary	Lake Wales
Polk City Elementary	Polk City
Purcell Elementary	Mulberry
R. Bruce Wagner Elementary	Lakeland
R. Clem Churchwell Elementary	Lakeland
REAL Academy	Lakeland
Ridgeview Global Studies Academy	Davenport
Rochelle School of the Arts	Lakeland
Rosabelle W. Blake Academy (K-8)	Lakeland
Sandhill Elementary	Haines City
Scott Lake Elementary	Lakeland
Sleepy Hill Elementary	Lakeland
Snively Elementary	Winter Haven
Socrum Elementary	Lakeland
South McKeel Academy	Lakeland
South Pointe Elementary	Winter Haven
Southwest Elementary	Lakeland
Spessard L. Holland Elementary	Bartow

Elementary School	Location
Spook Hill Elementary	Lake Wales
Valleyview Elementary	Lakeland
Victory Ridge Academy	Lake Wales
Wahneta Elementary	Winter Haven
Walter Caldwell Elementary	Auburndale
Wendell Watson Elementary	Lakeland
Willow Oak School	Mulberry
Winston Academy of Engineering	Lakeland

Source: Polk County Public Schools; https://polkschoolsfl.com/schoollistings/

TABLE IV-13
MIDDLE SCHOOLS WITHIN THE POLK COUNTY SCHOOL DISTRICT

Middle School	Location
Bartow Middle	Bartow
Berkley Accelerated Middle	Auburndale
Bill Duncan Opportunity Center (6-12)	Lakeland
Compass Middle Charter	Bartow
Crystal Lake Middle	Lakeland
Cypress Junction Montessori	Winter Haven
Daniel Jenkins Academy of Technology	Haines City
Davenport School of the Arts	Davenport
Denison Middle	Winter Haven
Discovery Academy of Lake Alfred	Lake Alfred
Doris A Sanders Learning Center	Lakeland
Dundee Ridge Middle Academy	Dundee
Edward W. Bok Academy	Lake Wales
Edward W. Bok Academy, North	Lake Wales
Fort Meade Middle-Senior	Fort Meade
Frostproof Middle-Senior	Frostproof
Gause Academy of Leadership	Bartow
Jean O'Dell Learning Center	Bartow
Jere L. Stambaugh Middle	Auburndale
Jewett Middle Academy Magnet	Winter Haven
Jewett School of the Arts	Winter Haven
Karen M. Siegel Academy	Lake Alfred
Kathleen Middle	Lakeland
Lake Alfred Polytech Academy	Lake Alfred
Lake Gibson Middle	Lakeland
Lake Marion Creek Middle	Poinciana
Lakeland Highlands Middle	Lakeland
Lakeland Montessori Middle	Lakeland
Language & Literacy Academy	Winter Haven
Lawton Chiles Middle Academy	Lakeland
McKeel Academy of Technology	Lakeland
McLaughlin Academy of Excellence	Lake Wales
Mi Escuela Montessori (K-8)	Lakeland

Middle School	Location
Mulberry Middle	Mulberry
New Beginnings High	Winter Haven
Polk Halfway House	Bartow
REAL Academy	Lakeland
Rochelle School of the Arts	Lakeland
Roosevelt Academy	Lake Wales
Rosabelle W. Blake Academy	Lakeland
Shelley S. Boone Middle	Haines City
Sleepy Hill Middle	Lakeland
Southwest Middle	Lakeland
Union Academy	Bartow
Victory Ridge Academy (PK-12)	Lake Wales
Westwood Middle	Winter Haven

Source: Polk County Public Schools; https://polkschoolsfl.com/schoollistings/

TABLE IV-14
HIGH SCHOOLS WITHIN THE POLK COUNTY SCHOOL DISTRICT

High School	Location
Auburndale Senior High	Auburndale
Bartow Senior High	Bartow
Chain of Lakes Collegiate High	Winter Haven
Discovery High School	Lake Alfred
Doris A Sanders Learning Center	Lakeland
Fort Meade Middle-Senior	Fort Meade
Fresh Start Community Campus	Bartow, Lakeland, & Winter Haven
Frostproof Middle-Senior	Frostproof
Gause Academy of Leadership	Bartow
George W. Jenkins Senior High	Lakeland
Haines City HS-IB	Haines City
Haines City Senior High	Haines City
Harrison School for the Arts	Lakeland
International Baccalaureate	Bartow
Jean O'Dell Learning Center	Bartow
Karen M. Siegel Academy	Lake Alfred
Kathleen Senior High	Lakeland
Lake Gibson Senior High	Lakeland
Lake Region High	Eagle Lake
Lake Wales Senior High	Lake Wales
Lakeland Senior High	Lakeland
McKeel Academy of Technology	Lakeland
Mulberry Senior High	Mulberry
New Beginnings High	Winter Haven
Polk State College Collegiate High	Lakeland
Polk State Lakeland Gateway to College Charter High School	Lakeland
Polk Virtual	Lakeland

High School	Location
Ridge Community High	Davenport
Ridge Technical College	Winter Haven
Roosevelt Academy	Lake Wales
Summerlin Academy	Bartow
Tenoroc High	Lakeland
Traviss Technical College	Lakeland
Victory Ridge Academy (PK-12)	Lake Wales
Winter Haven Senior	Winter Haven

Source: Polk County Public Schools; https://polkschoolsfl.com/schoollistings/

Post-Secondary Education

Table IV-15 includes a list of institutions providing post-secondary education in Polk County.

TABLE IV-15
POST-SECONDARY EDUCATIONAL INSTITUTIONS IN POLK COUNTY

School	Location
Polk State College	Bartow, Lake Wales, Lakeland, & Winter Haven
Florida Southern College	Lakeland
Southeastern University	Lakeland
Florida Polytechnic University	Lakeland
Warner University	Lake Wales
Webber International University	Babson Park
Keiser University	Lakeland
Florida Technical College	Lakeland
Ridge Technical Center	Lakeland
Southern Technical College	Auburndale
Traviss Technical Center	Lakeland

Source: Polk County Public Schools; https://polkschoolsfl.com/schoollistings/ and post-secondary education websites

SECTION V – HAZARD IDENTIFICATION AND ANALYSIS

44 Code of Federal Regulations

44 CFR §201.6(c)(2)(i):	A description of the type, location, and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

Overview

The Hazard Identification and Analysis section of the Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy (LMS) identifies and assesses the risk Polk County and the jurisdictions have to a variety of hazards. The analysis consists of two components: Hazard Identification and Hazard Profiles. Hazard Identification is the review of a wide range of hazards, and the identification of hazards that may impact the County. The analysis includes a description of hazards presenting very low or low risk to the County and the rationale indicating why the LMS does not need any further analysis. Hazard Profiles identify how hazards impact the County and jurisdictions. The Hazard Vulnerability and Risk Assessment section (Section VI) provides detailed analyses indicating the type and number of damages that may occur in the County and jurisdictions resulting from the identified hazards. Together, these sections identify, analyze, and assess the overall risk to Polk County and jurisdictions.

Hazard Identification

Polk County and jurisdictions are vulnerable to natural and human-caused hazards threatening life, property, and the economy. Upon consideration of the hazards recommended for review by the Federal Emergency Management Agency (FEMA) planning guidance, the LMS Working Group examined: research of past disaster declarations in the County; previous hazard mitigation plans in the County; the 2023 Florida Enhanced State Hazard Mitigation Plan (SHMP); other hazard related documents in the County; and input from the LMS Working Group. The LMS Working Group identified and omitted from the Hazards Profile the hazards having a very low and low probability of impacting Polk County and jurisdictions. Table V-1 identifies hazards that the LMS analyzes further and those that the LMS omits.

Hazard Profile

Hazard profiles include a description of each hazard, its potential impacts, historical occurrences, and the probability of future occurrences. Historical occurrence information includes Spatial Hazard Events and Losses Database (SHELDUS) data, noteworthy events details, and a listing of events that occurred between 2020 and 2024.

Hazard Identification

Tables V-1 and V-2 list the hazards initially identified for consideration. Table V-1 includes hazards categorized by type: atmospheric; geologic; hydrologic; other natural hazards; and human-caused hazards. Some hazards are interrelated or cascading (i.e., hurricanes can cause flooding and tornadoes); however, for preliminary hazard identification purposes, the LMS considers these hazards separately. Hazards~~,~~ such as drought or winter storms may impact a large area yet cause minor damage, while other hazards, such as tornadoes, may impact a small area but cause extensive damage. Table V-2 includes a

description of the hazards determined to require no further analyses (omitted from the LMS) and the rationale supporting the determination.

TABLE V-1:
INITIALLY IDENTIFIED HAZARDS AND DETERMINATION OF FURTHER ANALYSIS

Hazard	Further Analysis Required (Included in LMS)	No Further Analysis Required (Omitted from LMS)
Extreme Temperatures	X	
Fog	X	
Hurricanes /Tropical Storms	X	
Severe Storm and Tornado (Hail, Lightning, and Thunderstorm)	X	
Winter Storm		X
Earthquake		X
Landslide		X
Subsidence and Sinkhole	X	
Tsunami		X
Coastal and Riverine Erosion		X
Drought	X	
Flood	X	
Storm Surge		X
Sea Level Rise		X
Wildfire	X	
Space Weather		X
Civil Disturbance/Terrorism	X	
Cyber-Attacks	X	
Dam/Levee Failure	X	
Epidemics/Pandemics	X	
Hazardous Material Incidents	X	
Harmful Algal Blooms	X	
Mass Immigration/Migration		X
Nuclear/Radiological		X
Transportation Incident	X	

TABLE V-2:
IDENTIFIED HAZARDS THAT REQUIRE NO FURTHER ANALYSES (OMITTED FROM THE LMS)

Winter Storm Description	Severe winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Ice storms occur when moisture falls and freezes immediately upon impact on trees, power lines, communication towers, structures, roads, and other hard surfaces. Winter storms can down trees, cause widespread power outages, damage property, and cause fatalities and injuries to human life. The LMS addresses extreme cold temperatures under Extreme Temperatures.
Winter Storm Rationale	Snowfall, ice storms, and sleet are very uncommon occurrences in Florida, especially as far south as Polk County. While winter storms may result in tornadoes,

	the LMS addresses those impacts under tornadoes. The LMS addresses extreme cold temperatures under Extreme Temperatures.
Earthquake Description	An earthquake is a sudden movement of the Earth's lithosphere (its crust and upper mantle). Such movements occur along faults, which are thin zones of crushed rock separating blocks of crust. When one block suddenly slips and moves relative to the other along a fault, the energy released creates vibrations called seismic waves that radiate up through the crust to the earth's surface, causing the ground to shake. Aftershocks usually follow earthquakes.
Earthquake Rationale	The U.S. Geological Survey, National Seismic Mapping Project (website), locates Polk County in the 1% g (0.2 g) peak acceleration area. Because of this very low rating, the Florida Division of Emergency Management does not require local Comprehensive Emergency Management Plans to address earthquakes as a hazard that is likely to affect residents and visitors. The LMS does not include ~~a~~ further evaluation of this hazard related to vulnerability of people, property, critical infrastructure, environment, economy, or response operations.
Landslide Description	Landslides include a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. Although gravity acting on an over-steepened slope is the primary reason for a landslide, there are other contributing factors, such as: erosion by rivers, glaciers, or ocean waves creating over-steepened slopes; saturation by snowmelt or heavy rains causing weakened rock and soil slopes; earthquake created stresses causing weak slopes to fail; earthquakes of magnitude 4.0 and greater triggering landslides; volcanic eruptions producing loose ash deposits, heavy rain, and debris flows; and excess weight from accumulation of rain or snow, stockpiling of rock or ore, from waste piles, or from human-built structures that stress weak slopes to failure.
Landslide Rationale	Since there has been only one recorded landslide in Florida~~,~~ which occurred over 60 years ago~~,~~ on a very steep slope, and given the low-gradient topography in Polk County, the LMS does not include ~~a~~ further evaluation of this hazard related to vulnerability to people, property, critical infrastructure, environment, economy, or response operations.
Tsunami Description	A tsunami is a series of waves generated by an undersea disturbance such as an earthquake. The speed of a tsunami traveling away from its source can range from up to 500 miles per hour in deep water to approximately 20 to 30 miles per hour in shallower areas near coastlines. Tsunamis differ from regular ocean waves in that their currents travel from the water surface all the way down to the sea floor. Wave amplitudes in deep water are typically less than one meter; they are often barely detectable to the human eye. However, as they approach shore, they slow in shallower water, basically causing the waves from behind to effectively "pile up," and wave heights to increase dramatically. As opposed to typical waves that crash at the shoreline, tsunamis bring with them a continuously flowing 'wall of water' with the potential to cause devastation to the immediate shore of coastal areas.
Tsunami Rationale	Since most tsunamis are associated with major earthquakes, the possibility of a tsunami affecting the Atlantic or Gulf Coasts of Florida is remote. While the Caribbean region has a history of both earthquakes and tsunamis, they do not appear to have affected Florida's coastlines. Due to Polk County's inland location, the LMS does not include a further evaluation of this hazard related to vulnerability to people, property, critical infrastructure, environment, economy, or response operations.
Coastal & Riverine Erosion Description	Coastal erosion is a landward displacement of a shoreline caused by the forces of waves and currents over time. It is generally associated with episodic events such as hurricanes and tropical storms, nor'easters, storm surge, and coastal flooding,

	human activities that alter sediment transport may also cause coastal erosion. Construction of shoreline protection structures can mitigate the hazard but may also exacerbate it under some circumstances. In rivers, the scouring action of moving water may cause bank erosion, particularly in times of flood.
Coastal & Riverine Erosion Rationale	Polk County is an inland County with no coastline. Therefore, the County is not directly susceptible to coastal erosion hazards. Polk County contains 554 freshwater lakes, occupying approximately 135 square miles. The Hillsborough, Kissimmee, Palatlakaha, Peace, Alafia, and Withlacoochee rivers also wind their way throughout the County. The LMS omits erosion since it is not a hazard.
Storm Surge Description	A storm surge is a large dome of water, often 50 to 100 miles wide, rising anywhere from four to five feet in a Category 1 hurricane, up to more than 30 feet in a Category 5 storm. Storm surge heights and associated waves are dependent upon the shape of the offshore continental shelf (narrow or wide) and the depth of the ocean bottom (bathymetry). A narrow shelf, or one that drops steeply from the shoreline and subsequently produces deep water close to the shoreline, tends to produce a lower surge, but higher and more powerful storm waves. Storm surge arrives ahead of a storm's actual landfall and the more intense the hurricane, the sooner the surge arrives. Storm surge can be devastating to coastal regions, causing severe beach erosion and property damage along the immediate coast. Further, water rise caused by storm surge can be very rapid, posing a serious threat to those who have not yet evacuated flood-prone areas.
Storm Surge Rationale	Polk County is an inland County with no coastline. The geographical location of Polk County protects residents from storm surges associated with hurricanes. The LMS omits erosion since it is not a hazard.
Sea Level Rise Description	Sea level, also called mean sea level, is the sea surface level midway between mean high and low levels, computed from the records of tidal oscillations over an extended period. Relative sea level trends reflect changes in local sea level over time and are typically the most critical sea level trend for many coastal applications, including coastal mapping, marine boundary delineation, coastal zone management, coastal engineering, sustainable habitat restoration design, and public enjoyment of a beach.
Sea Level Rise Rationale	Polk County is an inland county with no coastline. Based on topography, a 5-meter rise in sea level would leave Polk County as an inland county while a 50-meter sea level rise would put all of Polk County except the Lake Wales Ridge and the other high points of the County under water. Predictions in the planning horizon do not indicate further evaluation. The LMS omits erosion since it is not a hazard.
Space Weather Description	Space weather is a broad term used to describe atmospheric events that have the potential to adversely affect conditions on Earth. Space Weather events are caused by the interaction of Earth with emissions from the Sun. There are two causes of Space Weather events, coronal mass ejections (CMEs) and solar flares, which are different incidents that occur on the sun. CMEs and solar flares can cause three different types of Space Weather events on Earth: geomagnetic storms, solar radiation storms, and radio blackouts. According to the National Space Weather Strategy and Action Plan, published March 2019, Space Weather poses a significant risk to the security of our country, including infrastructure and the economy. This is because our nation is becoming increasingly dependent on technology and the failure of one critical infrastructure facility or system could lead to failures in many other systems. For example, communication networks, satellite and airline operations, navigation systems, and

	the electric power grid could be disrupted, causing catastrophic problems and damages.
Space Weather Rationale	The Polk County LMS Working Group has begun monitoring Space Weather. The LMS omits Space Weather since it is not a hazard.
Mass Immigration/Migration Description	Mass immigration/migration refers to the migration of large groups of people from one geographical area to another. Mass migration differs from individual or small-scale migration, and from seasonal migration, which may occur on a regular basis.
Mass Immigration/Migration Rationale	Most of Florida's mass immigration/migration events result from its proximity to the Caribbean Basin. Polk County will most likely not serve as either a debarkation destination for foreign nationals following a Haiti-like earthquake evacuation or as an immigration point of entry because the County does not have a major airport that serves international flights or a port to receive international shipping. The LMS omits erosion since it is not a hazard.
Nuclear/Radiological Description	A nuclear/radiological incident is a release of radioactive or nuclear material. It may result from a deliberate act, an accident, or general mismanagement, and may center around different materials or industrial practices
Nuclear/Radiological Rationale	Polk County is outside the 50-mile Emergency Planning Zone (EPZ) for all nuclear facilities in the State. An evaluation of critical facilities and activities within the County indicates that it is unlikely that nuclear or radiological devices would be employed locally. The LMS omits erosion since it is not a hazard.

Climate Change

As stated by the National Oceanic and Atmospheric Administration (NOAA), climate change affects the environment in many different ways, including rising temperatures, sea level rise, drought, flooding, and more. These events affect things that we depend upon and value, like water, energy, transportation, wildlife, agriculture, ecosystems, and human health. According to the Environmental Protection Agency (EPA), climate change refers to any significant change in the measures of climate lasting for an extended period. Climate change includes major changes in temperature, precipitation, or wind patterns, among other effects, which occur over several decades or longer. Earth's average temperature has risen by 1.4°F over the past century and may rise another 2°F to 11.5°F over the next hundred years. Minor changes in the average temperature of the planet can translate to large shifts in climate and weather. This hazard occurs at a regional geographic level; therefore, climate change is likely to uniformly expose the entire County.

Potential Impacts from Climate Change are addressed under each potential hazard.

Hazard Profile – Atmospheric

Atmospheric Hazards are natural hazards where processes operating in the atmosphere are mainly responsible.

Extreme Temperatures

Description and Background

The extreme temperature hazard includes extreme heat and extreme cold. Both occur at a regional geographic level, uniformly exposing the entire County to their impacts.

Extreme Heat: Extreme heat includes temperatures that hover 10 degrees or more above the normal summer high temperature and last for several weeks. The normal summer high temperature in Polk County is 95 degrees. The heat index may reach up to 115 degrees. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a "dome" of high atmospheric pressure traps hazy, damp air near the ground where the temperature and relative humidity combine for a dangerous heat index. Excessively dry and hot conditions can provoke dust storms and low visibility. Droughts occur when a prolonged period passes without substantial rainfall. A heat wave combined with a drought is dangerous. Extreme heat can occur throughout the State but typically occurs in the summer between the months of June and September. As illustrated in Figure V.1, Polk County has a high summer heat index. Extreme heat impacts humans and agriculture.

Heat Wave: A heat wave is primarily a public health concern. In 1979, meteorologist R.G. Steadman, developed the Heat Index shown in Table V-3 to illustrate the risks associated with extreme summer heat. The listed heat disorders describe the general effect on people in high-risk groups. The Heat Index, also called apparent temperature, is a measure of how hot it really feels upon combining relative humidity and the actual air temperature.

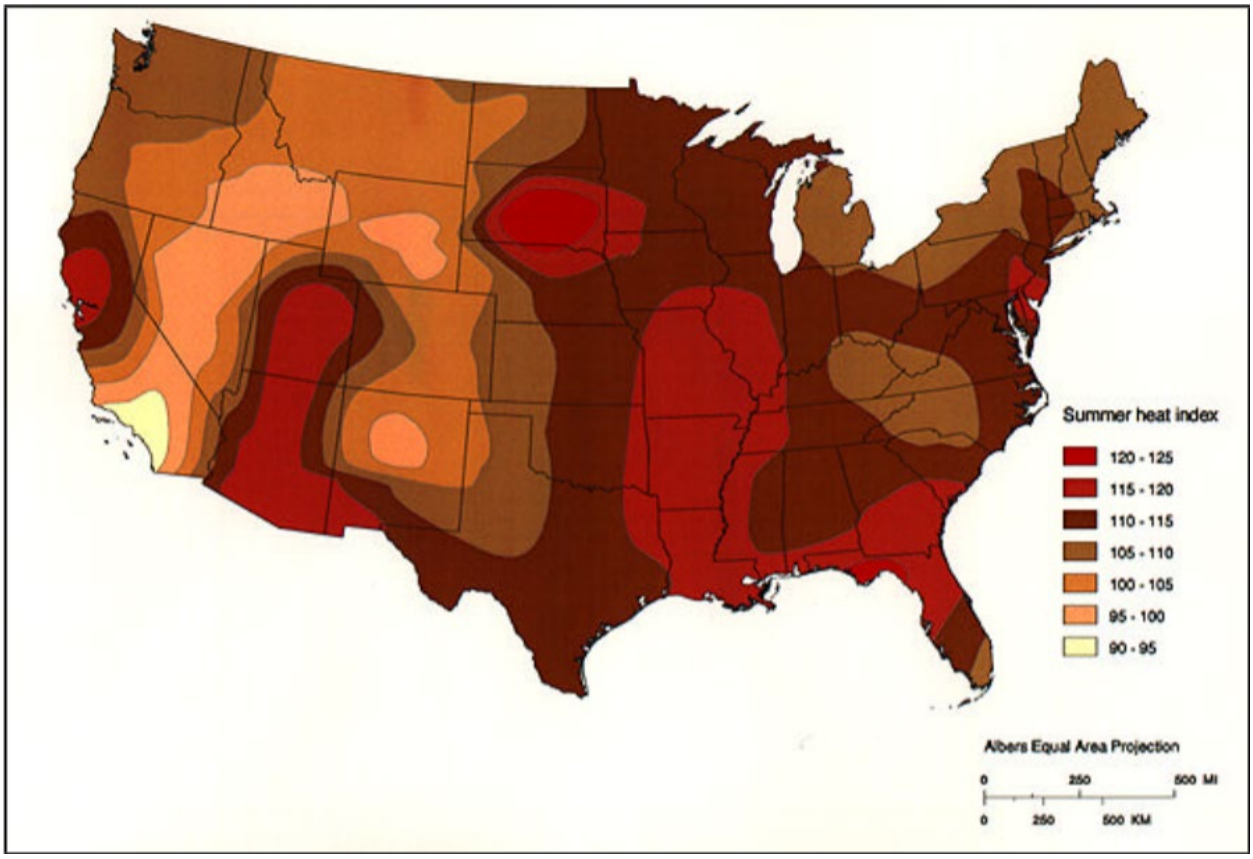


Figure V.1: Severity and areal extent of extreme summer heat; Source: FEMA.gov

TABLE V-3:
HEAT DANGER CATEGORIES (HEAT INDEX)

Danger Category	Heat Disorders	Apparent Temperature (˚F)
I. Caution	Fatigue possible with prolonged exposure and/or physical activity	80-90
II. Extreme Caution	Sunstroke, heat cramps, or heat exhaustion possible with prolonged exposure and/or physical activities	90-105
III. Danger	Sunstroke, heat cramps, or heat exhaustion likely; heat stroke possible with prolonged exposure and/or physical activity	105-130
IV. Extreme Danger	Heatstroke or sunstroke is highly likely with continued exposure	>130

Source: NOAA; http://www.srh.noaa.gov/oun/?n=safety-summer-heatindex

The National Weather Service issues the following advisories for heat related weather:

- Excessive Heat Warning – Issued when daytime heat index values are expected to reach or exceed 113 degrees Fahrenheit.
- Excessive Heath Watch – Issued when heat index values could reach or exceed 113 degrees Fahrenheit.

- Heat Advisory – When daytime heat index values are expected to be between 108 and 112 degrees Fahrenheit.

Extreme Cold: Extreme Cold includes temperatures at or below freezing for an extended period. Extreme Cold can be a prolonged period of excessively cold weather, and/or a sudden invasion of very cold air over a large area. Along with frost, this hazard can cause damage to agriculture, infrastructure, and property.

Freeze: According to the National Oceanic and Atmospheric Administration's (NOAA's) National Weather Service, a freeze occurs when surface air temperatures are at or below 32 degrees Fahrenheit over a widespread area for a climatologically significant period. Freeze warnings are issued during the growing season when meteorologists anticipate surface temperatures will drop below freezing over a large area for an extended period, regardless of whether frost develops. Exposure to temperatures below freezing for extended periods of time may damage or kill crops. Freezes may also cause damage to infrastructure.

Frost, often associated with freezes, is a layer of ice crystals produced by the deposit of water from the air onto a surface that is at or below freezing. A freeze warning is issued to inform public and agricultural interests of anticipated freezing conditions over a large area. Similarly, a hard freeze warning is issued under the same conditions as a freeze warning, but the temperatures are at or below 28˚ F for a duration of four hours or more. Certain agricultural crops in Polk County are vulnerable to freezing and hard freeze events.

Historical Occurrences

According to Sheldus and NOAA's National Centers for Environmental Information (NCEI), frost or freezes were reported for Polk County January 2018, March 2018, January 2020, February 2020, and January 2022 and heat occurrences were reported for Polk County March 2021 and May 2021. No other incidents of frost/freeze or heat were reported by NCEI in the past five years.

Potential Impacts

As an inland county, Polk County is more vulnerable to temperature extremes since it is located further away from the moderating influences of the ocean or an estuary. During extended periods of high temperatures, or high temperatures with high humidity, individuals can suffer heat stroke, heat exhaustion, heat syncope, and heat cramps. Extreme heat can ultimately cause death. Most heat disorders occur because the individual has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and the sick or overweight are more likely to succumb to extreme heat. During extended periods of low temperatures, individuals can suffer hypothermia and frostbite. Those at highest risk are primarily engaged in outdoor activities or are the elderly who are chronically exposed to colder indoor temperatures. Populations vulnerable to temperature extremes include the elderly, the very young, the homeless, and low-income individuals.

Temperatures remaining below the freezing point for four hours or more may severely affect agriculture production. Extreme temperatures may result in total crop loss or destruction of the plants or trees. Freezes are a significant recurring threat to the agriculture industry. On average, the State can expect a mild freeze every one to two years with hard freezes occurring less often. The number of nights with frost and/or freezing temperatures can vary from 23 to as many as 66 during the winter growing season.

Extreme temperatures can impact power usage and generation; however, this rarely results in structural losses. The demand for water increases during periods of hot weather. In extreme heat waves, people use water to cool bridges and other metal structures susceptible to heat failure. This can result in reduced water supply and water pressure and impact fire suppression in urban and rural areas. The rise in water temperature during heat waves contributes to the degradation of water quality, and negatively impacts fish populations. It can also lead to the death of other organisms in aquatic ecosystems. Scientists have linked high temperatures to rampant algae growth, causing fish kills in rivers and lakes. Potential losses to agriculture depend on when the growing season occurs.

Climate Change, Changes in Population, and Changes in Land Use and Development

In the coming decades, rising temperatures are likely to increase the frequency of unpleasantly hot days. As the atmosphere warms, evaporation increases causing a rise in humidity, average rainfall, and the frequency of heavy rainstorms in many places, including Florida. Like other seasons, winters have been getting warmer due to climate change. Overall, climate change is not expected to increase occurrences or magnitude of winter storms and freezes in Florida. However, that does not mean that winter storms and freezes will cease in Florida. Climate variability will continue to influence daily temperature variability, and isolated or prolonged winter freeze events in Florida are expected to continue to occur in the future.

Florida homes often lack adequate heating and insulation. Florida's outdoor lifestyle can lead to danger for those not prepared for freezing temperatures. In addition, freezing temperatures in Polk County can cause widespread damage to sensitive plants and crops (NWS). Like other seasons, winters have been getting warmer due to climate change. Warmer winters can affect water supplies, energy use, fruit and crop yields and growing seasons, disease-carrying pests, and winter recreation. Overall, climate change is not expected to increase occurrences or magnitude of winter storms and freezes in the County and its jurisdictions. However, that does not mean that winter storms and freezes will not occur. Climate variability will continue to influence daily temperature variability, and isolated or prolonged winter freeze events can be expected to continue to occur in the future. As population and development increase in the County and its jurisdictions, the probability that freezing temperatures will cause environmental damage or human casualties also increases. With more people migrating to Polk County and its jurisdictions, a larger percentage of the land and population may become more vulnerable to hazards. The higher standards adopted by Florida's Building Code decrease vulnerability.

Probability of Future Occurrences

Historically, the County has experienced extreme temperatures annually. Generally, no damages have been associated with these events. Sustained episodes of high heat can result in illness and fatalities in susceptible populations. As the County's population of elderly people increase, impacts from this potential hazard will increase. There are no recorded occurrences of extreme summer heat impacting Polk County in which jurisdictions have taken response actions beyond public service announcements. Polk County averages three to four freezes annually with cold fronts occurring approximately every 10 to 14 days throughout the winter. The frequency of extreme heat events is likely to occur every two to seven years

based on the naturally occurring El Niño/La Niña cycle. In Florida, La Niña years include reduced rainfall and higher temperatures. The probability of future extreme temperatures is medium.

Fog

Description and Background

Fog consists of dense clouds of tiny water droplets suspended in the air above land or water surfaces. Radiation fog occurs because of heat loss by radiative cooling of moist air. Advection fog occurs where warm, moist air moves over a cold surface, or cold air moves over a body of warm water. Fog is generally a danger where visual sensing and signals are essential to safe activity or operations (Hewitt, Kenneth). Thick masses of fog are often dense and can rapidly drop visibility levels. Unlike tornadoes or floods, fog itself does harm only indirectly, by paralyzing, seriously reducing, or slowing down the movement of persons and goods (Hewitt, Kenneth). Fog incidents can occur throughout the entire County.

Figure V.2: Fog on US 98 near Bartow
Source: CFRPC

Historical Occurrences

The most significant fog event in Polk County occurred on January 9, 2008, when a mixture of fog and smoke from a prescribed burn covered portions of Interstate 4 causing 70 vehicles to collide near mile marker 47, resulting in 5 deaths and 38 injuries.

From 2018 to 2024, neither the National Centers for Environmental Information (NCEI) nor SHELDUS recorded any fog-related events in the County. However, dense fog has been a contributing factor in several major accidents. On January 25, 2017, Fox 13 reported that heavy fog caused a seven-car pileup in Lake Wales. More recently, on February 28, 2022, The Daily Ridge reported that dense fog contributed to a six-vehicle accident.

Potential Impacts

Foggy conditions may cause accidents due to low visibility and the impairment of a driver's perceptual judgments of speed and distance. Foggy conditions can lead to chain-reaction accidents, which can cause

property damage and loss of life. As illustrated in Figure V.3, the Interstate 4 corridor running through Polk County has a high volume of fog related crashes. There are a variety of road sections, intersections, and rail crossings in the County that are more susceptible to the impacts of foggy conditions (See Section VI).

Probability of Future Occurrences

According to Geography Hunter and Florida Department of Transportation (FDOT), Central Florida and Polk County can expect to experience 15 to 20 days per year with heavy fog, with events more likely to occur in cold months. The probability of future significant fog impacts is medium.

Hurricanes and Tropical Storms

Description and Background

Hurricanes and tropical storms (cyclones) are closed circulation systems developing around a low-pressure center in which the winds rotate counterclockwise in the Northern Hemisphere (or clockwise in the Southern Hemisphere) and whose diameter averages 10 to 30 miles across. A tropical cyclone refers to any such circulation that develops over tropical waters. Tropical cyclones function as a "safety-valve," limiting the continued build-up of heat and energy in tropical regions by maintaining the atmospheric heat and moisture balance between the tropics and the pole-ward latitudes. The primary damaging forces associated with hurricanes and tropical storms are high-level sustained winds, heavy precipitation, and tornadoes. Coastal areas are vulnerable to the additional forces of storm surge, wind-driven waves, and tidal flooding, which can be more destructive than cyclone wind.

The energy source for a tropical cyclone is the release of latent heat from the condensation of warm water. Tropical cyclone formation requires: a low-pressure disturbance; warm sea surface temperature; rotational force from the spinning of the earth; and the absence of wind shear in the lowest 50,000 feet of the atmosphere. Most hurricanes and tropical storms form in the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico during the official Atlantic hurricane season, which encompasses the months of June through November. The Atlantic hurricane season peaks early to mid-September, and the average number of storms that reach hurricane intensity per year is approximately six.

Figure V.3: Hurricane Charley damage at Quails Bluff Apartments in Lake Wales; Source: The Tampa Tribune, 2004

As a hurricane develops, barometric pressure (measured in millibars or inches) at its center falls and winds increase. If the atmospheric and oceanic conditions are favorable, a tropical depression may form. When maximum sustained winds reach or exceed 39 miles per hour, the system becomes a named tropical storm, and the National Hurricane Center in Miami, Florida closely monitors it. When sustained winds reach or exceed 74 miles per hour the storm is classified as a hurricane. The Saffir-Simpson Scale further classifies Hurricane intensity on a scale of 1 to 5, with 5 being the most intense. The Saffir-Simpson Scale categorizes hurricane intensity linearly based upon maximum sustained winds, barometric pressure, and storm surge potential, which estimate potential damage. Categories 3, 4, and 5 are "major" hurricanes. Hurricanes within this range comprise 20 percent of total tropical cyclone landfalls, but they account for over 70 percent of the damage in the United States.

Hurricanes and tropical storms threaten the Atlantic and Gulf coasts of the United States. Landfalling storms directly impact coastal regions but may also impact areas hundreds of miles inland. All areas of Polk County are susceptible to the accompanying hazard effects of extreme wind, flooding, and tornadoes.

TABLE V: SAFFIR-SIMPSON HURRICANE WIND SCALE

Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph	Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96-110 mph	Extremely dangerous winds will cause extensive damage: Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3	111-129 mph (major)	Devastating damage will occur: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4	130-156 mph (major)	Catastrophic damage will occur: Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5	157 mph or higher (major)	Catastrophic damage will occur: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Source: https://www.nhc.noaa.gov/aboutsshws.php

Historical Occurrences

The most prominent hurricanes and tropical storms occurred in 2004 when three hurricanes (Charley, Frances, and Jeanne) directly impacted and one hurricane (Ivan) indirectly impacted Polk County:

- Hurricane Charley on August 13, 2004;
- Hurricane Frances on September 4, 2004;
- Hurricane Ivan on September 16, 2004; and
- Hurricane Jeanne on September 26, 2004.

FEMA declarations for Polk County hurricanes and tropical storms since 2018 include:

2022 Hurricane Ian
The County received Public Assistance for Categories A-G and Individual Assistance (FEMA declaration # 4673-FL).

2022 Hurricane Nicole
The County received Public Assistance for Category B (FEMA declaration #4680-DR).

2024 Hurricane Idalia
The County received Public Assistance for Category B (FEMA declaration #4734-DR).

2024 Hurricane Debby
The County received a declaration of Public Assistance (FEMA declaration #4806-DR).

2024 Hurricane Milton
The County Received a declaration of Public Assistance (Categories A-G) and Individual Assistance (FEMA declaration #4834-DR).

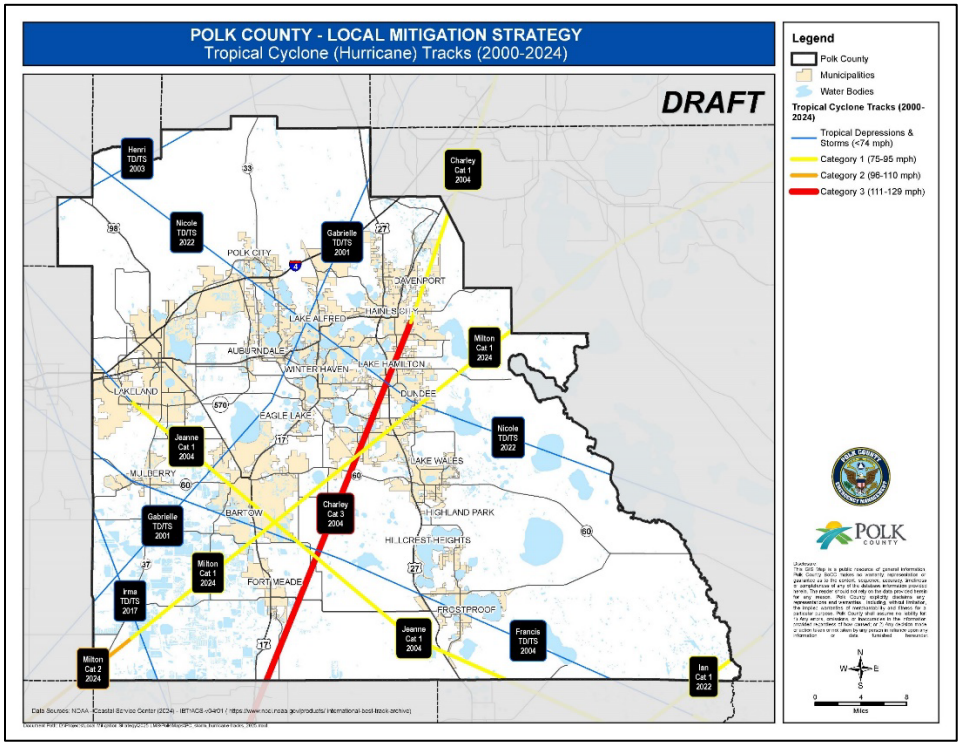


Figure V.4: Hurricane tracks for Polk County 2000-2024; Source: NOAA-Coastal Service Center (2024) https://www.ncei.noaa.gov/products/international-best-track-archive

Table V-5 includes hurricane and tropical storm events between 2018 to 2024.

TABLE V-5:
HURRICANE/TROPICAL STORM INCIDENTS BY JURISDICTION (2009-2019)

Date	Hurricane/Tropical Storm	Location	Damages
9/23/2022	Hurricane Ian	Polk County	Peak winds of 60-78 mph across the county. Lake Wales received almost 17 inches of rain in 24 hours. Estimated crop damages of $55,651.67.
11/10/2022	Hurricane Nicole	Polk County	Estimated crop damages of $27,721.
8/5/2024	Hurricane Debby	Polk County	Peak wind gusts of 40 to 50 mph and rainfall of 4 to 8 inches, with 8.03 inches near Mulberry.
8/30/2024	Hurricane Idalia	Polk County	Wind gusts of 40 to 50 mph with 3 to 6 inches of rainfall. 5.28 inches of rainfall received near Bartow.
10/9/2024	Hurricane Milton	Polk County	Peak wind gusts between 80 to 90 mph. Rainfall ranged from 10 to 15 inches over western parts of the county and 5 to 10 inches elsewhere with an isolated 16.55 inches received near Green Swamp.

Source: National Oceanic and Atmospheric Association; www.ncdc.noaa.gov, SHELDUS, National Weather Service, Polk County's Hurricane Ian After-Action Report

Potential Impacts

Florida has been hit with the most hurricanes in recorded history. Polk County experiences high winds and inland flooding generated from hurricane activity. Tornadoes associated with tropical storms are the most frequent in September and October when the incidence of tropical storms and hurricanes is the greatest. Inland flooding is likely during any hurricane due to the low elevation of much of the County. Hurricane force winds can destroy tall structures, like cell towers; as mobile homes; and other vulnerable structures.

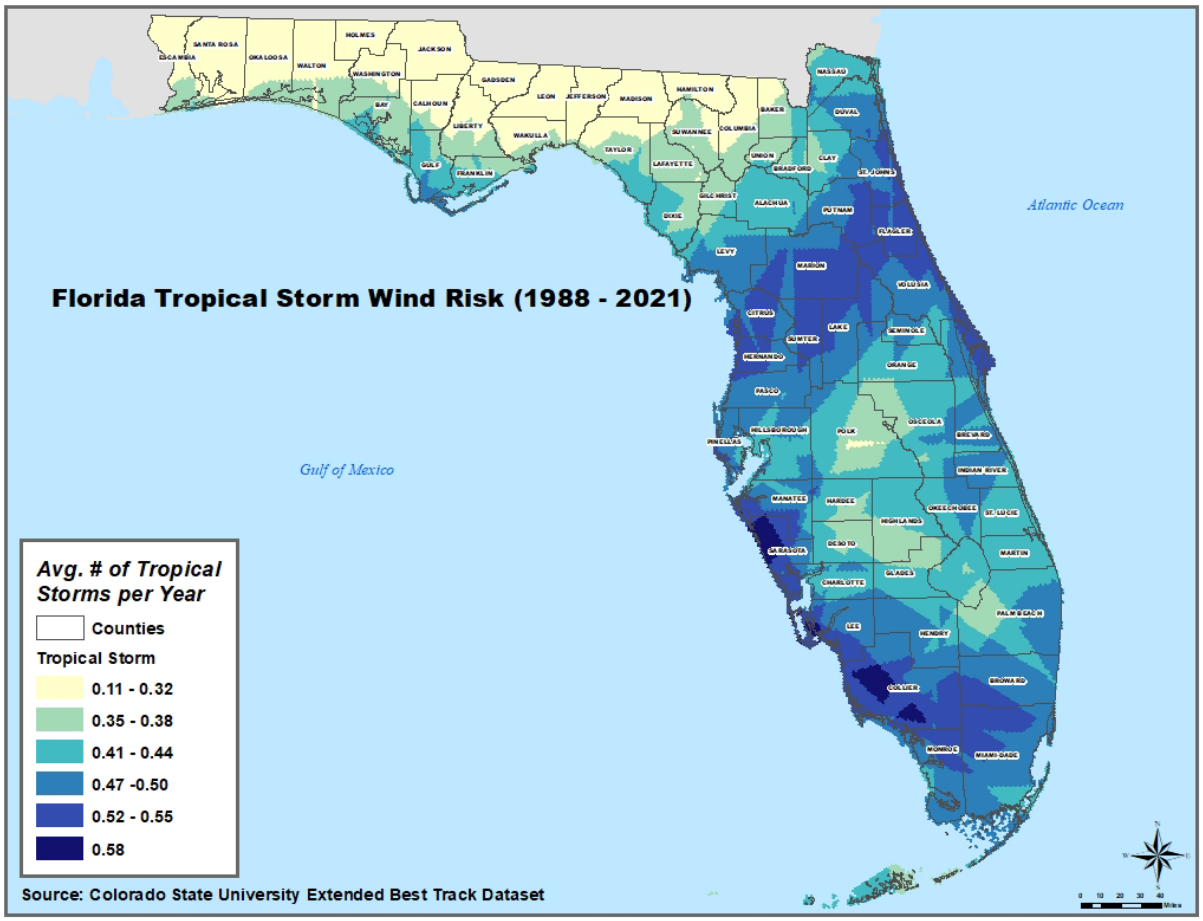


Figure V-5.: Florida tropical storm wind risk (1988-2021);
Source: *2023 State Hazard Mitigation Plan*

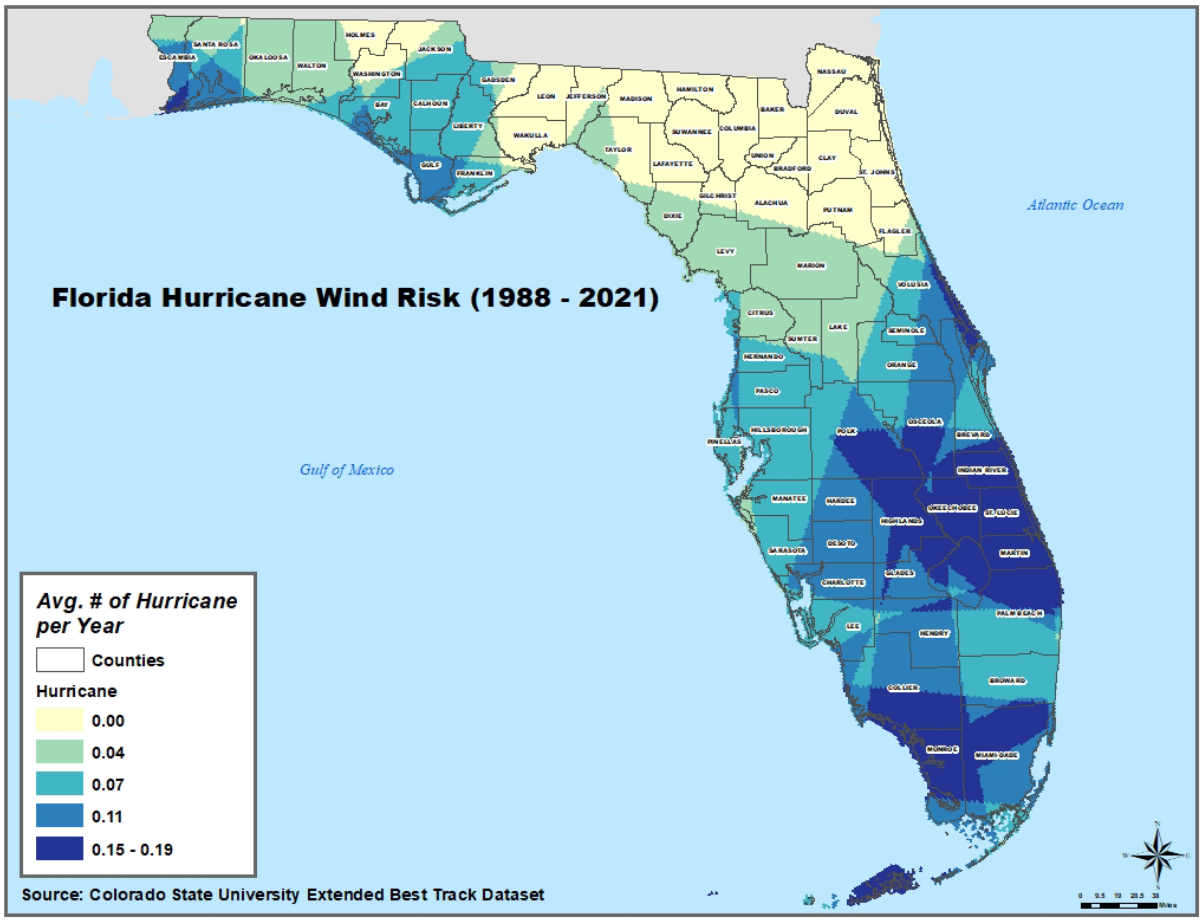


Figure V.6.: Florida hurricane wind risk (1988-2021); Source*: 2023 State Hazard Mitigation Plan*

Climate Change, Changes in Population Patterns, and Changes in Land Use Development

Climate change is significantly impacting hurricanes by making them more intense, with higher wind speeds and increased rainfall due to warmer ocean temperatures, leading to more destructive storm surges when they make landfall, while also potentially causing them to move slower, increasing the duration of their impacts; essentially, climate change is making hurricanes more powerful and dangerous overall. More intense hurricanes may cause an increase in property damage, agricultural damage, displacement of residents, and loss of life. Socioeconomically disadvantaged and the unhoused populations within the County (Section I) are vulnerable to tropical cyclone hazards due to their living environment, poverty, and lack of insurance coverage. As more land is converted from open space/agriculture to residential development, the impacts will be increased.

Probability of Future Occurrences

The probability of hurricanes and tropical storms impacting or affecting the County and its 17 municipalities is very high based on previous occurrences. Recent history indicates that residents can expect a storm to impact Polk County every 2 to 3 years, and the most likely event will be a Category 3 or lesser storm.

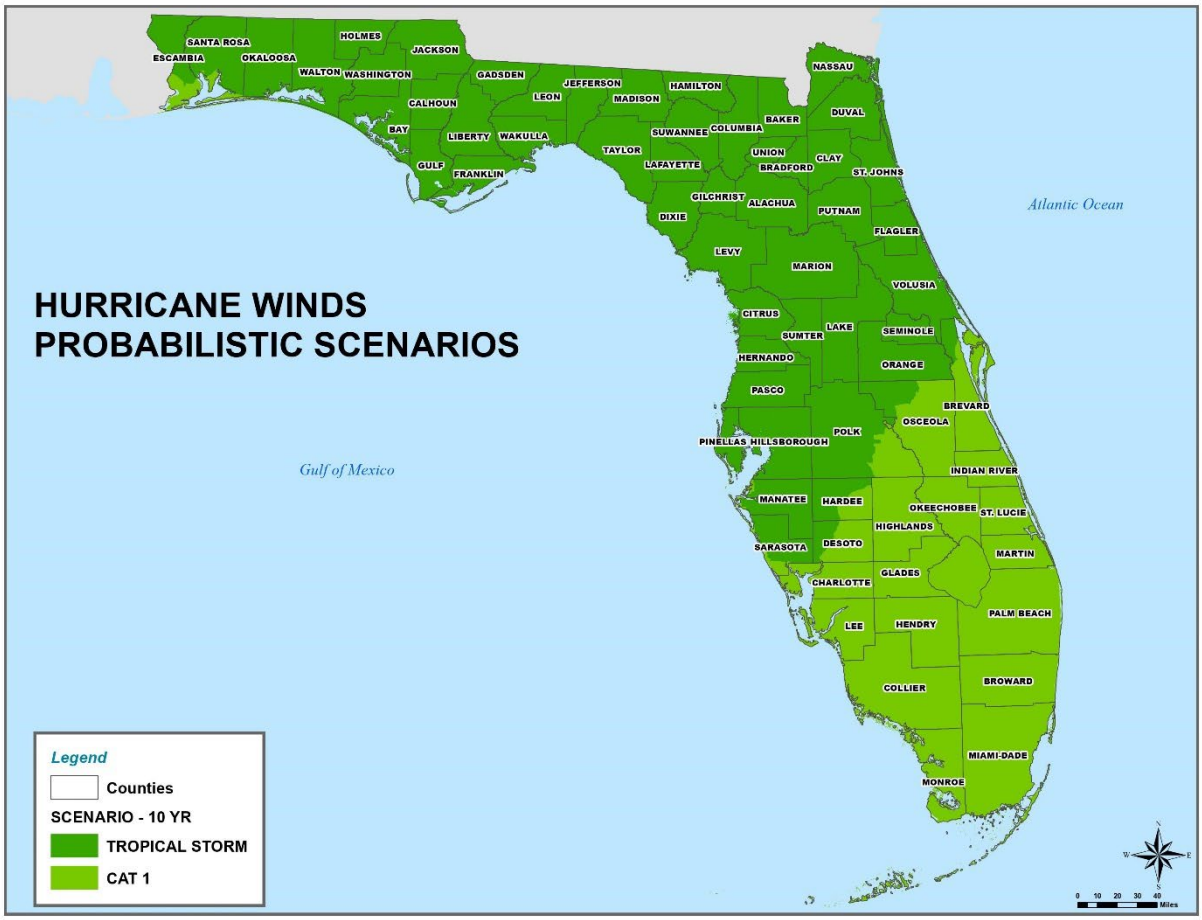


Figure V.7: Hurricane winds probabilistic scenario, 10-year return;
Source: 2023 State Hazard Mitigation Plan

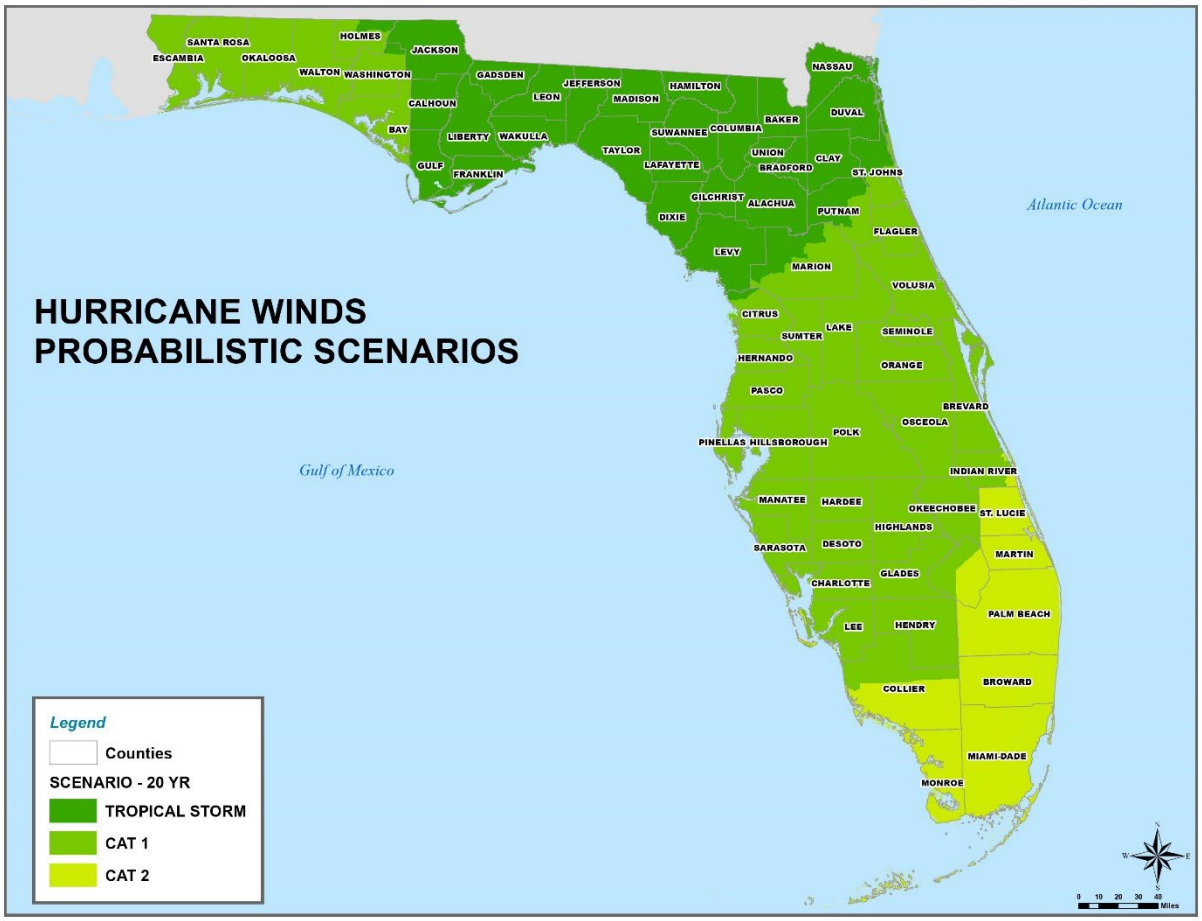


Figure V.8: Hurricane winds probabilistic scenario, 20-year return;
Source: 2023 State Hazard Mitigation Plan

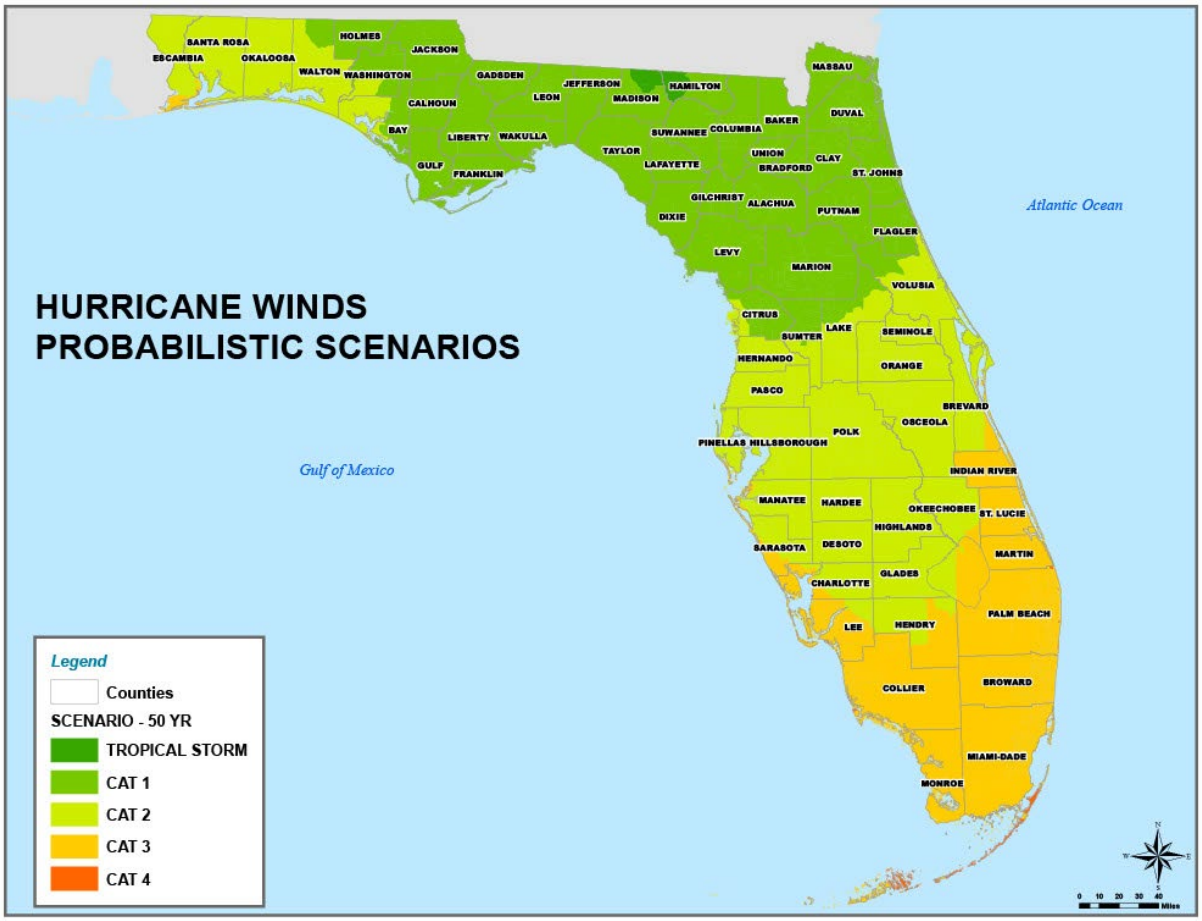


Figure V.9: Hurricane winds probabilistic scenario, 50-year return;
Source: 2023 State Hazard Mitigation Plan

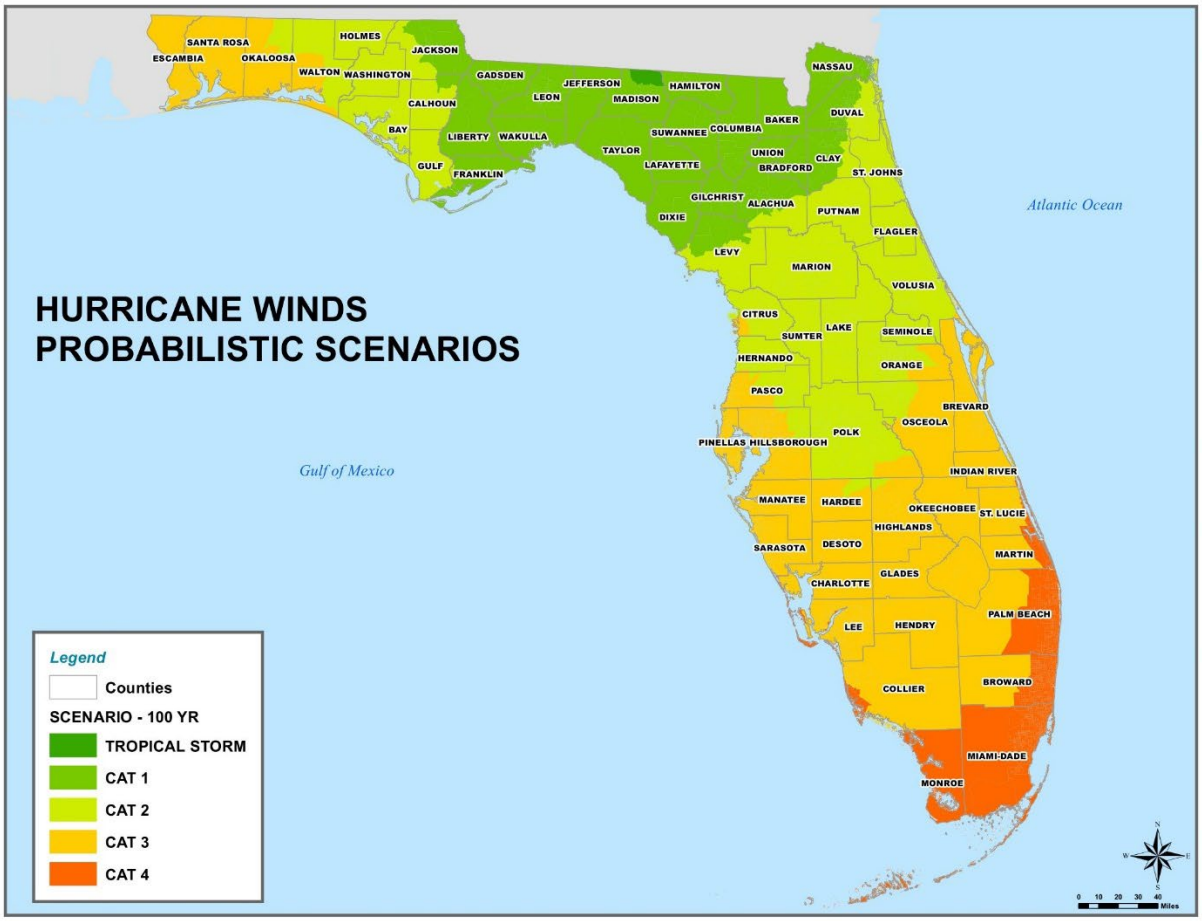


Figure V.10: Hurricane winds probabilistic scenario, 100-year return
Source: 2023 State Hazard Mitigation Plan

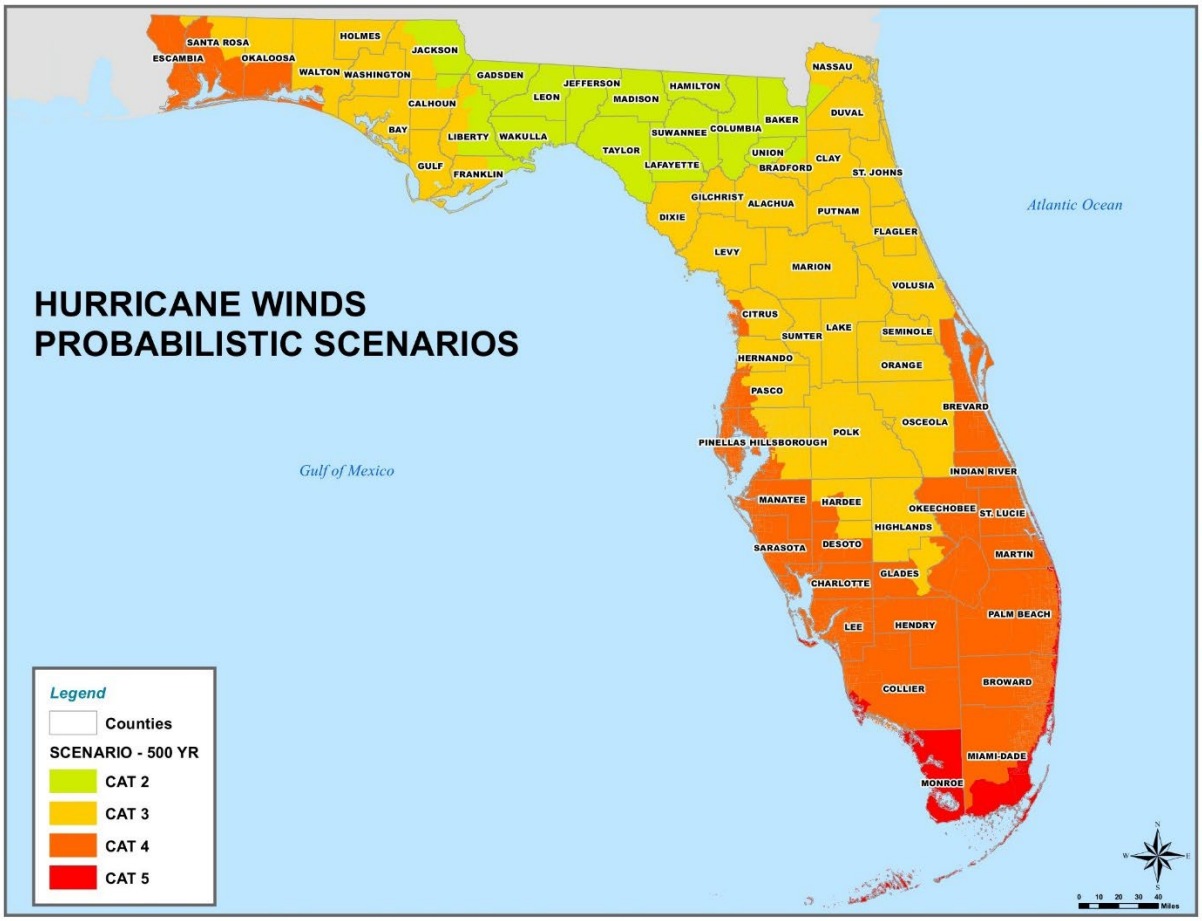


Figure V.11: Hurricane winds probabilistic scenario, 500-year return
Source: 2023 State Hazard Mitigation Plan

Severe Storms and Tornadoes (Hail, Lightning, and Thunderstorms)

Severe storms and tornadoes share components of hail, lightning, and thunderstorms. While they are all related, they can occur independently of each other. This section includes a discussion of each of the components.

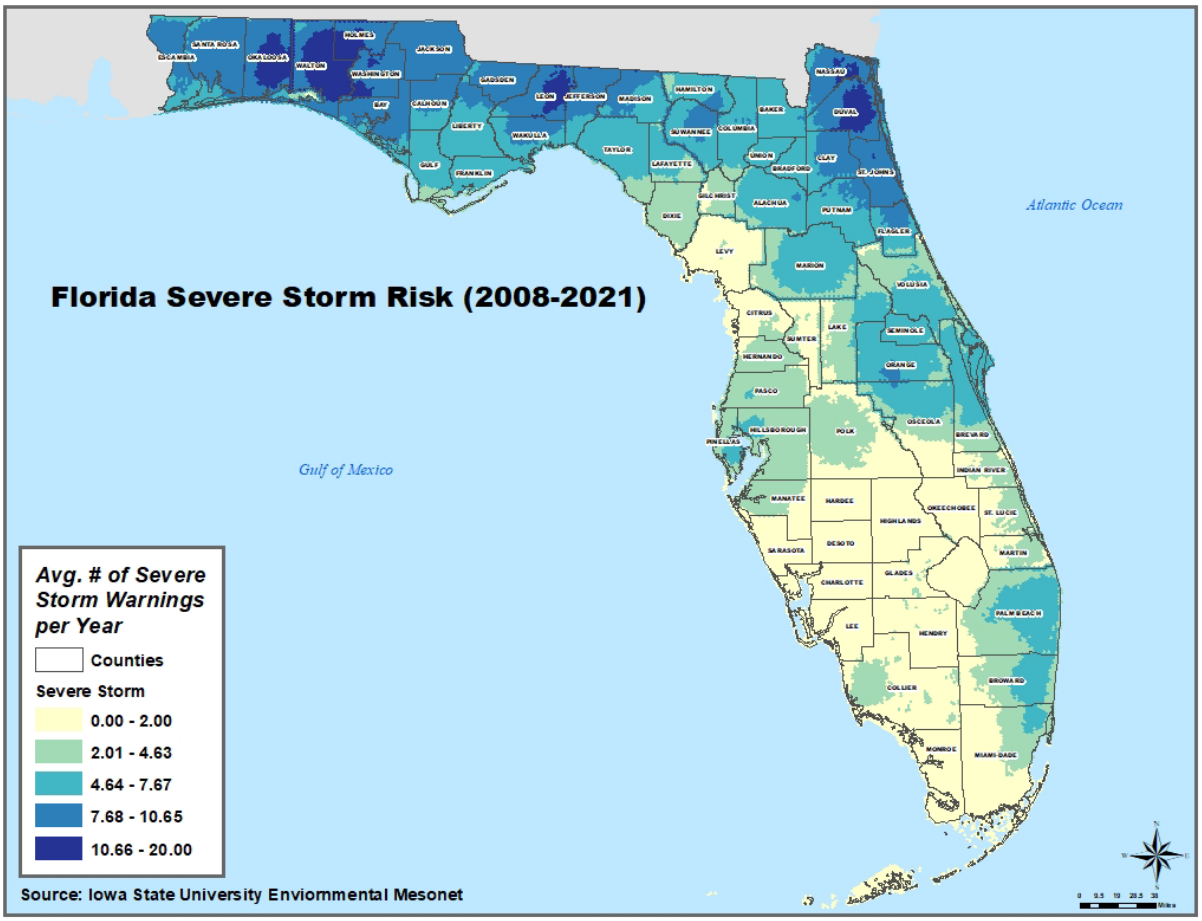


Figure V.12: Florida severe storm risk;
Source: 2023 Florida Enhanced State Hazard Mitigation Plan

Hail

Description and Background

Hail frequently accompanies thunderstorms and has the potential to cause substantial damage. Early in the developmental stages of hail, ice crystals form within a low-pressure front due to the rapid rise of warm air into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until they develop sufficient weight to fall as precipitation. Hail precipitation falls in sphere or irregularly shaped masses greater than 0.75 inches in diameter. The size of hailstones is a direct function of the size and severity of the storm. High velocity updraft winds keep hail in suspension in thunderclouds. The strength of the updraft is a function of the intensity of heating at the Earth's surface. Higher temperature gradients relative to elevation above the surface result in increased suspension time and hailstone size. Hailstones grow when the storm repeatedly blows the frozen droplet into the higher elevations. The hailstone ascends if the updraft velocity is high enough to hold the hailstone. As soon as the size and weight of the hailstone overcome the lifting capacity of updraft, it begins to fall freely under the influence of gravity. A cold downdraft of air accompanies falling hailstones under thunderstorm conditions.

Thunderstorms, which have no geographical imitations to the area they affect, may produce hail. Therefore, all of Polk County is uniformly at risk to a hail event. Impacts typically include downed power lines and trees and damage to vehicles and mobile homes.

Hailstorms are an outgrowth of severe thunderstorms and cause nearly $1 billion in damage to property and crops on an annual basis in the United States. Typical thunderstorms can be 3 miles wide at the base, rise to 40,000 to 60,000 feet in the troposphere, and contain half a million tons of condensed water. Hailstorms are violent and spectacular phenomena of atmospheric convection, always associated with heavy rain, gusty winds, thunderstorms, and lightning.

Historical Occurrences

Incorporated areas of Polk County have experienced slightly more hail events than unincorporated Polk County, at 54 percent, and 45 percent, respectively. Lakeland has experienced the most hail events in the County, followed by Winter Haven, Auburndale, and Mulberry.

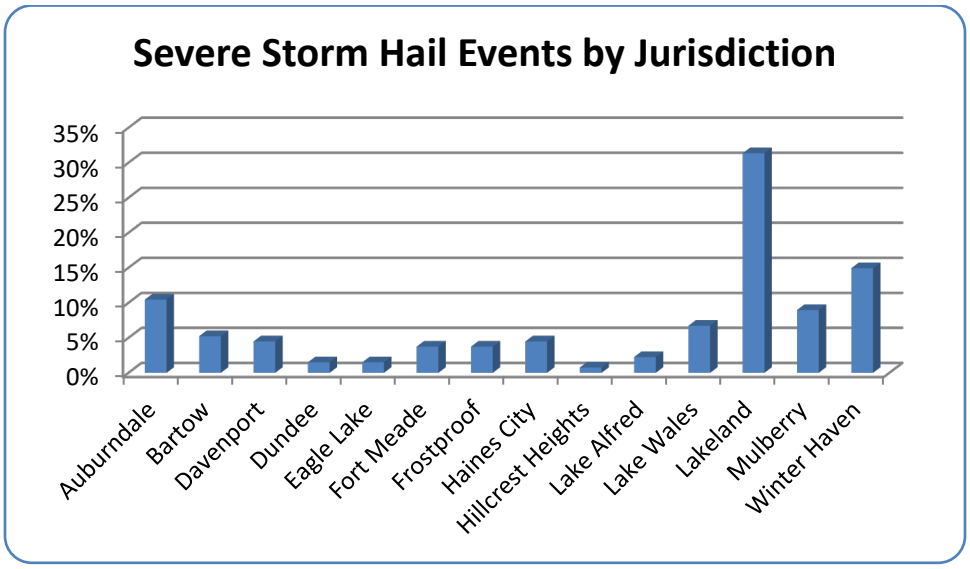


Figure V.13: Severe storm hail events; Source: : National Oceanic and Atmospheric Association Storm Prediction Center

There were 11 events, between 2018 and 2024, as reported by NOAA Storm Prediction Center. Table V-8 includes hail events from 2018-2024.

TABLE *V*-8:
HAIL INCIDENTS BY JURISDICTION (2018 – 2024)

Date	Location	Magnitude (in.)	Deaths	Injuries	Property Damage ($)	Crop Damage ($)
4/10/2018	Unincorporated Polk County	0.75	0	0	0	0
8/12/2020	Unincorporated Polk County	0.75	0	0	0	0

Date	Location	Magnitude (in.)	Deaths	Injuries	Property Damage ($)	Crop Damage ($)
4/17/2022	Unincorporated Polk County	1.00	0	0	0	0
5/15/2022	Unincorporated Polk County	1.00	0	0	0	0
5/15/2022	Davenport	2.00	0	0	0	0
6/18/2022	Winter Haven	1.75	0	0	0	0
4/24/2023	Frostproof	1.00	0	0	0	0
4/25/2023	Unincorporated Polk County	1.00	0	0	0	0
4/26/2023	Unincorporated Polk County	1.00	0	0	0	0
4/26/2023	Winter Haven	1.00	0	0	0	0
4/26/2023	Lake Alfred	1.75	0	0	0	0

Source: National Oceanic and Atmospheric Association Storm Prediction Center

Potential Impacts

Hail can damage structures, vehicles, and crops. The larger the hail, the more damage it can cause. Most hail events in the County produce penny to nickel sized hail. The Hazard Vulnerability and Risk Assessment Section (Section VI) includes a discussion of the impacts.

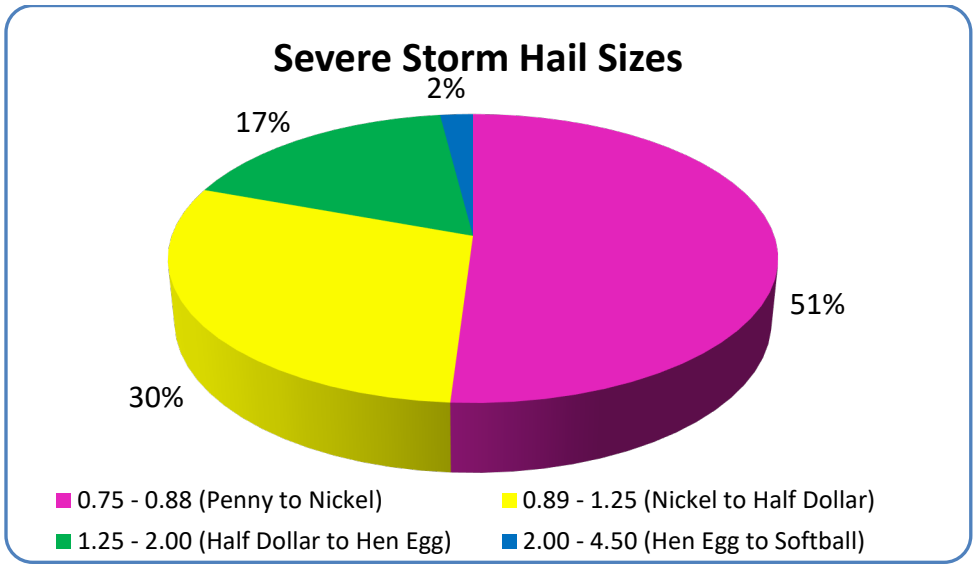


Figure V.14: Severe storm hail sizes; Source: National Oceanic and Atmospheric Association Storm Prediction Center

Probability of Future Occurrences

Due to the number and frequency of hail events in the County, the probability of hail events is high. The probability of hail events is higher for Lakeland, Auburndale, Mulberry, and Winter Haven. The County can expect to experience an average of three hail incidents per year, which are likely to be small to large size hail, that may cause minor damage.

Climate Change, Changes in Population Patterns, Changes in Land Use and Development

According to a fact sheet produced by NOAA, severe thunderstorm and tornado activity is dependent on two things: the strength of atmospheric instability and vertical wind shear. Additionally, natural climate variations, like El Nino and La Nina, have the potential to alter the environment necessary for tornado formation. As such, an assessment of the potential impact to these factors can highlight how climate change may impact severe storms and tornadoes in the future. In general, it is expected that climate change will increase instability in the atmosphere, especially with the higher temperatures and increased humidity associated with the changing climate. Additionally, a weakening vertical wind shear is expected through a reduction in the surface pole-to-equator temperature gradient. The combination of the increased atmospheric instability and weakening vertical wind shear may increase the likelihood of more severe storm events, including tornadoes.

As the population of the County and jurisdictions increase from increased migration of people, the potential impacts from severe storms, hail, and lighting will increase because there are more people to be impacted. As more land is converted from open space/agriculture to development, the impacts to buildings and structures will be increased. Since these hazards impact the entire county, patterns of development will not change the impacts of the hazards – other than through the use of stronger building codes.

Lightning

Description and Background

Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a "bolt" when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes, but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air causes thunder, which often accompanies lightning strikes. While most often affiliated with severe thunderstorms, lightning often strikes outside of heavy rain and might occur as far as 10 miles away from any rainfall.

Figure V.15: Lightning; Source: Shutterstock

Central Florida is the most lightning prone area in the United States. Because of this, Florida has more lightning deaths than any other state. Lightning kills more people in Florida than all other weather hazards combined. Florida's thunderstorm season has two general periods. Early May to early October is known as the wet season. Conversely, October through May is known as the dry season. Historically, the most dangerous months are May and June due to an abundance of moisture, atmospheric instability, and storm triggering sea breezes. Moisture is almost always prevalent in the summer because Florida is a peninsula between the Gulf of Mexico to the west and the warm Atlantic Gulfstream to the east. Instability is a function of surface heat and cool air aloft that is present for most of the summer season. Thunderstorms need a trigger to start. The sea breeze that forms daily on the Atlantic and Gulf coasts may become the trigger. As a sea breeze forms, it typically moves inland (from the Atlantic or Gulf of Mexico) and dramatically aids thunderstorm formation. Surface winds also play a big part in determining which areas get the most lightning and at what time. With westerly morning winds across the peninsula, afternoon thunderstorms tend to accumulate on the east coast. If the morning winds are from the east, afternoon thunderstorms will cluster on the west coast.

Lightning seeks the path of least resistance on its way to and through the ground. The human body is a good conductor because of its large water content. Metal is a better conductor than most objects so lightning can travel easily through metal objects such as fences or railroad tracks, which can conduct electricity for long distances.

Polk County is in a region of the country that is particularly susceptible to lightning. Figure V.20 shows the total lightning density for the years 2016-2023 based upon data provided by Vaisala's U.S. National Lightning Detection Network (NLDN®). Lightning occurs randomly and is, therefore, impossible to predict where it will strike. The LMS assumes that lightning, which strikes in very small, specific geographic areas, uniformly impacts all of Polk County.

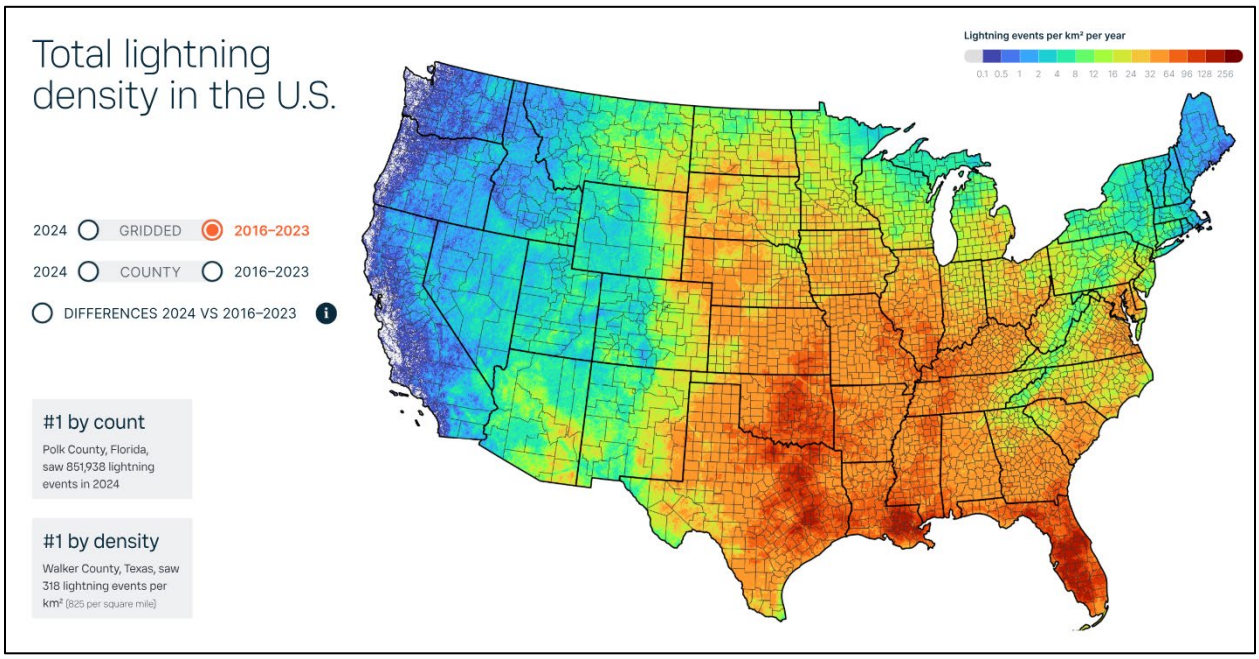


Figure V.16: Total lightning density 2016-2023; Source: Vaisala.com

Vaisala states Polk County is the number one county in the United States for total lightning density in 2024 with 851,938 lightning events.

Historical Occurrences
According to SHELDUS, there have not been any lightning events in the past five years.

Potential Impacts
Lightning occurs randomly and it is impossible to predict when and where it will strike. The LMS assumes lightning strikes can occur anywhere in Polk County. Impacts from lightning have included deaths and injuries, damage to electrical systems, wildfires, and structure fires that have destroyed residential and commercial property. The Hazard Vulnerability and Risk Assessment Section (Section VI) includes a discussion of the impacts on specific assets.

Probability of Future Occurrences
The probability of occurrence for future lightning events in Polk County is high. Given the regular frequency of occurrence, future lightning events will continue to threaten life and property throughout Polk County.

Climate Change, Changes in Population Patterns, Changes in Land Use and Development
According to a fact sheet produced by NOAA, severe thunderstorm and tornado activity is dependent on two things: the strength of atmospheric instability and vertical wind shear. Additionally, natural climate variations, like El Nino and La Nina, have the potential to alter the environment necessary for tornado formation. As such, an assessment of the potential impact to these factors can highlight how climate change may impact severe storms and tornadoes in the future. In general, it is expected that climate change will increase instability in the atmosphere, especially with the higher temperatures and increased humidity associated with the changing climate. Additionally, a weakening vertical wind shear is expected through a reduction in the surface pole-to-equator temperature gradient. The combination of the increased atmospheric instability and weakening vertical wind shear may increase the likelihood of more severe storm events, including tornadoes.

As the population of the County and jurisdictions increase from increased migration of people, the potential impacts from severe storms, hail, and lighting will increase because there are more people to be impacted. As more land is converted from open space/agriculture to development, the impacts to buildings and structures will be increased. Since these hazards impact the entire county, patterns of development will not change the impacts of the hazards – other than through the use of stronger building codes.

Thunderstorms

Description and Background
Air masses of varying temperatures meeting in the atmosphere cause thunderstorms. Rapidly rising warm moist air fuels the formation of thunderstorms. Thunderstorms may occur singularly, in lines, or in clusters. They can move through an area very quickly or linger for several hours.

Thunderstorms are common throughout Florida and occur throughout the year. Although thunderstorms generally affect a small area, they are dangerous given their ability to produce accompanying hazards

including high winds, hail, and lightning, which all may cause serious injury or death, in addition to property damage.

Thunderstorms need three conditions to form: 1) moisture must form clouds and rain; 2) unstable air, such as warm air that can rise rapidly (which officials refer to as the "engine" of the storm); and 3) lift which in the form of cold or warm fronts, sea breezes, mountains, or the sun's heat. Air masses of varying temperatures then meet, forming a thunderstorm. These storm events can occur singularly, in lines, or in clusters. Thunderstorms can move through an area quickly or linger for several hours.

Table V-10 illustrates the Beaufort Wind Force Scale's effects on land, which is an empirical measure of related wind speed to observed conditions at sea or on land.

TABLE V-10:
THE BEAUFORT WIND FORCE SCALE – EFFECTS ON LAND

Force	Wind (Knots)	WMO Classification	Appearance of Wind Effects on Land
0	Less than 1	Calm	Calm, smoke rises vertically
1	1-3	Light Air	Smoke drift indicates wind direction, still wind vanes
2	4-6	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	11-16	Moderate Breeze	Dust, leaves, and loose paper lifted; small tree branches move
5	17-21	Fresh Breeze	Small trees in leaf begin to sway
6	22-27	Strong Breeze	Larger tree branches moving, whistling in wires
7	28-33	Near Gale	Whole trees moving, resistance felt walking against wind
8	34-40	Gale	Twigs breaking off trees, generally impedes progress
9	41-47	Strong Gale	Slight structural damage occurs; slate blows off roofs
10	48-55	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	Violent Storm	--
12	64+	Hurricane	--

Source: National Oceanic and Atmospheric Association; https://www.spc.noaa.gov/faq/tornado/beaufort.html

Geographical boundaries do not confine severe thunderstorms (typically widespread events) and their related hazardous elements (including lightning, hail, and straight-line winds). While thunderstorms can occur in all regions of the United States, they are most common in the central and southern states because atmospheric conditions in those regions are favorable for generating these powerful storms. The LMS assumes severe storms uniformly impact the entire County and that the spatial extent is large.

Historical Occurrences

The historical data for thunderstorms includes the data in this section on tornadoes, wind, and hail.

Potential Impacts

Severe storms are localized events that can impact the entire County and affect residents, visitors, transportation routes, utilities, businesses, crops, and livestock. Thunderstorms can cause flooding, property damage, and disruption of utility services such as power, telephones, or cable. Lightning strikes can ignite wildfires or structure fires. The damage from severe storms depends on when and where they occur and can vary based on wind and weather patterns. Generally, severe storms injure people because of exposure to objects and debris propelled by high winds, exposure to lightning strikes, flash flooding, and localized inundations. The Hazard Vulnerability and Risk Assessment Section (Section VI) includes a discussion of the impacts to specific assets.

Probability of Future Occurrences

Thunderstorms are frequent in Polk County. During the summer, Polk County experiences a thunderstorm nearly every afternoon. Based on the historical frequency of thunderstorm events in Polk County, the probability of future occurrences is high.

Severe Storm Wind Events

Probability of Future Occurrences

From 1956 to 2023, most of the severe wind events in Polk County have occurred in incorporated areas (62 percent). Of the incorporated jurisdictions, Lakeland has experienced the most events (19.2 percent), followed by Winter Haven (11.6 percent), and Bartow (7.2%). Highland Park and Lake Hamilton did not experience any events.

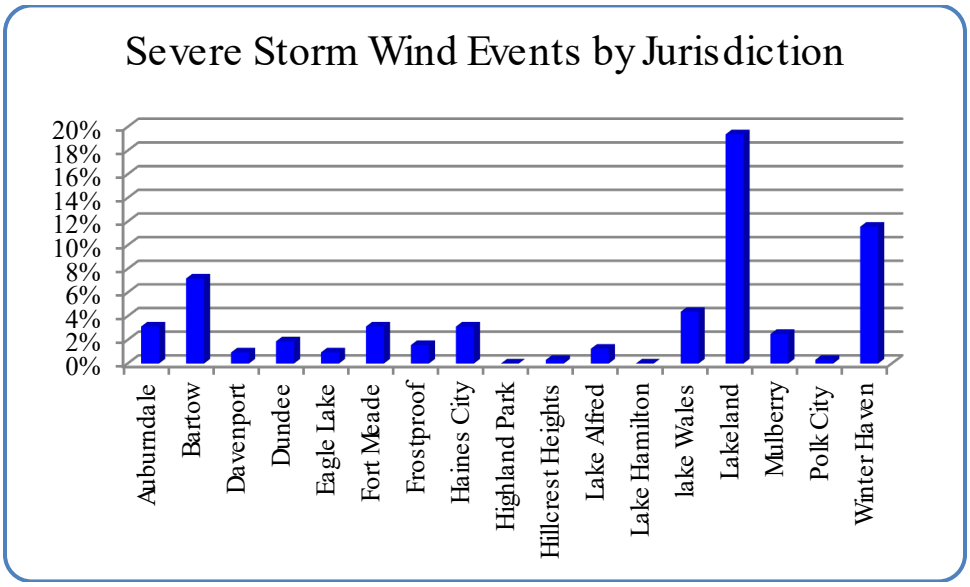


Figure V.17: Severe storm wind by jurisdictions

Climate Change, Changes in Population Patterns, Changes in Land Use and Development

According to a fact sheet produced by NOAA, severe thunderstorm and tornado activity is dependent on two things: the strength of atmospheric instability and vertical wind shear. Additionally, natural climate

variations, like El Nino and La Nina, have the potential to alter the environment necessary for tornado formation. As such, an assessment of the potential impact to these factors can highlight how climate change may impact severe storms and tornadoes in the future. In general, it is expected that climate change will increase instability in the atmosphere, especially with the higher temperatures and increased humidity associated with the changing climate. Additionally, a weakening vertical wind shear is expected through a reduction in the surface pole-to-equator temperature gradient. The combination of the increased atmospheric instability and weakening vertical wind shear may increase the likelihood of more severe storm events, including tornadoes.

As the population of the County and jurisdictions increase from increased migration of people, the potential impacts from severe storms, hail, and lighting will increase because there are more people to be impacted. As more land is converted from open space/agriculture to development, the impacts to buildings and structures will be increased. Since these hazards impact the entire county, patterns of development will not change the impacts of the hazards – other than through the use of stronger building codes.

Tornadoes

Description and Background

A tornado is a violently rotating column of air that contacts the ground and is often visible as a funnel cloud. Its vortex rotates cyclonically with wind speeds ranging from as low as 40 mph to as high as 300 mph. Tornadoes frequently generate from thunderstorm activity when cool, dry air intersects and overrides a layer of warm, moist air, forcing the warm air to rise rapidly. The destruction caused by tornadoes ranges from light to catastrophic depending on the intensity, size, and duration of the storm. In general, the tornadoes that occur in Florida are less intense than those that occur in the Great Plains but can produce substantial damage (see Table V-12, Enhanced Fujita Intensity Scale).

Figure V.18: Severe Thunderstorms and suspect tornado cause damage at Lakeland Linder Airport. Source: Orlando Sentinel; Courtesy of Michael Daniels

Supercell thunderstorms spawn the most powerful tornadoes. Under the right conditions, horizontal wind shears (winds moving in different directions at different altitudes) impact these storms. The wind shears

cause horizontal columns of air to rotate. This horizontal rotation may tilt vertically from violent updrafts, and the rotation radius can shrink, forming a vertical column of fast swirling air. This rotating air can eventually reach the ground, forming a tornado. At present, there is no way to predict exactly which storms will spawn tornadoes or where the tornadoes will touch down. Doppler radar systems have greatly improved the forecaster's warning capability, but the technology usually provides lead times from only a few minutes up to about 30 minutes. Consequently, early warning systems and preparedness actions are critical.

The Enhanced Fujita Intensity Scale (Enhanced F-scale) is a set of wind estimates (not measurements) based on damage (Table V-12). It uses three-second gusts estimated at the point of damage based on a judgment of eight levels of damage. These estimates vary with height and exposure. The three second gust is not the same wind as in standard surface observations. Weather stations take standard measurements in open exposures, using a directly measured "one-minute mile" speed.

TABLE V-12:
THE ENHANCED FUJITA INTENSITY SCALE

Category	Wind Speed	Potential Damage
EF-0	65 – 85 mph	**Light damage.** Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over.
EF-1	86 – 110 mph	**Moderate damage.** Roofs severely stripped; mobile homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.
EF-2	111 – 135 mph	**Considerable damage.** Roofs torn off well-constructed houses; foundations of frame homes shifted; mobile homes completely destroyed; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
EF-3	136 – 165 mph	**Severe damage.** Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance.
EF-4	166 – 200 mph	**Devastating damage.** Well-constructed houses and whole frame houses completely leveled; cars thrown and small missiles generated.
EF-5	> 200 mph	**Incredible damage.** Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 meters (109 yd); high-rise buildings have significant structural deformation; incredible phenomena will occur

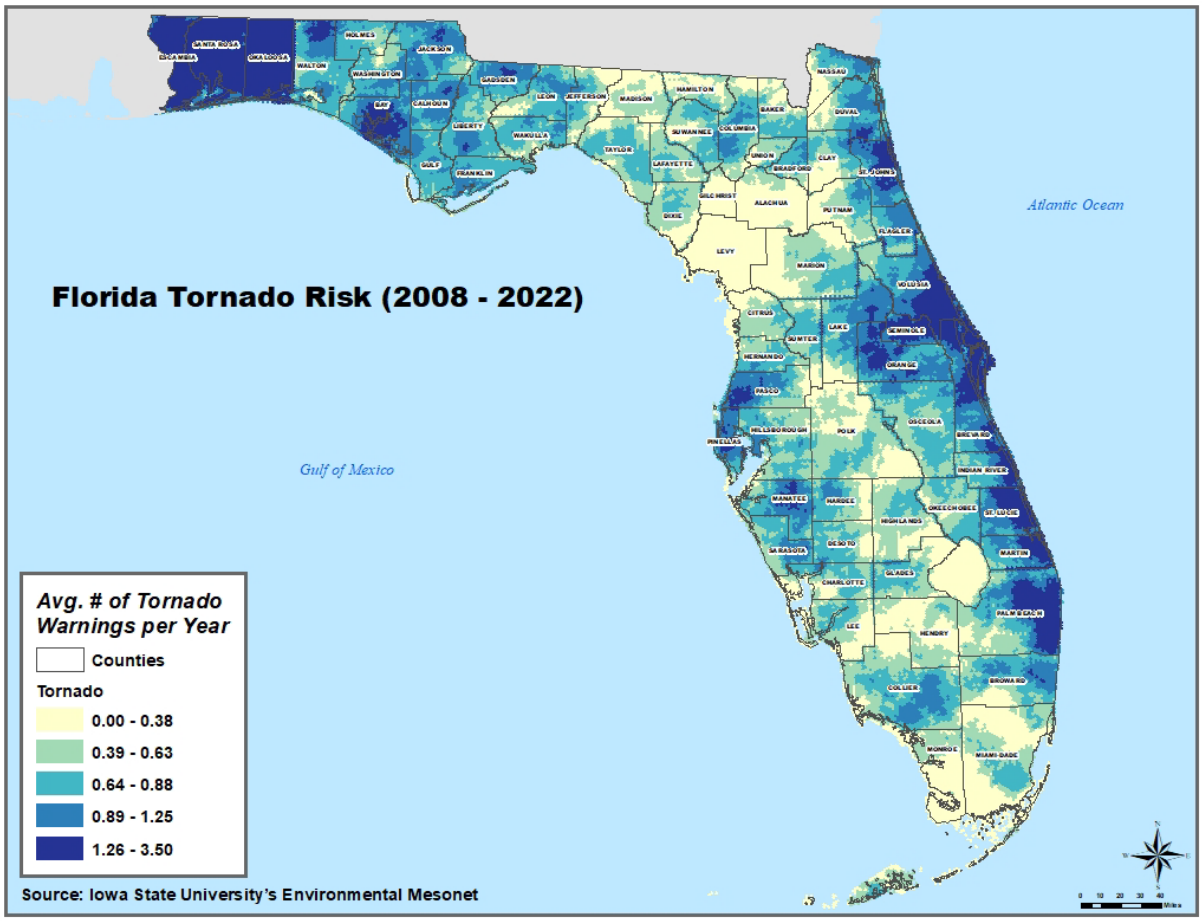


Figure V.19: Florida tornado risk (2008 – 2022); Source: 2023 State Hazard Mitigation Plan

Historical Occurrences

Table V-13 includes the tornado touchdown incidents from 2018 – 2021, as reported by NOAA Storm Prediction Center. Touchdowns may have occurred in unincorporated Polk County but that does not mean municipalities were not affected by the tornado's track.

TABLE V-13:
TORNADO TOUCHDOWN INCIDENTS BY JURISDICTION (2018 – 2021)

Date	Location	Magnitude	Death	Injuries	Property Damage ($)	Crop Damage ($)
12/20/2018	Unincorporated Polk County	EF0	0	0	5,000	0
12/20/2018	Unincorporated Polk County	EF0	0	1	45,000	0
10/18/2019	Unincorporated Polk County	EF2	0	0	10,000,000	0

Date	Location	Magnitude	Death	Injuries	Property Damage ($)	Crop Damage ($)
4/11/2021	Unincorporated Polk County	EF0	0	0	15,000	0

Source: NOAA Storm Prediction Center

Potential Impacts

Florida tornadoes typically impact a relatively small area; however, events are completely random and it is not possible to predict specific areas that are more susceptible to a tornado strike over time. The LMS assumes that tornadoes uniformly impact all of Polk County.

Probability of Future Occurrences

Based on the historical occurrence of tornadoes, the probability of a future tornado affecting Polk County is medium-high. While most of these events are small in terms of size, intensity, and duration, a minor tornado can cause substantial damage. Tornadoes pose a significant threat to lives and property in Polk County.

Climate Change, Changes in Population Patterns, Changes in Land Use and Development

According to a fact sheet produced by NOAA, severe thunderstorm and tornado activity is dependent on two things: the strength of atmospheric instability and vertical wind shear. Additionally, natural climate variations, like El Nino and La Nina, have the potential to alter the environment necessary for tornado formation. As such, an assessment of the potential impact to these factors can highlight how climate change may impact severe storms and tornadoes in the future. In general, it is expected that climate change will increase instability in the atmosphere, especially with the higher temperatures and increased humidity associated with the changing climate. Additionally, a weakening vertical wind shear is expected through a reduction in the surface pole-to-equator temperature gradient. The combination of the increased atmospheric instability and weakening vertical wind shear may increase the likelihood of more severe storm events, including tornadoes.

As the population of the County and jurisdictions increase from increased migration of people, the potential impacts from severe storms, hail, and lighting will increase because there are more people to be impacted. As more land is converted from open space/agriculture to development, the impacts to buildings and structures will be increased. Since these hazards impact the entire county, patterns of development will not change the impacts of the hazards – other than through the use of stronger building codes.

Hazard Profile – Geologic

A geologic hazard is one of several types of adverse geologic conditions capable of causing damage or loss of property and life.

Subsidence and Sinkholes

Description and Background

Sinkholes are a common, natural geologic feature of Florida's landscape. According to the Florida Department of Environmental Protection (FDEP), sinkholes are closed depressions in areas underlain by

soluble rock such as limestone and dolostone, which form the Floridan aquifer system, and gypsum or salt. Sinkholes form when surface sediments sink, or subside, into underground voids created by the dissolving action of groundwater in the underlying bedrock. Sinkholes can form from dissolution of near surface rocks or by roof collapse of underground channels and caverns. Other events that can cause holes, depressions, or subsidence of the land surface that may mimic sinkhole activity include:

- Removal of water leading to the compression of subsurface expansive clay or organic layers,
- Collapsed or broken sewer and drainpipes;
- Broken septic tanks;
- Improperly compacted soil after excavation work; and
- Buried trash, logs, and other debris.

Figure V.20: Sinkhole in Kathleen Road from collapsed pipe

Sinkholes are one of many kinds of karst landforms, which include caves, disappearing streams, springs, and underground drainage systems, all of which occur in Florida. Karst is a generic term which refers to the characteristic terrain produced by erosional processes associated with the chemical weathering and dissolution of limestone or dolomite, the two most common carbonate rocks in Florida. Dissolution of carbonate rocks begins with exposure to acidic water. Most rainwater is slightly acidic and usually becomes more acidic as it moves through decaying plant debris.

The Sinkhole Type Area Map includes four distinct areas, all of which are present in Polk County.

- Area I: Region of exposed or thinly covered carbonate rocks. Broad, shallow solution sinkholes dominate, with less common collapse sinkholes in areas with thicker overburden sediments.

- Area II: Region of incohesive, permeable sand ranging from 30 to 200 feet thick. Small cover subsidence sinkholes dominate, with less-common collapse sinkholes forming in areas with clayey overburden sediments.

- Area III: Region of cohesive, low-permeability clayey sediments ranging from 30 to 200 feet thick. Abruptly forming collapse sinkholes dominate this area. The size of these sinkholes depends upon the thickness and bearing properties of the overburdened sediments

- Area IV: Region of deeply buried carbonate rocks. Overburden sediments are primarily cohesive clayey sands and interbedded carbonates in excess of 200 feet thick. Sinkholes are uncommon, but rare deep collapse types and small subsidence sinkholes formed in shallow shell beds or carbonate lenses are possible.

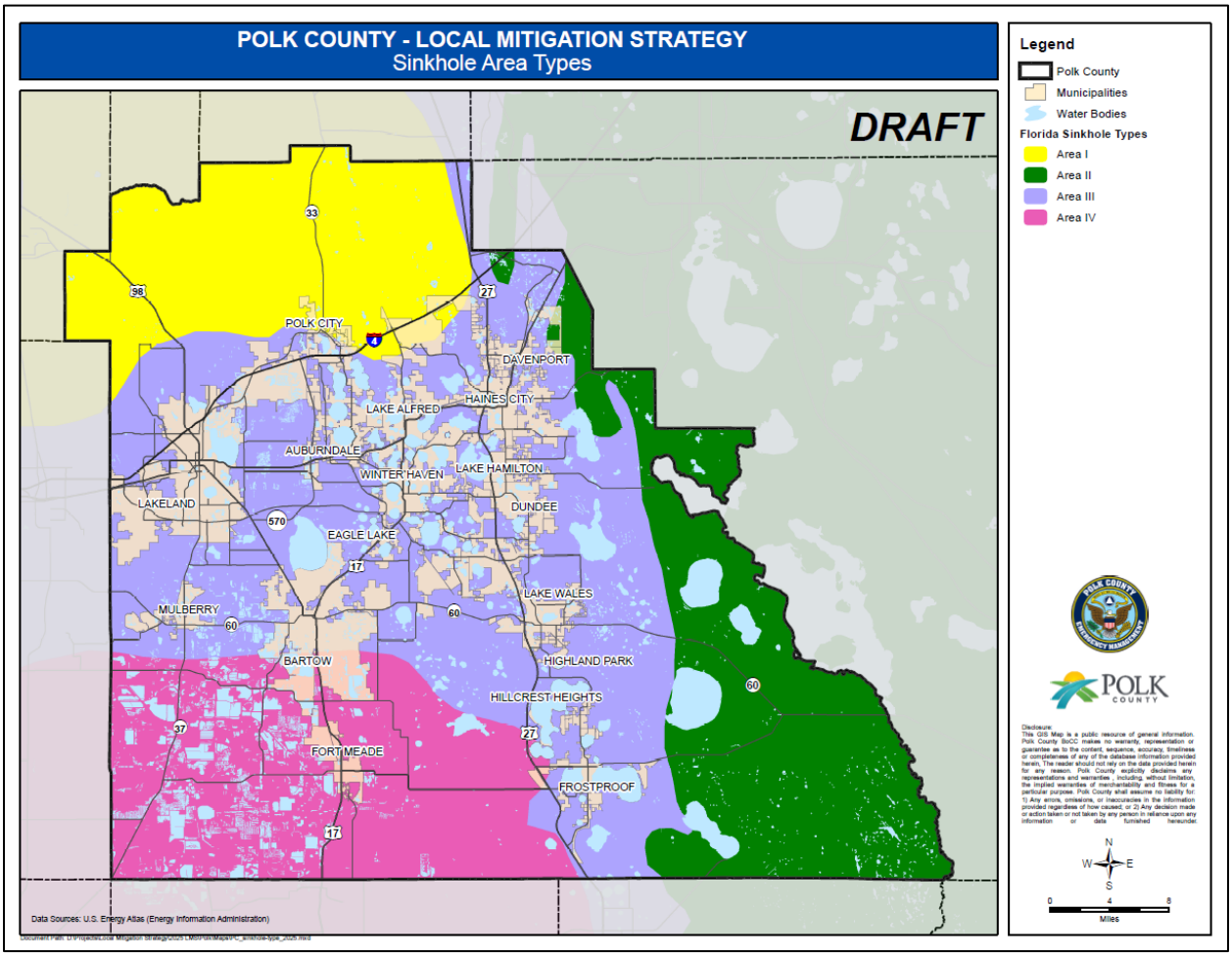


Figure V.21: Sinkhole area types 2025

Three types of sinkholes are common in Florida: dissolution; cover-subsidence; and cover-collapse sinkholes. Sinkholes develop from dissolution and suffusion. Dissolution is the ultimate cause of all sinkholes, but the thickness and type of overburden materials and the local hydrology also control the type of sinkhole. Although it is convenient to divide sinkholes into three distinct types, sinkholes can be a combination of types or may form in several phases.

Dissolution of limestone or dolomite is most intensive where water first contacts the rock surface. Aggressive dissolution also occurs where water flow focuses on pre-existing openings in the rock, such as along joints, fractures, and bedding planes, and in the zone of water-table fluctuation where ground water is in contact with the atmosphere. Cover subsidence sinkholes tend to develop gradually where the covering sediments are permeable and contain sand. Cover-collapse sinkholes may develop abruptly (over

a period of hours) and cause catastrophic damage. They occur where the covering sediments contain a significant amount of clay (2023 State Hazard Mitigation Plan).

Under natural conditions, sinkholes form slowly and expand gradually. However, activities such as dredging, constructing reservoirs, diverting surface water, and pumping groundwater can accelerate the rate of sinkhole expansions, resulting in the abrupt formation of collapse type sinkhole.

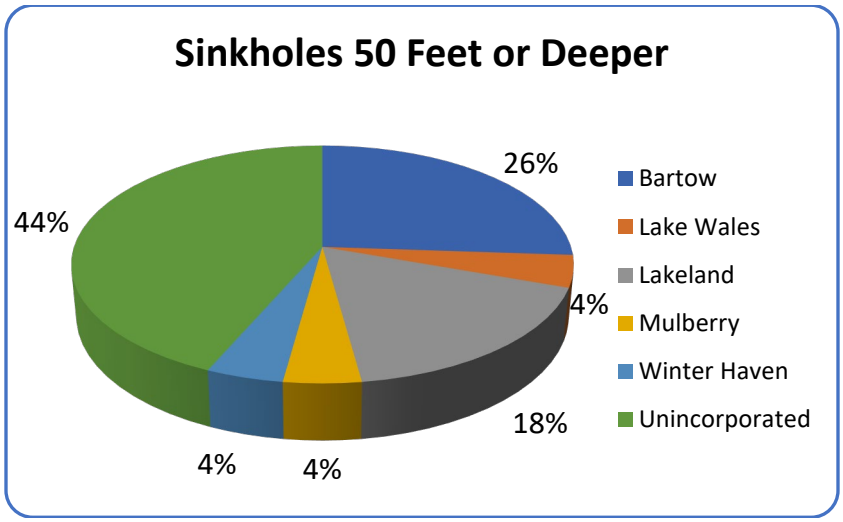


Figure V.23: Sinkholes 50 feet or deeper; Source: Florida Geological Survey

Historical Occurrences

The Florida Department of Environmental Protection (FDEP) maintains and provides a downloadable database of reported subsidence incidents statewide. A subsidence incident is a reported depression, which a Licensed Professional Geologist may or may verify by to be a true sinkhole, and the cause of the subsidence is unknown. The Subsidence Incident Report is the source for the information for the LMS.

Subsidence, including sinkholes, can occur all over the County. Most reported subsidence incidents (since 1954) occurred in unincorporated Polk County (59 percent). Within the municipalities, Bartow had 46 percent of the recorded incidents, and Lakeland and Winter Haven experienced 20 percent and 12 percent, respectively.

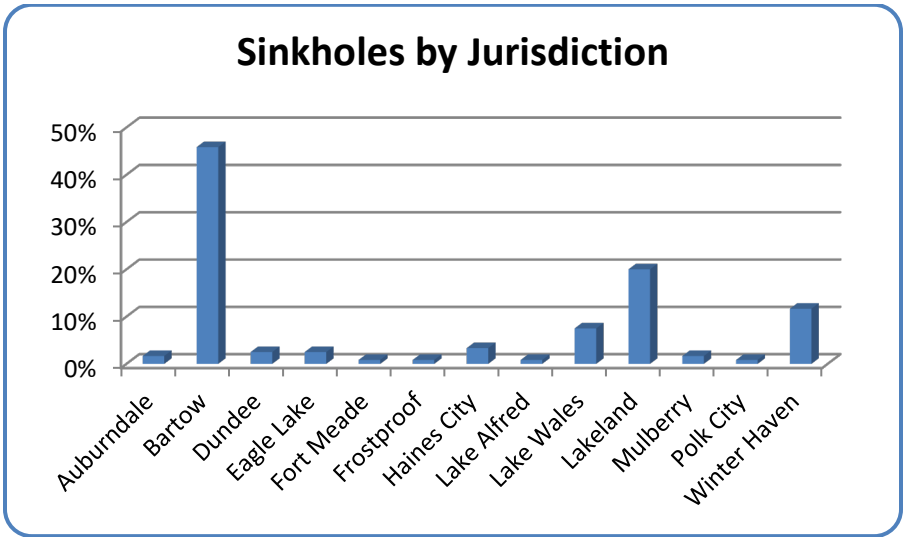


Figure V.24: Sinkholes by jurisdiction; Source: FDEP Florida Subsidence Incident Report Data

The United States Geological Survey (USGS) recorded 9 subsidence incidents in Polk County between 2020 and 2025. The USGS list is dependent on the reporting of incidents, meaning it is not a complete list of incidents since not all sinkholes are reported to USGS. According to the Florida Geological Survey Subsidence Incidence Reports, approximately 23 percent of the incidents reported in Polk County caused property damage.

Sinkholes may also be associated with phosphate mining. Please refer to the subsection on phosphate mining for further discussion.

Potential Impacts

Sinkholes are a hazard in Polk County, and throughout Florida, because they are a predominant landform feature. While generally not life-threatening, sinkholes may develop suddenly and cause property damage. Additional hazards associated with sinkholes include flooding, when water exceeds the natural capacity of the subsurface conduit, and pollutants on the land surface can potentially move rapidly into the underlying aquifer. Depending on the location of the sinkhole, severe damage can occur to individual properties or to roads and other infrastructure. In addition to structures and infrastructure, sinkholes may impact water supplies and environmental elements.

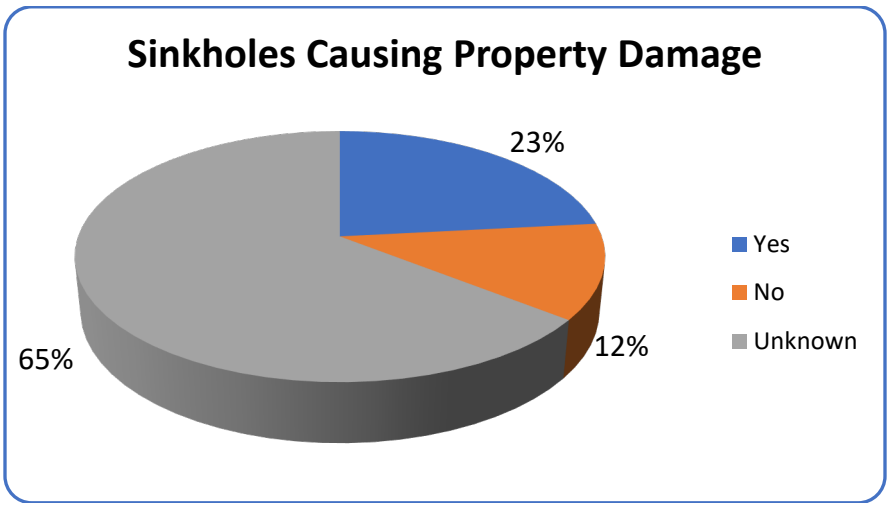


Figure V.25: Sinkholes Causing Property Damage;
Source: Florida Geological Survey

Climate Change, Changes in Population Patterns, Changes in Land Use and Development

Severe storm events and associated flooding or extended periods of drought both increase the number of sinkholes incidences. With the potential for more prolonged and intense periods of drought, as well as greater intensity and frequency of rainfall and inland flooding, it is likely that incidences of sinkholes will increase in the coming century.

A report published in the Natural Hazards and Earth System Sciences Journal shows that in general, the number of sinkholes in Florida increases by one to three percent for every 0.1 degree Celsius rise in global temperature. Rising temperatures can increase the dissolution of bedrock, cause soil collapse and increase the intensity and frequency of sinkhole occurrence. Sinkhole prevalence will be further exacerbated as Florida's population continues to rise and development increases in favorable sinkhole areas. Each of these factors may make sinkholes a more costly hazard in Florida in the future.

The depletion of the water table from development potential pressures may increase the occurrences of sinkholes.

Probability of Future Occurrences

The entire County has the potential for sinkhole development. Periods of drought and heavy rain have created suitable conditions for their formation. A sinkhole is likely to occur at least once within any given year. This results in a medium to high probability of future occurrence.

Hazard Profile – Hydrologic

Hydrological (water) processes cause hydrologic hazards.

Drought

Description and Background

A drought is a prolonged period of less than normal precipitation such that the lack of water causes a serious hydrologic imbalance. Drought is a normal part of virtually all climatic regions, including areas with high and low average rainfall. Drought is the consequence of a natural reduction in the amount of precipitation expected over an extended period, usually a season or more in length. High temperatures, high winds, and low humidity can exacerbate drought conditions. In addition, human actions and demands for water resources can hasten drought-related impacts. Officials classify droughts into one of four types:

- Meteorological: The degree of dryness or departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
- Hydrologic: The effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
- Agricultural: Soil moisture deficiencies relative to water demands of plant life, usually crops.
- Socioeconomic: The supply and demand of water with elements of meteorological, hydrological, and agricultural drought. It occurs when the demand for water exceeds the supply because of weather-related shortfall in water supply.

Droughts are slow-onset hazards, but over time can have very damaging effects on crops, municipal water supplies, recreational uses, and wildlife. If droughts extend over several years, the direct and indirect economic impact can be significant.

The Keetch Byram Drought Index (KBDI) is a numerical scale (0-800) that measures the amount of moisture in the soil. A zero indicates wet, full saturation conditions while an 800 represents extreme drought conditions. The index is used to assess the danger of wildfires and drought.

Explanation of the Keetch Byram Drought Index:

- 0-200—Soil moisture and large class fuel moisture is high and does not contribute much to fire intensity.
- 200-400—Lower litter and duff layers are drying and beginning to contribute to fire intensity.
- 400-600—Lower litter and duff layers actively contribute to fire intensity and will burn actively.
- 600-800—Intense, deep burning fires with significant downwind spotting can be expected. Live fuels expected to burn actively at these levels.

Historical Occurrences

Minor droughts occur every few years. They are usually associated with a “La Nina” event.

According to Sheldus, general drought conditions were present throughout all of Polk County in 2020, 2021, and 2022.

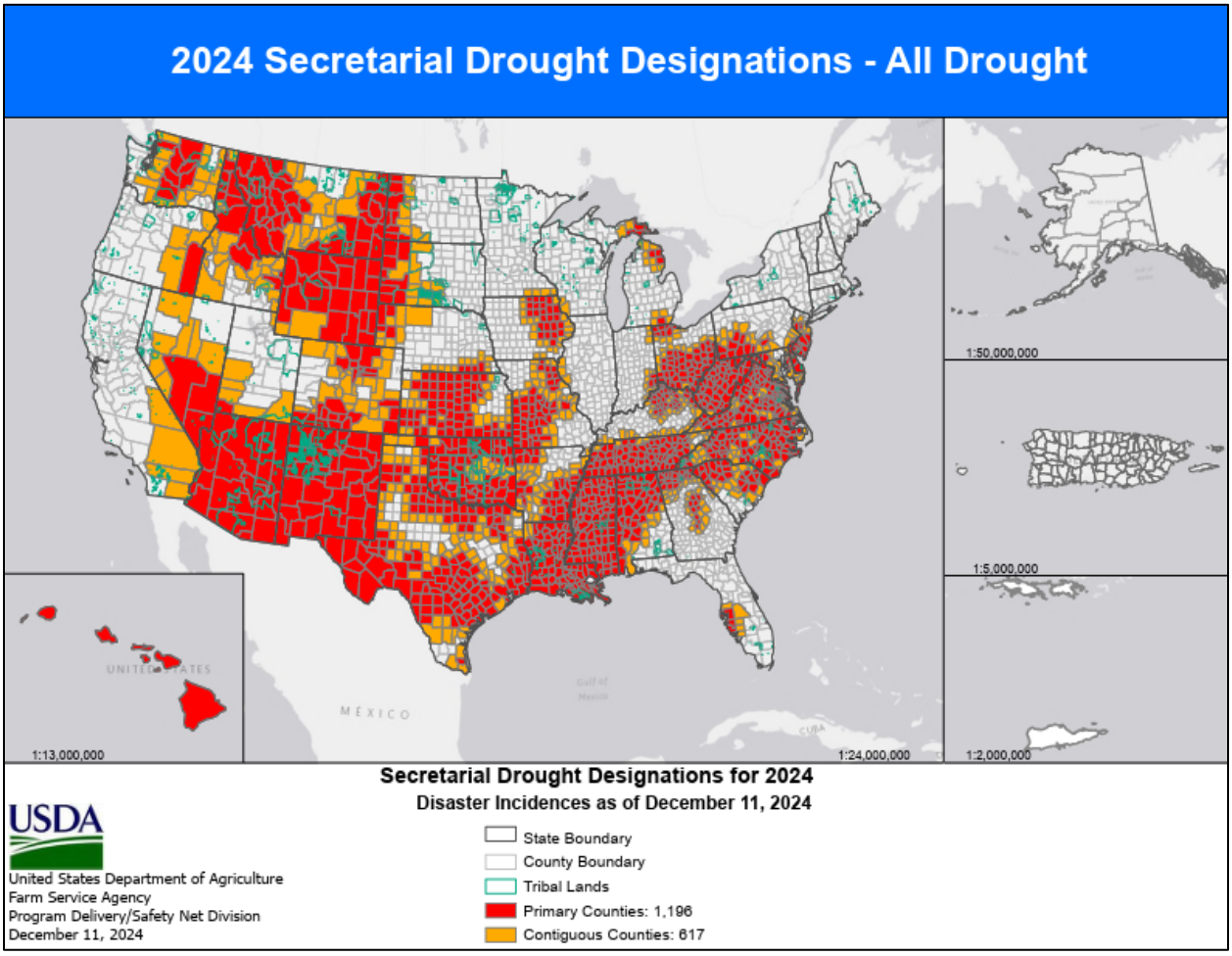


Figure V.26: 2024 Secretarial Drought Designations; Source: USDA Farm Service Agency 12/11/2024

Potential Impacts

Common effects of drought include crop failure, water supply shortages, and fish and wildlife mortality. High temperatures, high winds, and low humidity can worsen drought conditions and make areas more susceptible to wildfire. Human demands and actions can hasten or mitigate drought-related impacts on local communities.

Drought typically covers a large area that geographic or political boundaries cannot contain. Periods of drought can exacerbate the ignition of wildfires that can damage the natural and built environment.

The County's agricultural industry is at highest risk to drought. Drought can impact crops and livestock. Droughts also decrease the water supply, increase wildland fire danger, and increase the potential for sinkhole development for the entire County.

Climate Change, Changes in Population Patterns, Changes in Land Use and Development

Climate change is significantly increasing the frequency, intensity, and duration of droughts around the world, primarily by causing higher temperatures which lead to increased evaporation from soil and water bodies, making existing dry periods even drier, and altering precipitation patterns to produce less

rain in many regions; essentially, making droughts more severe and widespread. Increased development places more pressure on water supply, which is negatively impacted by climate change.

Probability of Future Occurrences

The LMS assumes that exposure to drought is uniform in Polk County, making the spatial extent potentially widespread. Drought may affect some areas of the County more severely than others. Given the frequency of previous events, warm temperatures, and average rainfall, the probability of future drought events is medium. As the County population continues to grow, water demands intensify, and demands related to agriculture and livestock increase, drought conditions may begin to have a profound impact on the County. There is a medium probability that cycles of reduced rain will continue to cause hydrological droughts in the future. Polk County can expect a minor drought once every 2 to 3 years.

Flood

Description and Background

The National Flood Insurance Program (NFIP) website defines a flood as a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area, or of two or more properties from:

- Overflow of inland or tidal waters;
- Unusual and rapid accumulation or runoff of surface waters from land source; or
- A mudflow.

The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. Floods are categorized as: riverine; coastal; or shallow flooding (where shallow flooding refers to sheet flow, ponding, and urban drainage).

Flooding is the most frequent and costly natural hazard in the United States, and has caused more than 1,392 deaths from 2010 to 2023 (Statista, https://www.statista.com/statistics/203709/number-of-fatalities-caused-by-floods-and-flash-floods-in-the-us/).

Figure V.27: Flooded Streets in downtown Haines City, April 30, 2014, Source: Bay News 9, Photographer: Viewer Submitted

Floods generally result from excessive precipitation, and are classified as: general floods which include precipitation over a given river basin for a long period of time along with storm-induced wave or tidal action; or flash floods which are the product of heavy localized precipitation in a short time period over a given location. The severity of a flooding event is typically determined by a combination of factors including stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and the degree of vegetative clearing and impervious surface.

A general flood is usually a long-term event that may last for several days. The primary types of general flooding include riverine, coastal, and urban flooding. Riverine flooding is a function of excessive precipitation levels and water runoff volumes within the watershed of a stream or river. Coastal flooding is typically a result of storm surge, wind-driven waves and heavy rainfall produced by hurricanes, tropical storms, and other large coastal storms. Urban flooding occurs where manmade development has obstructed the natural flow of water and decreased the ability of natural groundcover to absorb and retain surface water runoff.

Flash flooding is caused by slow-moving thunderstorms or by heavy rains associated with hurricanes and tropical storms. Flash flooding events may also occur from a dam or levee failure within minutes or hours of heavy amounts of rainfall, or from a sudden release of water held by a retention basin or other stormwater control facility. Although flash flooding occurs most often along mountain streams, it is also common in urbanized areas where impervious surfaces cover much of the ground.

The periodic flooding of lands adjacent to rivers, streams, and shorelines (land known as floodplain) is a natural and inevitable occurrence that takes place based upon established recurrence intervals. FEMA designates floodplains by the frequency of the flood that is large enough to cover them. The frequency of flood events, such as the 1 percent annual chance flood, is determined by plotting a graph of the size of all known floods for an area and determining how often floods of a particular intensity. Another way of expressing the flood frequency is the chance of occurrence in a given year, which is the percentage of the probability of flooding each year. For example, the 1 percent annual chance flood refers to an area in the 100-year floodplain that has a 1 percent chance of flooding in any given year. Similarly, the 0.2 percent annual chance flood in the area of the 500-year floodplain has a 0.2 percent change of flooding in any given year. The recurrence interval of a flood is the average time interval, in years, expected between a flood event equaling, or exceeding, a specified magnitude. Flood magnitude increases with increasing recurrence intervals.

Many areas of Polk County are susceptible to riverine and urban (stormwater) flooding. Figure V.28 and maps in Appendix A illustrate the location and extent of the Flood Insurance Rate Map.

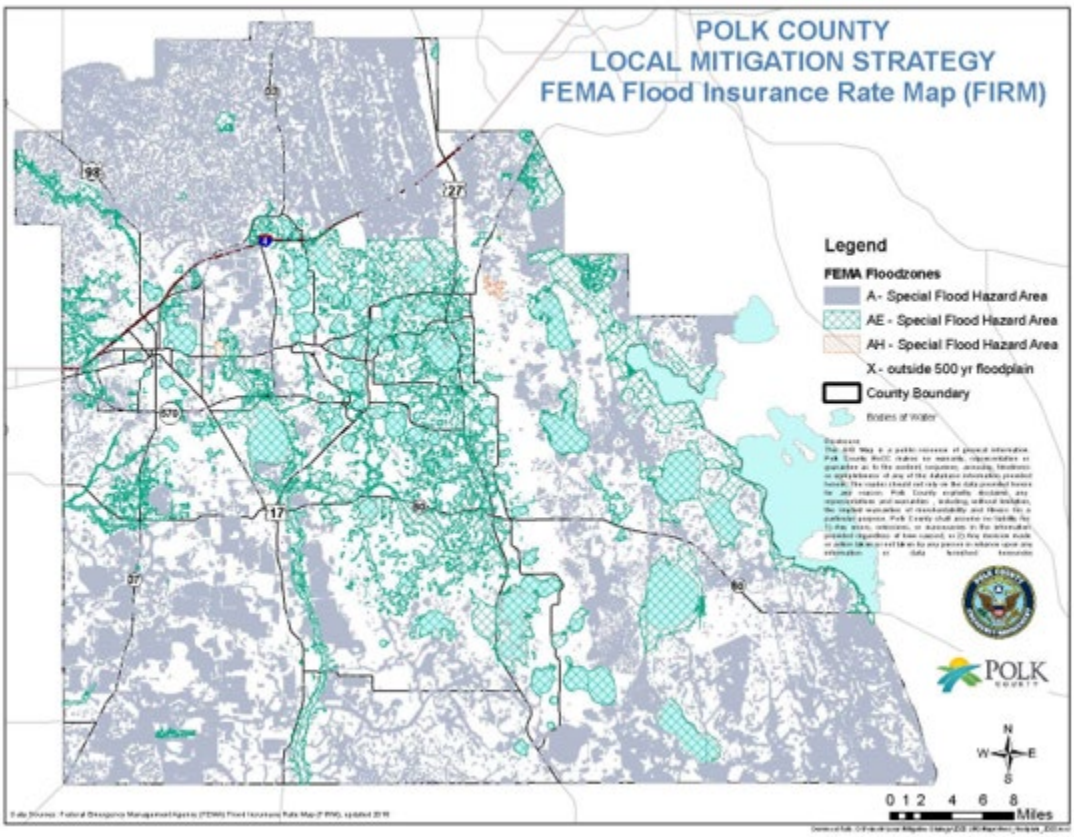


Figure V.28: FEMA Flood Insurance Rate Map Source: FEMA and Polk County

Natural Floodplain Functions

Floodplains left intact perform many natural functions including proving flood and erosion control, recharging our aquifers, improving surface water quality, and protecting ecologically sensitive areas. They support diverse populations of flora and fauna, providing outdoor areas to educate residents on the importance of protecting this valuable natural resource. In addition, they provide recreation and economic benefits to the community. There are several beneficial resources and functions of natural floodplains

Natural Flood Storage and Erosion Control

Floodplains provide areas to spread water out and temporarily store floodwater. This helps to reduce peak flood stages. In addition, the broad storage area diminishes the velocity of water flow, thus reducing erosion caused by fast moving water. In urbanized areas, natural floodplains can provide storage and/or result in less runoff that can be carried overland and lead to flooding in streets and neighborhoods.

Flood attenuation is particularly important in low-lying areas that can experience flooding during even relatively small storms. One acre of floodplain flooded a foot deep holds 330,000 gallons of water. Vegetated floodplains are especially advantageous due to the plants' structure hindering water movement, thus slowing the rate of flow that reaches the main water body. The diminished velocity provides erosion protection and stability to the banks of channels and lakes. Vegetation also reduces coastal shoreline erosion.

Water Quality and Aquifer Recharge

Natural floodplains not only provide runoff storage but also serve to improve water quality by reducing the number of contaminants including chemicals and unnatural levels of nutrients from reaching the main water bodies. In the process of suppression of water flow, vegetative floodplains allow sediments and debris to sink and settle within the floodplain. In natural floodplain areas outside of a main channel system, the water flow slows, giving more time to seep into the ground where it can help replenish the groundwater. As the water slowly seeps into the soil, natural purification of the water takes place as well.

Fish and Wildlife Habitat

Natural Floodplains support a wide variety of plants and animals. Natural floodplain habitats vary in the vegetation, with some having aquatic grasses and others being forested. What they have in common is that they are ephemeral, meaning there is a wet and dry period. The length of the period in which they are wet also fluctuates. Floodplains and associated wetlands provide food and cover for both terrestrial and aquatic wildlife. The areas where water and land converge are generally more biologically diverse than the surrounding uplands. Natural floodplains are a critical habitat for several imperiled species such as the wood stork.

Recreation

Most of the natural floodplains and surrounding natural areas of Polk County provide many recreational opportunities including hiking, bicycling, fishing, boating, and wildlife viewing.

Economic Benefit

Natural floodplains have an economic value in the reduction of flood and storm damage to infrastructure. They also provide an economic benefit from the ecotourism dollars generated from people visiting the area for recreational activities and great birding opportunities

Protecting Our Natural Floodplains

Poor planning and development in floodplains can result in degradation of water quality, loss of habitats, loss of valuable property, erosion, and increase in severity and frequency of flood losses. Polk County and the municipalities' comprehensive plans provide strategies to address the protection of natural floodplains. Water Quality Management Plans identify locations and projects on public lands that enhance natural systems, including natural floodplains. These enhancements provide a diversity of benefits, such as increasing wildlife habitat quality, attenuating stormwater flows, enhancing downstream water quality, and reducing erosion and sediment loading. The County and municipalities implement these measures through a variety of ways, including development of water quality management plans, policies intended to protect environmentally sensitive lands, as well as regulations aimed at protecting wetlands.

Historical Occurrences

SHELDUS and NOAA National Centers for Environmental Information do not list any instances of flooding after 2015 for Polk County or the municipalities. This can be contributed to flooding occurring with other events such as hurricanes or tropical storms. For example, extreme flooding occurred in areas in Bartow from Hurricane Ian in 2022 and in areas in Lakeland after Hurricane Milton in 2024.

Lake Alfred has three improved areas with a history of flooding. Sunset Mobile home park is located off Lynchburg Rd. The area near Lake Mariana is in Flood Hazard Zone AE. Echo Terrace is located South of Lake Echo. There is a delineated wetland area near Echo Park with a few residential lots located in Flood Hazard Zone AE. Lake Alfred Mobile Home Park located on 17-92 has several units within flood hazard zones. Special card through code enforcement is ongoing in this neighborhood. Any permitting in these zones is reviewed by our floodplain manager and is subject to FEMA guidelines.

Historical Summary of Insured Flood Losses

All municipalities in Polk County, except the Town of Hillcrest Heights and the Village of Highland Park, participate in the NFIP. Table IV-10 provides flood insurance policy summary information for each of the jurisdictions. According to FEMA flood insurance policy records as of June 30, 2019, there have been 667 flood losses reported in Polk County totaling approximately $7.5 million in claims payments. These numbers include losses to structures that were insured through NFIP policies, and losses in which people sought and received claims. It is likely that additional instances of flood losses in Polk County were either uninsured, denied claims payment, or not reported. More current information is not available from FEMA.

Repetitive Loss Properties

FEMA defines a repetitive loss property as any insurable building for which the NFIP paid two or more claims of more than $1,000 within any rolling 10-year period, since 1978. A repetitive loss property may or may not be currently insured by the NFIP.

According to FEMA repetitive loss property records (as of April 2009), there are 26 “non-mitigated” repetitive loss areas in Polk County based on topography (see Repetitive Loss Activity Map in Appendix A). These 26 properties are all located in unincorporated Polk County. Without mitigation, these properties will likely continue to experience flood losses. The City of Lakeland demolished the last repetitive loss property in the city in 2008. Table V-16 provides a summary of repetitive loss properties in Polk County.

TABLE V-16
REPETITIVE LOSS PROPERTIES

Type of Use	Number of Properties	Location
Residential	24	Unincorporated Polk County
Commercial (Office and Club/Lodge)	2	Unincorporated Polk County
Industrial (Light Manufacturing)	1	Unincorporated Polk County
Total	27	Unincorporated Polk County

Source: National Oceanic and Atmospheric Association; www.ncdc.noaa.gov

Polk County reviews and updates the list of repetitive loss properties, describes the causes of the losses, and coordinates outreach to those areas each year.

Potential Impacts

Floods can have devastating consequences and can impact the economy, environment, structures, and people. Floods, especially flash floods, may destroy roads, bridges, farms, houses, and automobiles. People may become homeless, and the water supply and electricity services may be disrupted. Emergency responses are ordered to address impacts. It may take years for affected communities to re-build and business to return to normalcy. Chemicals and other hazardous substances may contaminate the water

bodies. Flooding kills animals, introduces insects to affected areas, and may distort the natural balance of the ecosystem.

Climate Change, Changes in Population Patterns, Changes in Land Use and Development

As the climate continues to change, warmer temperatures and shifting rainfall patterns will be the result and will contribute to increases in rainfall severity and frequency. Continued development of land may also contribute to flooding as less areas remain available for water recharge. Consequences of increased flooding include health and safety of residents and responders, impacts to property, facilities, and infrastructure as well as impacts to economic and financial conditions.

Probability of Future Occurrences

There is a long history of flooding in Polk County and most of central Florida. There is a medium probability of heavy flooding. Figure V.34 illustrates the probability of future flood events, based on magnitude and according to the best available data, indicating those areas susceptible to the special flood hazard area.

Hazard Profile – Other Natural Hazards

Other Natural Hazards are natural hazards that are not categorized as atmospheric, geological, or hydrologic.

Wildfire

Description and Background

The Florida Forest Service (FFS) defines wildfire as any fire that does not meet management objectives or is out of control. Wildfires occur in Florida every year and are part of the natural cycle of fire-adapted ecosystems. Suppression of many of these fires occur before they can damage property. Many conservation and ranch properties across the State utilize prescribed or controlled fires to replace the natural benefits that wildfires provide. Despite the advancements of fire management across the State, many large and destructive wildfires occur during severe droughts. Nationally, negligent human behavior such as smoking in wooded areas or improperly extinguishing campfires start over 90 percent of forest fires. The second most common cause for wildfire is lightning (https://www.visitflorida.org/resources/crisis-preparation/wild-fire-information).

According to the 2023 Florida Enhanced State Mitigation Plan, there are three types of wildfires.

- Surface Fires: Fires that burn along the forest floor consuming the litter layer and small branches on or near the ground.
- Ground Fires: Fires that smolder or creep slowly underground. These fires usually occur during periods of prolonged drought and may burn for weeks or months until sufficient rainfall extinguishes the fire, or it runs out of fuel.
- Crown Fires: Fires that spread rapidly by the wind, moving through the tops of the trees.

Both public and private lands across the State utilize prescribed or controlled fires to replace the natural benefits that wildfires can provide. Prescribed burns help reduce the amount of flammable vegetation in

an area, which lessens the intensity of a wildfire that may occur in that same area. Firefighters then have an opportunity to suppress the fire while it is small and easier to control.

The type and amount of fuel, as well as its burning qualities and level of moisture, affect wildfire potential and behavior. The continuity of fuels, expressed in horizontal and vertical components, is a factor because it expresses the pattern of vegetative growth and open areas. Topography affects the movement of air (and thus the fire) over the ground surface. The slope and shape of terrain can change the rate of speed at which the fire travels. Temperature, humidity, and wind (both short- and long-term) affect the severity and duration of wildfires.

The wildland/urban interface (WUI) is the line, area, or zone where structures and other development meet or intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially ingresses the risk from wildfire. Appendix E includes the Southern Wildfire Risk Assessment Summary Report for Polk County generated from the Southern Wildfire Risk Assessment (SWRA) web Portal (SouthWRAP).

Historical Occurrences

Florida Fire Service, SHELDUS, and NOAA National Centers for Environmental Information do not list any instances of wildfires for 2018 – 2025 for Polk County or the municipalities.
According to the Polk County Community Wildfire Protection Plan (2011), there have been 263,439 acres burned from wildfires in Polk County from 1981-2011. Most fires have been under 10 acres. This amount does not include brush fires that local firefighters suppressed without FFS assistance.

Fox 13 News reported on an 85-acre wildfire in Lake Wales (May 7, 2020), a 175-acre wildfire that closed a portion of C.R. 640 (May 19, 2021), and an estimated 1,500-acre wildfire in Mulberry (April 14, 2024). The Ledger reported on a wildfire in River Ranch that burned 4,500 acres but was only 50% contained when the article was published on June 7, 2024. These articles are in Appendix F.

Potential Impacts

Wildfires may affect all jurisdictions in the County since the area consists of agricultural and conservation lands. Many individual homes and cabins, subdivisions, resorts, recreational areas, organizational camps, businesses, and industries are located within high wildfire hazard areas. The increasing demand for outdoor recreation places more people in wildlands during holidays, weekends, and vacation periods. Wildfires can result in severe economic losses. Businesses that depend on timber, such as paper mills and lumber companies, experience losses that they often pass along to consumers through higher prices. They also may experience job losses. The high cost of responding to and recovering from wildfires can deplete State resources and increase insurance rates. The tourism industry may also be impacted by wildfires if wildfires close roads and tourist attractions due to health and safety concerns.

Climate Change, Changes in Population Patterns, Changes in Land Use and Development

Climate change is significantly increasing the frequency, intensity, and duration of droughts around the world, primarily by causing higher temperatures which lead to increased evaporation from soil and water bodies, making existing dry periods even drier, and altering precipitation patterns to produce less rain in

many regions; essentially, making droughts more severe and widespread. Increased development places more pressure on water supply, which is negatively impacted by climate change.

Probability of Future Occurrences

Wildfire probability depends on local weather conditions, outdoor activities such as camping, debris burning, and construction, and the degree of public cooperation with fire prevention measures. Drought conditions and other natural hazards, such as tornadoes, hurricanes, etc., increase the probability of wildfires by producing fuel in urban and rural settings. Forest damage from hurricanes and tornadoes may block interior access roads and firebreaks, down overhead power lines, or damage pavement and underground utilities. There is a high probability of future wildfire events in Polk County, especially during drought cycles and abnormally dry conditions, based on prior occurrence.

Controlled/prescribed burns are used to control wildfire outbreaks by burning the underbrush that contributes to fueling flames. Because of these regularly scheduled burns, the likelihood of a major wildfire is medium, which is one event every four to five years. During periods of drought, the probability increases from medium to high, which is approximately one event every year.

Hazard Profile – Human-Caused Hazards

Human-caused hazards can result in human-caused disasters. Human-caused hazards have an element of human intent, negligence, error, or involve a failure of a human-caused system. This is as opposed to natural hazards that cause natural disasters.

Civil Disturbances/Terrorism

Description and Background

Events or conditions including social unrest, political activism, unstable economic conditions, or radical antigovernment/anti-establishment movements can generate civil disturbances. While the risk of large-scale civil disturbances in Polk County is low, current trends and indicators suggest that the potential for civil disturbances at some level will remain present for the mid-to long-term period.

Prior to September 11, 2001, Polk County considered the probability of civil disturbance or terrorist activity to be very low. Terrorist attacks on New York and Washington D.C. resulted in a dramatic increase in the potential threat to the entire nation and a major change in planning priorities. The threat to Polk County remains low in comparison to other areas in the State where there are major port and terminal operations and/or military facilities. Potential terrorist strategies and targets, and the possible requirement to provide mutual aid support to other areas, dictate a continuing commitment to planning, training, and acquisition of resources in support of Homeland Security initiatives in Polk County. The County's Comprehensive Emergency Management Plan addresses Civil Disturbance/Terrorism.

Historical Occurrences

Fox 13 reported on several incidents that occurred between May and June, one incident which the Polk County Sheriff's Office issued a countywide curfew. There were demonstrations in Lakeland, Munn Park, and Lakeland police headquarters. Lakeland Police Department had to request the assistance of the Polk County Sheriff's Office to help disperse the crowd and clear an intersection at Florida Boulevard. These demonstrations were due to an event that received national attention in another state.

Potential Impacts
Civil disturbances and terrorism can have an overwhelming direct and indirect impact on a population. Direct costs are associated with the hardening of structures and the addition of security personnel to work to prevent potential events.

Probability of Future Occurrences
The probability of future occurrences is low based on Polk County's history. However mass shootings have occurred in neighboring and nearby counties.

Cyber-Attacks

Description and Background
A cyber-attack is an assault launched by cybercriminals using one or more computers against single or multiple computers or networks. A cyber-attack can maliciously disable computers, steal data, or use a breached computer as a launch point for other attacks. Cyber-attacks are also infamous for attacking computer infrastructure and personal computers.

In addition to cybercrime, cyber-attacks can also be associated with cyberwarfare or cyberterrorism, particularly in instances when the attackers are State actors, groups, or affiliated organizations. For example, in 2014 a group hacked Sony Pictures and stole troves of data, including many Sony Pictures employees' personal information, executive salary information, copies of unreleased films, and more. The group, which officials suspect to be North Korean, or affiliated with North Korea, used a Shamoon wiper malware to obliterate Sony Pictures' computer infrastructure.

Historical Occurrences
There have been cyber-attacks on local governments and agencies in the County, but often specific details are not available. However, The Ledger reported that the Polk County Tax Collector's Office in June 2020 received a virus through an email. They shut the entire system down, including phones, online processing, and service center operations. All their computer servers and computers were wiped clean and restored. Another cyber-attack involved the Florida Department of Health which caused their county offices to revert to managing Vital Statistics offline until the issue was resolved. This impacted the Medical Examiner's Office and funeral homes. Both articles can be found in Appendix F.

Potential Impacts
Critical infrastructure, financial components, government, and private citizens are targets of cyber-attacks. Cyber-attacks cause financial impacts as government, business, and private citizens pay money for protective measures and potentially suffer losses to identity theft.

Probability of Future Occurrences
The probability of future occurrences is high as this is an underreported hazard that potentially touches everyone, company, and level of government. As more jurisdictions and businesses provide services through digital formats, the potential for cyber-attacks increases.

Dam/Levee Failure

Description and Background

A dam is a barrier constructed to hold back water and raise its level while a levee is a structure designed to prevent or control a flood. The LMS uses the terms interchangeably. The National Inventory of Dams defines any "major dam" as being 50 feet (15 m) tall with a storage capacity of at least 5,000-acre feet (6,200,000 m^3), or of any height with a storage capacity of 25,000-acre feet (31,000,000 m^3). Water control structures help provide flood protection, manage lake water levels, and prevent salt water from flowing into freshwater streams and creeks. The term “Dam” makes most people think only of structures associated with the impounding of rivers for use as drinking water reservoirs, the production of electricity, or flood control. In Florida, the term can take on an additional meaning, that of impounding clay settling ponds or phosphogypsum stacks associated with the mining and processing of phosphate. Both types of dams occur within Polk County.

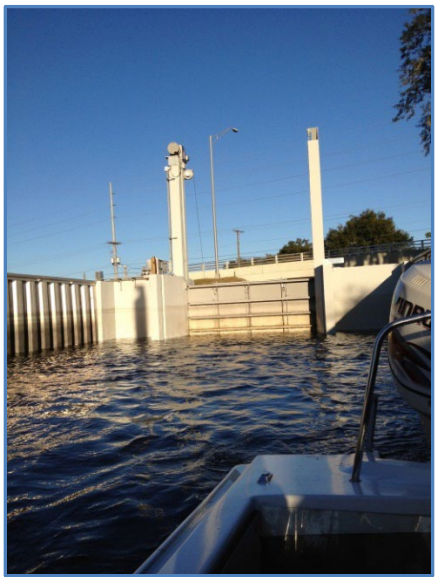


Figure V.30: Chain of Lakes Lock System; Source: worldbarefootcenter.com

According to FEMA, dams can fail for one or a combination of the following reasons:

- Overtopping caused by floods that exceed the capacity of the dam;
- Deliberate acts of sabotage;
- Structural failure of materials used in dam construction;
- Movement and/or failure of the foundation supporting the dam;
- Settlement and cracking of concrete or embankment dams;
- Piping and internal erosion of soil in embankment dams; or
- Inadequate maintenance and upkeep

A flood event may also trigger dam/levee failure. The dam impounds water in the reservoir, or upstream area. Officials measure the amount of water impounded in acre-feet. Dam failures are not routine, but the impacts can be significant. Two factors influence the potential severity of a dam failure: (1) the amount of water impounded and (2) the density, type, and value of the development downstream.

“Dam hazard” is a term indicating the potential hazard to the downstream area resulting from failure or mis-operation of the dam or facilities. According to the U.S. Army Corps of Engineers National Inventory

of Dams, there are 326 dams in Polk County. Figure V.31 illustrates the general locations of structures in Polk County identified through the National Inventory of Dams. Most dams occur in the southwest portion of the County, with some in the northeast and along the Kissimmee River in the southwest portion. The breakdown of the location of these dams are as follows:

- Auburndale – 2
- Bartow – 30
- Winter Haven – 3
- Lakeland – 11
- Dundee – 1
- Fort Meade – 2
- Unincorporated Polk County - 277

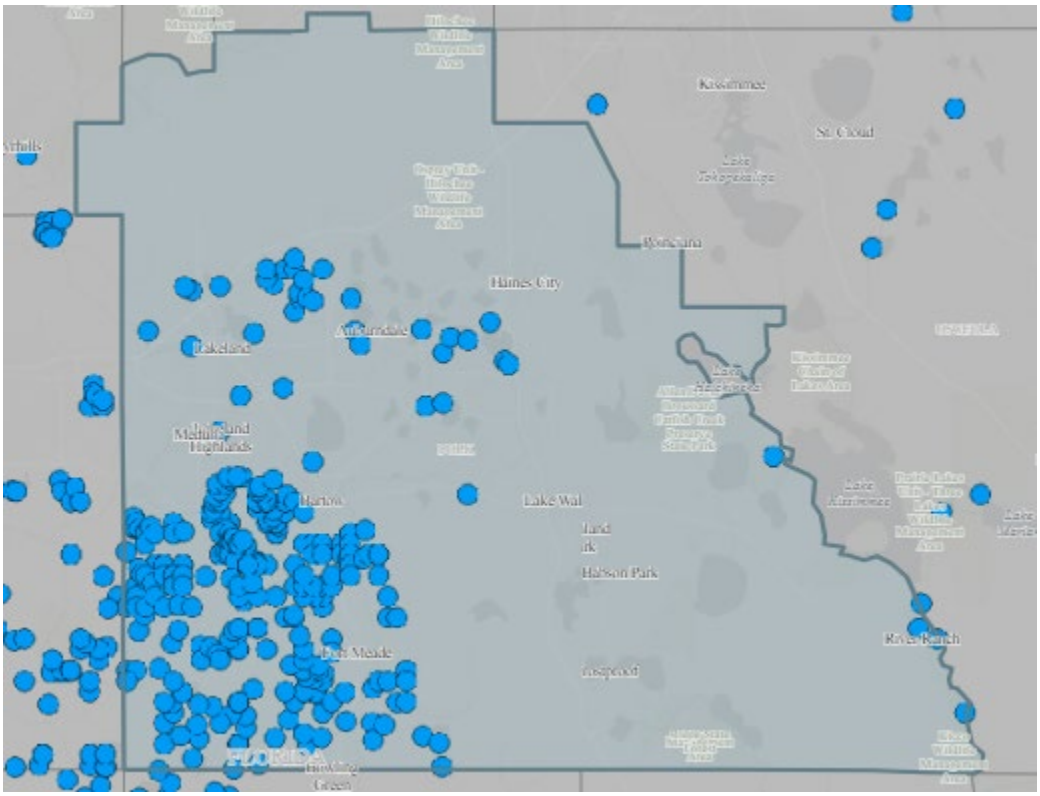


Figure V.31: Polk County dam location map; Source: USACE, National Inventory of Dams

The U.S. Army Corps of Engineers National Inventory of Dams identifies each of the dams by their hazard risk of low, significant, and high.

- Low hazard: A dam where failure or mis-operation results in no probable loss of human life and low economic and/or environmental loss. Losses generally occur on the owner's property.

- Significant hazard: A dam where failure or mis-operation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact

other concerns. These dams are often located in predominantly rural or agricultural areas but may also be located in populated areas with significant infrastructure.

- High hazard: A dam where failure or mis-operation may cause loss of human life.

Mining operations that have dams in Polk County are in the southwestern portion of the County.

- Phosphate mining has moved through Lakeland, Mulberry, Bartow, and Plant City. In the past 20 years, mining operations on Polk County's southern fringe have decreased. The closing of the IMC Clear Springs and Noralyn mines in 2000 signaled a close to active mining in what has been the heart of the mining district since the mining of phosphate pebble on land began in the late 1800s (Florida Industrial and Phosphate Research Institute).

Historical Occurrences

Since 2018, there have been no recorded instances of dam/levee failure or breach in Polk County. Many dam/levee failures in the past have been related to clay settling ponds and gypsum stacks associated with phosphate mining. Please refer to the section on phosphate mining for a detailed discussion.

Climate Change, Changes in Population Patterns, Changes in Land Use and Development

Climate change may significantly increase the risk of failure for tailings dams due to more extreme weather events like intense rainfall, which can overwhelm the dam's capacity, leading to potential breaches and large-scale environmental damage; this is because most existing tailings dams were not designed to handle such drastic changes in precipitation patterns. Failure of a phosphate mining dam could have severe environmental impacts, including large-scale water pollution with high levels of phosphorus, heavy metals like uranium and radium, and other chemicals from the mining waste, leading to harmful algal blooms, fish kills, disruption of aquatic ecosystems, and potential contamination of drinking water sources downstream from the dam breach; further impacts could include land degradation, erosion, and damage to infrastructure in the affected area depending on the volume and flow of the released waste.

Probability of Future Occurrences

Section 62-672 Florida Administrative Code and Section 373, Florida Statutes, govern the construction and safety of dams and levees in Florida. According to FDEP, dam inspections in Florida by agency personnel at the State, regional, and local levels; and private dam owners. Oversight for phosphate mining and similar industrial impoundments is primarily the responsibility of FDEP. Other dams generally fall within the purview of the U.S. Army Corps of Engineers (USACE), the State's five regional water management districts, or local government agencies.

Based on historical data, the probability that future dam and levee failures will occur somewhere within the planning area is low; however, the LMS cannot exclude such an occurrence. While the risk is very low, the number of dams/levees that are over 50 years of age, and the number of structures ranked as significant or having a high downstream hazard potential, increases the County's risk from very low to low. Most dams categorized as having a high downstream hazard potential are remnant mining ponds that have dried up. Based on the conditions of these structures and the history of dam failures in the County, the County can expect to experience one dam failure every ten years.

The closing of processing plants has raised concerns regarding the maintenance of the phosphogypsum stacks. Of concern is the potential for major or long-duration rainfall events exceeding the capacity of the stack. Per FDEP, upon completion of closure activities, the owner shall take over long-term maintenance responsibilities.

Epidemics/Pandemics

Description and Background

An epidemic is a sudden, widespread occurrence of an undesirable phenomenon. Epidemics frequently refer to infectious diseases, but also include agricultural diseases and exotic pests, and social activities such as drug use. A pandemic is an epidemic that has spread over several countries or continents.

- Infectious Disease
  Infectious diseases are illnesses caused by the presence and activity of one or more pathogenic agents including viruses, bacteria, fungi, protozoa, multicellular parasites, and abnormal proteins called prions. Transmittal occurs through a variety of means including direct or indirect contact; ingestion (in water or food); transmission of body fluids; inhalation of airborne particles and droplets; transmission by vectors such as mosquitoes, fleas, and ticks; and others.

- Exotic Pests and Diseases
  Citrus production and cattle ranching are two of the major industries in Polk County. In the past, several pests and diseases have threatened both. Eastern equine encephalitis threatened the large animal population (cattle, horses, etc.) in 1992. The Mediterranean fruit fly threatened citrus crops in 1997, and citrus canker threatened citrus in 2005–06. Citrus Greening and black spot diseases continue to impact the citrus industry and spread throughout Polk County. Figure V.40 illustrates the locations in 2017 of citrus greening in relation to commercial citrus production areas.

- Social Activities
  Social activities, such as drug use, can reach epidemic proportions. Prescription narcotic abuse has been a problem in Polk County.

The spread of infectious disease depends on pre-existing levels of the disease, ecological changes resulting from disaster, population displacement, changes in population density, disruption of public utilities, interruption of basic public health services, and compromises to sanitation and hygiene. The risk that epidemics of infectious disease will occur is proportional to the population density and displacement. A true epidemic can occur in susceptible populations in the presence or impending introduction of a disease agent compounded by the presence of a mechanism that facilitates large-scale transmission. According to the Florida Department of Agriculture and Consumer Services, “Florida is currently under statewide quarantine as directed by CFR 301.75 Subpart Citrus Canker and by federal order from the United States Department of Agriculture (USDA) for citrus canker, sweet orange scab, citrus greening disease, and the Asian citrus psyllid. In addition, portions of Collier, Hendry, Polk, Charlotte, Lee, and Glades counties are under quarantine for citrus black spot disease.”

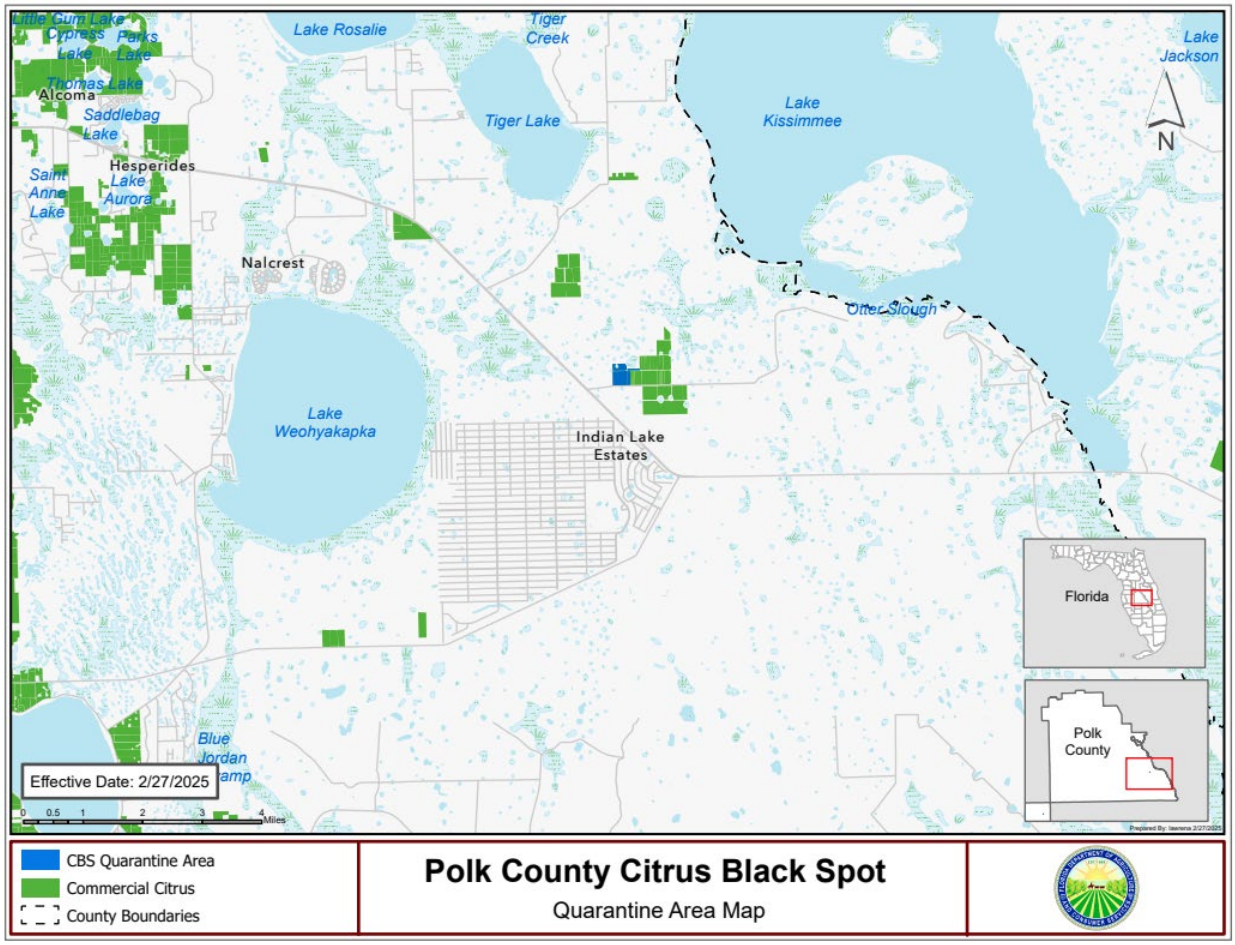


Figure V.33: Polk County Citrus Black Spot Quarantine Area Map February 27, 2025; Source: Citrus Health Response Program (CHRP)

Historical Occurrences

In 2019, a Hepatitis A outbreak impacted Florida more than any other state. Florida had a 1.3 percent fatality rate compared to the national average of 1 percent. More than 40 people died from the virus and 78 percent of the cases in Florida required hospitalization, compared to 60 percent nationally, which led to an estimate $180 million in hospital costs. Polk County had 39 cases, as of September 2019, and 18 cases in 2018. Polk County is ranked 16th in the State for number of cases.

On January 30, 2020, the Florida Department of Health Polk County extended a rabies alert, originally issued for the Bartow and Loughnan area on November 18, 2019. Polk County had 10 confirmed cases of rabies in the first quarter of 2020; the last involving a 15-year-old Davenport boy bitten by a sick raccoon. There were three confirmed cases in 2018 (Source: The Ledger and Florida Department of Health Polk County).

On March 17, 2020, the Florida Department of Health announced the first positive case of COVID-19 in Polk County. One month later, the County experienced an exponential increase in positive cases including in Lakeland and Winter Haven. As of 10:00 a.m. on May 2, 2020, the Florida Department of Health reported the County had 514 cases, 159 hospitalization, and 26 deaths. The County, municipalities, and

Polk County Public Schools implemented social distancing measures including closing schools and businesses, holding virtual public meetings, and implementing safer-at-home policies. Figure V.34 shows the all-time cases of Covid-19 through May 2023 by County. Polk County had a total of 261,444 cases of COVID-19 and 2,914 deaths, which equates to 36,506 cases per 100,000 people and 407 deaths per 100,000 people.

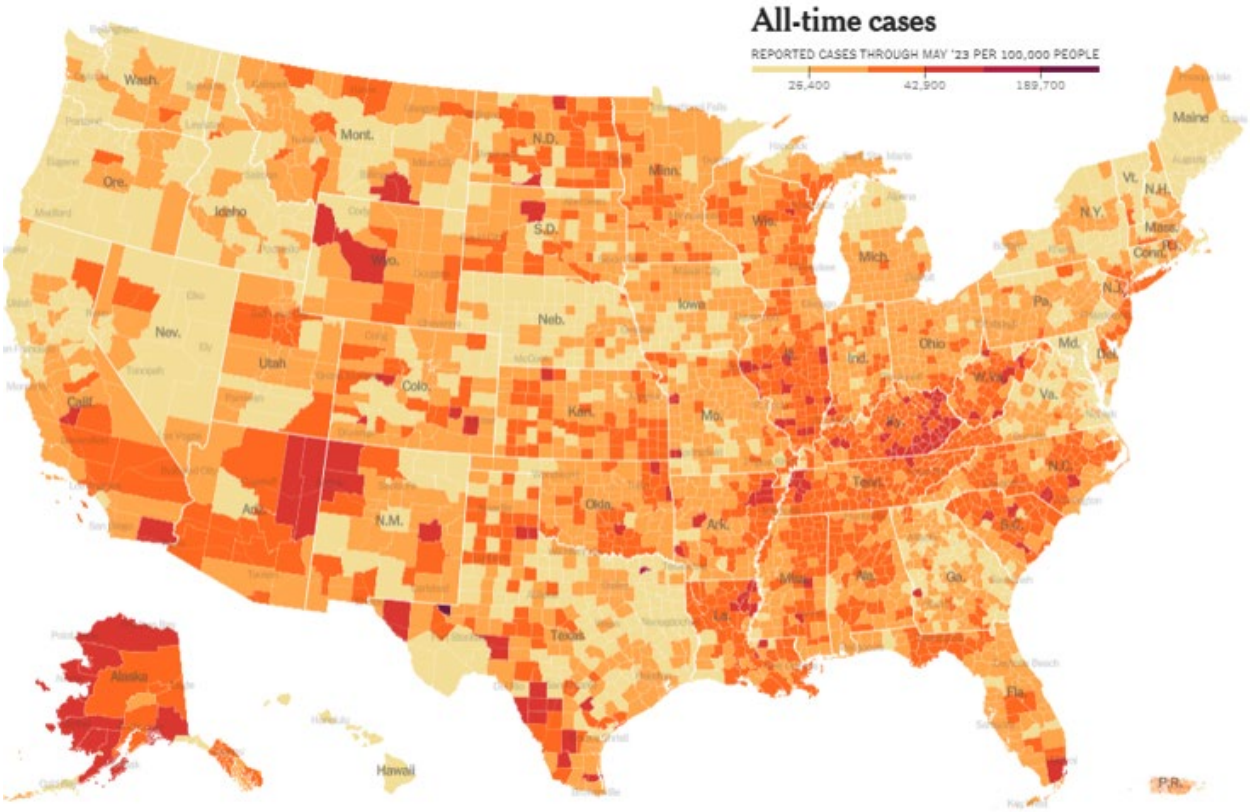


Figure V.34: Covid-19 All-time Cases through May 2-23 per 100,000 People ; Source: Data from Centers for Disease Control and Prevention via : https://www.nytimes.com/interactive/2023/us/covid-cases.html

According to the Florida Department of Law Enforcement's Drugs Identified in Deceased Persons by Florida Medical Examiners 2023 annual report, Ethanol had the highest frequency at 18.4% followed by Fentanyl (17.3%), and Cocaine (11.2%). (https://www.myfloridalegal.com/sites/default/files/2025-01/2023-drugs-in-deceased-annual-report.pdf)

Potential Impacts

Epidemics/Pandemics have an overwhelming impact on a population both directly and indirectly. The economic costs encompass hospitalizations, insurance premiums, outpatient visits, and even death. The spread of exotic pests and diseases may cause a change in the local flora/fauna and have impacts on the economy – such as a change in agricultural crops. Social epidemics such as drug use impact social, economic, and political aspects of the community.

Probability of Future Occurrences

According to the University of Florida Institute of Food and Agricultural Sciences extension, some emerging infectious diseases (EIDs) such as AIDS, antibiotic resistant bacteria, tuberculosis, and others are already a threat to Florida and the United States. Others, such as dengue and dengue hemorrhagic fever, pose a credible threat to certain areas of the continental United States such as Florida and Texas, and there have been outbreaks in Hawaii and Puerto Rico. Another group of EIDs may present a hazard to travelers visiting or working in foreign locations where these diseases are endemic. The use of disease organisms such as *Bacillus anthracis* (anthrax), *Francisella tularemia* (tularemia), smallpox and Ebola viruses, and others in bioterrorist attacks is now a threat in many countries including the United States.

The probability of future occurrences is even across Polk County. Areas of the County with high concentrations of agricultural production have a higher level of exposure for impacts of citrus greening and other agricultural pests and diseases.

Hazardous Materials Incidents

Description and Background

Hazardous Materials (HazMat) are hazardous substances, petroleum, natural gas, synthetic gas, and acutely toxic chemicals. Title III of the Superfund Amendments and Reauthorization Act of 1986 uses the term Extremely Hazardous Substance (EHS) to refer to those chemicals that may cause serious health effects following short-term exposure from accidental releases.

Small Quantity Generator of Hazardous Waste (SQG) are facilities that generate hazardous waste as a product or byproduct of their normal business function. The Central Florida Local Emergency Planning Committee (LEPC) inspects these facilities. According to the Florida Department of Environmental Protection, there are 1,339 facilities within Polk County that are actively generating small quantities of hazardous waste. Classic examples of SQGs include:

- Auto Paint & Body Shops (paints and solvents, anti-freeze);
- Doctor/Dentist offices that use wet read x-rays versus digital (photographic silver);
- Auto mechanic shops (oils, solvents, anti-freeze); and
- Pesticide applicators (plastic containers).

Sites termed as 302 sites are facilities that use/consume EHS in the normal process of business. Generally, there will be large amounts of these substances stored on site and used as needed. An EHS is a substance

that has the potential to kill or cause serious health issues to a person. Some of the classic examples of EHS include:

- Chemicals for citrus groves (paraquat dichloride, temmic);
- Large battery back-up systems for telephone communications (sulfuric acid & lead);
- Manual blood pressure cuffs (mercury);
- Refrigerants (anhydrous ammonia); and
- Chlorine – vs – Sodium Hypochlorite (used for water purification).

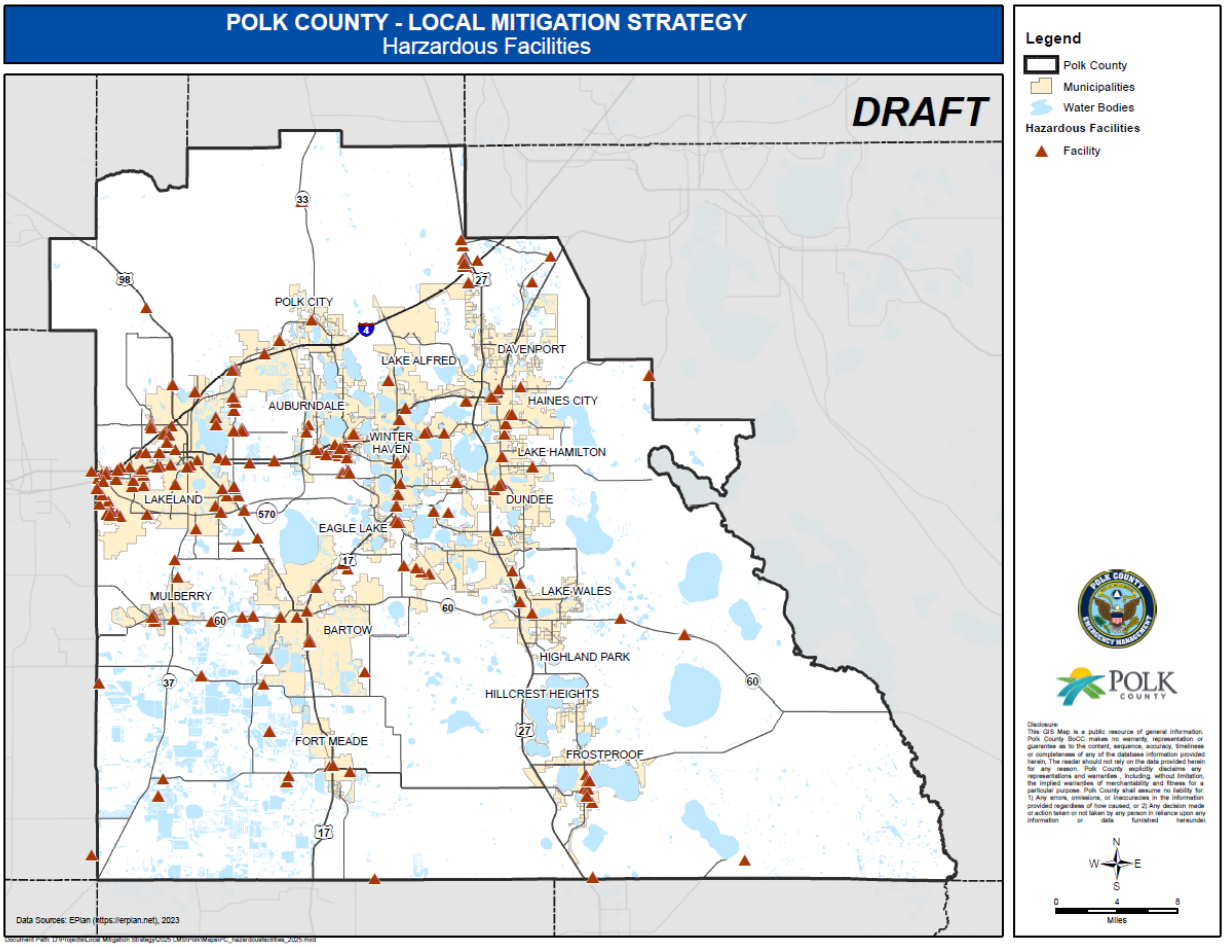


Figure V.35: Hazardous materials facilities; Source: EPlan

Since 1992, the Polk County facilities that are required to file EHS reports have ranged between 200 and 350. The potential for incidents involving these substances is high.

Of the numerous hazardous materials incidents reported statewide each year, less than one percent resulted in fatalities, less than four percent resulted in injuries, and less than six percent resulted in evacuation. Hazardous materials incidents can occur anywhere there is a road, rail line, or fixed facility storing hazardous materials. The entire County is at risk to an unpredictable incident of some type. Most incidents are small and confined to a relatively localized area.

The greatest volume of EHS found in Polk County is sulfuric acid. Mining operations and fertilizer production use this substance. The facilities using sulfuric acid in large quantities are concentrated in the southwest section of the County.

Figure V.36: Molten sulfur train derailment, November 27, 2017. Source: www.fluoridealert.org

Hazardous material incidents can occur during production, storage, transportation, use, or disposal. Communities are at risk when companies or individuals use chemicals unsafely or release harmful amounts into the environment. Polk County and jurisdictions participate in the Central Florida Local Emergency Planning Committee (LEPC) whose responsibilities include collecting information about hazardous materials in the community, making this information available to the public upon request, and developing an emergency plan to prepare for and respond to chemical emergencies in the community. The LEPC's emergency plan identifies means in which to notify the public, and actions the public must take in the event of a release.

Historical Occurrences

FDEM reported 379 hazardous material incidents in Polk County from January 2020 to January 2025.

24 Incidents (6%) involved an Ammonia release
184 Incidents (48%) had a transportation related release
357 Incidents (94%) required the Florida Department of Environmental Protection to be contacted
23 Incidents (6%) had at least one or more injuries
14 Incidents (3%) had at least one fatality
370 Incidents (97%) had at least one person evacuated

55 Incidents (14%) had at least one CERCLA 304 (EHS Chemical) released. Below is the date and summary of these incidents.

Date and Investigative Details are provided from the Florida Division of Emergency Management reporting system with individual names redacted while maintaining the remaining original language.

January 13, 2020	Per NRC#1268560 Verbatim: "CALLER REPORTED AMMONIA RELEASED TO THE AIR FROM A CHEMICAL FACILITY THAT MAY EXCEED THE RQ DUE TO A PRESSURE RELIEF VALVE THAT MOMENTARILY LIFTED. THE CAUSE IS UNKNOWN." Per Mosaic Fertilizer: The updated quantity released is 76 pounds.
May 29, 2020	An estimated 50 to 75 gallons of diesel and 20 tons of Phosphate spilled on HWY-60 in the Mulberry area due to a traffic crash involving two tractor-trailers. No storm drains or waterways affected. No clean-up actions reported. One unconfirmed fatality reported. Per Florida Department of Environmental Protection (FDEP) via email: OER is on-scene with the Polk County Sheriff's Office. One of the semis released motor oil and operating fluids, which are contained to the roadway. Another semi carrying approximately 23.5 tons of Diammonium Phosphate fertilizer released an unknown amount onto the roadway as well.
June 6, 2020	PER NRC#1278992 VERBATIM "CALLER REPORTED A RELEASE OF ANHYDROUS AMMONIA FROM A MANUFACTURING FACILITY DUE TO POWER LOSS AT THE FACILITY. CALLER STATED THE RELEASE WAS STOPPED AT THE FACILITY." Mosaic Fertilizer sent a 7 day follow release report. Mosaic Fertilizer indicated that 34 pounds of anhydrous ammonia pounds was released from a broken release valve due to their power loss.
June 17, 2020	Caller reports a phosphoric acid release in Mulberry at the county line due to equipment failure. Approximately 1,500 gallons released and was contained onto concrete on-site. The release was stopped. Cleanup actions are planned. Per Mosaic the release remained on site and the Primary site location was in Polk County where the phosphoric acid release occurred.
July 29, 2020	5 to 6 gallons of unknown chemicals had an unexpected reaction while being mixed in a vat at a dairy in Winter Haven. The chemical mixture remains in the vat at this time. The building was evacuated and 911 called. One employee reported feeling sick, but no transports to a hospital reported. A HAZMAT Team is on scene. Per the Borden Dairy Co. of Florida contact the chemicals that were released stayed on site, there were no injuries due the possible mixtures of the caustic mix and the acid solution in their Vat. Around 5-10 persons were evacuated from the plant, the rest of the workers moved to other side of the plant. Local Fire/Hazmat did respond to the plant.
September 9, 2020	900 gallons of a Chlorine solution reported spilled at the Auburndale Water Treatment Plant in Auburndale. The spill was to soil and possibly into Lake Ariana. Caller reported she found a reference to the spill in her shift notes that stated the spill started around 7 AM and was under control. However, at around 1900 ET this evening a private citizen called

	to report an odor. Plant employees were notified and later found the release and reported the spill back to Polk County Dispatch. No injuries or evacuations reported.
September 15, 2020	An estimated 4-5 gallons of battery acid were released after a pallet jack fell off the back of a semi truck in Lakeland. Caller stated that the majority of the release flowed into a nearby storm drain where it is contained. A contractor has been hired and is enroute to conduct clean up.
October 1, 2020	Caller reports a release of an unknown amount of ammonia due to unknown causes in Mulberry. No injuries or fatalities were reported. The release has ceased. Updated quantity is 45 lbs. of NH3, The report has been updated to reflect the change.
October 16, 2020	NRC#1289932 has been attached. Caller advises that the release was acidic was water mixed with sulfuric acid, NOT purely sulfuric acid. The cause of the release was a leaking frac tank, not a storage tank as the NRC report states. Clean up actions have been completed.
December 17, 2020	Mosaic reports a release of an unknown amount of ammonia due to a power outage in Mulberry. No injuries, fatalities, or evacuations took place. The release has ceased. No clean up actions were necessary.
January 5, 2021	PER NRC#1295491 "VERBATIM" CALLER REPORTED A SULFURIC ACID TRANSFER PUMP LEAK DUE TO EQUIPMENT FAILURE. NO WATERWAYS IMPACTED. SPILL OCCURRED INSIDE OF THE PLANT. CLEAN UP IS UNDERWAY. VAC TRUCK USED. Reporting party advised that a total of 16 gallons of sulfuric acid released. The release was stopped, and cleanup actions are in progress.
February 8, 2021	Polk County SO reports a release of an unknown amount of ammonia due to unknown causes in Elouise. No injuries or fatalities were reported. The building has been evacuated. Polk County FR is en-route. Per Box Beef there was no release of anhydrous ammonia on site. There was a possible false alarm with the fire system that led Haz-Mat to believe there was a possible release of anhydrous ammonia. They stated that their anhydrous ammonia alarms are working and there was no readings detected for anhydrous ammonia. Colorado Box Beef was given the number to call the SWP to update the information, Colorado Box Beef does understand about calling in a possible release in the future if one was to occur. Upon checking information in CDX and E-Plan there was no current RMP filings found for Colorado Box Beef in Winter Haven as a possible RMP site. Colorado Box Beef has around 18,515 pounds of anhydrous ammonia on site. Registration information for filing in CDX and updating E-Plan were forwarded to Colorado Box Beef.

February 25, 2021	Polk County FR advises of a road closure with an ammonia and petroleum release. All lanes of CR 640 at the address are closed due to an overturned semi. No injuries or fatalities are reported. An unknown amount of ammonia is releasing from the semi as well as approximately 100 gallons of diesel. No storm drains or waterways have been impacted. FHP and Polk County FR are on scene. The Traffic accident with a Diesel Fuel spill is unrelated to release of anhydrous ammonia. Per [redacted] with OER there was a traffic accident in front of Mosaic's plant entrance on State Road 640. A semi-truck was leaving Mosaic with a container and overturned on State Road 640, it released around 740 pounds of diesel fuel. While responding to the diesel fuel spill OER, FHP and Polk County FR noticed a slight whiff of anhydrous ammonia near the traffic accident. The Responders found that the anhydrous ammonia release was coming from a Pipeline from the Mosaic plant. There is a Manhole cover/Vault that covers the pipeline on one side of the road that the anhydrous ammonia pipeline goes underground on State Road 640. The pipeline crew responded where they found a bad valve in the pipeline that was leaking anhydrous ammonia, they replaced the valve. The amount of anhydrous ammonia released is unknown. CS 2/26/21
March 2, 2021	NRC #1299468 has been attached, which states that a total of 757 pounds released. Cleanup actions are planned. Per NRC#1299450 Verbatim: "CALLER STATED DUE TO A VALVE THAT WAS OPEN THERE WAS A RELEASE OF TOLUENE THAT WENT TO THE AIR AT THE CHEMICAL MANUFACTURING FACILITY. CALLER STATED THE MATERIALS MIXED WITH WATER WENT TO AN INTERNALDITCH GOES TO THE ONSITE WASTE WATER TREATMENT FACILITY."
May 5, 2021	Caller reports a release of anhydrous ammonia in Mulberry. An unknown amount released from a pressure relief valve due to over pressuring. The release was contained on site. Clean up actions are complete. NRC#1304332 is attached. Please see below correspondence related to the anhydrous ammonia release that was reported to the NRC and SWO earlier today. The release was determined to be approximately 35 pounds, below the reportable quantity. Mosaic notified the agencies as a precaution since the exact amount was not known at the time of release.
May 30, 2021	Caller reports a hazmat release in Davenport. Approximately 2 gallons of muriatic acid released from a vehicle. A storm drain was impacted. Clean up actions are complete.
May 30, 2021	US Water reported a release of approximately 200 gallons of a sodium hypochlorite solution from an aboveground tank at a drinking water facility in the Frostproof area. The release was contained to the facility and no waterways or storm drains were impacted. There was no impact to the drinking water supply inside the facility. Clean-up actions have been completed. The Public Water ID# for the facility is 6535463.

July 5, 2021	Polk County SO reports an active ammonia release in Eloise. The source of the release is unknown at this time. A shelter in place order has been advised. Polk County Fire Rescue is on scene. Per [redacted] with Colorado Box Beef said, the release of anhydrous ammonia was form a ½ inch line on the high side of the compressor. The amount of anhydrous ammonia released is still unknown. Polk Co. Haz-Mat/Fire Department responded to the release of the anhydrous ammonia, the initial call was made from the Polk County Sherriff's Department. [redacted] did follow up to report the initial release to the NRC. I asked for a 7 Day follow up release report to be forwarded to the Local LEPC and to the SERC. [redacted] said that [redacted] is coming to assist with the repairs and work on an estimation of the anhydrous ammonia released. Colorado Box Beef is still working on their registration, the information for registration was forwarded for CDX, E-Plan and for RMP. CS 7/6/21
August 5, 2021	Polk County SO reports a release of an unknown amount of ammonia due to a broken valve in Auburndale. No injuries or fatalities were reported. The building and surrounding homes have been evacuated. Polk County FR and hazmat are on scene. I talked to [redacted] with All Temp Storage, [redacted] explained that the anhydrous ammonia release occurred in the pump room after a refill of their system while conducting a pressure test with the aid Kelly Refrigeration. While conducting the pressure test the bolts broke on a valve during a compressor restart, an unknown amount of anhydrous ammonia was released. Around 15-20 people were evacuated from the buildings around the surrounding area, there were no injuries and Polk Co Fire Rescue/Haz-Mat responded to the release. When their anhydrous ammonia system recharge is completed All Temp Storage will be sending a 7 Day follow up release report. I gave the contact information for the Local LEPC, SWP, explained 42 USC 11004 (a)&(c). All Temp Storage needs to follow up with a call to the SWP since there was no initial call made other than the call made to the NRC. Contact numbers for the SWP and the NRC where forwarded, I explained Sections 311, 304, 303, 302 and CERCLA 103. All Temp Storage has not updated their information in E-Plan to reflect that anhydrous ammonia is stored on site Since the 2018 reporting year, 2019 and 2020 reporting years need to be updated in E-Plan. I also explained for need to update the emergency contact names and phone numbers in E-Plan. CS 8/6/21
August 7, 2021	Unknown amount of anhydrous ammonia released at the Mosaic New Wales Facility in the Mulberry area. The release was from a pressure valve that vented to the atmosphere. No injuries or offsite impact reported. Per NRC#1313046 (VERBATIM): THE CALLER IS REPORTING A RELEASE OF ANHYDROUS AMMONIA INTO THE ATMOSPHERE FROM THE PRESSURE RELIEF VALVE ON A PIPE, INSIDE THE FACILITY. THE CAUSE OF THE INCIDENT IS UNKNOWN AT THIS TIME. SHUTDOWN SYSTEM, CLEANUP COMPLETED, INVESTIGATION UNDERWAY. Per Mosaic: The amount has

	been updated to 56 pounds. The anhydrous ammonia release was called in by Mosaic, remained on site and was below the RQ. The release was from a pressure valve that vented to the atmosphere around 56 pounds was released. CS 8/9/21
August 18, 2021	Mosaic reported a release of an unknown amount of a 40% phosphoric acid solution from a facility in Mulberry due to a ruptured tank. No storm drains or waterways were impacted. Clean-up is in progress. This correspondence serves as follow up reporting related to the 40% Phosphoric Acid Release which occurred at the New Wales facility on August 18, 2021 (State Watch Office Report 2021-4569 and NRC Report 1314004). The release quantity has been estimated to be 25,000 gallons to soil. Mosaic continues clean-up and remediation of the impacted soil. If you need any additional information, please contact me at 863-860-0989. Thank you, Dara Ford. CS 8/26/21 The Phosphoric Acid release/discharge was at the ditch east of process area & north of collapsed tank phosphoric acid tank. The Phosphoric Acid tank totally collasped on 8/18/21. Info. from DEP oculus/warning letter provide from DEP/OER. CS 4/1/22
September 2, 2021	Caller reports a release of an unknown amount of anhydrous ammonia in Mulberry due to unknown reasons. There are no evacuations at this time. No injuries or fatalities were reported.
October 26, 2021	Caller reports an ammonia release of approximately 1200-1400 pounds in Winter Haven due to a leaking holding tank. No injuries or fatalities, no evacuations associated with this release either. No storm drains or waterways have been affected. Talked to [redacted] with William G Roe & Sons Inc., he explained the anhydrous ammonia release was from a leaking gasket in their pump room. Upon discovering the release their workers exited the building and hit the outside emergency stop button for the anhydrous ammonia. [redacted] said the release was between 1200 -1400 pounds of anhydrous ammonia which remained inside the pump room. [redacted] said they are trained as responders but remained outside of the building when Polk Co. Fire Rescue responded. [redacted] said the anhydrous ammonia release was contained in the pump room and it was slowly vented by Polk Co. Fire Rescue. I explained CERCLA 103, calling within 15 minutes when a release occurs to the NRC/SWP and the contact phone numbers were provided. I explained 42 USC 11004 (a) & (c) and the contact information for the Local LEPC was provided. Also, I explained there was an initial delay in making a call to the SWP and there was a delay in calling the NRC. I asked for a 7 Day follow up release report to be emailed to the Local LEPC and to the SERC. Talked with Polk Co. Fire Rescue they had estimated somewhere between 200-500 pounds of anhydrous ammonia might have been released. CS 10/26/21

November 19, 2021 — Per NRC#1322479 (VERBITUM): CHLORINE AND PHOSPHATE RELEASED FROM AN UNKNOWN NUMBER OF PORTABLE CANS ON A VEHICLE (UNKNOWN EXACTLY WHAT TYPE OF VEHICLE) THAT WAS INVOLVED IN A SINGLE VEHICLE ACCIDENT. THE FIRE CHIEF IS REQUESTING A CALL BACK FROM THE ENVIRONMENTAL PROTECTION AGENCY (EPA)... FIRE DEPT IS ONSCENE... THE ROAD CLOSURE IS STILL ONGOING. [redacted] with Polk County Warning Point (863-401-2222) contacted the State Watch Office about this incident. He has requested someone from DEP call the on scene contact at 863-287-8075 reference clean-up. One of the chemicals released has changed from Phosphate to Phosphoric Acid. Spill is to the roadway. No storm drains or waterways affected. Per OER the release was Muriatic Acid and Sodium Hypochlorite that spilled. CS 11/19/21

January 12, 2022 — An unknown amount of anhydrous ammonia was released from an evaporator unit in Auburndale due to unknown causes. No storm drains or waterways were impacted and no clean up actions are reported. Per Commercial Warehouse T3 their release was below the RQ 99lbs or under, remained on site and they called within required timeline. CS 1/13/22 Follow up release letter from Commercial Warehouse shows 109 pounds of NH3 was released. CS 1/20/22

February 13, 2022 — An unknown amount of Ammonia was released from a low pressure strainer at a warehouse in Lakeland due to a crack. The release was contained on site. I talked to the Publix contacts [redacted] and [redacted] the maintenance person who worked to isolate the anhydrous ammonia release on the roof at the bakery. [redacted] said, the anhydrous ammonia release was from a liquid strainer that had cracked on a bypass line (low side), [redacted] with Publix isolated the release and then made the notification calls to the SWP and to the NRC. The anhydrous ammonia release remained on site. [redacted] with Publix believes the anhydrous ammonia release is possibly below the RQ, they will update the possible release amount after the Publix engineers complete their calculations. CS 2/14/22 Follow up report from Publix 2/25/22 stated 43.89 pds of NH3 was released. CS 3/10/22

February 14, 2022 — An unknown amount of ammonia was released from a plant in Mulberry due to unknown causes. No storm drains or waterways were reported. No clean up actions are reported. The amount released has been updated to show 500 lbs. Per [redacted] with Mosaic said, the anhydrous ammonia release occurred in the reactor part of the fertilizer plant. Mosaic believes the anhydrous ammonia release is possibly below the RQ, they will update the possible release amount after the Mosaic engineers complete their release calculations. Mosaic's anhydrous ammonia release remained on site and they called the NRC (# 1328917) / SWP after the release occurred. CS 2/15/22

March 9, 2022	Polk County SO reports a HazMat release of 200 gallons of sodium hydroxide near Ft. Meade due to a vehicle crash. No injuries were reported. No waterways were impacted. Polk County FR and SO are on-scene.
March 24, 2022	Mosaic reports a potential release of 2% phosphoric acid solution also known as process water due to a suspected tear in the liner of a gypsum stack in Mulberry. Caller stated that it is unknown how much has released, but the facility maintains a recovery well system. No evacuations or endangerments were reported. No state assistance requested at this time. Per Mosaic the potential release was called in out of caution if they were to detect any solution in there recovery wells. CS 3/29/22
May 6, 2022	No more than 35 gallons of automotive fluids (fuel, motor oil and radiator fluid) spilled into a large water filled ditch in Lakeland due to a single vehicle traffic crash. One person reported injured and had to be extricated from the vehicle by fire fighters. After the vehicle was removed, automotive fluids were seen in the ditch. No clean-up actions reported.
June 24, 2022	Polk County SO reports a release of approximately 75 gallons of a petroleum mixture in Lakeland due to a vehicle accident. The mixture consists of diesel and radiator fluid. The release entered a nearby storm drain where it was contained. There are no injuries or fatalities. No clean up actions were reported. Polk County SO and FR are on-scene.
August 8, 2022	Via NRC#1343885 verbatim: "THE CALLER STATES A POWERE OUTAGE CAUSED AMMONIA TO RELEASE INSIDE THE FACILITY. NO EVACUATIONS AT THIS TIME." Incident occurred in Lake Wales. Per [redacted] via phone call: Three people have been transported and the leak has been stopped. NRC follow up 89pds of NH3 was released. I talked to [redacted] with Florida Natural in Lake Wales. He said, the release was from a relief valve on the roof that lifted after their power was restored. It was estimated to be from a 3 - 5 Minute release on a ¾ inch line. Florida Natural will be sending a 7 Day follow up release report after the calculations are completed. 3 persons were transported for possible exposure where treated and released the same day. CS 8/9/22. Per [redacted], he had a productive 1 ½ hour meeting with the facility this morning. The written follow up letter will be comprehensive in nature & will detail the facility's efforts to institute Administrative and Engineering Controls to prevent future releases. Facility representatives stated that there was much electrical activity in the area, which resulted in a power failure. The valve that should have closed, remained in the open position. That valve is being replaced, and similar valves are being checked for operability. The facility appears to be more prepared than most and has a very functional Emergency Action Plan. By the email embedded below,

	as well as the fact that Duke Energy (contractor) employees were transported to a medical facility, they will send in the written report within Federal mandated time limits. [redacted] Follow up From Polk Co. EM. CS 8/10/22
August 16, 2022	Approximately 10 gallons of diesel and radiator fluid spilled in the Bartow area due to a traffic crash involving two tractor-trailers. No storm drains or waterways affected. No clean-up actions reported.
September 12, 2022	Mosaic Fertilizer reports a sulfuric acid release of approximately 35 gallons in Ft. Meade. The cause of the release is unknown at this time. No storm drains or waterways were impacted. The release has since stopped. RP can be reached for further information.
September 15, 2022	Per NRC#1347393 verbatim "CALLER REPORTED AN AMMONIA RELEASE DUE TO A RUPTURED LINE AT THEIR FACILITY DUE TO EQUIPMENT FAILURE. THERE WERE NO OFF SITE IMPACTS, FIRES, EVACUATIONS OR INJURIES. THE RELEASE HAS BEEN ISOLATED. THE AMOUNT OF MATERIALS RELEASED IS UNKNOW AT THIS TIME BUT IS BELIEVED TO BE ABOVE THE THRESHOLD FOR REPORTING." I talked to [redacted] with Mosaic he said, the anhydrous ammonia release was from a ruptured line/pipe and the amount of anhydrous ammonia released is still unknown. The release was for a short duration. There were no injuries, evacuations and the release remained on site. Mosaic is working on the follow up release report. EPA Region 4 did call to ask about the anhydrous ammonia release. CS 9/16/22
September 29, 2022	Per [redacted] via email; "I wanted to send an update regarding this incident. The valve that was broken has been repaired and the leak was stopped. The release is contained onsite and did not impact storm drains or waterways. The release did impact the soil. ACT was hired by the responsible party and the clean up is currently in process."
November 15, 2022	Per NRC#1352636 verbatim "CALLER IS REPORTING THEY FOUND A PRESSURE RELIEF VALVE THAT WAS ICED OVER WHICH CAUSED A RELEASE OF ANHYDROUS AMMONIA INTO THE AIR. THE AMOUNT RELEASE IS APPROX. 1231 POUNDS." Mosaic did notify the SWP and they notified the NRC about the release, they were late for the initial notifications. The amount of the anhydrous ammonia release was 1231 pounds. The anhydrous ammonia release was related to a pressure relief valve that iced over; the anhydrous ammonia release did not travel offsite. I asked for a 7 Day follow up release report to be sent to the SERC and to the Local LEPC. CS 11/16/22
November 17, 2022	All lanes of Drane Field Road are closed near County Line Road in the Lakeland area due to a traffic crash. Two people reported injured. Unknown amount of bagged fertilizer reported spilled. The fertilizer bags

	fell into a retention pond and have mixed with water. Local fire department is on scene. A DEP call back has been requested (Battalion 26 / 863-899-8339).
January 6, 2023	Per NRC#1356964 Verbatim: "CALLER IS REPORTING A HOSE DISCONNECTED FROM A TANK AND RELEASED LIQUID CHLORINE. THE MATERIAL RELEASED INTO THE PARKING LOT AND THE SRP SHOVELED THE MATERIAL INTO THE CANAL BEHIND THE FACILITY AT THE ADDRESS PROVIDED. CALLER ALSO STATED THAT THE GRASS WHERE THE RELEASE OCCURRED SHOW SIGNS OF CHEMICAL BURNS FROM THE RETAIL STORE TO THE CANAL." R/P did notify the NRC. CS 1/10/23 Per the store owner [redacted] of Pinch a Penny did not have any Sodium Hypochlorite releases. [redacted] with Polk Co. EM visited the site to asset with How to Comply information and shared the need to send a follow up release report to the SWP. [redacted] indicated from a visual inspection of the outside of store going toward a canal behind the facility there was a possible Sodium Hypochlorite release. The Pinch a Penny store does understand about reporting releases and the correct timeframe for reporting after [redacted] visit from Polk Co. EM. CS 1/13/23
January 14, 2023	The City of Lakeland advises of a potential chlorine gas release in a facility due to unknown causes. There are no injuries, fatalities, evacuations, or road closures at this time. A HazMat team is En route to the facility to assess the situation. Per [redacted] with the City of Lakeland, there were no evacuations/injuries due to the chlorine gas release and the amount released was 57 pounds. The onsite scrubber captured most of the chlorine gas on site. I explained to [redacted] with The City of Lakeland that the amount of chlorine gas released needs to be updated in the State Warning Point and the National Response Center reports. The City of Lakeland did call the NRC and the State Warning Point. I asked for a 7 Day follow up release report to be sent to the Local LEPC and to the SERC. The contact information was forwarded for the LEPC and for the SERC. CS 1/17/23
February 14, 2023	Per NRC#1359966 verbatim "CALLER IS REPORTING THE DISCOVERY OF A LEAK OF ANHYDROUS AMMONIA AT THE COLD STORAGE FACILITY. CALLER STATED THE CAUSE OF THE LEAK IS UNKNOWN AT THIS TIME. "Per Auburndale FD via phone call: The report has been updated to show less than 100 pounds of Ammonia was released due to a pressure gauge leak. The release was called in by the facility on time and it was Under the RQ. CS 2/17/23
March 15, 2023	Minute Maid Company reports an ammonia release of an unknown amount due to equipment failure at a plant in Auburndale. The release is contained to inside the building. No storm drains or waterways were impacted. No injuries or fires were reported. The structure is currently being evacuated. Polk County FR and EMS are En-route. Per Polk Co. EM

	STATUS " LEAK HAS JUST BEEN MITIGATED. NUMEROUS (FEW SO FAR) HAVING SHORTNESS OF BREATH. SHELTER IN PLACE FOR THE AREA CS 3/15/23Per Auburndale FD via phone call: The report has been updated to show the amount of Ammonia released to be 8,000-12,000 pounds. The leak has been mitigated, and the evacuation order is now lifted. Auburndale FD is clearing the scene. 8,000-12,000 pounds. Coca-Cola North America did make their initial call notifications to the NRC and the SWP within the required timeline. CS 3/16/23 Per Coca-Cola North America the total amount of NH3 released was 12961 Pounds. No injuries were reported. CS 3/17/23
April 14, 2023	Polk County SO reports a potential release of an unknown amount of muriatic acid from a vehicle due to a fire in Davenport. No storm drains or waterways were impacted. Polk County FR is on-scene.
April 14, 2023	Mosaic Fertilizer reports that an unknown amount of Ammonia was released near Mulberry due to unknown causes. No injuries, road closures, or evacuations have been reported. The release has been mitigated at this time. Per [redacted] with Mosaic Fertilizer (863-232-7417): Follow-up investigation found that 10 pounds of Anhydrous Ammonia was released to the atmosphere.
April 25, 2023	A potential release of an unknown amount of chlorine was reported due to unknown causes at the Glendale Wastewater Reclamation Facility in Lakeland. Lakeland FD is on-scene. Polk County HAZMAT is enroute. Per the City of Lakeland contact [redacted], the chlorine gas release was due to a faulty valve on a chlorine gas tank and the amount released was around 14 pounds. The chlorine gas release remained on site, there were no injuries, no evacuations and the facility was late for their initial reporting time. Polk County Fire/Hazmat responded to the Glendale Wastewater Reclamation Facility; they were on site for around 6.5 hours assisting & aided in the replacement of the faulty valve. I asked for a 7 Day follow up release report from the Glendale Wastewater Reclamation Facility to be sent to Central Florida Local Emergency Planning Committee and to my email address at the State Emergency Response Commission. [redacted] the ERC Coordinator with Polk County visited the facility on 4/27/23 in the morning. CS 4/27/23
May 9, 2023	Per NRC#1366759 Verbatim: "CALLER STATES AN UNKNOWN AMOUNT OF ANHYDROUS AMMONIA WAS RELEASED INTO THE AIR FROM A VENT STACK ON TOP OF THE FERTILIZER PLANT. THERE WAS RESIDUAL AMMONIA LEFT IN THE VENT PIPING. THE EXACT CAUSE IS STILL UNDER INVESTIGATION BUT IT IS SUSPECTED THAT A PRESSURE RELIEF VALVE DID NOT RE-SEAT."I talked to [redacted] with Mosaic she indicated that a PRV valve had lifted and was possibly stuck when they discovered that a release of anhydrous ammonia occurred, around 390 pounds was released. Mosaic will be checking their other PRV valves and replace them

	if needed. Mosaic will be sending a follow up report and will update if the amount released has changed. CS 5/9/23
June 5, 2023	An estimated 200 gallons of fluoride were released at a water treatment facility in Haines City. Caller stated that the release was from a newly installed holding tank and believes it to be the result of loose fittings. The release was mostly within a containment area with some potentially impacting soil. Clean up actions were not reported. RP requests a call from FDEP OER in regard An estimated 200 gallons of fluoride were released at a water treatment facility in Haines City. Caller stated that the release was from a newly installed holding tank and believes it to be the result of loose fittings. The release was mostly within a containment area with some potentially impacting soil. Clean up actions were not reported. RP requests a call from FDEP OER in regard to what clean up actions should be taken to what clean up actions should be taken. I talked with [redacted] with the City of Haines City Water treatment plant. He explained it was hydrofluoric acid that was released that remained on site, very little product went outside of containment area. I explained the need to follow up with a call to the NRC since, there was no initial notification made. CS 6/5/23 The City of Haines City WTP understands if they are over the Threshold for section 302 they will need to update the information in E-Plan. They indicated its a 25% solution; they are not subject to RMP. CS 6/6/23
June 5, 2023	Per OER via email: "OER (H. Hoffman) contacted the On Scene Contact, who stated that 20-25 gallons of muriatic acid fell off of a flatbed truck onto the roadway. Auburndale FR contacted Hull's Environmental to supplement remediation with sodium bicarbonate and all impacts were contained to the roadway. Hull's will likely be hired by the RP to complete the remediation.
June 20, 2023	The anhydrous ammonia release was due to high winds tearing off the roofing that damaged a valve on the piping. The release was called in by Lineage Logistics and the amount is still unknown. Per [redacted], they did get the numbers from their team its roughly around 2900 pounds of anhydrous ammonia that was released, they will update that amount in their follow up release report. I did ask for the 7 Day follow up release report to be forwarded to the Central Florida LEPC and to the SERC. CS 6/23/23
August 1, 2023	Lakeland PD reports of a coolant and petroleum mixture release from a vehicle due to a vehicle accident. A nearby storm drain was impacted, but it is unknown where it discharges to. No clean-up actions have been reported. Lakeland FR and PD are on scene.
October 5, 2023	Per NRC#1380999 verbatim "THE CALLER IS REPORTING A RELEASE OF 10.5% SODIUM HYPOCHLORITE (BLEACH) ONTO THE GROUND AND INTO

	A STORM DRAIN FROM A TOTE ON THE BACK OF A FLATBED TRUCK. THE CAUSE OF THE RELEASE WAS DUE TO THE VALVE ON THE TOTE FAILING." Per [redacted] with DEP OER: OER (Tom West) contacted the reporting party who stated 300 gallons of sodium hypochlorite was released from a tote with approximately 200 gallons impacting a grassy area with an approximate 12' x 12' area being affected and approximately 100 gallons impacted a storm drain with an unknown endpoint. CURA Environmental Services has been hired for remediation. OER contacted CURA Environmental. CURA personnel are enroute to the scene and the PM will provide a Discharge Report Form to FDEP within 24 hours. No further OER action required at this time.
October 10, 2023	Per NRC#1381383 Verbatim: CALLER STATED A SELF-CONTAINED UNIT AT THE FACILITY HAD A RELEASED OF ANHYDROUS AMMONIA. THE CAUSE OF RELEASE IS UNKNOWN AT THIS TIME. NO INJURIES OR EVACUATIONS WERE REPORTED. Talked to [redacted] with Cutrale Citrus Juices he said, the anhydrous ammonia release was from a mini com unit that is used as a portable cooling container at the facility. The cause use of the anhydrous ammonia release is unknown, and the amount released is unknown. The anhydrous ammonia release remained on site and there were no injuries or evacuations. They are currently working on the calculations on the possible amount that might have been released and the possible cause. Cutrale Citrus Juices will be sending a 7 Day follow up release report. CS 10/11/23
November 6, 2023	Per NRC#1383577 verbatim: "CALLER STATED ANHYDROUS AMMONIA RELEASED FROM PIPE ON A REACTOR FOR THE G3 UNIT. THE RELEASE WAS DUE TO A PIN HOLE IN THE LINE. THERE WERE NO INJURIES REPORTED." This incident occurred in Mulberry. The anhydrous ammonia release remained on site, it was below the RQ and there were no injuries or evacuations. Per Mosaic the release was due to a pinhole leak in a line on the reactor G3. CS 11/6/23
January 31, 2024	Per NRC#1390404 verbatim: "THE CALLER STATES THE TUBE BROKE FROM ITS FITTING, CAUSING THE TANK TO TIP OVER, RELEASING 475 GALLONS OF BLEACH ONTO THE GROUND. THIS IS A RESTRICTED ACCESS FACILITY." This incident took place in Mulberry. One minor correction to the below message. The chlorine tank did not tip over but the sight glass on the tank fell over. I thought it was important to mention that here. We are working on our remediation efforts and communicating closely with our environmental team. Info. from Polk Co. Utilities. CS 1/31/24

Potential Impacts

There may be significant potential impacts to people and property caused by a major hazardous materials release.

Probability of Future Occurrences

Polk County programs help reduce the amount of hazardous materials and future hazmat occurrences and are listed.

- Through the Small Quantity Generator Program, the County provides businesses with information about methods of hazardous waste recycling and disposal. The State mandates Polk County monitor all businesses on the handling of hazardous waste.

- The Household Hazardous Waste Collection Facility accepts, free of charge, any household materials (corrosives, flammable, reactive materials, and toxins) that can cause injury or are harmful to people and the environment, if handled improperly.

The probability of future occurrences is medium.

Climate Change

Climate change is increasing the risk of hazardous materials incidents by intensifying extreme weather events and environmental conditions that can compromise storage, transportation, and response efforts. Stronger hurricanes, heavy rainfall, and flooding can damage facilities, storage tanks, and transport routes, leading to spills or chemical releases. Rising temperatures can accelerate the degradation of certain hazardous materials, increasing the risk of leaks, fires, or explosions. Additionally, extreme weather can disrupt emergency response efforts, delaying containment and mitigation measures. These climate-driven challenges heighten the potential for environmental contamination, public health risks, and economic impacts in the region.

Phosphate Mining Industry

Description and Background

FDEP Bureau of Mining and Minerals Regulation (BMMR) categorized approximately 420,000 acres, or 30.6 percent of Polk County, as mineable for phosphate rock. Since the early 1900s, the phosphate mining industry has been second only to agriculture in the economic impact to Polk County. The industry's impact on the economy is, however, in decline and officials anticipate it to continue to decline in the 21st Century as phosphate mining moves south into Hardee and DeSoto Counties. Some chemical manufacturing plants will continue to operate in Polk County and may convert to process new phosphate products. In 2009, Polk County designated approximately 188,000 acres, or 14 percent of the County, as Phosphate Mining, a Future Land Use designation for active mining or industries supporting the phosphate industry.

Phosphate mining is a temporary use of the land, and the phosphate mining industry has mined most of the phosphate mining district, which is now rural in nature due to reclamation after mining. (Polk County Bone Valley Selected Area Study Existing Conditions Analysis)

Figure V.37: View of a chemical plant. Source: www.fluoridealert.org

Phosphate mining generates waste products during the beneficiation and processing of phosphate rock, including sand tailings and phosphatic clays. Phosphate mining companies use tailings to backfill mine cuts, then spread the overburden stockpiled over the tailings to produce a stable landform with a variety of potential uses. Phosphate mining companies pump phosphatic clays as a 3 to 5 percent solids slurry to large, diked areas where the clay solids slowly settle, remove the supernatant water through spillways, and reuse them in the mine operations. These clay settling ponds have typically occupied 20 to 40 percent of the land area mined. It takes 3 to 5 years to consolidate to a 15 to 20 percent solids level and to crust over enough to support cattle grazing. (Central Florida Regional Planning Council 1997 Strategic Regional Policy Plan)

Chemical Fertilizer Plants

Open pit mining recovers phosphate rock. The phosphorus content of the phosphate rock is in a form (calcium phosphate) that will not dissolve in water and crops cannot absorb without a chemical process. Large phosphoric acid-based plants complete the chemical processing of phosphate rock (through the wet-phosphoric acid process) to produce phosphoric acid, producing finished products such as di-ammonium phosphate, triple superphosphate, and mono-ammonium phosphate. A primary and significant by-product of the wet process phosphoric acid-based product is phosphogypsum which is largely calcium sulfate.

Figure V.38: View of a phosphogypsum stack. Source: www.fluoridealert.org

Gypsum Stacks

Gypsum stacks are huge piles of stored phosphogypsum. Central Florida is one of the major phosphoric acid producing areas, generating about 32 million tons of phosphogypsum each year (EPA).

Phosphate mining facilities separate the phosphogypsum from the phosphoric acid and store it in the open-air gypsum stacks in the form of a solid/water mixture (slurry). The gypsum stacks form as the phosphate mining companies pump the slurry containing the by-product phosphogypsum onto a disposal site. Over time, the solids in the slurry build up forming a stack. Phosphate mines build gypsum stacks on unused or mined out land on the processing site.

As the gypsum stack increases, the phosphogypsum slurry begins to form a small pond (gypsum pond) on top of the stack. Workers dredge gypsum from the pond to build up the dike around it and the pond gradually becomes a reservoir for storing and supplying process water. The surface area covered by gypsum stacks ranges from about 5 to 740 acres. The height ranges from about 10 to 200 feet.

Ponds and ditches containing process water cover the tops of operating phosphogypsum stacks. Saturated land masses protrude into the ponds. These surface features may cover up to 75 percent of the top of the stack. Other surface features include areas of loose, dry materials; access roads; and thinly crusted stack sides (EPA).

Historical Occurrences

The Dam/Levee Failure section outlines the historical occurrences of dam/levee failures including clay settling ponds and gypsum stacks, as well as the 1997 breach that occurred in the wall of a gypsum stack in Mulberry maintained by the MPI phosphoric acid/fertilizer production facility. As a result of the breach, approximately 50 million gallons of acidic process water overflowed and ran into and through Skinned Sapling Creek to the Alafia River. Over the course of the next 10 days, the released process water traversed approximately 35 miles of the Alafia River to Tampa Bay. The release lowered the pH of the Alafia River for several days and added large amounts of nutrients to the river system, causing injuries to freshwater

wetlands and surface waters, resulting in the deaths of many species of fish, crab, shrimp, oysters, and birds. Several restoration projects occurred in the Alafia River (NOAA).

Another significant event occurred in June 1994 when a sinkhole formed (106 feet wide by 185 feet deep) in the center of an IMC-Agrico gypsum stack (at the now Mosaic New Wales Plan) near Mulberry. The sinkhole photo taken in June 1994 (Figure V.45), released 20.8 million pounds of liquid phosphoric acid into the ground below.

Figure V.39: Sinkhole in Center of IMC-Agrico Waste Stack Near Mulberry, June 1994 Source: www.fluoridealert.org (AP Photo)

The County does not have any available records on historical occurrences of hazardous material incidents relating to phosphate mining. Internet research resulted in the following historical events.

August 2016:	A sinkhole opened underneath a gypsum stack resulting in water, containing low-level radiation and other pollutants, pouring into Florida's primary drinking water aquifer.
October 2019	Two leaks formed in a gypsum stack at a fertilizer plant in Bartow. Officials believe one is coming from the old gypsum stack as the result of a tear in the protective lining.

Potential Impacts

The extent of damage the County may suffer will depend on the exact location of gypsum stacks and phosphate mines. Due to their isolated locations, there is little likelihood the failure of a clay-settling pond would adversely impact County residents. Concerns with clay-settling ponds and phosphogypsum stacks center primarily on the potential for contaminated water to flow into water bodies and water supplies and cause subsequent environmental impacts.

Possible effects of the failure of a gypsum stack include surface and groundwater contamination.

Radium is a trace impurity of gypsum. Many parts of the nation have naturally occurring radiation. Some areas of Polk County have higher recordings of radiation.

Probability of Future Occurrences

Although phosphate mining is declining in Polk County, the wet-phosphoric acid process continues at the chemical plants as mine companies transport mined phosphate from other counties into Polk County. A continued probability exists for threats generated by chemical plants and gypsum stacks, especially as they age.

Climate Change

Climate change is impacting the phosphate mining industry in Polk by intensifying extreme weather events, altering water availability, and exacerbating environmental risks. Increased rainfall and stronger storms can lead to flooding at mining sites, causing operational disruptions, soil erosion, and the potential release of pollutants into surrounding waterways. Prolonged droughts can also strain water resources needed for processing phosphate, affecting production efficiency. Additionally, rising temperatures and more frequent hurricanes increase the risk of sinkhole formation in the region's karst geology, posing structural threats to mining infrastructure and waste containment areas, such as phosphogypsum stacks.

Pipelines

Description and Background

Five pipelines currently traverse Polk County and include the Ammonia Pipeline, the Central Florida Pipeline, the Florida Gas Transmission Company (FTC) Pipeline, the Gulfstream Pipeline, and the Florida Southeast Connection Pipeline. All these pipelines carry hazardous materials. Figure V.48 illustrates the location of the pipelines.

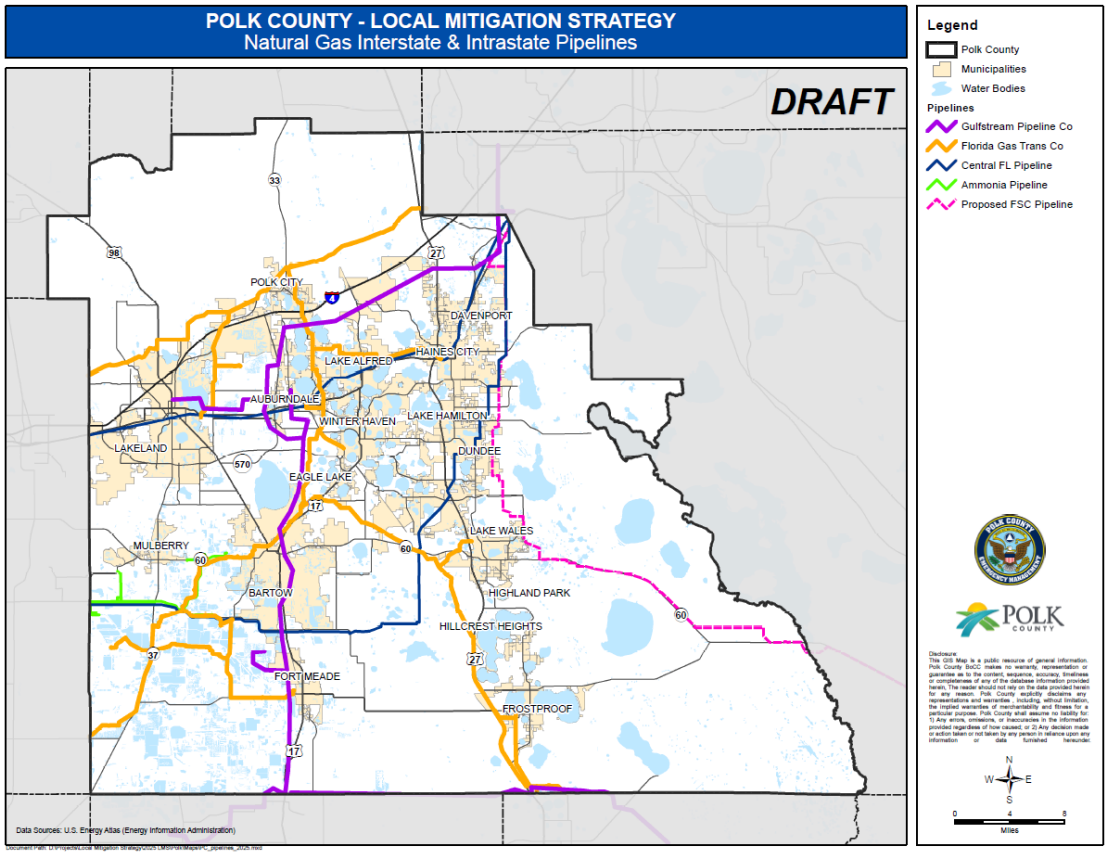


Figure V.40: Pipeline Locations; Source: U.S. Energy Atlas

Historical Occurrences

In July 2019, a pipeline at a phosphate facility leaked approximately 200 gallons of sulfuric acid.

Potential Impacts

Potential impacts from an accident or incident are potentially disastrous.

Probability of Future Occurrences

There is a low probability of future occurrences. Public education regarding pipelines such as “Call before you dig” is important to overall public safety. Many local governments in Polk County disseminate information about pipelines.

Climate Change

Climate change is affecting the pipeline industry by increasing the risk of infrastructure damage, operational disruptions, and environmental hazards. More frequent and intense storms, including hurricanes and heavy rainfall, can lead to flooding and erosion, potentially exposing or damaging underground pipelines. Extreme heat can weaken pipeline materials and increase the risk of pressure fluctuations, leading to leaks or failures. Shifting groundwater patterns also pose long-term risks to pipeline stability and corrosion. These climate-related threats not only impact the reliability of fuel and

gas distribution but also increase the potential for environmental contamination and costly maintenance in the region.

Harmful Algal Blooms

Description and Background

Polk County has more than 550 lakes, and of those approximately 100 lakes offer public access for boating, fishing, and other recreation. In recent years the presence of Harmful Algal Blooms (HABs) has become a growing concern. Over 200 algal blooms, in Polk County lakes, were investigated by the Florida Department of Environmental Protection (FDEP) since 2022. Many of these reported blooms were analyzed and showed no detectable toxins, but a few did contain toxins which could have negative consequences. Different species of algae produce toxins. Toxins have a wide range of potential negative impacts. Some of the identified toxins could affect wildlife such as fish and birds in the area leading to death. Cattle could also suffer from nervous system issues due to exposure to the identified toxins. In rare cases the consequences include human health effects ranging from skin irritation, gastrointestinal issues, or liver and kidney damage. While many of the samples taken from Polk County lakes showed very low or undetectable levels of toxins it is critical that HAB monitoring is prioritized to maintain public safety. Polk County reports any potential HAB to Florida Department of Environmental Protection (FDEP). Upon testing by FDEP, any toxin producing HAB is then sent to Florida Department of Health (FDOH). FDOH handles all public health decisions and notices to the public.

Historical Occurrences

TABLE V-19:
HARMFUL ALGAL BLOOM INCIDENTS (2022-2024)

Location	Number of Incidents
Auburndale	16
Bartow	13
Dundee	1
Eagle Lake	2
Fort Meade	7
Frostproof	4
Lake Alfred	17
Lake Hamilton	4
Lakeland	13
Winter Haven	26
Unincorporated Polk County	92
Total	**195**

Source: FDEP

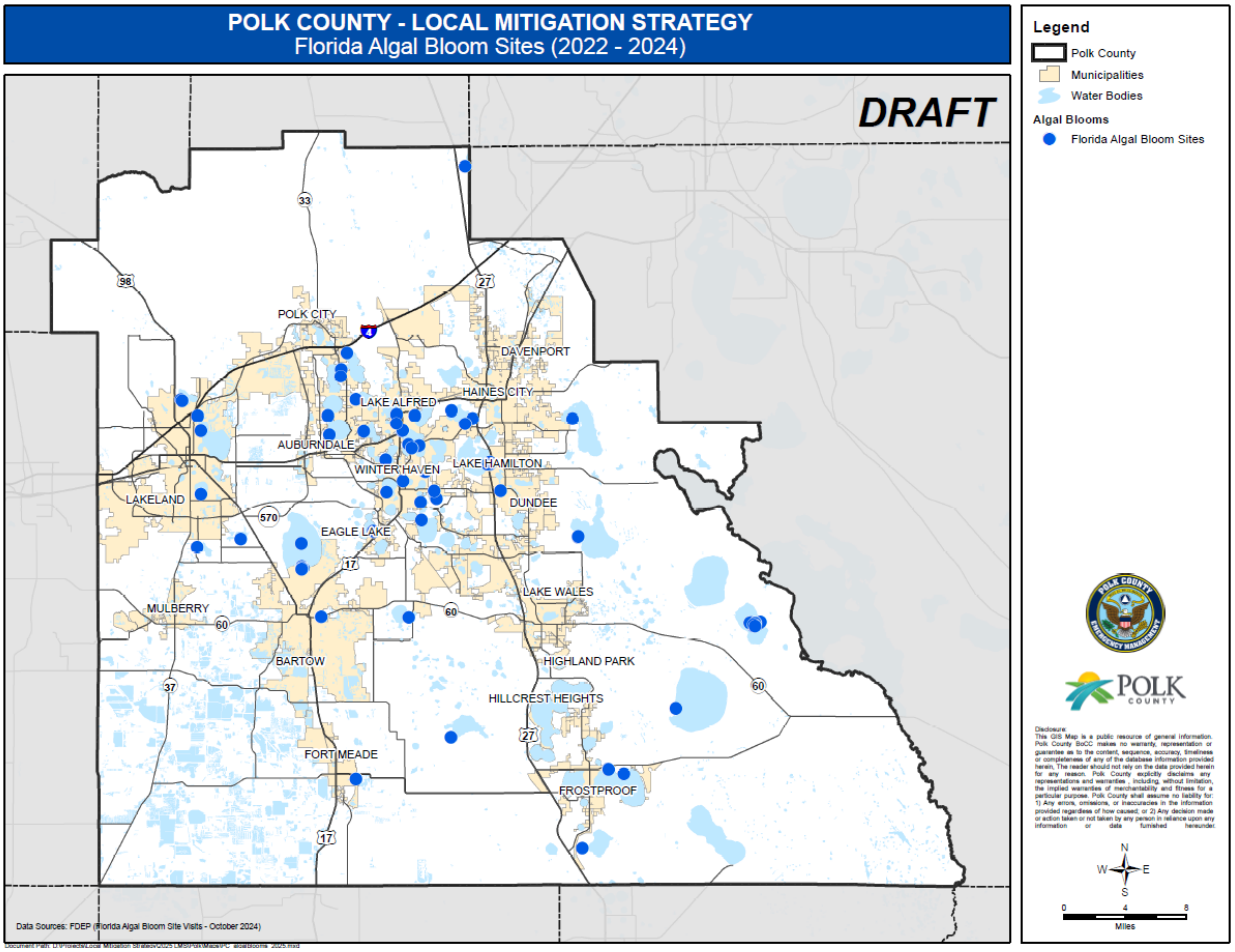


Figure V.41: Florida Algal Bloom Sites (2022-2024) Source: FDEP

Potential Impacts

The human illnesses caused by HABs, though rare, can be debilitating or even fatal. Ranging from microscopic, single-celled organisms to large seaweeds, algae are simple plants that form the base of food webs. Sometimes, however, their roles are more sinister. Under the right conditions, algae may grow out of control — and a few of these "blooms" produce toxins that can kill fish, mammals, and birds, and may cause human illness or even death in extreme cases. Other algae are nontoxic but eat up all of the oxygen in the water as they decay, clog the gills of fish and invertebrates, or smother corals and submerged aquatic vegetation. Still others discolor water, form huge, smelly piles on beaches, or contaminate drinking water.

Probability of Future Occurrences

During the late summer and early fall months, algae bloom development increases in intensity. High water temperatures, reduced freshwater inputs, and high humidity levels create an ideal environment for harmful algal blooms to persist. Additionally, after major flood or hurricane events, nutrient pollution caused by infrastructure debris, stormwater runoff, and wastewater spills can develop or exacerbate blooms.

Climate Change

Climate change is intensifying harmful algal blooms by increasing water temperatures, altering precipitation patterns, and intensifying nutrient runoff. Warmer waters create ideal conditions for algae to flourish, while extreme weather events, such as hurricanes and heavy rainfall, contribute to nutrient pollution by washing excess fertilizers and organic matter into local lakes and waterways. These factors, combined with prolonged droughts that reduce water flow and increase stagnation, can lead to more frequent and severe HABs, posing risks to water quality, aquatic ecosystems, and public health in the region.

Transportation Incidents

Description and Background

The movement of people and materials throughout the County has increased. Accompanying this movement is the increased risk of disaster incidents involving rail, bridges, vehicles, pedestrians, and bicyclists.

From October 25, 2020 to October 25, 2024, there have been 1,490 crashes involving bicycles and pedestrians in Polk County.

The majority of the bridges in Polk County are located in unincorporated Polk County (65.4 percent) followed by Lakeland with 22.8 percent. Most rail crossings are in unincorporated Polk County (65.4 percentIn the incorporated areas, the rail crossings impact 12 of the 17 jurisdictions. Of these, the City of Lakeland has the most rail crossings (27 percent), followed by the City of Bartow (14 percent), and the City of Lake Wales (12 percent).CSX moves freight through the County. The Amtrak Silver Star, running from New York to Miami, has stops at Lakeland and Winter Haven. Lakeland's Amtrak train station is located at the northeast corner of downtown along Lake Mirror, east of Massachusetts Avenue. The Winter Haven Amtrak Station is located on 7th Street SW across US 17. The Florida Department of Transportation (FDOT) is currently studying the possibility of extending the SunRail commuter rail service into Polk County, Florida. SunRail currently serves Central Florida from DeBary in the north to Poinciana in the south. This project would extend service to the west from the Poinciana SunRail station to Lakeland.

Historical Occurrences

TABLE V-19:
NUMBER OF PEDESTRIAN AND BICYCLE CRASHES (2022-2024)

Location	Pedestrian Crashes	Bicycle Crashes
Auburndale	66	21
Bartow	50	24
Davenport	10	4
Dundee	6	0
Eagle Lake	3	3
Fort Meade	10	2

Location	Pedestrian Crashes	Bicycle Crashes
Frostproof	3	0
Lake Alfred	7	0
Lake Hamilton	0	2
Lakeland	318	166
Winter Haven	77	31
Unincorporated Polk County	301	143
Total	**931**	**413**

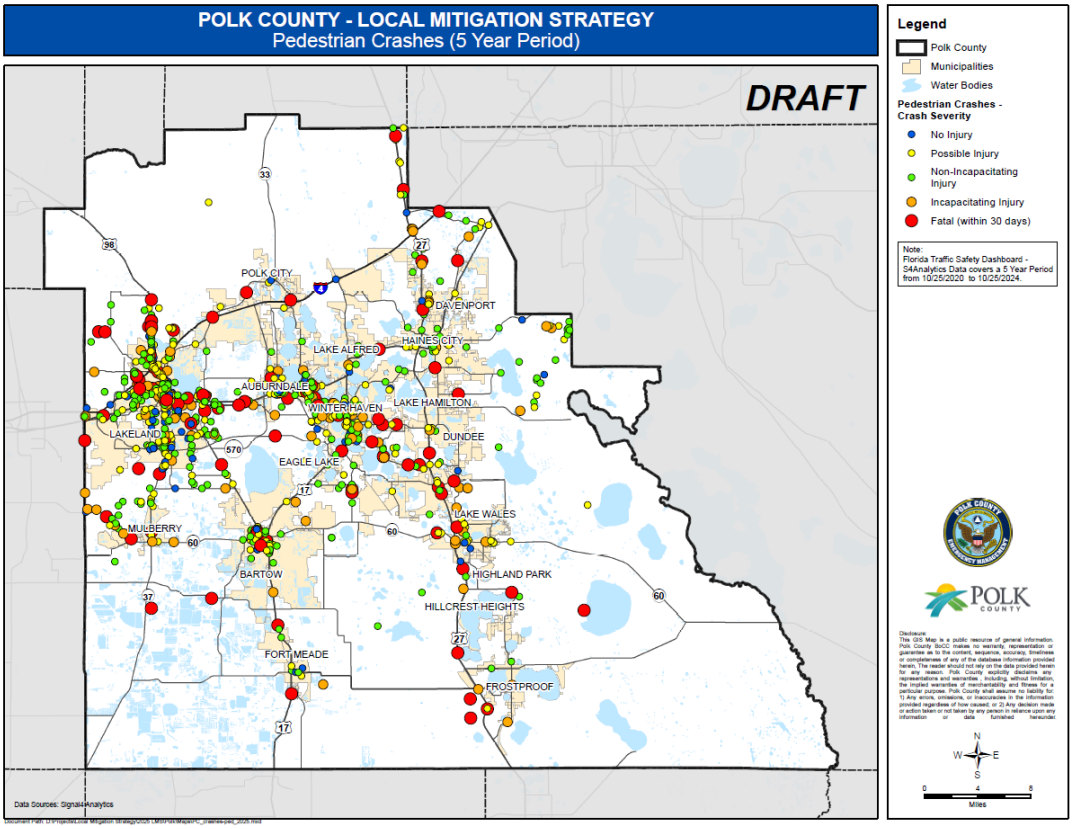


Figure V.42: Pedestrian Crashes (10/25/2020 – 10/25/2024); Source: Polk TPO; Signal4Analytics

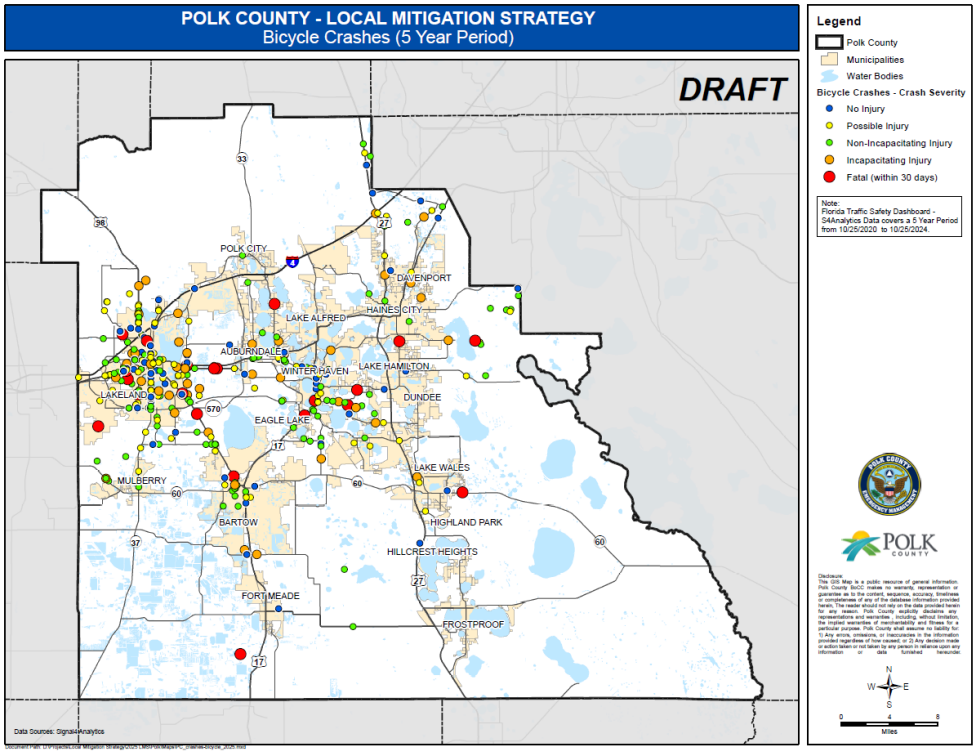


Figure V.43: Bicycle Crashes (10/25/2020 – 10/25/2024); Source: Polk TPO;

Potential Impacts

Pedestrian and bicycle accidents may result in serious injury or death. These accidents may cause officials to close roads for periods of time, which may cause a loss of time and/or income for people who utilize the road network. The extent of damage the County may suffer from train accidents depends on the type of train (passenger or freight) and/or its load (i.e. hazardous materials).

Probability of Future Occurrences

The probability of a potential transportation incident is high.

Figure V.43: CSX phosphate train crash with produce truck, Broadway & Polk St. crossing, Bartow, Florida
Source: www.bestofpolk.com

Climate Change

Climate change is contributing to an increase in transportation incidents by intensifying extreme weather conditions that disrupt road safety and infrastructure. More frequent and severe storms, including hurricanes and heavy rainfall, lead to flooding, road washouts, and hazardous driving conditions. Extreme heat can degrade pavement, increasing the risk of road failures and vehicle malfunctions such as tire blowouts. Additionally, shifting weather patterns can cause visibility issues and delays in emergency response efforts. These climate-related factors heighten the risk of traffic accidents, supply chain disruptions, and challenges in maintaining transportation resilience in the county.

SECTION VI –HAZARD VULNERABILITY AND RISK ASSESSMENT

44 Code of Federal Regulations		
44 CFR §201.6(c)(2):	A risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.	
44 CFR §201.6(c)(2)(ii):	A description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. The plan should describe vulnerability in terms of:	
	(A)	The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas;
	(B)	An estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate;
	(C)	Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions
44 CFR §201.6(c)(2)(iii):	For multi-jurisdictional plans, the risk assessment section must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.	

Overview

In preparing the Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy (LMS), the LMS Working Group performed a Hazard Vulnerability and Risk Assessment (Assessment) to determine the impacts that hazards have on built environments and how they affect the safety of residents. The results of the Hazard Identification and Analysis (Section V) indicate hazards that warrant an Assessment due to the frequency of occurrence and resulting damage. The Assessment uses the information generated in the hazard identification, analysis, and hazard profile to identify locations where residents may suffer the greatest injury or property damage in the event of a disaster. The Assessment identifies the effects of hazard events by estimating the relative hazardous condition exposure of people, buildings, and infrastructure. Depending on the data available, an assessment may involve counting the number of structures or people in the path of hazards or describing what hazards may have on physical, social, and economic impacts.

Asset Inventory

Asset identification is a critical step in the hazard mitigation planning process. Taking an inventory of structures and populations provides insight into the County's vulnerability to hazards, and the magnitude of potential damages. Risk assessment models examine the impact of hazards on the built environment, including the general building stock (residential, commercial, industrial, etc.), critical facilities, government operations, shelters, hospitals and health care facilities, utilities, water and wastewater, hazardous material sites, and schools. The LMS Working Group used and analyzed Critical Assets from a recently completed Polk County Vulnerability Assessment. This data is part of and derived from the Florida Department of Environmental Protection (FDEP) Statewide Vulnerability Assessment that was approved in 2024. In some instances, this information differed slightly from the inventory data reflected from the Polk County Property Appraisers Office.

General Acreage, Building Valuation, and Total Valuation

The LMS Working Group utilized County tax assessment data and US Census American Community Survey data to develop an inventory of the built environment and population. The LMS Working Group utilized GIS software to estimate the number of acres, structures, and individuals at risk from select hazards for the incorporated and unincorporated areas of Polk County. Department of Revenue (DOR) Use Codes assigned by the Polk County Property Appraiser indicate approximately 53 percent of the lands within incorporated areas of Polk County have a non-residential land DOR classification, 26 percent have an agricultural land DOR classification, and 21 percent have a residential land DOR classification. Polk County Property Appraiser data indicates approximately 49 percent of the land within unincorporated areas of Polk County have non-residential land DOR classifications, 36 percent have agricultural land DOR classifications, and 15 percent have a residential land DOR classification. While DOR Use Codes identify the majority of the land in incorporated and unincorporated Polk County as non-residential and agricultural, the majority of the building and total valuation is residential (Figures VI.1 through VI.6 and Tables VI-1 and VI.2).

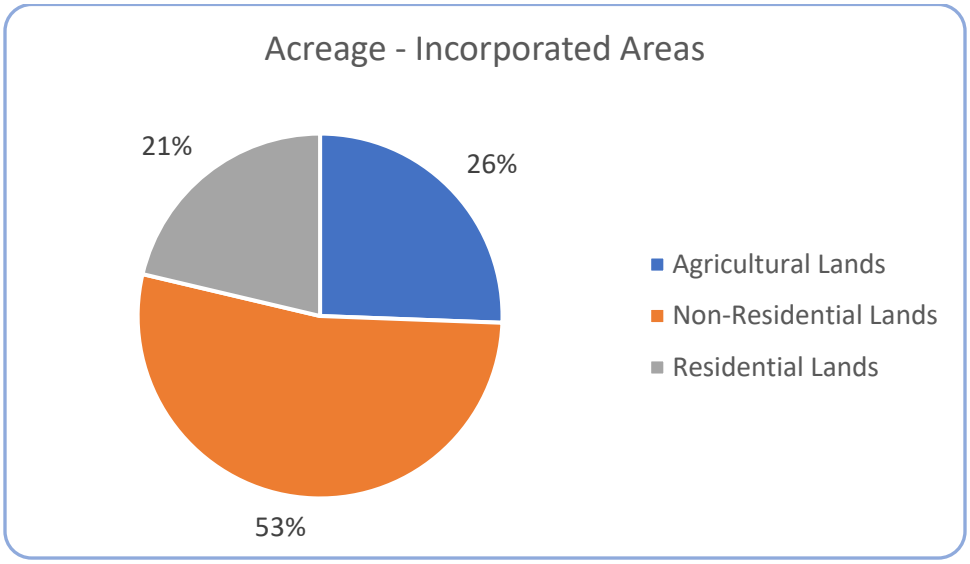


Figure VI.1: Acreage for Incorporated Areas

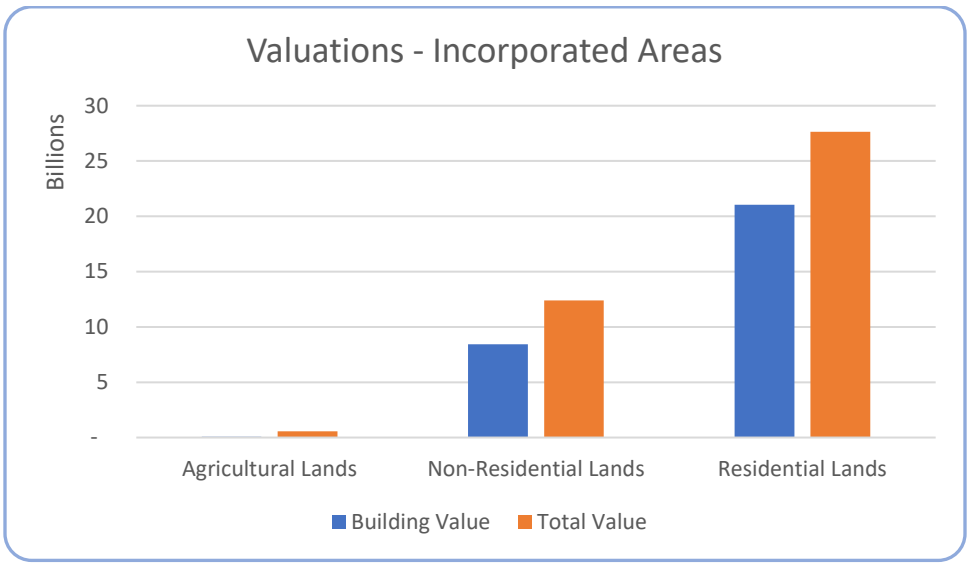


Figure VI.2: Valuations for Incorporated Areas

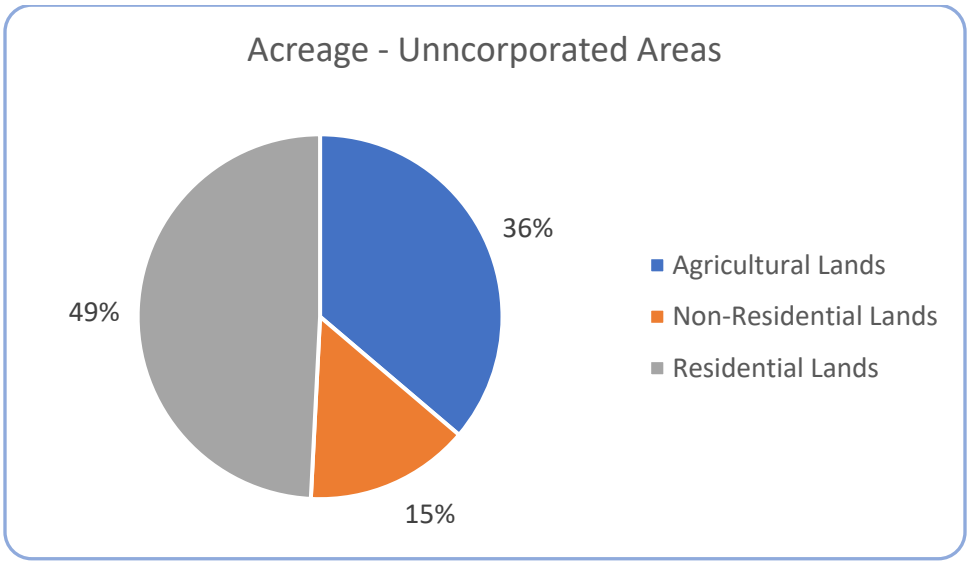


Figure VI.3: Acreage for Unincorporated Areas

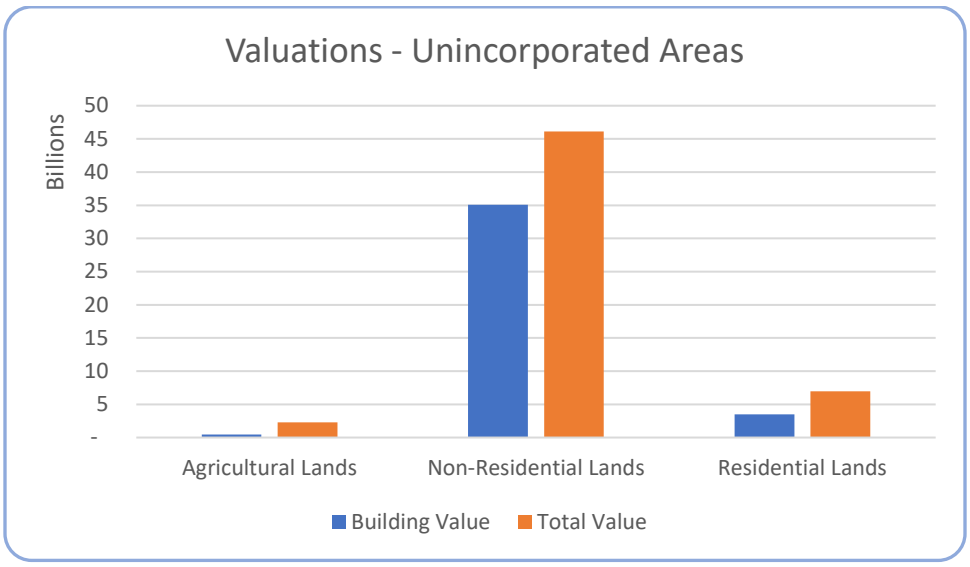


Figure VI.4: Valuations for Unincorporated Areas

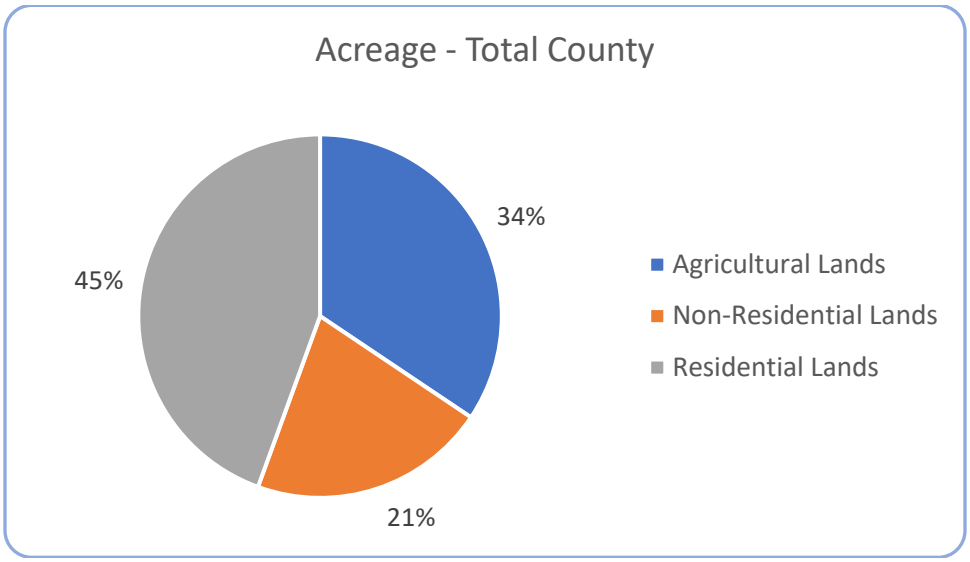


Figure VI.5: Acreage for Total County

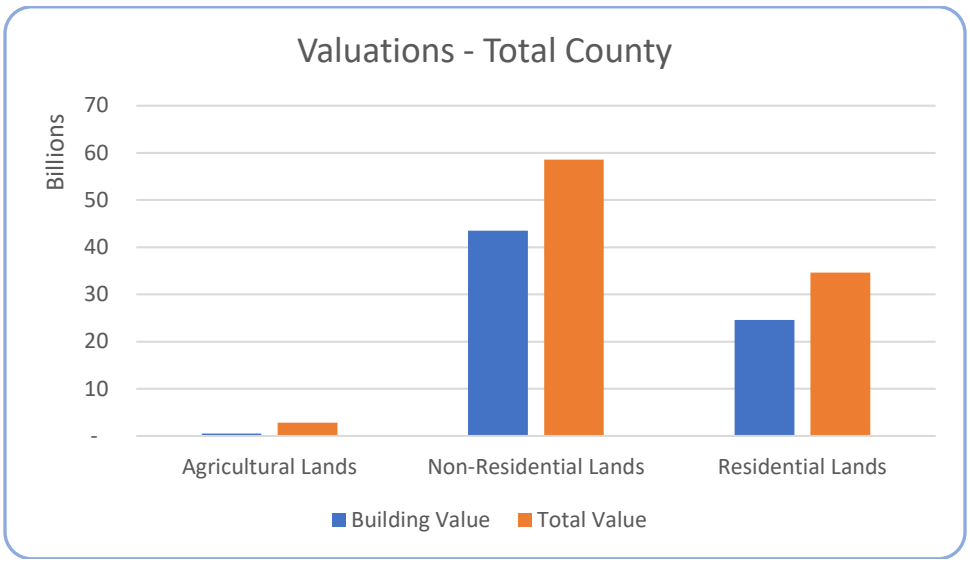


Figure VI.6: Valuations for Total County

Table VI-1 includes the summary of acreage, building value, and total value for the incorporated and unincorporated portions of the County and the County as a whole. Table VI-2 includes these values for each municipality.

TABLE VI-1:
INCORPORATED: ACREAGE, BUILDING VALUE, AND TOTAL VALUE

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	54,506	59,233,112	559,755,617
Residential Lands	113,092	8,439,309,571	12,407,799,006
Non-Residential Lands	45,385	21,057,684,201	27,636,835,479
Total Lands	212,983	29,556,226,884	40,604,390,102

Source: Polk County Property Appraiser and Jurisdictions

TABLE VI-2:
UNINCORPORATED: ACREAGE, BUILDING VALUE, AND TOTAL VALUE

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	375,941	461,936,218	2,270,580,519
Residential Lands	510,710	3,517,182,822	6,985,117,176
Non-Residential Lands	151,555	35,086,410,954	46,134,195,176
Total Lands	1,038,207	39,065,529,994	55,389,892,951

Source: Polk County Property Appraiser and Jurisdictions

TABLE VI-3:
TOTAL COUNTY: ACREAGE, BUILDING VALUE, AND TOTAL VALUE

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	430,447	521,169,330	2,830,336,136
Residential Lands	623,802	11,956,492,393	19,392,916,182
Non-Residential Lands	196,940	56,144,095,155	73,498,030,655
Total Lands	1,251,189	68,621,756,878	95,721,282,973

Source: Polk County Property Appraiser and Jurisdictions

TABLE VI-4:
VALUATIONS BY MUNICIPALITY: AUBURNDALE

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	5,625	4,325,579	$64,969,765
Residential Lands	3,493	1,568,624,402	$2,078,968,119
Non-Residential Lands	8,929	576,258,791	$856,272,822
Total Lands	18,047	2,149,208,772	$3,000,210,706

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-5:
VALUATIONS BY MUNICIPALITY: BARTOW

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	16,723	791,312	$58,959,517
Residential Lands	2,994	1,242,301,982	$1,574,808,950
Non-Residential Lands	14,007	507,319,902	$696,888,736
Total Lands	33,724	1,750,413,196	$2,330,657,203

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-6:
VALUATIONS BY MUNICIPALITY: DAVENPORT

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	2,661	1,028,156	$36,014,286
Residential Lands	2,922	1,576,932,485	$2,080,479,967
Non-Residential Lands	5,154	144,871,475	$225,426,874
Total Lands	10,738	1,722,832,116	$2,341,921,127

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-7:
VALUATIONS BY MUNICIPALITY: DUNDEE

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	1,242	3,376,167	$21,344,762
Residential Lands	801	326,457,751	$413,669,153
Non-Residential Lands	2,155	88,614,173	$146,590,308
Total Lands	4,199	418,448,091	$581,604,223

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-8:
VALUATIONS BY MUNICIPALITY: EAGLE LAKE

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	157	1,634,866	$6,095,197
Residential Lands	818	265,611,032	$374,284,092
Non-Residential Lands	922	53,390,670	$65,972,177
Total Lands	1,898	320,636,568	$446,351,466

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-9:
VALUATIONS BY MUNICIPALITY: FORT MEADE

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	1,695	829,498	$6,908,573
Non-Residential Lands	859	245,530,278	$297,965,653
Residential Lands	1,928	61,153,796	$87,315,808
Total Lands	4,482	307,513,572	$392,190,034

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-10:
VALUATIONS BY MUNICIPALITY: FROSTPROOF

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	4,588	3,461,658	$51,591,845
Residential Lands	735	137,432,236	$183,339,328
Non-Residential Lands	7,245	118,889,638	$170,319,102
Total Lands	12,568	259,783,532	$405,250,275

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-11:
VALUATIONS BY MUNICIPALITY: HAINES CITY

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	6,213	2,474,804	$105,323,926
Residential Lands	5,334	2,442,588,670	$3,222,007,200
Non-Residential Lands	8,004	439,771,934	$767,241,686
Total Lands	19,551	2,884,835,408	$4,094,572,812

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-12:
VALUATIONS BY MUNICIPALITY: HIGHLAND PARK

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	0	0	$0
Residential Lands	98	22,495,420	$31,129,393
Non-Residential Lands	664	175,491	$1,119,164
Total Lands	762	22,670,911	$32,248,557

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-13:
VALUATIONS BY MUNICIPALITY: HILLCREST HEIGHTS

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	-	0	$-
Residential Lands	85	23,076,661	$31,341,626
Non-Residential Lands	5,448	112,702	$162,113
Total Lands	5,533	23,189,363	$31,503,739

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-14:
VALUATIONS BY MUNICIPALITY: LAKE ALFRED

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	411	412,899	$3,264,590
Residential Lands	2,307	465,559,538	$660,657,414
Non-Residential Lands	2,964	83,216,032	$129,209,190
Total Lands	5,683	549,188,469	$793,131,194

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-15:
VALUATIONS BY MUNICIPALITY: LAKE HAMILTON

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	44	659,787	$4,014,553
Non-Residential Lands	548	74,492,142	$130,188,295
Residential Lands	131	16,259,366	$27,909,801
Total Lands	723	91,411,295	$162,112,649

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-16:
VALUATIONS BY MUNICIPALITY: LAKE WALES

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	4,120	1,659,668	$37,895,478
Residential Lands	4,153	986,210,442	$1,297,365,611
Non-Residential Lands	7,592	500,404,545	$719,249,687
Total Lands	15,865	1,488,274,655	$2,054,510,776

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-17:
VALUATIONS BY MUNICIPALITY: LAKELAND

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	1,916	30,082,144	$71,640,855
Residential Lands	11,432	7,277,749,495	$9,530,465,183
Non-Residential Lands	25,481	4,505,588,132	$6,444,035,016
Total Lands	38,829	11,813,419,771	$16,046,141,054

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-18:
VALUATIONS BY MUNICIPALITY: MULBERRY

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	1,943	203,380	$9,834,402
Residential Lands	375	153,193,736	$191,252,115
Non-Residential Lands	1,945	156,941,535	$274,813,931
Total Lands	4,263	310,338,651	$475,900,448

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-19:
VALUATIONS BY MUNICIPALITY: POLK CITY

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	3,908	6,566,983	$30,179,588
Residential Lands	966	306,476,977	$427,999,928
Non-Residential Lands	4,889	60,148,450	$99,569,608
Total Lands	9,764	373,192,410	$557,749,124

Sources: Polk County Property Appraiser and Municipalities

TABLE VI-20:
VALUATIONS BY MUNICIPALITY: WINTER HAVEN

Land Type	Acreage	Building Value ($)	Total Value ($)
Agricultural Lands	3,259	1,726,211	$51,718,280
Residential Lands	7,463	3,942,950,954	$5,110,913,452
Non-Residential Lands	15,633	1,126,192,939	$1,695,702,983
Total Lands	26,355	5,070,870,104	$6,858,334,715

Sources: Polk County Property Appraiser and Municipalities

Critical Facilities

Hazard identification analyses determine which structures, areas, and services are necessary to provide a minimal degree of safety, health, and security to residents of a community. Each community must determine the composition and importance of identified critical facilities. Multiple buildings serving as critical facilities may exist in one location. For example, a school will have classroom buildings, a gymnasium, administrative buildings, etc. The LMS Working Group determined the following are critical facilities:

- Fire stations;
- Governmental buildings;
- Schools/shelters;
- Hospital and healthcare facilities;
- Utilities; and
- Water and wastewater facilities.

Approximately 52 percent of the critical facilities are located in the incorporated areas of the County. The cities of Lakeland and Bartow have the most identified critical facilities, with 29 and 14 percent, respectively.

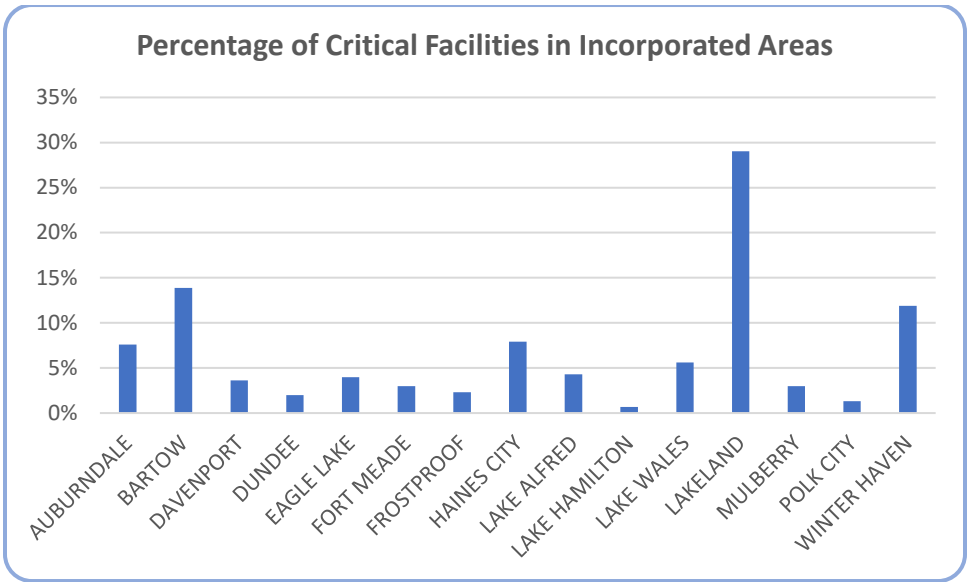


Figure VI.7: Percentage of Critical Facilities in Incorporated Areas

Government Operations

Polk County and its jurisdictions use several facilities, offices, and stations to house and coordinate hazard and emergency response activities. These facilities also provide direct operations prior to, during, and after a hazard event. Although many facilities are designed to withstand a variety of hazards, several have not and need additional hardening.

Schools/Shelters

Schools house thousands of children during each weekday, and entire communities use school facilities for educational, recreation, and other activities throughout the year. Emergency events may cause disruption to these activities. If schools are open after emergency events, parents may focus on home and business cleanup and rebuilding.

School buildings are used as hurricane shelters in Polk County. Emergency plans call for evacuation of affected communities to these shelters in the event of a major storm. As in many other areas in the United States, emergency preparedness officials have expressed concerns about the adequacy of shelters to house evacuated populations. Shelter criteria from the American Red Cross limits the number of existing structures to house people during evacuations. Shelters cannot be in evacuation zones, must be outside the Category 4 storm surge area, and must provide 20 square feet of space per individual. Approved shelters for special needs populations must have 60 square feet of space per individual.

According to the 2024 Statewide Emergency Shelter Plan, Polk County had a surplus of 29,999 general population shelter spaces in 2024 and a projected deficit of 28,238 general population shelter spaces by 2029. Polk County also indicated a deficit of 1,999 special needs shelter spaces in 2024 and a projected deficit of 22,151 special needs shelter spaces in 2029. County estimates are based on past storm histories and project much smaller deficits.

Hospitals and Health Care Facilities

When a large-scale event (such as a hurricane) threatens the County and requires evacuations there may be impacts to County hospitals and other health care facilities. During this scenario, hospitals may be limited in their ability to provide care during or shortly after the event. Should the event cause significant damage, reentry may not occur for any portion of the general population until the hospitals are able to provide care.

After sudden events in which evacuation is not an option, hospitals and other healthcare facilities will serve as critical facilities for the treatment and care of the injured, as well as providing ongoing care to the remainder of the community. During a flood event, hospitals expect an influx of residents, including infirm and aged individuals.

Utilities

Electrical and communication utility providers have contingency plans and design equipment to mitigate hazard events, but services may still be disrupted. After an event, these providers will need to mobilize labor and equipment to restore services. Loss of electrical power may affect fire protection resources and potable water, especially for smaller or individual water utility and electric systems. Such disruptions may impact emergency management officials' ability to predict when displaced populations can safely return to homes and businesses. Communication failures may have an immediate impact on directing crews to fix services, and coordination of emergency management activities.

Water/Wastewater

Potable water supplies in Polk County face a variety of hazards during a flood event. The first is possible contamination of the public utility and private wells that furnish potable water. Another hazard is loss of plant capacity resulting from floodwaters and the ability to properly dispose of sewage. This manifests through submerged sanitary sewers, septic systems, and wastewater treatment facilities. Periods of high saturation, like flood events, may reduce system efficiency. Septic systems submerged by floodwaters may pose health risks through the introduction of pathogenic organisms into the environment. The higher saturation associated with such events may result in septic drain field failures. Freeze events may lead to a drawdown of water as the agricultural industry uses water from wells to protect crops. If users draw enough water out of the aquifer, the water table may fall to a level where residents served by private wells no longer have access to water and well pumps may fail.

Methodology

The maps in Appendix A demonstrate vulnerability or potential effects of hazards for Polk County and municipalities. The maps identify structures for each hazard and include municipal boundaries. While the impacts apply to the entire planning area, the analysis includes specific information for municipalities when available. The building and total valuations in Tables VI-1 and VI-2 serve as the basis for the potential estimated dollar losses. These numbers change based on the identified potential hazard impact areas, as applicable and the narrative for each identified hazard includes a summary by municipality.

Hazard Vulnerability and Risk Modeling

The maps in Appendix A demonstrate vulnerability or potential effects of hazards for Polk County and municipalities. The maps identify structures for each hazard and include municipal boundaries. While the impacts apply to the entire planning area, the analysis includes specific information for municipalities when available. The building and total valuations in Tables IV-1 and IV-2 serve as the basis for the potential estimated dollar losses. These numbers change based on the identified potential hazard impact areas, as applicable and the narrative for each identified hazard includes a summary by municipality.

FEMA National Risk Index

The FEMA National Risk Index Map is an interactive map to visually explore natural hazard risk data across the United States (https://hazards.fema.gov/nri/map). According to the website, the National Risk Index's interactive mapping and data-based interface enables users to visually explore individual datasets to better understand what is driving a community's natural hazard risk. Expected Annual Loss (EAL) represents the average economic loss in dollars resulting from natural hazards each year. It is calculated for each hazard type and quantifies loss for relevant consequence types: buildings, people, and agriculture. The risk analysis utilizes the information from this website to help analyze the risks in Polk County.

Disclaimer

The maps and potential loss estimation tools provided in this document are for planning purposes only. Uncertainties are inherent in any loss estimation methodology and arise in part from incomplete scientific

knowledge concerning natural hazards and their effects on the built environment. Uncertainties also result from approximations and simplifications necessary to conduct such a study including incomplete or outdated data on inventory, demographic, or economic variables or parameters; the unique nature and severity of each hazard when it occurs; and the amount of advance notice that residents have to prepare for the incident. As a result, potential exposure and loss estimates are approximations and should not be interpreted or used as precise results; they should only be used to understand relative risk.

Vulnerability and Risk Assessment

Risk estimate is based on the judgment of local planners and the LMS Working Group regarding the likely frequency of occurrence of a hazard event compared to its probable consequences or impacts. If a hazard event occurs frequently, and has very high consequences, that hazard poses a very high risk to the affected community. In comparison, if a hazard event is not expected to occur frequently, and even if it did, the consequences would be minimal, then the hazard is considered to pose a very low risk. The hazard vulnerability risk level for the LMS follows the approach utilized in the 2018 Florida Enhanced State Hazard Mitigation Plan.

- Low (One Occurrence every 10 years)
- Medium (One occurrence every 5-7 years)
- Medium/High (One occurrence every 3 years)
- High (One or more occurrence each year)

As described in Section V, the following hazards are determined to be minimal to low risk/impact/severity to Polk County, its municipalities, and partners. The LMS does not include any further evaluation in relation to vulnerability and consequences to people, property, critical infrastructure, environment, economy, and response operations.

- Winter storms
- Earthquakes
- Landslides
- Tsunamis
- Coastal and riverine erosion
- Storm surge
- Space Weather
- Sea level rise
- Mass immigration/migration
- Nuclear/Radiological

The LMS Working Group identified hazards with medium to high risk in relation to potential frequency and consequences of impact to Polk County and its jurisdictions. They include:

- Extreme temperatures
- Fog
- Hurricanes/tropical storms
- Severe storms and tornadoes, including
  - Hail
  - Lightning
  - Thunderstorms
- Subsidence and sinkholes
- Drought
- Flood
- Wildfire
- Civil disturbance/terrorism
- Cyber-Attacks
- Dam/levee failure
- Epidemics/Pandemics
- Hazardous material incidents
- Harmful Algal Blooms
- Transportation incidents

Because these hazards have at least a medium risk in relation to frequency and consequences, the LMS includes them in the vulnerability analysis. Additional information on these hazards includes geographic areas; degree of severity or magnitude; comparison of jurisdictional risk; and existing and future structures and critical facilities. Due to similar linkages, the vulnerability assessment combines some of the hazards listed above.

TABLE VI-21:
RELATIVE VULNERABILITY TO HAZARDS BY LOCAL JURISDICTION

Hazard	Auburndale	Bartow	Davenport	Dundee	Eagle Lake	Fort Meade	Frostproof	Haines City	Highland Park	Hillcrest Heights	Lake Alfred	Lake Hamilton	Lake Wales	Lakeland	Mulberry	Polk City	Winter Haven	Unincorporated County	Polk Public Schools
Extreme Temperatures	L/M	M	L/M	M	L/M	M	M	L/M	L/M	M	L/M	M	L/M	M	M	L/M	M	L/M	L/M
Fog	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Hurricanes/ Tropical Storms	L/M	M	L/M	M	L/M	M	M	L/M	L/M	M	L/M	M	L/M	M	M	L/M	M	L/M	L/M
Severe Storms and Tornadoes (Hail, Lightning, and Thunderstorms)	M/H	H	M/H	H	M/H	H	H	M/H	M/H	H	M/H	H	M/H	H	H	L/M	H	H	H
Subsidence and Sinkholes	M/H	H	M/H	H	M/H	H	H	M/H	M/H	H	M/H	H	M/H	H	H	M/H	H	M/H	M/H
Drought	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M	L/M
Flood	L	L/M	L	L	L/M	L/M	L	L	L	L	L/M	L/M	L/M	L/M	L	L	L	M	M
Wildfire	L/M	M/H	L/M	M/H	L/M	L/M	L/M	L/M	M/H	M/H	L/M	L/M	L/M	L/M	L/M	M/H	L/M	L/M	L/M
Civil Disturbance/Terrorism	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Cyber-Attacks	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Dam/Levee Failure	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Epidemics/Pandemics	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Hazardous Materials Incidents	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Harmful Algal Blooms	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Transportation Incidents	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

Atmospheric Hazard Vulnerability and Risk

Extreme Temperatures

Extent

A heat wave is an abnormally high temperature and unusually high humidity sustained over a period of at least one day. In Polk County, these temperatures can range above 90°F. Heat waves in Florida typically occur during periods of drought, low humidity, and mostly clear skies. In June 1985, a severe heat wave hit the State with temperatures of 105˚F in Lakeland.

According to the Department of Agriculture and Consumer Services (DOACS), Polk County can expect a moderate freeze every one to two years and a severe freeze on an average of once every 15 to 20 years. Temperatures in the 20˚Fs can last for as long as six to eight hours from December to March, causing hard freezes.

The lowest and highest temperatures in the County may range from 15˚F to 105˚F. The heat index may reach 115˚F and the wind chill may be as low as 0˚F.

The National Weather Service issues the following advisories for cold weather and freezes:

- Wind Chill – When the wind chill is forecast to be 35 degrees Fahrenheit or less and the wind is forecast to be above 5 mph.
- Freeze Warnings – When temperatures are forecast to be below 32 degrees Fahrenheit within the next 24 hours.
- Hard Freeze Warnings – When temperatures are expected to be below 28 degrees Fahrenheit for at least three hours

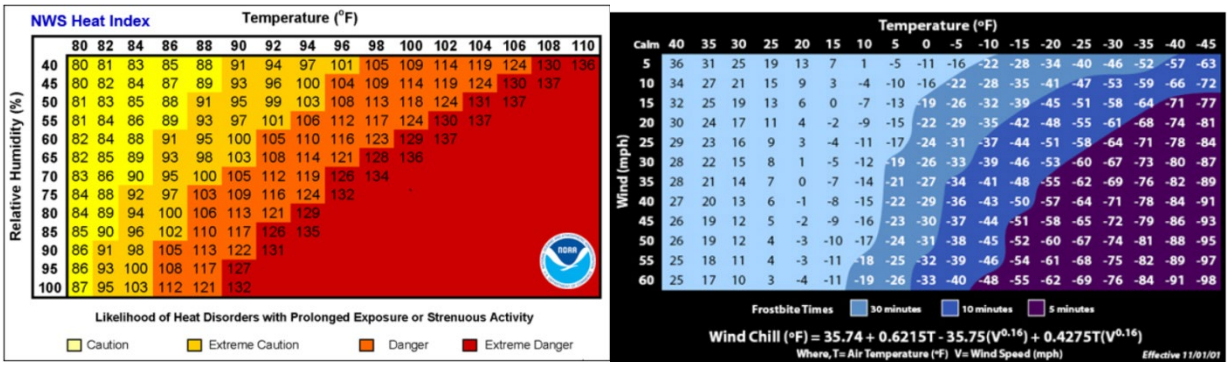


Figure VI.8: Heat Index and Wind Chill Index;
Sources: NWS.NOAA.gov and Floridadisaster.org

During extreme heat events, temperatures may reach over 100 degrees Fahrenheit. Potentially high relative humidity could drastically increase the apparent temperature by 10 degrees or more. While there is not a history of Extreme Heat in our county, we recognize it can affect our and unincorporated portions of Polk County in the future.

The magnitude or severity of freezes that may occur within the planning area could be as low as 20 degrees Fahrenheit or, in rare cases, a few degrees lower. The severity of the impacts associated with freezes depends on multiple factors including timing, location, and duration of the freeze and types of crops being grown during the event. Winter storms create a higher risk of car accidents, hypothermia, frostbite, carbon monoxide poisoning and heart attacks from overexertion.

Vulnerability Summary

Vulnerability to extreme temperatures is low to medium and all jurisdictions are at risk. The County's very young, elderly, and homeless populations are at the highest risk for injury or death from extreme heat or cold.

With its location in Central Florida, Polk County is susceptible to periods of extreme heat. In addition to deaths, extreme heat events cause a wide range of other health problems such as rashes, cramps, heat exhaustion, and heat stroke. Extreme heat can also make existing medical conditions worse.

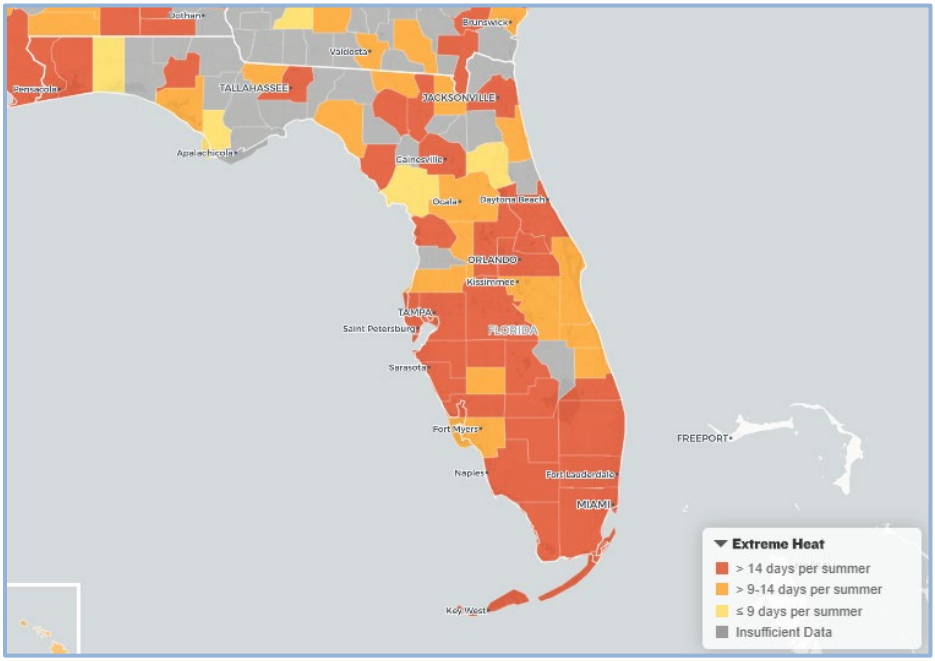


Figure VI.9: Extreme Heat Map ; Source: *NRDC.org*

Higher electrical demand during extreme temperatures often causes power outages that further exacerbate the impact of the event. Extended periods of extreme temperatures can also have a negative impact on wildlife and fishery habitats. If water levels drop to where authorities expand water restrictions, agriculture is vulnerable.

Polk County works with the American Red Cross to open shelters in times of extreme temperatures. In a recent study conducted by the Florida Council on Homelessness, Polk County recorded 850 homeless residents, approximately 55 percent of whom were unsheltered.

The extent of severe cold and freeze damage is greatest where farms and groves are located; therefore, the agriculture industry is at risk. According to the Central Florida Development Council, agricultural and

related industries generate 81,902 or 26.1% of total jobs in Polk County. It is estimated that for every $1 invested in agriculture research and extension, there is a return of $20 to the community. During the 2019-2020 growing season Polk County produced 11.6 million boxes of citrus. That number has declined since then, but citrus and agriculture are still a large part of the economy of the county. The citrus crops are most vulnerable to freeze.

Extreme temperatures are a pressing public health risk, particularly for socio-economically disadvantaged and elderly communities living in developed areas with low tree canopy cover. In the more densely populated and heavily developed areas, man-made structures such as buildings and roadways trap heat and contribute to what is known as the Heat Island Effect. Extreme heat is a serious threat as it can worsen air quality, exacerbate public health issues, negatively impact crop production, and increase stress on the local economy

The County's urban areas (Lakeland, Winter Haven, Haines City, Davenport, and the four-corners areas) are usually warmer than their rural surroundings because of the "urban heat island" effect. As cities develop, the amount of green space tends to be replaced by increasing amounts of impervious surfaces. In addition, these locations usually experience higher maximum daytime temperatures and less nighttime cooling.

The expansion of urban development has increased the magnitude of the urban heat island effect. Other factors that exacerbate the heat island effect are dryer surfaces due to draining wetlands and exceptionally dry soils during periods of drought. Table VI-4 includes the level of risk for each jurisdiction for extreme temperatures.

TABLE VI-22:
LEVEL OF RISK – EXTREME TEMPERATURES

Jurisdiction	Level of Risk
Auburndale	Low - Medium
Bartow	Medium
Davenport	Low – Medium
Dundee	Medium
Eagle Lake	Low – Medium
Fort Meade	Medium
Frostproof	Medium
Haines City	Low – Medium
Highland Park	Low – Medium
Hillcrest Heights	Medium
Lake Alfred	Low – Medium
Lake Hamilton	Medium
Lake Wales	Low – Medium
Lakeland	Medium
Mulberry	Medium
Polk City	Low – Medium
Winter Haven	Medium
Unincorporated Polk County	Low – Medium
Polk County Public Schools	Low – Medium

Risk Assessment

Polk County's population of elderly and homeless individuals are especially at risk of the impacts of extreme temperature events. Based on current census data, 17.4 percent of Polk County's population is 65 years of age or older.

Extreme temperatures, especially freezes, pose a recurring major hazard to the agriculture industry in Polk County, and are a significant threat to the economic vitality of the County's agriculture industry. For growers, the impact can vary from low to moderate. According to the U.S. Department of Agriculture, Florida citrus generates a statewide economic impact of $243.7 million and in 2022 produced $671,940,000 in cash receipts. A major freeze could cause the loss of an entire year's crops. This worst-case scenario is highly unlikely because freezes in recent years have impacted citrus very little. New hybrid plants and growing techniques have limited the impact of freezes. A more likely event would impact 5 to 10 percent of crop production and cause $160,000 to $320,000 in losses. Structures are not vulnerable to the effects of extreme temperatures; therefore, they do not have a potential dollar loss.

Fog

Extent

Dense fog advisories are issued in Polk County every year. Foggy conditions on roadways can cause accidents due to low visibility and the impact on a driver's perception of speed and distance. Polk County can expect approximately 25 days with dense fog (visibility ¼ mile or less) and approximately 125 days with fog (visibility ½ mile to 6 miles). Foggy conditions can lead to chain-reaction accidents. On January 9, 2008, a mixture of fog and smoke from a prescribed burn covered portions of Interstate 4. This caused 70 cars and trucks to collide near mile marker 47, resulting in five deaths and 38 injuries.

The National Weather Service issues the following fog advisories:

- Dense Fog Advisory – When widespread dense fog develops and visibility drops to one-quarter of a mile or less.
- Freezing Fog Advisory – When fog develops and surface temperatures are at or below freezing and visibility drops to one mile or less.

Vulnerability Summary

All of Polk County is at risk for incidents related to foggy conditions. The vulnerability of these incidents increases with the number of roads and railroads. The Rail Lines and Crossings Map (Appendix A) illustrates the locations of railroad crossings. The roadway corridors that most frequently experience fog within Polk County are included below. The Interstate 4 corridor carries the most traffic and has experienced the most accidents. This is due in part to the corridor's location through the Green Swamp.

Historically, the densest fog in Polk County has developed along roadways located through pastures and fields, and along water bodies and swamp areas. The roadways listed below are most susceptible to fog conditions in Polk County.

- Interstate 4 from the Hillsborough/Polk County Line to the west, to the Polk/Osceola County Line to the northeast
    - Jurisdictions along this Interstate corridor include:
        - Unincorporated Polk County;
        - Lakeland;
        - Polk City; and

        - Auburndale.

- US 27 from the Highlands/Polk County Line to the Polk/Lake County Line
    - Jurisdictions located along this highway through Polk County include:
        - Unincorporated Polk County;
        - Frostproof;
        - Lake Wales;
        - Dundee;
        - Lake Hamilton;
        - Davenport; and
        - Haines City.
        - Crossing at US 27 south of CR 630.

- US 98 from Interstate 4 to the Polk/Pasco County Line
    - This segment of US 98 traverses the sparsely populated and sparsely developed Green Swamp. This area is vulnerable to fog. Jurisdictions impacted by this roadway segment include:
        - Unincorporated Polk County; and
        - Lakeland.

- US 17 from CR 547 to the Polk/Osceola County Line
    - Jurisdictions impacted by this roadway segment include:
        - Unincorporated Polk County; and
        - Davenport.

- SR 60 from Hillsborough/Polk County Line to the west to the Polk/Osceola County Line to the east
    - Jurisdictions located along this State Road corridor include:
        - Unincorporated Polk County;
        - Mulberry;
        - Bartow;
        - Winter Haven; and
        - Lake Wales.

    - The sections along this corridor that are most vulnerable to fog include much of the undeveloped lands that consist of pasture, row crops, lakes, and wetlands. These areas are located between the Hillsborough/Polk County Line and Mulberry, between the urbanized Mulberry area and Bartow, and between Bartow and the urbanized area of Lake Wales. Fog is also prevalent between Lake Wales and the Polk/Osceola County Line.

- SR 33 from Polk City to the Polk/Lake County Line
    - This segment of SR 33 traverses the sparsely populated and sparsely developed Green Swamp. This area is vulnerable to fog. Jurisdictions impacted by this roadway segment include:
        - Unincorporated Polk County; and
        - Polk City.

- County Line Road from SR 60 to Interstate 4
    - Jurisdictions along this corridor include:
        - Unincorporated Polk County; and
        - Lakeland.
    - The entire stretch of this roadway is vulnerable to fog.
    - There is one railroad crossing along this corridor that experiences fog coverage.
        - Crossing at US 92 and County Line Road.

Fog, particularly when dense, can be hazardous to drivers, mariners, and aviators. Fog contributes to numerous travel accidents every year. Restrictions in visibility resulting from fog can also impact takeoff and landing procedures and requirements for pilots and can be the cause of weather-related aviation delays. Table VI-5 includes level of risk for each jurisdiction for fog.

TABLE VI-23:
LEVEL OF RISK – FOG

Jurisdiction	Level of Risk
Auburndale	Low - Medium
Bartow	Medium
Davenport	Low – Medium
Dundee	Medium
Eagle Lake	Low – Medium
Fort Meade	Medium
Frostproof	Medium
Haines City	Low – Medium
Highland Park	Low – Medium
Hillcrest Heights	Medium
Lake Alfred	Low – Medium
Lake Hamilton	Medium
Lake Wales	Low – Medium
Lakeland	Medium
Mulberry	Medium
Polk City	Low – Medium
Winter Haven	Medium
Unincorporated Polk County	Low – Medium
Polk County Public Schools	Low – Medium

Risk Assessment

While the LMS Working Group recognizes jurisdictions are vulnerable to fog incidents, there is a lack of data to quantify the vulnerability of structures to this hazard.

Hurricanes/Tropical Storms

Extent

Several hurricane and tropical storm events occurred in 2004 when three hurricanes directly impacted Polk County, and one indirectly impacted the County. Hurricane Charley made landfall on August 13, 2004; Hurricane Frances on September 5, 2004; Hurricane Ivan on September 16, 2004; and Hurricane Jeanne on September 26, 2004. Polk County experienced hurricane impacts in 2022 and 2024. Polk County and its jurisdictions are at a high risk from hurricanes. Average maximum wind speeds in Polk County are higher than they were 30 years ago. Over the past 20 years, the majority of declared disasters were related to hurricanes.

Vulnerability Summary

The entire area of Polk County and its jurisdictions are highly vulnerable to hurricanes. As an inland county, the County and its jurisdictions will be impacted by Category 3 and higher hurricanes as they face high winds and inland flooding and by lesser hurricanes that cross Central Florida (See map showing historical paths of hurricanes and tropical storms). Polk County's location in Central Florida makes it vulnerable to hurricane impacts including property and utility damage from high winds and rain-induced flooding. Older buildings, dilapidated housing, and other less hardened properties, such as mobile homes are most susceptible to damage. Approximately 48 percent of the housing stock in Mulberry is made up of mobile homes. Frostproof includes approximately 35 percent mobile homes, Fort Meade includes 25 percent mobile homes, and Dundee has 21 percent mobile homes. The other jurisdictions range between 19 percent and 4 percent, except Highland Park and Hillcrest Heights have no mobile homes. Throughout the County, widespread electrical outages are likely, as are water and sewage backup in flooded areas. Depending on the intensity of a hurricane, economic impacts can be severe. Hurricane and tropical storm events may impact all populations, but those at highest risk are the elderly, people with disabilities, lower income, and the homeless. Hurricanes can also cause extensive environmental damage.

As the population increases, ensuring that Polk County has enough shelter space to provide for its residents and evacuees of surrounding areas is a priority. In addition to existing shelters, Polk County continues to assess viable shelter space within the County. The protection of critical infrastructure, communication systems, and power sources is important to recovery after a hurricane/tropical storm event. Polk County and the jurisdictions should continue to ensure that private and public sector facilities meet existing building codes to withstand the impacts of hurricanes.

All of Polk County is vulnerable to high winds during hurricanes and tropical storms. The greatest danger from wind is to those living in structurally unsound housing and mobile homes. Encouraging residents and business owners to protect their homes and facilities with storm shutters and generators will reduce the damage caused by tropical cyclones.

High winds can create significant quantities of debris from downed trees, branches, and damaged buildings. This debris can impede emergency response efforts, present a safety hazard for emergency and repair workers and citizens, and present significant removal, storage, and disposal issues.

All jurisdictions have an equal risk to hurricane impacts. Recent history indicates that residents can expect a hurricane to affect Polk County every two to three years, and the most likely event will be a Category 3 or lesser storm. The probability of being affected by a hurricane is low to medium. Table VI-6 includes level of risk for each jurisdiction for hurricanes/tropical storms.

TABLE VI-24:
LEVEL OF RISK – HURRICANES/TROPICAL STORMS

Jurisdiction	Level of Risk
Auburndale	Low - Medium
Bartow	Medium
Davenport	Low – Medium
Dundee	Medium
Eagle Lake	Low – Medium
Fort Meade	Medium
Frostproof	Medium
Haines City	Low – Medium
Highland Park	Low – Medium
Hillcrest Heights	Medium
Lake Alfred	Low – Medium
Lake Hamilton	Medium
Lake Wales	Low – Medium
Lakeland	Medium
Mulberry	Medium
Polk City	Low – Medium
Winter Haven	Medium
Unincorporated Polk County	Low – Medium
Polk County Public Schools	Low – Medium

Risk Assessment

As shown on the figures below, the FEMA Natural Risk Index for Natural Hazards identifies the majority of the block groups in the County as having a relatively high to high risk for hurricanes. The expected annual loss for the majority of the Block Groups is relatively high to very high. With a frequency of 0.2 events per year, the expected annual loss is 9.6 million dollars.

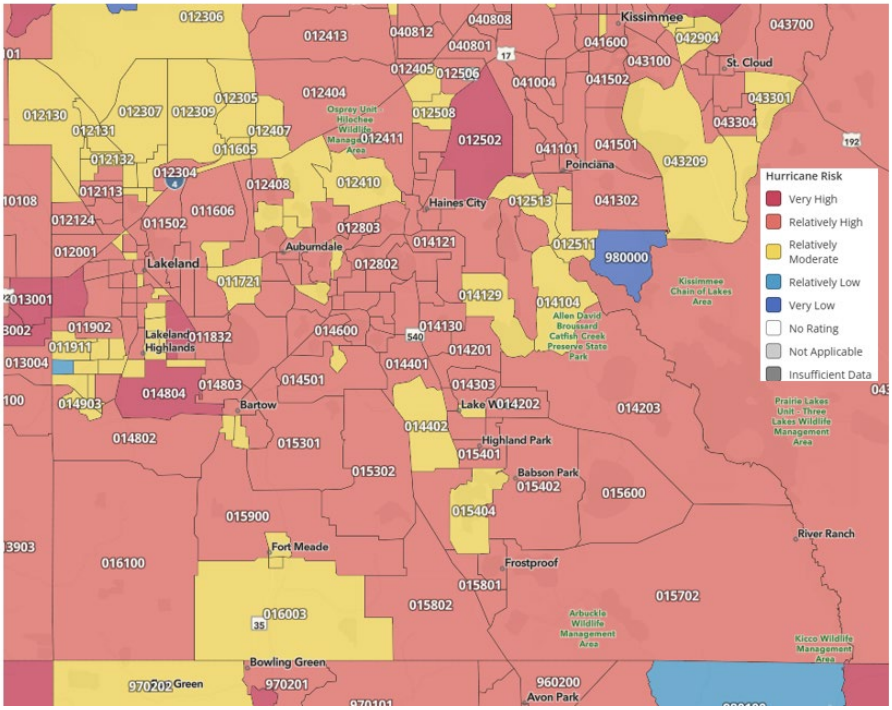


Figure IV.10: Hurricane Risk Map; Source: *https://hazards.fema.gov/nri*

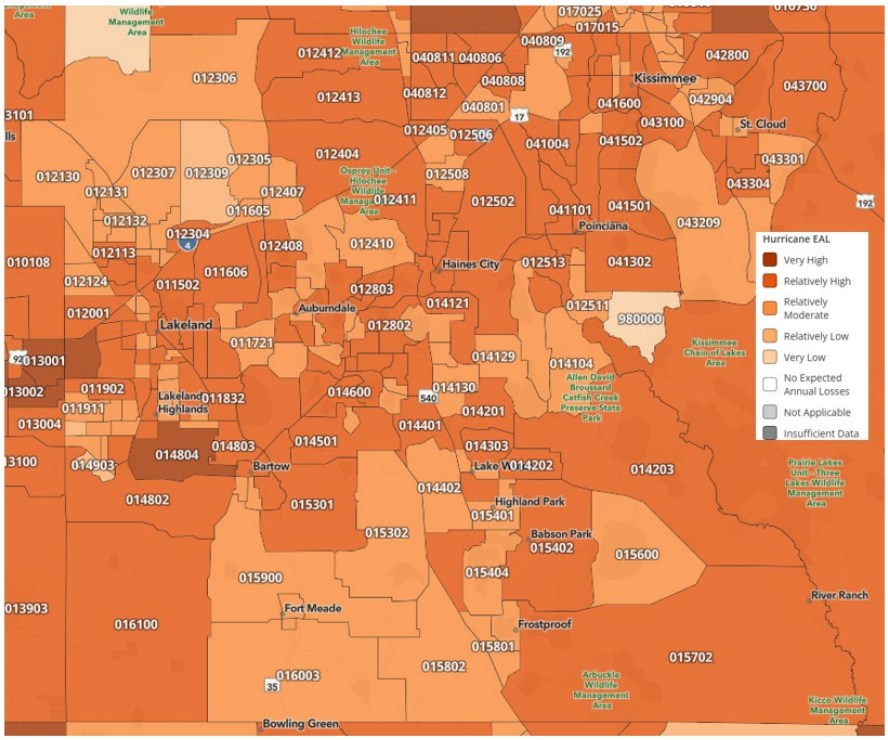


Figure IV.11: Hurricane Expected Annual Loss Map; Source: https://hazards.fema.gov/nri

Severe Storms and Tornadoes (Hail, Lightning, and Thunderstorms)

Extent

Severe weather is defined as any meteorological event that poses a risk to life, property, social disruption, and/or requires the intervention of authorities. This includes hail, lightning, and thunderstorms. Severe storms and tornadoes affect the entire County. Many produce hail and lightning that cause significant damage. Between 1959 and May 2018, there were 27 deaths caused from lightning strikes in Polk County. According to the Spatial Hazard Events and Losses Database (SHELDUS), from 1960 through 2018, there were 223 severe storm events, resulting in 20 injuries, 2 fatalities, approximately $7.1 million in crop damages, and approximately $59.7 million in property damages in Polk County.

As shown on the maps in Appendix D, hail, thunderstorms, and tornados have impacted all the jurisdictions in the County. Table VI-7 includes level of risk for each jurisdiction for Severe Storms and Tornadoes (Hail, Lightning, and Thunderstorms).

TABLE VI-25:
LEVEL OF RISK – SEVERE STORMS AND TORNADOES (HAIL, LIGHTNING, AND THUNDERSTORMS

Jurisdiction	Level of Risk
Auburndale	Medium - High
Bartow	High
Davenport	Medium - High
Dundee	High
Eagle Lake	Medium - High
Fort Meade	High
Frostproof	High
Haines City	Medium - High
Highland Park	Medium - High
Hillcrest Heights	High
Lake Alfred	Medium - High
Lake Hamilton	High
Lake Wales	Medium - High
Lakeland	High
Mulberry	High
Polk City	Low – Medium
Winter Haven	High
Unincorporated Polk County	High
Polk County Public Schools	High

Hail

The Tornado and Storm Research Organization (TORRO) created the TORRO Hailstorm Intensity Scale (Table V-7) to rate the intensity of hailstorms. The Intensity Scale depends on two factors: the diameter of the hailstone, and the damage done. Based on historical occurrences (Table V-8), Polk County can expect hail events with H2 to H5 intensities, with some in the H7 and H8 range. Lake Wales has experienced an H10 intensity hailstorm.

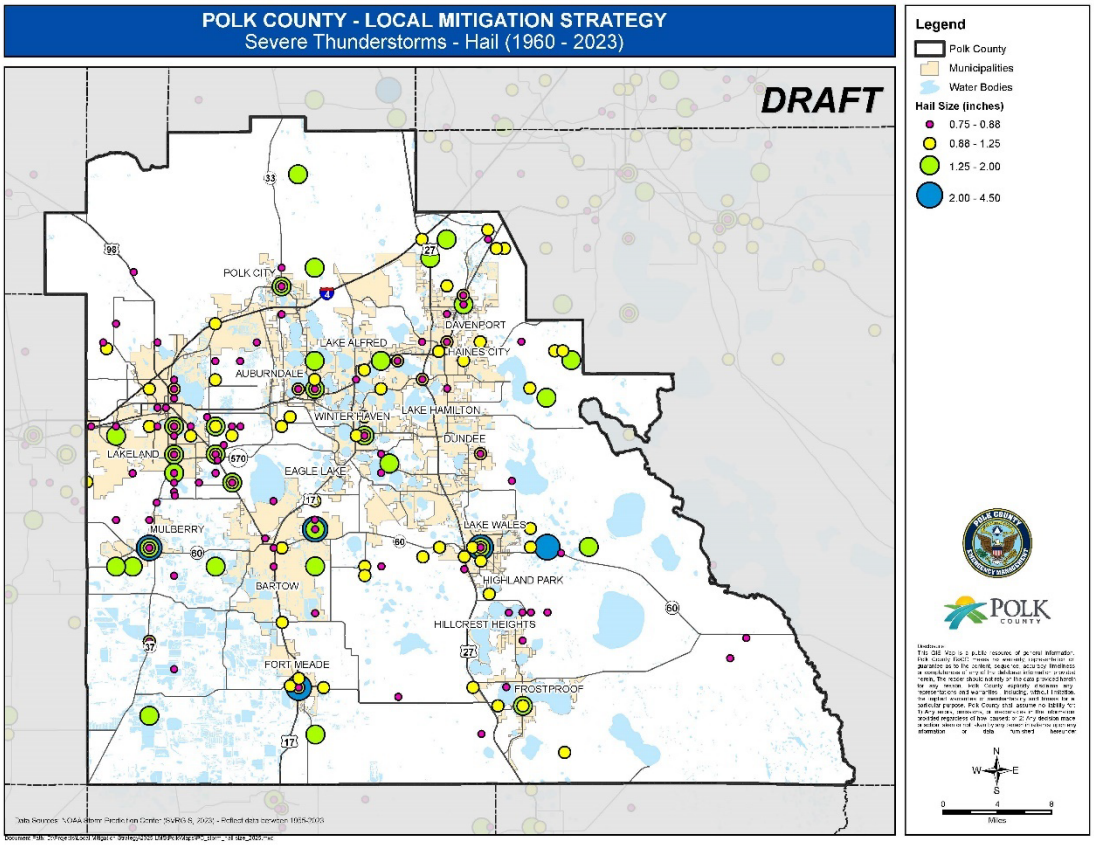


Figure VI.12: Hail locations and size; Source: *NOAA*

The magnitude or severity of thunderstorms is measured by the diameter of hail, the speed of wind, or the occurrence of tornadoes it produces. Severe thunderstorms, as defined above, are expected to occur at some point throughout the entire planning area. The extent of damage from the occurrence of severe thunderstorms largely depends on the amount of lightning and hail produced by the event, the speed of winds, and the amount, location and duration of rainfall associated with the event.

Every thunderstorm produces lightning, which kills more people each year than tornadoes. Heavy rain from thunderstorms can lead to flash flooding; which is the number one thunderstorm killer. Strong winds, hail, and tornadoes are also dangers associated with some thunderstorms.

National Weather Service considers the extent of hail based on its size:

- Small Hail – Less than 1 inch in diameter (size of peas to nickels).
- Large Hail – Size 1 inch to 1 ¾ inch in diameter (size of quarters to golf balls) which causes minor damage.
- Very Large Hail – Size 1 ¾ inch to 2 ¾ inch in diameter (size of golf balls to baseballs) that causes moderate damage.
- Giant Hail – size 2 ¾ inch or greater (size of grapefruit or softballs) that causes major damage.

Vulnerability Summary

Hailstorms associated with thunderstorms may occur in any area of the County, and may be associated with damage to roofs, skylights, windows, and automobiles. Hail is more likely to damage older construction and mobile homes.

Lightning

According to National Oceanic and Atmospheric Administration (NOAA), Polk County averages approximately 67,700 cloud-to-ground lightning strikes each year, most of which occur between June and September. The large amount of open space and natural areas in Polk County are highly susceptible to lightning strikes. With 5,206 km^2 in Polk County, the County experiences approximately 13 lightning strikes per square kilometer per year. Given this regular frequency of occurrence, it can be expected that future lightning events will continue to threaten life and property throughout the county.

Vulnerability Summary

The risk of lightning is high in Polk County and all its jurisdictions, mostly affecting electrical service to communities with restoration of service typically occurring within the same day. More critical is potential loss from physical damage and loss to government and business computer systems/networks. Lightening is more likely to strike properties located at higher elevations in the County, such as along the Lake Wales Ridge that generally follows the State Road 17 corridor. Municipalities in this area include Frostproof, Hillcrest Heights, Highland Park, Lake Wales, Dundee, Lake Hamilton, and Haines City. Many lightning victims are individuals who were engaged in work or recreation at the time of a lightning strike. See Table VI-7 above for vulnerability assessment by jurisdiction.

Thunderstorms

Because thunderstorms are not bound by geographic or topographic characteristics, there are no means to determine whether the extent of this hazard differs from jurisdiction to jurisdiction. According to the Florida State University Florida Climate Center, Polk County can expect 90 thunderstorm days per year. The Beaufort Wind Force Scale (Table V-10) relates wind speed to observed conditions at sea and on land. Based on historical reports, the County can experience storms of 55 to 63 mph during thunderstorms or 64 to 83 mph during hurricanes. Lightening and hail are frequently a part of thunderstorm activity.

Vulnerability Summary

Polk County and its jurisdictions are vulnerable to thunderstorms. Most of the time, local thunderstorms are ephemeral events that create localized nuisance flooding. However, some thunderstorms can create significant property damage from flooding, wind, hail, lightning, and tornadoes. Thunderstorms typically cause damage by downing trees and power lines. Downed trees can block key roadways within a community, making emergency response more difficult. Downed power lines block roadways, disrupt businesses when power fails, and pose threats to people when they are still energized.

Mobile homes are susceptible during severe thunderstorm activity. As discussed in Section IV, approximately 20 percent of the housing units in Polk County were mobile homes or trailers. Of the 17 municipalities, Mulberry had the highest percentage of mobile homes or trailers, with 47.7 percent of the residential structures. Frostproof had the second highest amount of mobile homes or trailers with 35.1 percent of residential structures. See Table VI-7 above for vulnerability assessment by jurisdiction.

Tornadoes

Polk County and its jurisdictions are vulnerable to tornado activity. Maps show tornadoes have historically occurred closer to populated areas (Appendix A). EF3 and EF4 tornadoes typically occur during the dry season with February, March, and April being the high-activity months. Although the average tornado in Polk County is an EF0, the County has experienced two F4 tornadoes, which occurred on April 15, 1958, and April 4, 1966. (See Table V-12 for tornado category, wind speed, and potential damage, and Appendix A for extent maps).

Vulnerability Summary

Polk County is highly vulnerable to severe storms and tornadoes. Severe storms are common and most infrastructure can withstand the effects of such storms. Tornadoes have greater effects, but over smaller areas, so the vulnerability is moderate. Factors contributing to tornado vulnerability are the abundance of pre-engineered structures (including manufactured housing and metal buildings), recreational vehicles used as residences, and high concentrations of elderly populations. The most vulnerable populations include those in mobile home parks, recreational vehicles, and aged or dilapidated housing. The potential for damage and loss of life increases as a function of population density. As the number of structures and people increase, the probability a tornado will cause property damage or human casualties also increases. All critical facilities in the County and jurisdictions are susceptible to tornado impacts. The contributing factors that may determine vulnerability are early warning systems and the location and availability of storm shelters constructed to withstand the forces of a tornado. See Table VI-7 above for vulnerability assessment by jurisdiction.

Overall Severe Storm Risk Assessment

Severe weather events such as thunderstorms, lightning, hail, high winds, and heavy rain are high-risk hazards that can impact all areas of Polk County (Appendix A). While such weather conditions can impact all populations, lack of shelter puts the homeless at highest risk. Severe weather can damage structures, disrupt utilities (mainly electrical), and affect surface/air transportation. Jurisdictions should identify recreation parks that do not have severe weather detection systems.

The existing stormwater systems in Polk County can withstand many of the frequent thunderstorms that occur during the summer months. Due to the frequent nature of severe thunderstorms in Polk County, from June 1st through November 30th, much of the population is accustomed to thunderstorms such that they pose little vulnerability.

Due to the largely unpredictable frequency and tracks of tornadoes, the whole of Polk County is vulnerable to their impact. The high wind speeds associated with tornadoes leave most structures susceptible to damage, with the greatest potential for loss from mobile homes, dilapidated housing, and other less hardened properties. The danger for residents in older mobile homes emphasizes the need for Polk County to identify alternate safe locations for residents for shelter during possible tornado weather. While tornadoes can impact all populations in the County, the most vulnerable are the homeless, the elderly, and those of lower income. Depending on location and severity, tornadoes can cause social disruption in the form of electrical outages, transportation problems, economic loss, and the accompanying psychological hardships associated with physical and human loss.

Severe storm impacts are generally moderate to high and can range from short-term power outages to major structural damages. Individual/localized damage has caused major impacts to families and neighborhoods, particularly mobile home parks. Tornadoes can cause widespread damage to property

and infrastructure, as well as pose risks to human safety. Impacts can range from minor damage like downed trees and power lines to severe damage and destruction of buildings, particularly mobile homes, and structures with weak roofs. Flying debris from tornadoes can also create serious hazards, potentially causing injuries or fatalities. The cost of repairing or replacing damaged property and infrastructure can be significant. Severe weather and tornadoes can disrupt businesses, leading to lost revenue and economic losses.

Geologic Hazard Vulnerability and Risk

Subsidence and Sinkholes

Extent

The entire County has potential for sinkhole formation. Sinkhole area types are based on the type and thickness of material overlying the limestone. The type of sinkhole and its extent varies depending on the area type in which it is located. The Sinkhole Area Type map illustrates the regions that sinkholes tend to develop near areas of high population (Appendix A). Polk County includes all four sinkhole area types. The largest sinkhole Polk County experienced was 225 feet long, 225 feet wide, and 50 feet deep. Another major sinkhole was 200 feet long, 200 feet wide, and 150 feet deep. Sinkholes of this extent are rare.

Vulnerability Summary

The entire County and all jurisdictions have a medium to high vulnerability level, except Bartow and Lakeland, which have a high vulnerability level. The number of people adversely affected by a sinkhole is small, but there is an increased likelihood of occurrence.

Sinkholes can occur in any area of Polk County, but as shown on the maps in Appendix A Bartow, Lakeland, and Lake Wales have experienced the most occurrences. All structures, utilities, systems, and populations are equally vulnerable. Depending on the location and size of a sinkhole, the social and economic impact can range from minor to extensive. While sinkholes have been reported throughout the County, most are small and cause little damage. Table VI-26 includes level of risk for each jurisdiction for Sinkholes.

TABLE VI-26:
LEVEL OF RISK – SINKHOLES

Municipality	Level of Risk
Auburndale	Medium – High
Bartow	High
Davenport	Medium – High
Dundee	High
Eagle Lake	Medium – High
Fort Meade	High
Frostproof	High
Haines City	Medium - High
Highland Park	Medium - High
Hillcrest Heights	High
Lake Alfred	Medium - High
Lake Hamilton	High
Lake Wales	Medium - High
Lakeland	High
Mulberry	High
Polk City	Medium - High
Winter Haven	High
Unincorporated Polk County	Medium - High
Polk County Public Schools	Medium - High

Risk Assessment

There is a medium to high level of risk for sinkholes in Polk County. Sinkhole impacts range from minor damage to a home or road, to an entire city block. With the average annual income per capita in the $25,000 to $35,000 range, most residents do not have enough insurance and are unable to pay for major repairs. Sinkholes may affect the economy in several ways:

- Reduce real estate sales and profits; and
- Increase in insurance costs and uninsured losses are becoming more frequent as affordable insurance becomes less available.

Sinkholes can impact every part of the County. The tables below show the dollar amounts for each building type that is within the sink hole area type, as illustrated on the sinkhole map in Appendix A. The dollar values indicate the total amount that is exposed (building value), but a dollar estimate is impossible to project because of the localization of the sinkhole hazard.

TABLE VI-26a:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – UNINCORPORATED POLK COUNTY

Building Type	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$81,880,647	$15,151,977	$313,282,671	$ 57,593,423	**$467,908,718**
Residential	$1,589,743,824	$3,484,700,657	$29,875,282,916	$ 330,854,972	**$35,280,582,369**
Commercial/ Industrial	$339,154,711	$31,779,168	$1,990,273,533	$ 117,910,370	**$2,479,117,782**
Government/ Institutional	$47,114,923	$19,087,579	$1,075,745,832	$ 93,836,853	**$1,235,785,187**
Miscellaneous	$1,855,100	$471,232	$15,155,018	$ 30,568,863	**$48,050,213**
Total	**$2,059,749,205**	**$3,551,190,613**	**$33,269,739,970**	**$ 630,764,481**	**$39,511,444,269**

TABLE VI-26b:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – AUBURNDALE

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$4,325,579	$0	**$4,325,579**
Residential	$0	$0	$1568624402	$0	**$1568624402**
Commercial/ Industrial	$0	$0	$469,551,681	$0	**$469,551,681**
Government/ Institutional	$0	$0	$98,240,909	$0	**$98,240,909**
Miscellaneous	$0	$0	$8,466,201	$0	**$8,466,201**
Total	**$0**	**$0**	**$2,149,208,772**	**$0**	**$2,149,208,772**

TABLE VI-26c:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – BARTOW

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$504,164	$287,148	**$791,312**
Residential	$0	$0	$1,241,649,095	$2,472,514	**$1,244,121,609**
Commercial/ Industrial	$0	$0	$241,982,604	$77,557	**$242,060,161**
Government/ Institutional	$0	$0	$263,036,921	$702,865	**$263,739,786**
Miscellaneous	$0	$0	$1,597,512	$44,549	**$1,642,061**
Total	**$0**	**$0**	**$504,164**	**$3,584,633**	**$4,088,797**

TABLE VI-26d:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – DAVENPORT

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$1,028,156	$0	**$1,028,156**
Residential	$0	$95,253	$1,576,837,232	$0	**$1,576,932,485**
Commercial/ Industrial	$0	$0	$70,657,738	$0	**$70,657,738**
Government/ Institutional	$0	$0	$74,048,762	$0	**$74,048,762**
Miscellaneous	$0	$0	$164,975	$0	**$164,975**
Total	**$0**	**$95,253**	$1,722,736,863	**$0**	**$1,722,832,116**

TABLE VI-26e:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – DUNDEE

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$3,376,167	$0	**$3,376,167**
Residential	$0	$0	$326,457,751	$0	**$326,457,751**
Commercial/ Industrial	$0	$0	$46,785,388	$0	**$46,785,388**
Government/ Institutional	$0	$0	$41,578,790	$0	**$41,578,790**
Miscellaneous	$0	$0	$249,995	$0	**$249,995**
Total	**$0**	**$0**	**$418,448,091**	**$0**	**$418,448,091**

TABLE VI-26f:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – EAGLE LAKE

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$1,634,866	$0	**$1,634,866**
Residential	$0	$0	$265,611,032	$0	**$265,611,032**
Commercial/ Industrial	$0	$0	$11,138,955	$0	**$11,138,955**
Government/ Institutional	$0	$0	$42,176,109	$0	**$42,176,109**
Miscellaneous	$0	$0	$75,606	$0	**$75,606**
Total	**$0**	**$0**	**$320,636,568**	**$0**	**$320,636,568**

TABLE VI-26g:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – FORT MEADE

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$0	$829,498	**$829,498**
Residential	$0	$0	$0	$245,530,278	**$245,530,278**
Commercial/ Industrial	$0	$0	$0	$29,648,099	**$29,648,099**
Government/ Institutional	$0	$0	$0	$31,193,883	**$31,193,883**
Miscellaneous	$0	$0	$0	$311,814	**$311,814**
Total	**$0**	**$0**	**$0**	**$307,513,572**	**$307,513,572**

TABLE VI-26h:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – FROSTPROOF

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$ 3,461,658	$0	**$3,461,658**
Residential	$0	$0	$ 136,717,758	$0	**$136,717,758**
Commercial/ Industrial	$0	$0	$ 55,358,308	$474,663	**$55,832,971**
Government/ Institutional	$0	$0	$ 62,575,796	$701,383	**$63,277,179**
Miscellaneous	$0	$0	$ 139,856	$0	**$139,856**
Total	**$0**	**$0**	**$ 258,253,376**	**$1,176,046**	**$259,429,422**

TABLE VI-26i:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – HAINES CITY

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$ 2,474,804	$0	**$2,474,804**
Residential	$0	$0	$ 2,442,588,670	$0	**$2,442,588,670**
Commercial/ Industrial	$0	$0	$ 264,243,174	$0	**$264,243,174**
Government/ Institutional	$2,803,220	$0	$ 174,495,149	$0	**$177,298,369**
Miscellaneous	$0	$0	$ 932,815	$0	**$932,815**
Total	**$2,803,220**	**$0**	**$ 2,884,734,612**	**$0**	**$2,887,537,832**

TABLE VI-26j:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – HIGHLAND PARK

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$0	$0	**$0**
Residential	$0	$0	$11,986,266	$0	**$11,986,266**
Commercial/ Industrial	$0	$0	$38,901	$0	**$38,901**
Government/ Institutional	$0	$0	$0	$0	**$0**
Miscellaneous	$0	$0	$0	$0	**$0**
Total	**$0**	**$0**	**$12,025,167**	**$0**	**$12,025,167**

TABLE VI-26k:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – HILLCREST HEIGHTS

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$0	$0	**$0**
Residential	$0	$0	$14,791,440	$0	**$14,791,440**
Commercial/ Industrial	$0	$0	$0	$0	**$0**
Government/ Institutional	$0	$0	$19,858	$0	**$19,858**
Miscellaneous	$0	$0	$0	$0	**$0**
Total	**$0**	**$0**	**$14,811,298**	**$0**	**$14,811,298**

TABLE VI-26l:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – LAKE ALFRED

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$ 412,899	$0	**$ 412,899**
Residential	$0	$0	$ 465,559,538	$0	**$ 465,559,538**
Commercial/ Industrial	$0	$0	$ 25,847,646	$0	**$ 25,847,646**
Government/ Institutional	$0	$0	$ 57,116,399	$0	**$ 57,116,399**
Miscellaneous	$0	$0	$ 251,987	$0	**$ 251,987**
Total	**$0**	**$0**	**$ 549,188,469**	**$0**	**$ 549,188,469**

TABLE VI-26m:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – LAKE HAMILTON

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$ 659,787	$0	**$ 659,787**
Residential	$0	$0	$ 74,492,142	$0	**$ 74,492,142**
Commercial/ Industrial	$0	$0	$ 13,827,628	$0	**$ 13,827,628**
Government/ Institutional	$0	$0	$ 2,379,409	$0	**$ 2,379,409**
Miscellaneous	$0	$0	$ 52,329	$0	**$ 52,329**
Total	**$0**	**$0**	**$ 91,411,295**	**$0**	**$ 91,411,295**

TABLE VI-26n:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – LAKE WALES

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$ 1,659,668	$0	**$ 1,659,668**
Residential	$0	$0	$ 1,008,705,862	$0	**$ 1,008,705,862**
Commercial/ Industrial	$0	$0	$ 291,537,778	$0	**$ 291,537,778**
Government/ Institutional	$0	$0	$ 208,299,184	$0	**$ 208,299,184**
Miscellaneous	$0	$0	$ 743,074	$0	**$ 743,074**
Total	**$0**	**$0**	**$ 1,510,945,566**	**$0**	**$ 1,510,945,566**

TABLE VI-26o:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – LAKELAND

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$ 30,082,144	$0	**$ 30,082,144**
Residential	$0	$0	$ 7,277,749,495	$0	**$ 7,277,749,495**
Commercial/ Industrial	$0	$0	$ 2,935,203,022	$0	**$ 2,935,203,022**
Government/ Institutional	$0	$0	$ 1,561,926,373	$0	**$ 1,561,926,373**
Miscellaneous	$0	$0	$ 4,360,255	$0	**$ 4,360,255**
Total	**$0**	**$0**	**$11,809,321,289**	**$0**	**$11,809,321,289**

TABLE VI-26p:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – MULBERRY

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$ 203,380	$0	**$ 203,380**
Residential	$0	$0	$ 153,193,736	$0	**$ 153,193,736**
Commercial/ Industrial	$0	$0	$ 102,432,456	$0	**$ 102,432,456**
Government/ Institutional	$0	$0	$ 54,249,660	$0	**$ 54,249,660**
Miscellaneous	$0	$0	$ 259,419	$0	**$ 259,419**
Total	**$0**	**$0**	**$ 310,338,651**	**$0**	**$ 310,338,651**

TABLE VI-26q:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES– POLK CITY

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$223,273	$0	$ 6,343,710	$0	**$6,566,983**
Residential	$21,910,506	$0	$ 288,941,795	$0	**$310,852,301**
Commercial/ Industrial	$11,326,679	$0	$ 39,167,013	$0	**$50,493,692**
Government/ Institutional	$8,925,129	$0	$ 2,860,096	$0	**$11,785,225**
Miscellaneous	$66,633	$0	$ 66,633	$0	**$133,266**
Total	**$424,52,220**	**$0**	**$ 337,379,247**	**$0**	**$337,379,247**

TABLE VI-26r:
SINKHOLE EXPOSURE AND POTENTIAL LOSSES – WINTER HAVEN

Use	Area Type I	Area Type II	Area Type III	Area Type IV	Total
Agriculture	$0	$0	$ 1,726,211	$0	**$ 1,726,211**
Residential	$0	$0	$ 3,942,950,954	$0	**$ 3,942,950,954**
Commercial/ Industrial	$0	$0	$ 798,129,209	$0	**$ 798,129,209**
Government/ Institutional	$0	$0	$ 327,206,226	$0	**$ 327,206,226**
Miscellaneous	$0	$0	$ 857,504	$0	**$ 857,504**
Total	**$0**	**$0**	**$ 5,070,870,104**	**$0**	**$ 5,070,870,104**

Hydrologic Hazard Vulnerability and Risk

Drought

Extent

The Florida State Hazard Mitigation Plan defines droughts as "A drought is a deficiency in precipitation over an extended period." A hydrological drought can affect the entire County. The Palmer Drought Severity Index (PDSI) uses readily available temperature and precipitation data to estimate relative dryness. It is a standardized index that spans -10 (dry) to +10 (wet). Maps of operational agencies like NOAA typically show a range of -4 to +4, but more extreme values are possible. The extent of damage is normally minimal. As illustrated in Figure IV-18, the extent of drought in Florida has reached and exceeded -4 on occasion but generally is at -2. Polk County can expect a minor drought once every 2 to 3 years.

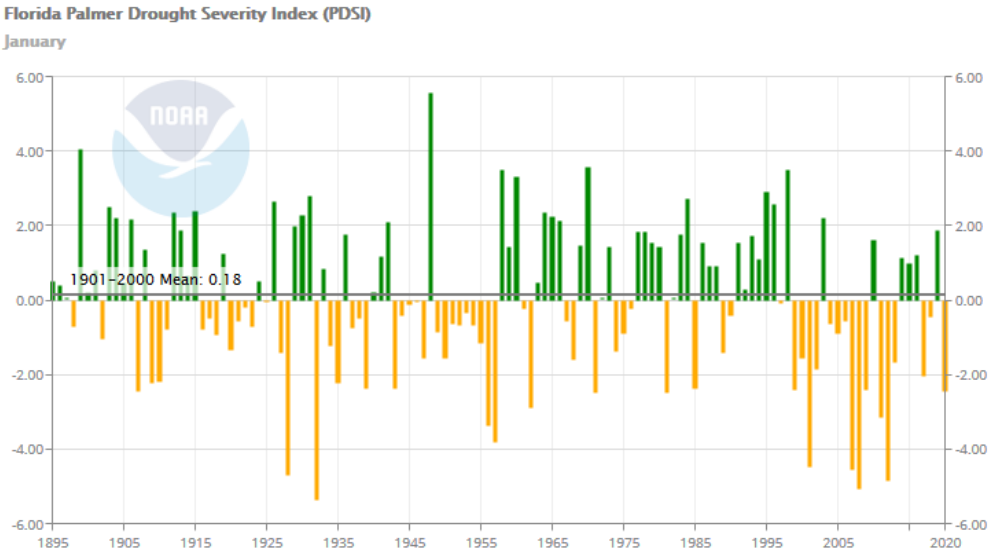


Figure VI.13: Florida Palmer Drought Severity Index; Source: NOAA

Vulnerability Summary

To date there have been no recorded human or significant economic impacts from droughts in Polk County; therefore, the impact is low to moderate. However, being an agricultural county, a major long-term hydrological drought that causes loss of an entire year's crops may cause more than $350 million in damages and millions more to lawns and landscaping. A more likely event would result in a 5 to 10 percent reduction in crop yield and $17.5 to $35 million in losses. A drought may also impact the County's $34.2 million annual livestock industry.

Drought affects water supplies, agriculture, and fire danger levels and is based on the severity of these impacts. Drought may dramatically affect local natural lake levels. As the water table responds to the lack of rain by a decrease in the level of the potentiometric surface of the Floridan aquifer underlying Polk County, many lakes having karst (sinkhole) connections to the aquifer respond by draining into the aquifer and therefore drying out. This is a natural process that has been occurring for millennia, but it can interfere with traditional uses of these lakes and can increase fire danger through the many terrestrial plants that move into the dry lake beds over time.

The characteristics of population, activities, or the environment that make them susceptible to the effects of drought are the basis for the measurement of vulnerability to drought conditions. The degree of vulnerability depends on the environmental and social characteristics of the region and the ability to anticipate, cope with, resist, and recover from drought. Drought can particularly exacerbate demand for potable water (until such time as more reclaimed water is available). Drought in Florida can contribute to sinkhole development, impede farm productivity, and strain local water supplies.

Vulnerability to drought/heat wave is low to medium. Vulnerability increases if water levels drop to a point where officials expand water restrictions to include agriculture. Table VI-27 includes level of risk for each jurisdiction for Drought.

TABLE VI-27:
LEVEL OF RISK – DROUGHT

Jurisdiction	Level of Risk
Auburndale	Low – Medium
Bartow	Low – Medium
Davenport	Low – Medium
Dundee	Low – Medium
Eagle Lake	Low – Medium
Fort Meade	Low – Medium
Frostproof	Low – Medium
Haines City	Low – Medium
Highland Park	Low – Medium
Hillcrest Heights	Low – Medium
Lake Alfred	Low – Medium
Lake Hamilton	Low – Medium
Lake Wales	Low – Medium
Lakeland	Low – Medium
Mulberry	Low – Medium
Polk City	Low – Medium
Winter Haven	Low – Medium
Unincorporated Polk County	Low – Medium
Polk County Public Schools	Low – Medium

Risk Assessment

All municipalities within the County are at a low risk of drought or heat wave hazard. Droughts do not impact structures, so the LMS does not include a dollar loss estimated.

The LMS Working Group did not perform an assessment of potential dollar costs since droughts are not expected to damage existing or future structures or critical facilities. Consequences associated with drought can impact public health, agricultural productivity, economic recovery assistance programs, and mass care.

Flood

Extent

Water depth levels and amount of damage determine the extent of a flood. Polk County is subject to flooding due to heavy rains and river flooding. The FEMA Flood Insurance Rate Map (FIRM) helps determine the extent of flood hazard in each of the municipalities. Appendix A includes the FIRM Map for each jurisdiction. FEMA classifies land area through flood zones and categorizes the probability of a flood occurrence. The County's FIRM (Appendix A) illustrates these flood zones. According to FEMA, a flood event having a 1-percent chance of being equaled or exceeded in any given year will inundate the Special Flood Hazard Area (SFHA). The 1-percent annual chance flood is the base flood or 100-year flood. SFHAs included in Polk County include Zone A, Zone AH, and Zone AE. These categories indicate a probability of occurrence. The smaller percent chance of occurrence, the more devastating the flood. In a worst-case scenario event, isolated areas in Polk County can expect to experience up to 10 feet of flood waters while average flood water depths are 4 feet to 5 feet.

The Peace River had a recorded maximum crest of 11.13 feet on September 12, 2004 (National Weather Service, Advanced Hydrologic Prediction Service). Flood stage begins at 8 feet, with major stage beginning at 10 feet. On July 1, 2004, June rainfall of 14 to 18 inches in eastern Polk County increased lake water levels from Lake Wales to Frostproof. Water levels were already high after three hurricanes moved over the area in 2004 and some lake levels rose 10 feet in a 12-month period. The flooding resulted in the loss of approximately 107 manufactured homes, and water surrounded approximately 175 of the 700 homes at Saddlebag Lake. The County performed pumping operations to lower lake levels. There are no natural outlets for most of the lakes in eastern Polk County. The damage estimates for this event were approximately $1.6 million.

The severity or magnitude of flooding throughout the County depends on several factors: the amount, location and duration of rainfall, soil saturation, upstream conditions, and lake stage levels. Depth of water is a basis for measuring the extent of flooding. Base flood elevations are the computed elevation to which FEMA anticipate floodwater to rise during the base flood. FIRMs and the flood profiles show the Base Flood Elevations.

Vulnerability Summary

Flooding causes a number of impacts to life and property. Direct effects include the loss of life, personal property, crops, business facilities, utilities, and transportation infrastructure. Floods can also indirectly cause economic and societal impacts when transportation routes are damaged or destroyed thus inhibiting the transport of needed supplies. Pooled water can inundate drinking water supplies and harbor diseases that lead to public health issues, and moving waters can cause erosion damaging agriculture and infrastructure.

Flooding not only is a hazard to those living in flood-prone areas but also can affect individuals outside their home. The Florida Division of Emergency Management has provided the following flood statistics:

- As little as one foot of moving water can move most cars off the road.
- Just six inches of fast-moving water can sweep a person off his or her feet.
- Most flood-related deaths occur at night and result from vehicular accidents.
- Urban and small stream flash floods often occur in less than one hour.

Florida is susceptible to seasonal hurricanes that can cause severe flooding. Approximately 42 percent of the County is in one of the FEMA SFHA designations. A significant percentage of the County's population lives or works in areas that are at risk of flooding. Mobile homes and septic tanks are particularly susceptible to damage from flooding. Fresh water flooding has the highest potential along the five rivers and around the 554 lakes in the County.

For the people who live along the banks of the various rivers and the numerous lakes, or other low-lying areas, vulnerability is higher than normal and the impact potentially great. However, for the County, vulnerability is medium. During periods of heavy rainfall, several communities in low-lying areas anticipate flooding and some damage to property and infrastructure.

One contributing factor that may affect flood vulnerability is the County's early warning systems. The Polk County Division of Emergency Management maintains the Alert Polk system, which provides information about situations that may affect people's health and safety relevant to the addresses they provide. During emergencies, residents can listen to PGTV (Bright House 622, Verizon 20, Comcast 5, www.polk-county.net), local television stations, and primary emergency broadcast system radio stations: WONN 1230 AM, WPCV 97.5 FM, Travelers Information System 1610 AM, or En Español (WSIR 1490 AM, WAUC 1310 AM, WAVP 1390 AM) to obtain additional information.

Table VI-28 includes level of risk for each jurisdiction for Flooding and Appendix D includes the flood maps for each jurisdiction.

TABLE VI-28:
LEVEL OF RISK – FLOODING

Jurisdiction	Level of Risk
Auburndale	Low
Bartow	Low-Medium
Davenport	Low
Dundee	Low
Eagle Lake	Low - Medium
Fort Meade	Low - Medium
Frostproof	Low
Haines City	Low
Highland Park	Low
Hillcrest Heights	Low
Lake Alfred	Low - Medium
Lake Hamilton	Low - Medium
Lake Wales	Low - Medium
Lakeland	Low - Medium
Mulberry	Low
Polk City	Low
Winter Haven	Low
Unincorporated Polk County	Medium
Polk County Public Schools	Medium

Risk Assessment

The impacts to victims of a flood are moderate to high. Most residents cannot return to/live in their homes until they complete repairs and clean-up. Even with flood insurance, the cost to the homeowner can be in the thousands of dollars. Conversely, floods may be profitable for some businesses, such as those specializing in flooring, appliances, and furniture. The tables below indicate the acreage of land and value of buildings in the Special High Hazard Area by Polk County Property Appraiser assigned DOR Use Code for each jurisdiction. The acreage includes any parcel with a Special High Hazard designation and is not the acreage of the Special High Hazard Area. The Special High Hazard Area designation impacts approximately 1 million acres of parcels and $14.4 billion of building valuation in Polk County. The municipalities include 15 percent of the acreage, 42 percent of the building values, and 40 percent of the total values.

TABLE VI-28a:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – UNINCORPORATED POLK COUNTY

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	331,458	358,872,271	1,629,149,659
Residential	78,518	6,527,203,342	9,542,822,236
Commercial/Industrial	24,711	809,354,492	2,114,138,610
Government/Institutional	253,101	606,102,159	845,117,312
Miscellaneous	183,921	39,986,245	394,347,459
Total	**871,709**	**8,341,518,509**	**14,525,575,276**

TABLE VI-28b:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – AUBURNDALE

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	2,918	9,780,261	34,314,814
Residential	1,443	212,217,720	357,166,978
Commercial/Industrial	661	205,463,703	243,951,737
Government/Institutional	4,755	26,302,397	38,615,308
Miscellaneous	1,951	145,557	10,006,279
Total	**11,728**	**453,909,638**	**684,055,116**

TABLE VI-28c:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – BARTOW

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	14,996	405,802	46,404,276
Residential	462	67,078,025	93,164,896
Commercial/Industrial	884	25,595,085	53,518,335
Government/Institutional	6,677	67,992,349	88,096,381
Miscellaneous	4,803	534,054	22,161,697
Total	**27,822**	**161,605,315**	**303,345,585**

TABLE VI-28d:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – DAVENPORT

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	2,192	610,849	21,202,488
Residential	799	65,272,660	88,991,081
Commercial/Industrial	67	1,024,119	2,073,045
Government/Institutional	34	3,368,282	4,356,131
Miscellaneous	250	164,975	1,768,396
Total	**3,341**	**70,440,885**	**118,391,141**

TABLE VI-28e:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – DUNDEE

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	1,926	719,467	26,100,131
Residential	125	9,491,036	14,025,740
Commercial/Industrial	232	20,375,534	47,505,872
Government/Institutional	964	1,447,930	4,377,115
Miscellaneous	597	0	5,890,327
Total	**3,845**	**32,033,967**	**97,899,185**

TABLE VI-28f:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – EAGLE LAKE

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	90	1,634,866	4,732,969
Residential	247	31,746,049	44,410,361
Commercial/Industrial	4	953,365	1,214,617
Government/Institutional	1,304	31,186,955	33,771,186
Miscellaneous	184	35,457	762,702
Total	**1,829**	**65,556,692**	**84,891,835**

TABLE VI-28g:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – FORT MEADE

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	1,864	748,228	7,253,990
Residential	70	5,571,134	6,938,182
Commercial/Industrial	424	2,700,998	7,589,642
Government/Institutional	820	6,275,510	7,827,145
Miscellaneous	190	0	507,132
Total	**3,369**	**15,295,870**	**30,116,091**

TABLE VI-28h:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – FROSTPROOF

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	0	0	0
Residential	249	23,836,118	39,914,006
Commercial/Industrial	204	11,737,662	27,126,974
Government/Institutional	5,483	35,231,936	38,134,118
Miscellaneous	692	0	1,192,392
Total	**6,629**	**70,805,716**	**106,367,490**

TABLE VI-28i:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – HAINES CITY

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	2,457	1,624,947	36,273,745
Residential	1,642	141,593,720	201,286,394
Commercial/Industrial	1,227	98,093,521	240,160,537
Government/Institutional	611	25,228,681	33,975,918
Miscellaneous	1,368	285,680	9,876,147
Total	**7,304**	**266,826,549**	**521,572,741**

TABLE VI-28j:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – HIGHLAND PARK

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	0	0	0
Residential	47	9,820,403	14,397,673
Commercial/Industrial	90	0	366,557
Government/Institutional	432	0	400
Miscellaneous	0	0	0
Total	**569**	**9,820,403**	**14,764,630**

TABLE VI-28k:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – HILLCREST HEIGHTS

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	0	0	0
Residential	25	5,471,342	9,409,149
Commercial/Industrial	0	0	0
Government/Institutional	5,445	0	5,445
Miscellaneous	-	0	0
Total	**5,470**	**5,471,342**	**9,414,594**

TABLE VI-28l:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – LAKE ALFRED

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	1,558	513,339	8,216,295
Residential	1,117	71,509,353	102,998,852
Commercial/Industrial	418	3,781,534	28,682,392
Government/Institutional	7,665	42,642,203	63,321,855
Miscellaneous	2,809	0	5,484,453
Total	**13,568**	**118,446,429**	**208,703,847**

TABLE VI-28m:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – LAKE HAMILTON

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	552	952,843	13,388,416
Residential	166	24,844,148	37,363,337
Commercial/Industrial	134	20,734,912	34,118,265
Government/Institutional	574	68,703	407,846
Miscellaneous	145	0	1,401,458
Total	**1,570**	**46,600,606**	**86,679,322**

TABLE VI-28n:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – LAKE WALES

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	1,772	1,659,668	15,288,810
Residential	2,137	99,052,676	170,062,526
Commercial/Industrial	1,677	128,616,601	218,075,491
Government/Institutional	2,242	60,440,900	79,022,173
Miscellaneous	1,452	25,706	10,649,507
Total	**9,280**	**289,795,551**	**493,098,507**

TABLE VI-28o:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – LAKELAND

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	5,251	30,058,173	101,140,697
Residential	4,189	976,281,217	1,478,093,739
Commercial/Industrial	6,432	1,331,406,573	2,027,922,280
Government/Institutional	12,166	817,824,930	1,019,670,575
Miscellaneous	1,850	0	6,686,911
Total	**29,888**	**3,155,570,893**	**4,633,514,202**

TABLE VI-28p:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – MULBERRY

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	1,826	203,380	9,394,792
Residential	142	13,208,938	15,993,773
Commercial/Industrial	903	56,143,860	141,724,909
Government/Institutional	883	42,211,081	46,996,080
Miscellaneous	259	0	482,108
Total	**4,012**	**111,767,259**	**214,591,662**

TABLE VI-28q:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – POLK CITY

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	1,504	0	9,594,196
Residential	372	31,742,688	46,561,106
Commercial/Industrial	138	39,288,139	57,741,652
Government/Institutional	219	1,587,520	2,867,048
Miscellaneous	258	0	1,527,893
Total	**2,491**	**72,618,347**	**118,291,895**

TABLE VI-28r:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – WINTER HAVEN

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	3,292	1,074,538	36,701,310
Residential	3,643	701,452,645	1,024,246,331
Commercial/Industrial	2,461	300,190,055	494,685,998
Government/Institutional	6,824	152,423,520	204,951,763
Miscellaneous	2,499	169,401	13,335,043
Total	**18,719**	**1,155,310,159**	**1,773,920,445**

Other Natural Hazard Vulnerability and Risk

Wildfire

Extent

Polk County is susceptible to wildfires throughout the year, particularly during the months with minimal rainfall amounts. The major cause of brush fires and forest fires is due to residents not conforming to the burning regulations in effect and not considering the conditions, as they exist (dry or windy conditions).

Polk County experiences brush fires and wildland fires annually. The peak time for forest fires is usually during the dry season from January through May of each year. During these months, grass, leaves, pine needles, and underbrush provide optimal conditions that fuel wildfires. Caused by any number of natural and man-made events, wildfires can result in extensive damage to public and private property. Wildfires also threaten the health and safety of citizens in or around the hazard (CEMP). The Center for Disease Control warns that smoke from wildfires can cause eye and respiratory system irritation and can worsen chronic heart and lung diseases.

Certain weather conditions can also increase the potential for wildfires and alter fire behavior. Wind speed, direction, and low relative humidity (a measure of moisture in the air) can cause wildfires to spread more quickly (South Carolina Forestry Commission). Wildfires are a natural, often beneficial process, but can cause serious impacts to life and property when not properly managed. here are three advisories the National Weather Service (NWS) may issue for wildfires:

- Fire Watch Weather – indicates weather conditions could result in critical fire weather conditions in the next 72 hours.
- Red Flag Warning – indicates ongoing or imminent critical fire weather in the next 24 hours.
- Extreme Fire Behavior – implies that a wildfire is either moving fast, has prolific crowning or spotting, has fire whirls, or has a strong convection column.

Vulnerability Summary

During drought conditions, much of the conservation lands and vegetated phosphate mining lands are at risk of wildfires. Wildfires in Polk County and most of its municipalities impact wooded areas with low population density. Wildfires generally do not pose a high risk to major population areas. Smoke from wildfires may impact traffic and cause medical problems with those with breathing difficulties. The agricultural industry is vulnerable to the impacts of wildfire. The County's special needs populations are vulnerable in terms of ability to evacuate and impacts from smoke. The most susceptible areas for wildfires in Polk County are the lands along the Lake Wales Ridge and in the Green Swamp.

Lake Wales Ridge

The Lake Wales Ridge, running north and south in eastern Polk County, is home to the cities of Frostproof, Lake Wales, Dundee, Lake Hamilton, Haines City and Davenport. The Heart of Florida Hospital is located on the Ridge in the Haines City/Davenport area south of Interstate 4. Many residential subdivisions have developed along the Ridge, especially in northeastern Polk County. In addition to these more urban areas, the Ridge, due to its sandy and permeable soils, is home to citrus groves and extensive agricultural operations. The Avon Park Air Force Range is also located along the Ridge. Management through prescribed burning is essential in these areas to control wildfires.

Green Swamp

The Green Swamp, located in northern Polk County along the Interstate 4 corridor, is vulnerable to wildfires during dry seasons. Much of the Green Swamp is undeveloped, however the cities of Polk City, Lakeland, and Auburndale extend into this area. Although the Green Swamp is mostly undeveloped, it is home to sand mining operations and some agricultural operations. As with the Lake Wales Ridge, management through prescribed burning is essential in this area to control wildfires.

Because much of the County is undeveloped green space, vulnerability is moderate to high. If a major wildfire were to occur, the most significant impact would be the loss of the green space. Protection of most populated areas is at the cost of the forest. Table VI-29 includes level of risk for each jurisdiction for wildfire.

TABLE VI-29:
LEVEL OF RISK – WILDFIRE

Jurisdiction	Level of Risk
Auburndale	Low - Medium
Bartow	Medium – High
Davenport	Low – Medium
Dundee	Medium – High
Eagle Lake	Low – Medium
Fort Meade	Low – Medium
Frostproof	Low – Medium
Haines City	Low – Medium
Highland Park	Medium – High
Hillcrest Heights	Medium – High
Lake Alfred	Low – Medium
Lake Hamilton	Low – Medium
Lake Wales	Low – Medium
Lakeland	Low – Medium
Mulberry	Low – Medium
Polk City	Medium – High
Winter Haven	Low – Medium
Unincorporated Polk County	Low – Medium
Polk County Public Schools	Low – Medium

Risk Assessment

Wildfire impacts residents and businesses by threatening physical structures and infrastructure. However, smoke can also have widespread impacts. This represents personal as well as economic loss, depending on the impact area. Uncontrolled wildfires can cause severe economic impact to the agricultural industry depending on their location.

As the population continues to grow, the number of residents living in or near wildland areas will also continue to increase. The threat of wildfire will increase as the urban areas extend into previously forested areas, or into or adjacent to forested areas not prescriptively burned on a regular basis. The number of human-caused fires will likely increase as the population living in near wildland areas continues to grow, and as management of natural areas within the urban area with prescribed fire or other vegetation management does not occur.

As shown on the Figures below, the FEMA National Risk Index identifies wildfire at a risk from Relatively Low through Relatively High. The Census Tracts with the higher wildfire risk corresponds to the areas with lower population densities (See maps in Appendix A). There are pockets of areas within the jurisdictions with higher wildfire risk. The County as a whole has a Relatively High Risk Index. The expected annual loss is 798,000 dollars with an exposure of 171 billion dollars.

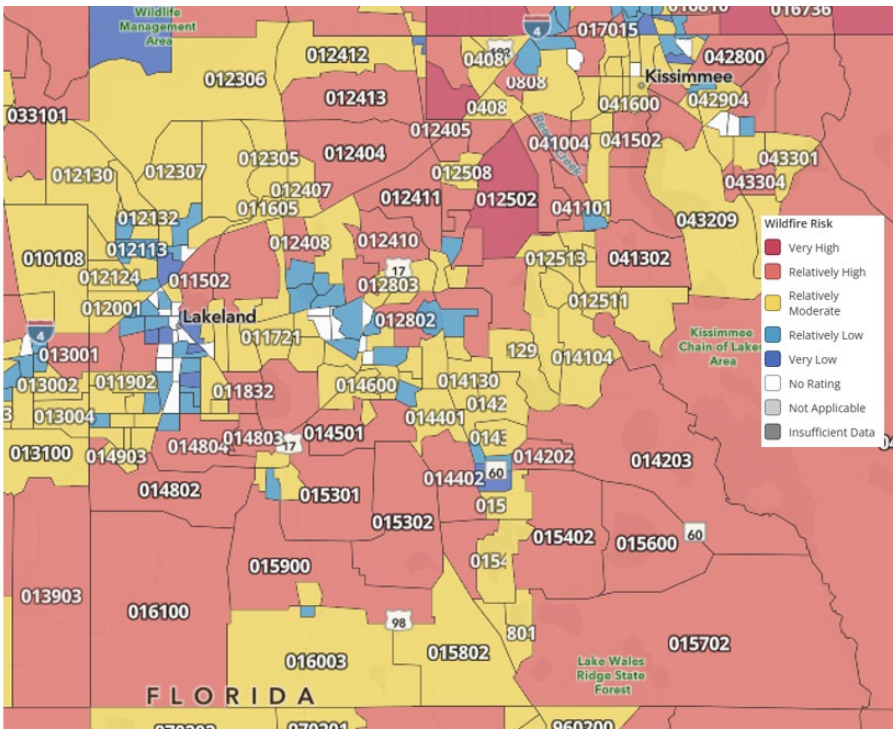


Figure VI.14: Wildfire Risk Map; Source: *https://hazards.fema.gov/nri*

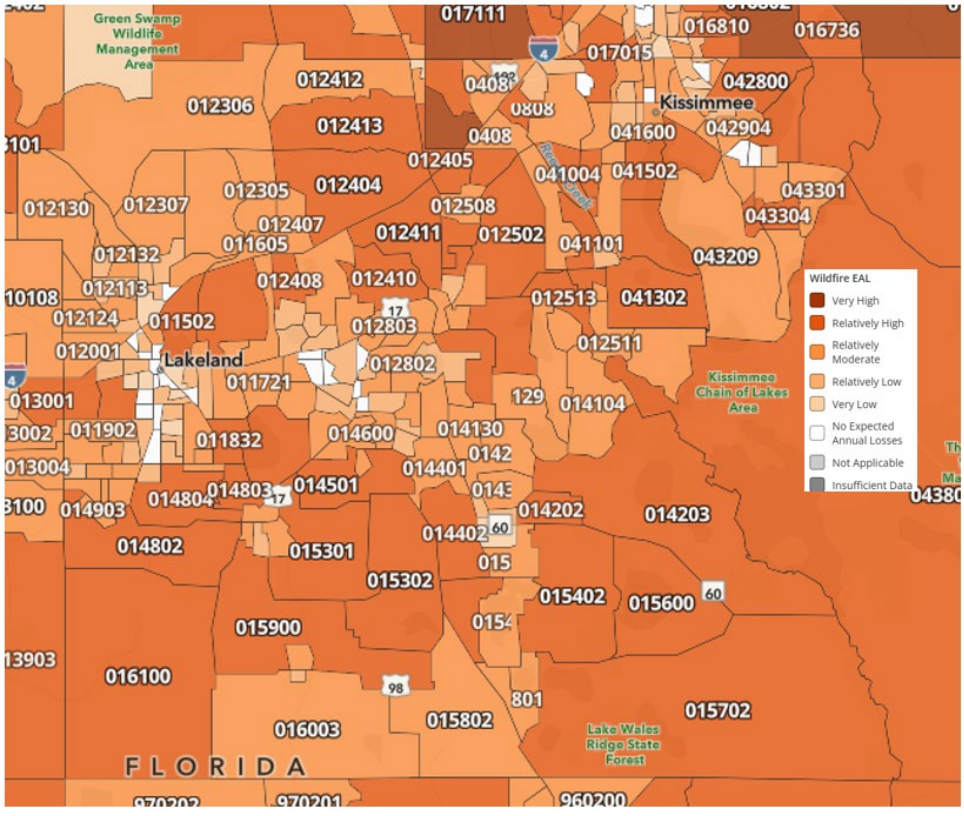


Figure VI.15: Wildfire Expected Annual Loss Map; Source: *https://hazards.fema.gov/nri*

Human-Caused Hazard Vulnerability and Risk

Civil Disturbance

Extent

According to the US Army Civil Disturbance Operations Manual, civil disturbances and riots can arise from crowds. Crowds are gatherings of a multitude of individuals and small groups that have temporarily assembled in the same place, usually representing a group belief or cause. Under certain circumstances, crowds can become a riot or a violent mob very quickly. These are the types of civil disturbances that are of primary concern to the state of Florida. Violent crowds may strike out physically at bystanders and others in the crowd or destroy private and government property (Source: 2023 Enhanced State hazard Mitigation Plan).

The possibility exists in Polk County for civil disturbances. The County's vulnerability to this hazard is medium, and the LMS Working Group considers this hazard a threat to the County. The City of Bartow has a slightly higher vulnerability since it is the County seat. Civil Disturbances can occur anywhere but tend to occur most often in urban areas. Due to the nature of crowd building, civil disturbances most often occur in open, public spaces or venues. Sites that are attractive for political or other rallies should be considered as probable locations for the epicenter; arenas and stadiums are another type of venue where civil disturbance can occur. Civil disturbances can also occur in proximity to locations where a "trigger event" occurred.

Vulnerability Summary

Populations in urban areas may face a greater risk. Vulnerable populations may face a greater risk due to possible discrimination. Individuals and populations whose jobs involve public safety, such as law enforcement officers, may face a greater risk. People who need services from public safety may also be at risk if the public services staff are occupied with incidents. Civil disturbances may result in damage or destruction of buildings, such as government property. Civil disturbances may result in traffic congestion or temporary closure of major roadways. Businesses may be impacted from loss of function or loss of inventory.

Risk Assessment

Although the LMS Working Group recognizes jurisdictions are vulnerable to cyber-incidents, there is a lack of data to quantify the vulnerability. Climate change does not have a direct effect on civil disturbances, but it does indirectly affect them. Although civil disturbances may not directly impact the environment, environmental issues can inspire the formation of organized gatherings in protest of a jurisdiction's environmental policy.

Cyber-Attacks

Extent

A cyberattack is any intentional effort to steal, expose, alter, disable, or destroy data, applications, or other assets through unauthorized access to a network, computer system or digital device. Threat actors start cyberattacks for all sorts of reasons, from petty theft to acts of war. They use various tactics, like malware attacks, social engineering scams, and password theft, to gain unauthorized access to their target systems.

Cyberattacks can disrupt, damage, and even destroy businesses. The average cost of a data breach is 4.88 million dollars. This price tag includes the costs of discovering and responding to the violation, downtime and lost revenue, and the long-term reputational damage to a business and its brand. Some cyberattacks can be considerably more costly than others. Ransomware attacks have commanded ransom payments as high as 40 million dollars. Business email compromise (BEC) scams have stolen as much as 47 million dollars from victims in a single attack. Cyberattacks that compromise customers' personally identifiable information can lead to a loss of customer trust, regulatory fines, and even legal action. By one estimate, cybercrime will cost the world economy 10.5 trillion dollars per year by 2025.

The possibility exists in Polk County for cyber-attacks. The County's vulnerability to this hazard is medium, and the LMS Working Group considers this hazard a threat to the County. All the jurisdictions have exposure to cyberattacks as they have an online presence. Instances of fraud can be perpetrated against residents.

According to ISPReports.Org, approximately 89 percent of Polk County households have an internet connection despite having 98.47% availability. 75% of households have fiber, cable, or DSL, 5% have satellite, 0% are still on dial-up, and 3% of households have internet but do not pay for a subscription because it's subsidized by the Affordable Connectivity Program. Speeds and coverage vary within the county, and sometimes even from block to block. As connections to the internet increase, the opportunities for impacts from cyber incidents will increase.

Vulnerability Summary

While anyone can fall victim to cyberattacks, certain demographics, such as seniors and minors, may be more susceptible due to factors such as limited digital literacy, trust in online interactions, and lack of awareness about online risks. Smaller companies and jurisdictions may be more open to cyberattacks if they do not have advanced backup and protection systems.

Risk Assessment

Although the LMS Working Group recognizes jurisdictions are vulnerable to terrorism and cyber-attacks, there is a lack of data to quantify the vulnerability.

Dam/Levee Failures

Extent

According to the 2018 Florida Enhanced State Hazard Mitigation Plan, Polk County has the highest number of dams in the State. According to information available through the National Inventory of Dams, most structures (94.1 percent) in the County are earthen dams. The private sector owns most of the dams (93.0 percent). Many water control structures in lakes are lock systems. Mining operations that have dams in

Polk County are in the southwestern portion of the County. In 1967, a dam failure occurred at a phosphate mining operation in Fort Meade that resulted in the release of 250,000 m^3 of phosphatic clay slimes and 1 million m^3 of water, causing a fish kill in the Peace River. In 1971, a clay pond dam failed releasing 9 million m^3 of clay water, which caused a large fish kill in the Peace River. In 1994, a dam failure occurred at a phosphate mining operation releasing 6.8 million m^3 of water from a clay settling pond, the majority of which remained on site.

According to National Inventory of Dam information, the 307 dam/levee structures in the County have an average of 7,412 acre-feet maximum storage, which is total storage space in a reservoir below the maximum attainable water surface elevation, including any surcharge storage. The structures have an average of 9,457 acre-feet of normal storage, which is the total storage space in a reservoir below the normal retention level, including dead and inactive storage and excluding any flood control or surcharge storage. These structures have a total drainage area of 2,493 square miles.

Vulnerability Summary

The frequency of failures for dams in Polk County is unknown. Life spans for earthen dams generally exceed 50 years. Of the structures with a listed completion date, approximately 32 percent of the structures in the County are less than 50 years old (Figure VI.16).

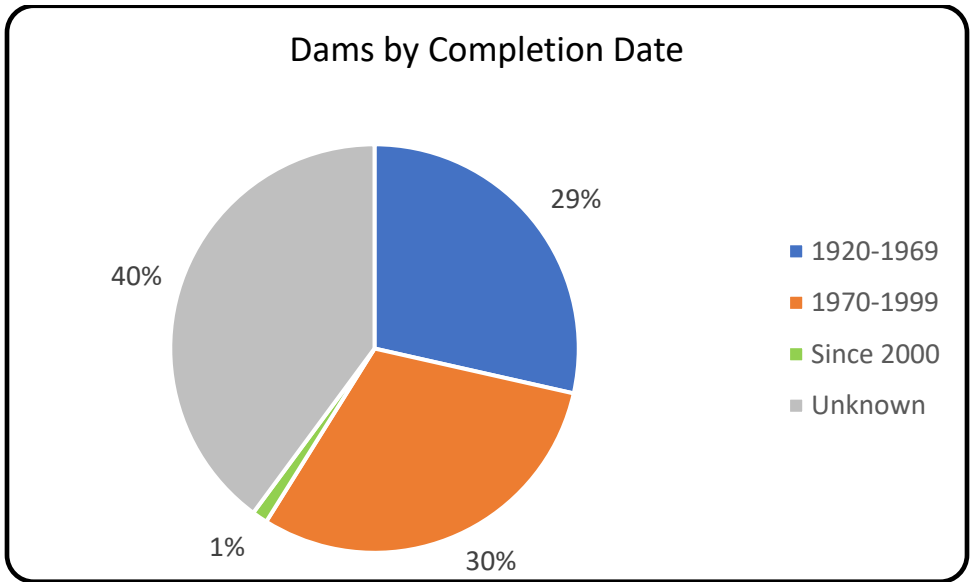


Figure VI.16: Year Dam/Levee Structure Completed;
Source: USACOE National Inventory of Dams

The extent of damages the County would suffer depends on the exact location of a dam breach and the degree of the failure. Due to their isolated locations, there is little likelihood that the failure of a clay-settling pond would adversely impact county residents. Based on the general location map (Figure V.39), and information from the Statewide Critical Facilities Inventory, Table VI-15 includes information relating to the assets located in the vicinity of the dam locations where dam failure could cause impacts.

TABLE VI-30:
SPECIFIC ASSETS VULNERABLE TO DAM/LEVEE FAILURE

Asset Type	Count		Asset Type	Count
Community Center	1		Private Schools	2
Electric Substations and Power Plants	18		Public Schools	7
Faith Based Facilities	11		Public Water Supply	40
Fire Stations	4		Shelters	4
Mobile Home/RV Parks	20		Solid Waste Facilities	8
Police Stations	2		Wastewater Facilities	28

The National Inventory of Dams includes a determination as to the downstream hazard potential for 326 structures in Polk County. The National Inventory of Dams identifies dams by their hazard risk of low, significant, and high.

- Low hazard: A dam where failure or mis-operation results in no probable loss of human life and low economic and/or environmental loss. Losses are principally limited to the owner's property.

- Significant hazard: A dam where failure or mis-operation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities or impact other concerns. These dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.

- High hazard: A dam where failure or mis-operation will probably cause loss of human life.

Figure VI.17 illustrates the percentage of dam structures based on their classification of downstream hazard potential throughout the County.

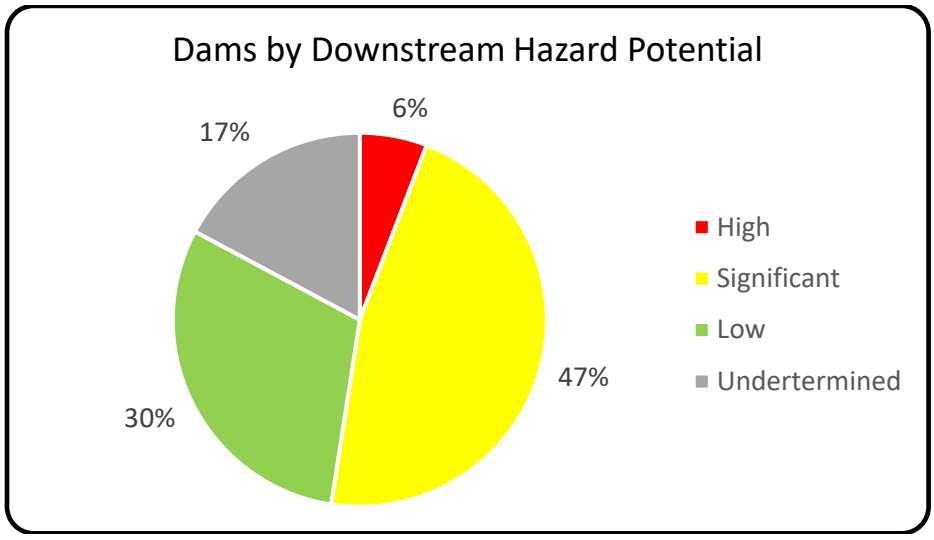


Figure VI.17: Dams by Downstream Hazard Potential;
Source: USACOE National Inventory of Dams

Most dams in Polk County with a high hazard designation are located in isolated areas of the County with no community assets, critical facilities, or infrastructure that a dam breach would impact. Many of the dams are remnant mining ponds which have dried up. The remaining dam is located north of SR 60 between Bartow and Mulberry. Failure of this dam could potentially impact a railroad, SR 60, and a few industrial properties located between the dam and SR 60 through flooding.

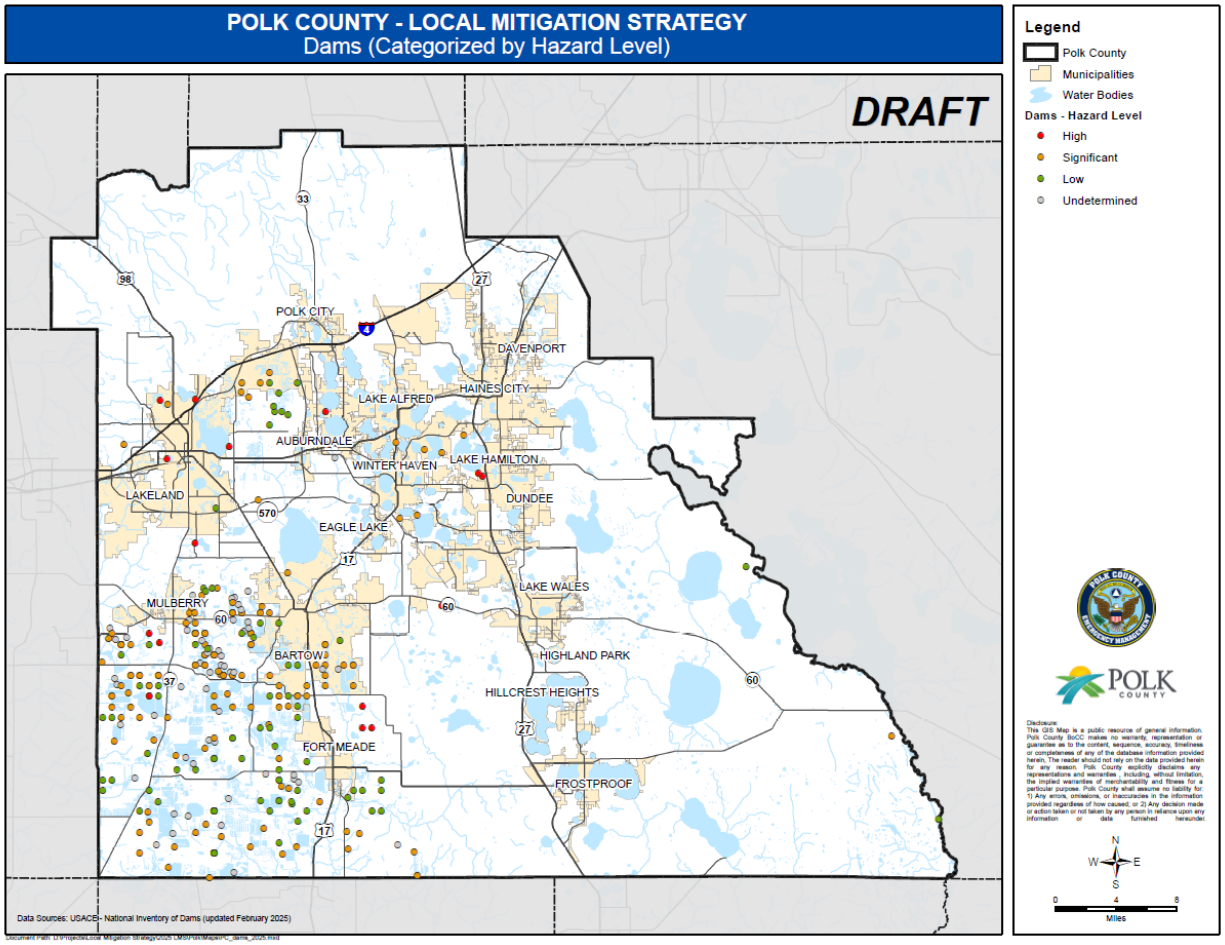


Figure VI.18: Polk County Dam Location Categorized by Hazard Level; Source: USACE, National Inventory of Dams

Risk Assessment

Section 62-672 Florida Administrative Code and Section 373, Florida Statutes, govern the construction and safety of dams and levees in Florida. According to the Florida Department of Environmental Protection (FDEP), agency personnel at the State, regional, and local levels, as related to their respective regulatory programs, and private dam owners, conduct dam inspections in Florida. Oversight for phosphate mining and similar industrial impoundments is primarily the responsibility of FDEP. Other dams generally fall within the purview of the US Army Corps of Engineers, the State's five regional water management districts, or local government agencies.

Although the LMS Working Group recognizes that jurisdictions are vulnerable to human-caused hazards, there is a lack of data to quantify the vulnerability.

Epidemics/Pandemics

Extent

A disease outbreak takes place when a disease occurs in greater numbers than expected in a community or region or during a season. An outbreak may occur in one community or even extend to several countries. It can last from days to years.

Two of the major industries in Polk County for many years have been cattle ranching and citrus production. Eastern equine encephalitis threatened the large animal population (cattle, horses, etc.) in 1992. In the past, several pests and diseases have threatened the citrus industry (Mediterranean fruit fly (1997) and citrus canker (2005–06). Citrus greening and black spot are diseases that are affecting the citrus industry and continuing to spread through Polk County. Appendix A includes the extent of citrus canker and citrus greening impacts in Polk County.

Pandemics are large-scale outbreaks of infectious disease that can greatly increase morbidity and mortality over a wide geographic area and cause significant economic, social, and political disruption. Evidence suggests that the likelihood of pandemics has increased over the past century because of increased global travel and integration, urbanization, changes in land use, and greater exploitation of the natural environment (Jones and others 2008; Morse 1995). Pandemics can cause economic damage through multiple channels, including short-term fiscal shocks and longer-term negative shocks to economic growth. Individual behavioral changes, such as fear-induced aversion to workplaces and other public gathering places, are a primary cause of negative shocks to economic growth during pandemics. Pandemic mitigation measures can cause significant social and economic disruption.

Drug overdose deaths continue to impact communities in the United States and Polk County. The figures below show the drug overdose deaths and the non-fatal overdose hospitalizations in Polk County.

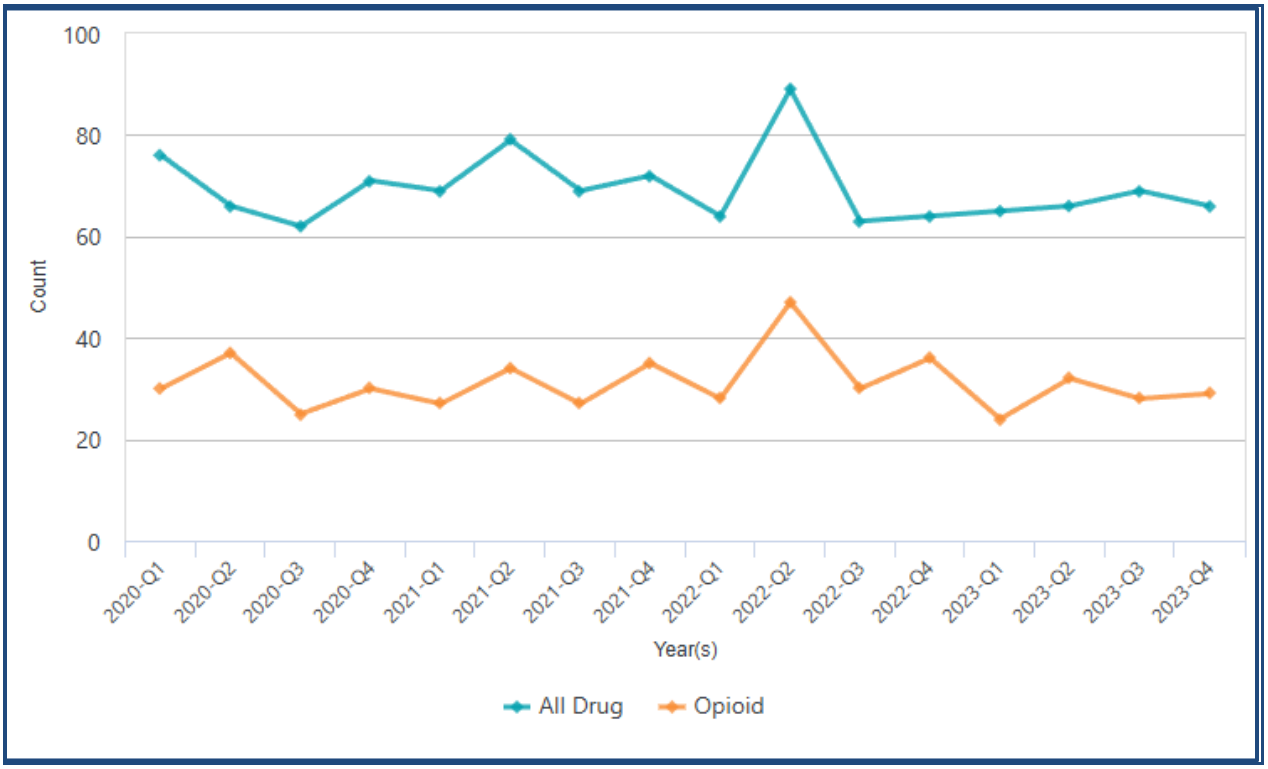


Figure VI.19: Drug Overdose Deaths Polk County;
Source: Flhealthcarts.gov

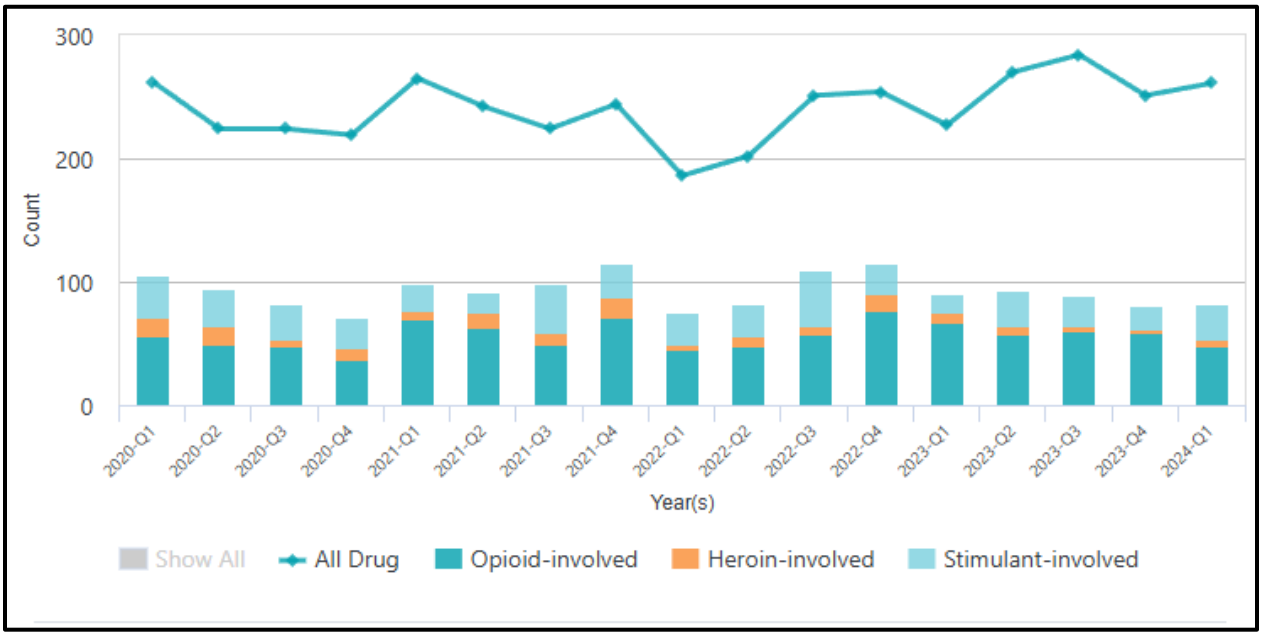


Figure VI.20: Total Non-fatal Overdose Hospitalizations Polk County.
Source: FloridaHealthChartds.gov; Data Source Agency for Health Care Administration

Vulnerability Summary

Populations located in urban areas may face a greater risk. Vulnerable populations in the same areas may face a greater risk. Polk County would have extra vulnerability as there is currently one hospital in the County. As experienced with the COVID-19 incidents, there may be loss of function and/or inventory to businesses. Costs may be incurred for decontamination. Social activities such as drug use can lead to increased crime.

It is impossible to determine a jurisdiction's vulnerability; however, it is reasonable to claim that every jurisdiction is somewhat vulnerable to epidemic outbreaks and drug use.

Risk Assessment

A loss estimation is difficult to determine because of many unknown variables, but it is reasonable to claim that losses could range from minimal to extreme, depending on the epidemic and the magnitude. Climate change has forced some animal species into new habitats as their natural habitats disappear, and it has expanded the habitats of other animals. This movement of animals into new areas increases opportunities for contact between humans and animals and the potential spread of zoonotic diseases. Rising temperatures allow certain disease-causing fungi to spread to new areas that previously were too cold for them to survive. The risk of natural disasters and flooding has increased, therefore the risk of mold growing in homes increases.

Hazardous Materials Incidents

Extent

There are numerous hazardous materials facilities and plants throughout Polk County. There are hazardous materials located in minor quantities at schools, hospitals, and some of the telecommunication facilities throughout the county. The Local Emergency Planning Committee (LEPC) has an aggressive hazardous materials inspection and cataloging program. The LEPC places the information collected from the facilities into a statewide system for easy access by emergency responders. The Polk County Emergency Operations Center monitors planning and training activities, spills, chemical releases, and hazardous materials events. Of the numerous hazardous materials incidents reported statewide each year, fewer than one percent have resulted in fatalities, fewer than four percent have resulted in injuries, and fewer than six percent have resulted in evacuation. Hazardous materials incidents can occur anywhere there is a road, railroad, or fixed facility storing hazardous materials. The entire County is at risk of an unpredictable incident of some type. Most incidents are small and confined to a relatively localized area.

The maps in Appendix A illustrate the location of hazardous materials facilities and the potential locations for hazardous materials incidents at rail crossings.

Vulnerability Summary

Vulnerability to hazardous materials releases (including waste), whether onsite or in route, is difficult to determine due to the type and amount of materials released, location, weather, and other variables. To determine the vulnerability of the County to potential hazardous material incidents, it is necessary to determine the "vulnerable zone" or the area of each facility using or storing extremely hazardous substances. Due to the specificity of each hazardous material release, it was not possible to determine a comprehensive vulnerable zone or population exposure for Polk County.

Nationwide, there are more transportation accidents involving hazardous materials and wastes than those that occur at fixed facilities. Transportation accidents can occur on roadways, railways, waterways, in the air, and within pipelines. In addition, the numbers of large and small quantity generators are significant, and they correlate with the ranges of services and manufacturing within the County's economy. These generators register with FDEP and have control plans in place in accordance with permit procedures. The County can address spills and accidental releases. Officials expect the number of generators and the quantity and types of materials handled to increase proportionately with population and economic growth.

Risk Assessment

Hazardous materials incidents have the potential for loss of life, injury, damage to physical structures, and damage to the environment including drinking water. Businesses and individuals incur financial losses when officials close roads due to hazardous materials incidents.

Harmful Algal Blooms

Extent

Harmful Algal Blooms may last from days to several months or even years. A significant concern is that many freshwater sources used for drinking water can be affected by Harmful Algal Blooms potentially contaminating the water supply if not properly treated.

The maps in Appendix A illustrate the location of hazardous materials facilities and the potential locations for hazardous materials incidents at rail crossings.

Vulnerability Summary

Harmful Algal Blooms harm human and animal health, fishing and aquaculture, and long-term ecosystem health. Some Harmful Algal Blooms are toxic, can poison animals, and make the surrounding air hard to breathe. The toxins produced by algae vary by species and region, and impact wildlife and people in different ways.

Risk Assessment

Although the LMS Working Group recognizes jurisdictions are experiencing an increasing number of Harmful Algal Blooms, there is a lack of data to quantify the vulnerability.

According to NRDC.org, climate change is both increasing the frequency and duration of droughts in many parts of the country and intensifying extreme storms. Periods of drought interspersed with strong precipitation increase runoff from agricultural lands, lawns, and other sources, leading to higher nitrogen levels in rivers—and therefore harmful algal blooms.

Burning fossil fuels, deforestation, and land development are increasing the amount of carbon dioxide in the atmosphere. This fuels harmful algal blooms because cyanobacteria can feed on the carbon dioxide not only present at the surface of a water body but also dissolved in the water. And when algae die and sink to the bottom of a freshwater body, they decompose and release carbon that was once sequestered, providing more fuel for cyanobacteria growth.

Transportation Incidents

Extent

Transportation incidents include interactions between vehicles, bicyclists, pedestrians, trains, and airplanes. The use of golf carts on roads and the use of rental e-scooters are on the rise. The Smart Growth America's Dangerous by Design 2019 document shows Lakeland-Winter Haven with the fifth highest pedestrian danger index in the country. Municipalities are experiencing problems with users littering the sidewalks with e-scooters, which can impede the safe flow of traffic. All municipalities in the County adopted the complete streets policy to address the interaction of all potential users of the roadways. The Polk County Transportation Planning Organization and several municipalities are working on an intelligent transportation system and advanced technology to prepare for the future role of Autonomous, Connected, Electric, and Shared vehicles (ACES).

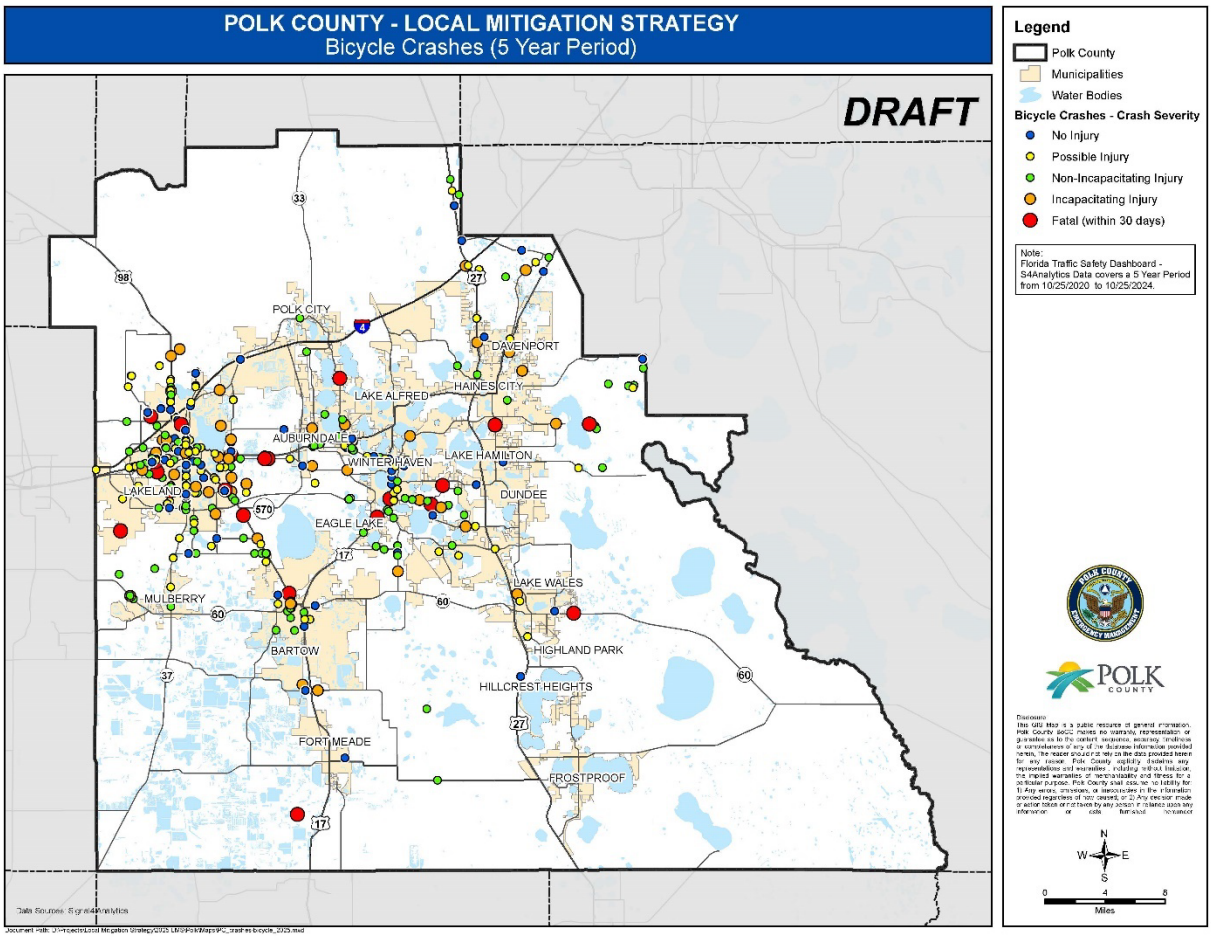


Figure VI.21: Bicycle Crashes
Source: Polk TPO

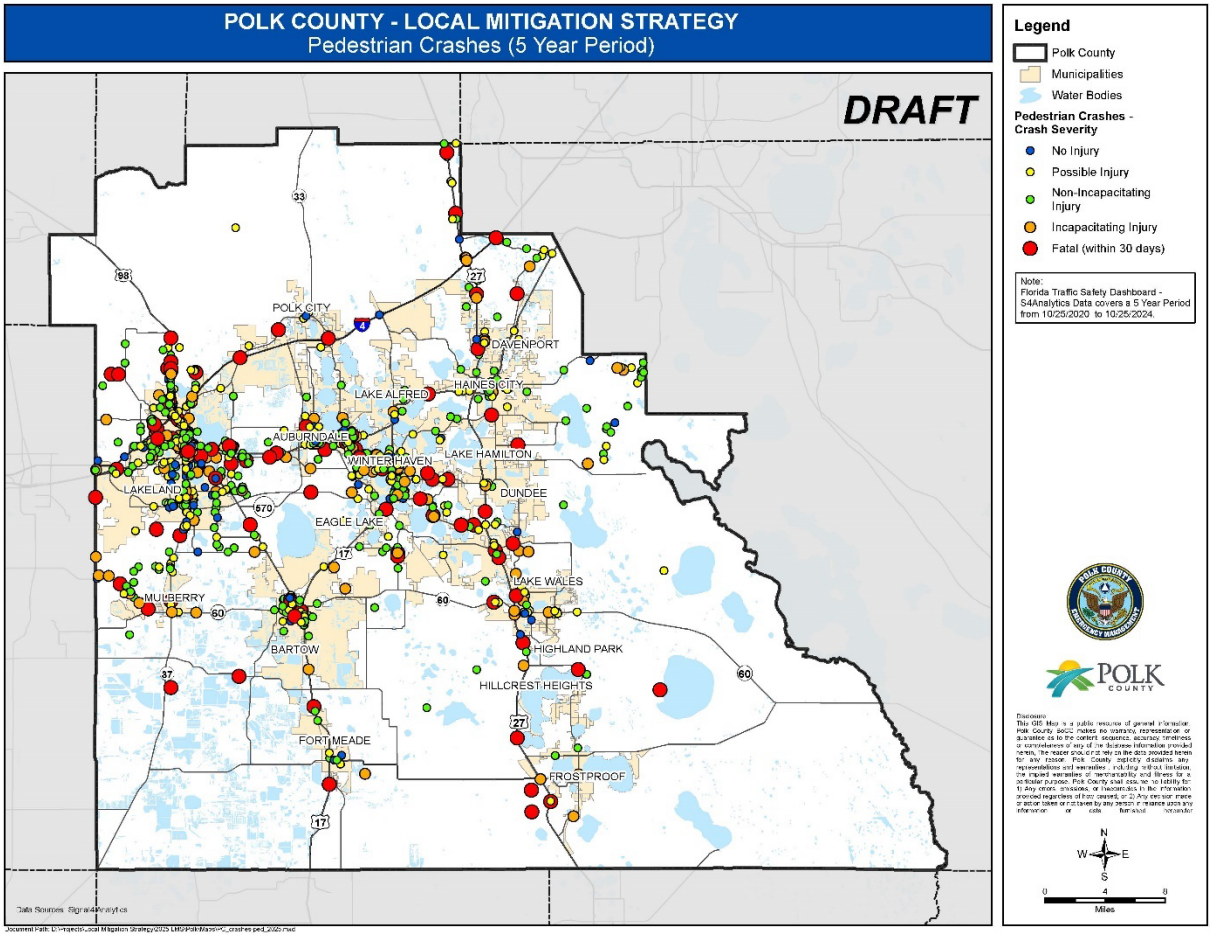


Figure VI.22: Pedestrian Crashes;
Source: Polk TPO

Vulnerability Summary

Vulnerability to transportation system accidents is associated with the highway and rail systems that run through Polk County (see maps Appendix A). According to Smart Growth America, fatal crashes involving pedestrians disproportionately represent older adults, people of color, and people walking in low-income communities. Individual community and population center vulnerabilities to this hazard are dependent upon location. Maps in Appendix A illustrate the locations of pedestrian and bicycle injuries and fatalities.

According to the US EPA's Climate Change on Transportation, the impacts of climate change on precipitation, extreme weather, and heat pose risks to the transportation system. These hazards may affect system performance, safety, and reliability. In coastal regions, rising sea levels and more extreme storms can lead to more storm surge and flooding, which can damage roads, bridges, railways, ports, and coastal airports. Increased local flooding can affect roadways and tunnels, weaken roadway materials, and cause traffic congestion. As a result, people may have trouble getting to their homes, schools, stores, and medical appointments.

Across inland regions, heavy rain can cause flooding and mudslides, affecting highways, railways, and bridges. Lack of rain can also be a concern. Drought combined with extreme heat increases wildfire risk. Wildfires can damage transportation networks and impair drivers' visibility.

Rising temperatures can affect transportation in many regions. These impacts can be both immediate and long-lasting. For example, heat affects runways, and hotter air can make it more difficult for airplanes to take flight. Heat can also damage rail tracks and cause cracks in roads. In addition, heat can pose safety risks to transportation workers and travelers. For example, vehicles can overheat and roadway joints can buckle, leading to accidents (Source: https://www.epa.gov/climateimpacts/climate-change-impacts-transportation#:~:text=Wildfires%20can%20damage%20transportation%20networks,for%20airplanes%20to%20take%20flight).

Risk Assessment

Transportation incidents impact residents and business by potential loss of life and injury and damage to physical structures. There is a financial loss to businesses and individuals as transportation incidents close roads. The risk of transportation incidents is increasing as people are more distracted by their phones and digital devices and paying less attention.

Critical Facilities

Critical facilities are located throughout the County. Approximately 52 percent of the critical facilities are located in a municipality. Lakeland, Bartow, and Winter Haven have the highest percentage of critical facilities. Public Schools and substations make up the largest percentage of critical facilities. Table VI-16 includes a breakdown of critical facilities by type.

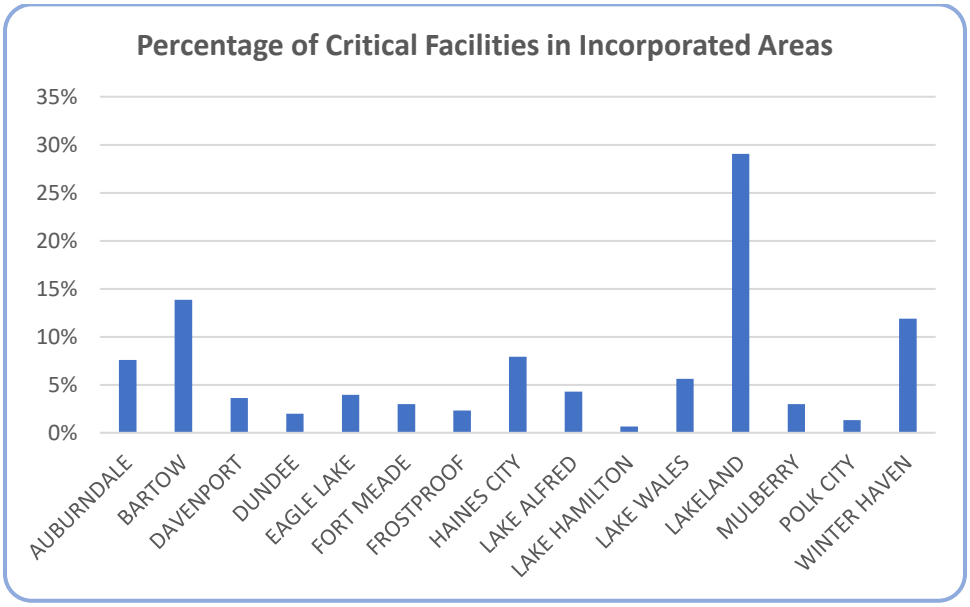


Figure VI.23: Critical Facilities within Incorporated Areas

TABLE VI-31:
CRITICAL FACILITIES

Land Type	Percent of Total
Emergency Medical Service	3.9%
Emergency Operations Center	0.2%
Fire Station	11.9%
Health Clinic	0.9%
Hospital	1.0%
Law Enforcement	4.6%
Local Government Facility	3.2%
Power Plant	4.3%
Public School	28.5%
Shelter	17.2%
State Government Facility	3.2%
Substation	21.0%

The majority of the critical facilities are located outside the Special Flood Hazard Area (96.9%).

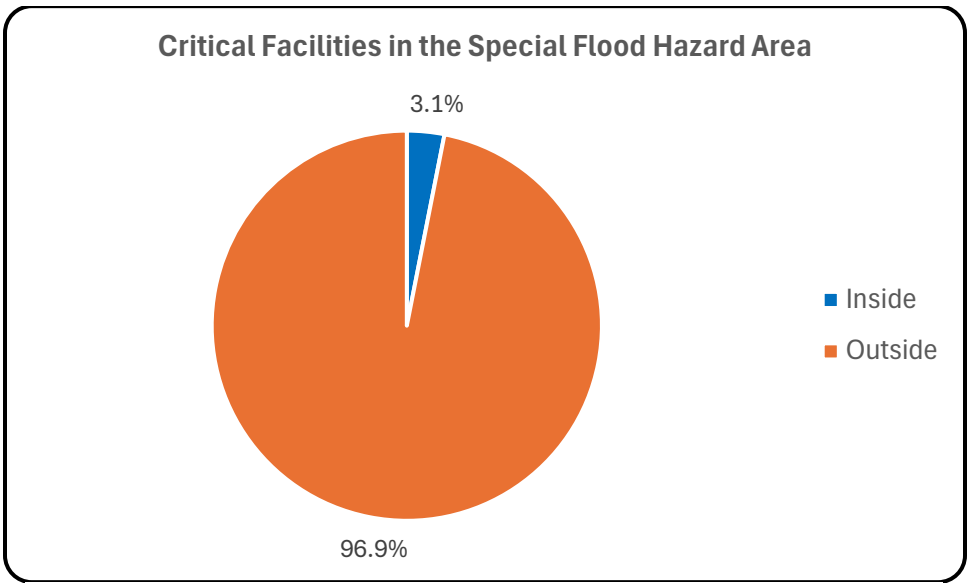


Figure VI.24: Percentage of Critical Facilities in the Special Flood Hazard Area

The majority of the critical facilities are located in Sinkhole Area III (89.4%). Sinkhole Area Type I includes the smallest percentage of critical facilities (0.9%). There are no critical facilities located in a municipality that is also in the Sinkhole Area II.

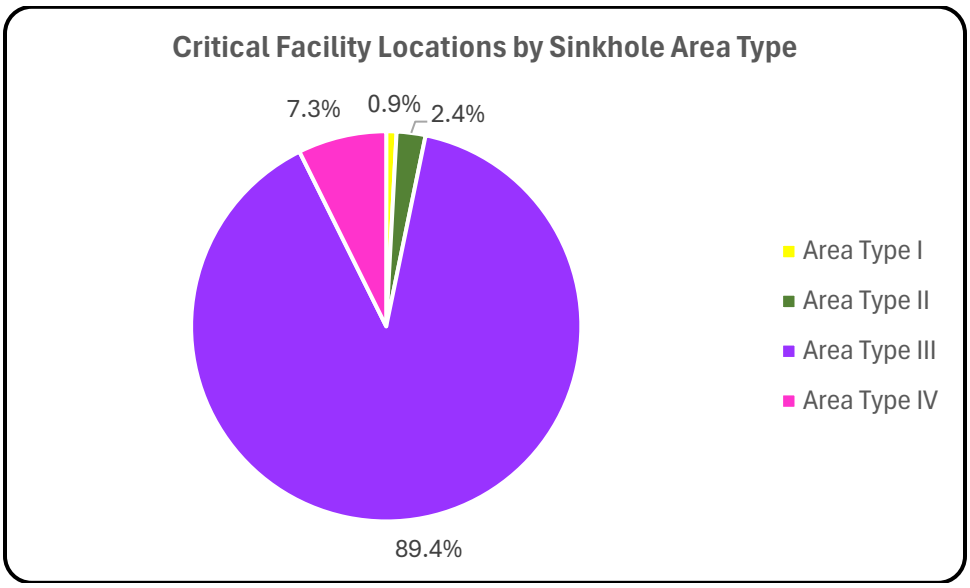


Figure VI.25: Percentage of Critical Facilities by Sinkhole Area Type

Repetitive Loss

The LMS does not include the database of repetitive loss properties because of the specific address and personal information that is associated with the information. Individuals may request specific information from the appropriate jurisdictions directly, or through the NFIP at FEMA. Appendix A includes a map related to repetitive loss properties by Census Block Group. The Polk County Floodplain Manager has requested specific information pertaining to repetitive loss for all jurisdictions. As of the printing of this document, Polk County has not received this information.

The cities of Auburndale, Bartow, Davenport, Eagle Lake, Frostproof, Haines City, Lakeland, and Mulberry include all or a portion of a block group depicted on the map below.

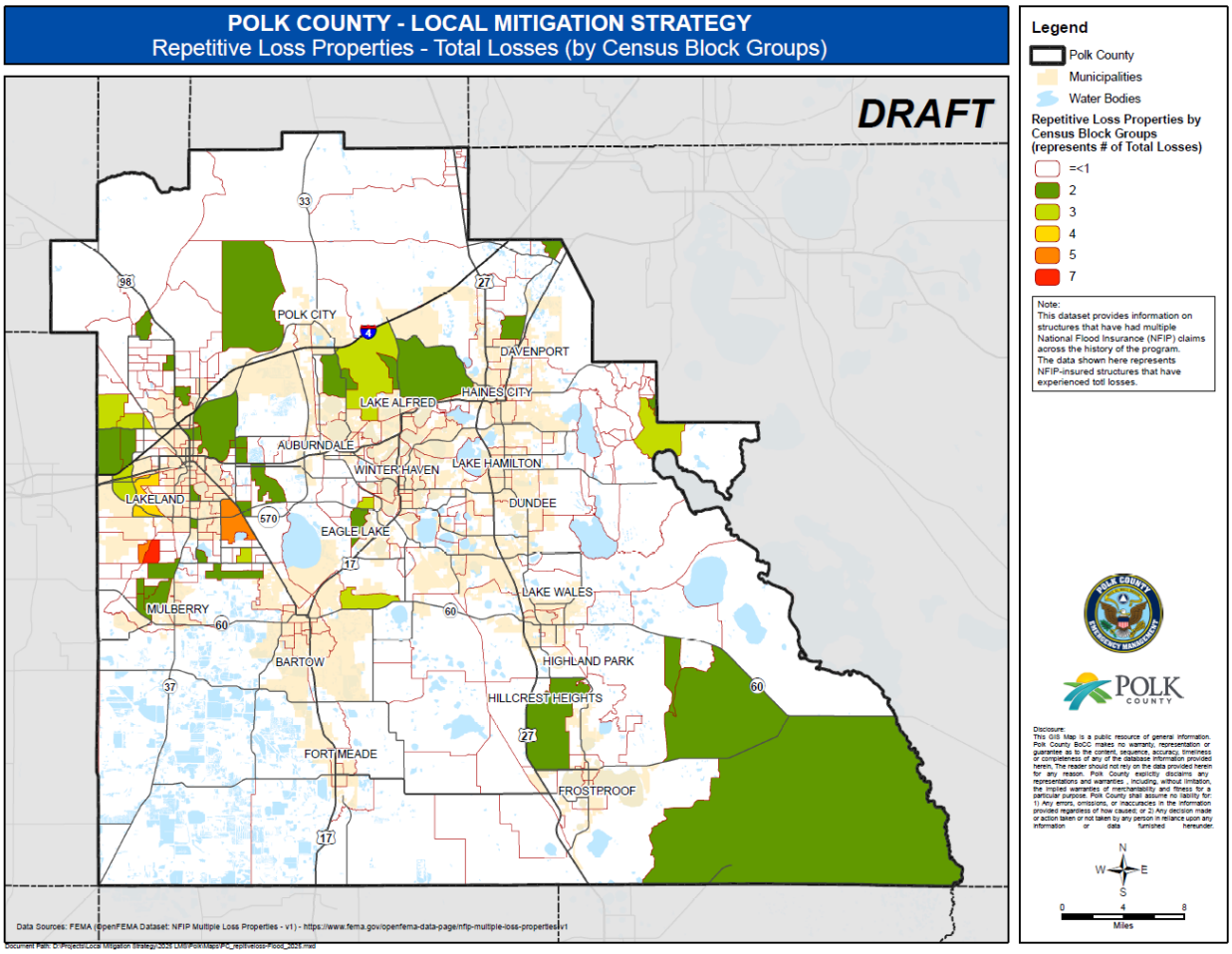


Figure VI.26: Map of Repetitive Loss by Census Block Group

Municipalities with repetitive loss properties are trying to eliminate or reduce the risks of future flooding to those properties through various mitigation techniques including outreach methods. Each municipality sends a notice to every owner of a repetitive loss property, soliciting interest and participation in various grant programs, to mitigate their property from future flood losses. The municipality prioritizes each interested property owner that responds to the solicitation utilizing the prioritization guidelines, produced by the program in which they apply. Currently, each municipality maintains that information.

The LMS supports all projects submitted for alternative funding regardless of the authority, and the LMS Working Group scores each project utilizing the LMS project scoring criteria. Depending upon the grant program or alternative funding source, the programs may have specific prioritization process, which may complement or negate the local prioritization. Each municipality's repetitive loss property coordinator maintains a list of interested property owners.

Land Use Trends and Potential Loss

The LMS Working Group recognizes the way people utilize land, especially land within known hazard-prone areas, has a significant effect on community vulnerability. Residential or industrial development

areas may be more susceptible to disaster-related damages than others. The LMS includes a municipal-specific analysis because individual municipalities have the planning and legal control over land use policy.

All municipalities reported they were growing either moderately or rapidly, and except the Town of Hillcrest Heights and the Village of Highland Park, all are participants in the NFIP. Pressure for development to locate in wetland areas continues to be an ongoing issue in the County. The LMS Working Group recognizes that its efforts to identify the areas at risk from various hazards is essential to guide the use of land to minimize future vulnerabilities to disaster. When needed and desired, a participant may propose modifications to the plans, ordinances, codes, and similar policies as mitigation initiatives for incorporation into the LMS.

Changes in future development influence the peak discharge of floods by modifying how rainfall is stored on and/or run off the land into tributaries. In undeveloped areas such as forests and grasslands, rainfall is collected and stored on vegetation, in the soil column, and in surface depressions. When this storage capacity is filled, runoff flows slowly over land or as subsurface flow. In contrast, urban areas have less capacity to store rainfall since development covers much of the urban land surface by roads and buildings. Construction of these roads and buildings often involves removing vegetation, soil, and depressions from the land surface. Development replaces the permeable soil with impermeable surfaces such as roads, roofs, parking lots, and sidewalks that store little water, reduce infiltration of water into the ground, and accelerate runoff to ditches and streams. Even in suburban areas, where lawns and other permeable landscaping may be common, rainfall can saturate thin, compressed soils and produce overland flow, which runs off quickly. Dense networks of ditches and culverts in cities reduce the distance that runoff must travel overland or through subsurface flow paths to reach streams and rivers.

Changes in the future development as described above, in conjunction with the projected increase in population, have the potential to put more homes and lives at risk due to flooding. Some of these areas exist in Special Flood Hazard Areas. Future land use planning considers existing Special Flood Hazard Areas, as well as areas known to exhibit flooding not identified on the FEMA maps, which preserves many areas that provide natural floodplain functions, including existing Special Flood Hazard Areas.

County and municipal staff work with developers to avoid and minimize impacts on wetlands and preserve wetlands and wetland buffers as much as possible. In most cases where minimal impacts to wetlands are allowed, on-site mitigation is preferred. These natural wetlands or mitigated features provide valuable stormwater attenuation, among other values to our developed spaces.

Life and Safety

In Florida, common hazards to life safety include coastal and inland flooding, tropical storms, hurricanes, and lightning. Deep, fast flowing, or rapidly rising floodwaters can cause physical injury and loss of life. A mere six inches of moving water can sweep a person away. The risk of drowning and physical injury increases when floodwaters carry debris. Floodwaters can also hide other hazards for wading pedestrians, such as manhole openings where flood flow has lifted the covers. Approximately six inches of flowing water can move vehicles and wash away roads. Downed power lines or other energized systems in the water can cause electrocution. In addition, stresses to gas lines can lead to a natural gas leak, further putting lives at risk. Flooding from rainfall itself will not warrant an emergency evacuation of many residents and visitors. However, residents may evacuate as result of rising floodwater overflow.

Flooding is one of the most devastating natural disasters in the world. Having a warning system and evacuation plan will reduce injuries and loss of life. A specific evacuation procedure, including zones, routes, shelters, and means of communication helps reduce confusion for residents and visitors, and provides a smooth evacuation out of high-risk areas. Polk County is a StormReady community and has several programs to better prepare the community for these events. A Storm Ready community must:

- Establish a 24-hour warning point and emergency operations center;
- Have more than one way to receive severe weather warnings and forecasts and to alert the public;
- Create a system that monitors weather conditions locally;
- Promote the importance of public readiness through community seminars; and
- Develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.

In addition, Polk County utilizes Alert Polk, which is a critical communications system shared with most public safety operations across the State of Florida to inform county residents about public safety threats and concerns. During situations which may affect the health, safety and welfare of Polk County residents, designated officials send out messages to telephone numbers and email addresses within the affected geographic area. When Alert Polk sends a message, it provides specific information about the current announcement. Topics of emergency notifications include:

- Tornadoes/Severe Weather;
- Mandatory Evacuations;
- Boil Water Orders;
- Gas Leaks;
- Sexual Predator Relocation Notices;
- Critical Law Enforcement Notifications;
- Hurricanes; and
- Hurricane Recovery Information.

Table VI-32 describes the potential impacts to life safety of these and the identified hazards from Section V.

TABLE VI-32:
POTENTIAL IMPACTS TO LIFE SAFETY

Hazard	Potential Impact
Extreme Temperatures	Extreme heat can cause discomfort and may increase the risk of accidents due to muscle cramps, heat exhaustion, and the worst is death. Temperatures that are too low can increase the risk of accidents due to health problems arising from the cold including frostbite and hypothermia.
Fog	Fog, particularly when dense, can be hazardous to drivers, mariners, and aviators. Fog contributes to numerous travel accidents every year. Restrictions in visibility resulting from fog can also impact takeoff and landing procedures and requirements for pilots and can be the cause of weather-related aviation delays.
Hurricanes/ Tropical Storms	Hurricanes and tropical storms may damage or destroy residential, commercial, and public buildings, as well as critical infrastructure such as transportation, water, energy, and communication.

Hazard	Potential Impact
Severe Storms and Tornadoes (Hail, Lightning, and Thunderstorms)	All thunderstorms are dangerous and can be associated with several hazards. Heavy rains can lead to flash flooding events – one of the primary causes of death associated with thunderstorms. Lightning causes fatalities and injuries each year. Lightning can also start building fires, damage electrical equipment, and electrocute humans and livestock. High winds generated by thunderstorm can cause damage to homes, overturn vehicles, uproot or damage trees, or blow down utility poles causing widespread power outages. Hail causes damage to crops and property each year and can injure people or animals left outdoors.
Subsidence and Sinkholes	Sinkholes can cause significant damage and pose a threat to safety when they occur along a highway or near homes and other buildings. If sinkholes are under or near a structure, they can destroy the structure's integrity. Formation of the sinkhole can also result in the plugging of underground drainage patterns and a lake can form in the newly formed depression area. One hazard associated with sinkholes is the possibility of health problems caused by chemicals and other materials contaminating the drinking water supply. Open sinkholes provide a direct connection between ground water surface water and any contaminants it carries.
Drought	Drought impacts come in a variety of forms. Examples of economic impacts include farmers who lose money because drought destroyed their crops or ranchers who may have to spend more money to feed and water their animals. Drought also affects the environment and society. Plants and animals depend on water, just as people do. Drought can shrink their food supplies and damage their habitats. Drought can also affect people's health and safety. Drought conditions can also provide a substantial increase in wildfire risk. Long periods of drought can equate to more wildfires and more intense wildfires, which affect the economy, the environment, and society in many ways such as by destroying neighborhoods, crops, and habitats.
Flood	Floodwaters have the potential to cause drowning. Floodwaters carrying debris increases the risk of drowning and physical injury. Floodwaters can also hide other hazards for wading pedestrians, such as manhole openings where the flood flow lifts the covers.
Wildfire	In some cases, the resulting losses are extraordinary, causing hundreds of deaths, widespread damage to property and contents and significant impacts on the environment. More often, fires may cause a single casualty or affect a single home, though the effects are still highly significant to those affected and collectively are substantial.
Civil Disturbance/Terrorism	There may be risks posed to the natural environment because of a civil disturbance event. Any damage, such as the destruction of vegetation or the contamination of waterways, would likely be incidental to the physical

Hazard	Potential Impact
	intrusion of protestors. The natural environment would be assigned a low impact and vulnerability rating
Cyber-Attacks and Terrorism	Researchers have identified 57 different negative impacts that can result from cyber-attacks. They are split into the following categories: Physical/Digital; Economic; Psychological; Reputational; and Social/societal. Terrorism incidents can result in the loss of life, the destruction of property, excessive costs to law enforcement and emergency management services, and increased uncertainty in the markets.
Dam/Levee Failure	Dam failures and other incidents that have the potential to harm downstream populations and/or infrastructure. Leaking and collapsing tailings dams can result in long term environmental damage.
Epidemics/Pandemics	Infectious diseases can spread with extreme rapidity, threatening the health and life safety of regional communities or global populations. Outbreaks of epidemics can lead to costs on the health system, disruption of economic and other socially valuable activities, and decreases in trade.
Hazardous Materials Incidents	Hazardous material spills or releases can pose a risk to life, health, and property. An incident can force the evacuation of few people, a section of a facility, or an entire neighborhood or community, resulting in significant economic impact and possible property damage and loss of life. There is also the possibility of health problems caused by chemicals and other materials contaminating the drinking water supply.
Harmful Algal Blooms	Harmful algal blooms cause a variety of mild to serious illnesses. Symptoms depend on the type of harmful algal bloom you come in contact with and how you are exposed. Harmful algal blooms can damage the environment by depleting oxygen in the water, which can kill fish and other living creatures. Harmful algal blooms that bloom near the water surface can also block sunlight from reaching organisms deeper in the water. The economic impacts of Harmful algal blooms to fisheries and recreational areas can be extensive. Businesses lose significant revenue if they are forced to close or reduce operations due to Harmful algal blooms.
Transportation Incidents	Transportation incidents can result in property damage; costs to emergency services; traffic delays; medical and rehabilitation care; lost productivity and disability compensation costs; and pain, suffering and grief.

Public Health

Of all hazards, flooding presents the most prevalent risk to public health. Floodwater is generally contaminated by various pollutants such as sewage, human and animal feces, pesticides and insecticides, fertilizers, oil, asbestos, rusting building material, and others. Prolonged flooding also provides breeding grounds for mosquitoes. Flooding exposes homes to mold and mildew and can cause flood victims to contract upper respiratory diseases and trigger cold-like symptoms. Molds can grow in as little as 24 to 48 hours in wet and damp areas of buildings and homes not cleaned after flooding. Water infiltrating through walls, floors, carpets, toilets, and bathrooms can cause mold. Floodwater can also contain dangerous animals such as alligators or snakes. Flooding can bring these animals typically found in rivers, creeks, and ponds onto normally dry land. Residences and visitors need to be careful, as these animals may be hard to see in the floodwaters. Flooding resulting from a tropical storm or hurricane can compromise the safety of water supplies and the integrity of sewage disposal, leading to threats of food borne and waterborne illness. Power line damage and power outages increase the risk of foodborne illness and electrocution. Storms can disrupt medical care; a major storm can leave victims isolated without water and medicines. Restoring medical care for individuals injured in the storm or whose care for chronic conditions lapsed when storms cut them off from services is a public health priority. A flood can also cause both emotional and physical stress. Exposure to extreme disaster events, including loss or injury of loved ones, home damage, or home destruction can pose a long-term psychological impact on victims. Vulnerable populations such as seniors, people with disabilities, or those with long-term illnesses are less able than others to cope with floods.

Economy and Top Employers

According to FEMA and PEW Charitable Trusts, flooding is the costliest and most common natural disaster in the U.S., claiming lives, inflicting financial losses on households and businesses, and straining the government agencies that provide flood response and relief. The closure of roads and public transportation services can prevent employees from getting to work and employers from providing goods and services. The closure of businesses can affect the economy due to loss of revenue, fixed costs, replacement costs, and other expenses. The top three employers for Polk County are Publix Super Markets, the Polk County School Board, and Lakeland Regional Health with 21,618 employees, 13,500 employees, and 7,865 employees, respectively. Facilities serving these industries are located throughout the County. Tropical storms, hurricanes, flooding, and other hazards can quickly disrupt these services. Loss of business in such events would impact the economy of the Polk County community.

SECTION VII – MITIGATION ACTION PLAN

44 Code of Federal Regulations	
44 CFR §201.6(c)(3):	A mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.
44 CFR §201.6(c)(3)(i):	A description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.
44 CFR §201.6(c)(3)(ii):	A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.
44 CFR §201.6(c)(3)(iii):	An action plan describing how the actions identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.
44 CFR §201.6(c)(3)(iv):	For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

Introduction

The intent of the Polk County 2025 Local Mitigation Strategy (LMS) is to provide Polk County, its municipalities, and identified participants goals to serve as guiding principles for future mitigation policy and project administration. The LMS provides an analysis of mitigation techniques to meet those goals and reduce the impact of identified hazards. The LMS is comprehensive, strategic, and functional:

- *Comprehensive:* The LMS includes a thorough review of likely hazards and identification of far-reaching policies and projects intended to reduce future impacts of hazards, and to assist the County and jurisdictions in achieving compatible economic, environmental, and social goals.

- *Strategic:* The LMS ensures that policies and projects proposed for implementation are consistent with pre-identified, long-term planning goals.

- *Functional:* The LMS links proposed mitigation actions to identified hazards and assigns specific departments or individuals responsible for implementation with target completion deadlines. When necessary, the mitigation strategy identifies funding sources that may assist with project implementation.

The first step in updating the LMS is the identification of countywide mitigation goals and objectives. These represent broad statements participants achieve through the implementation of more specific mitigation actions. Actions include hazard mitigation policies and implementation strategies (such as the regulation of land in known hazard areas through a local ordinance), and mitigation projects that seek to address specifically targeted hazard risks (such as the acquisition and relocation of a repetitive loss structure).

The second step involves identification, consideration, and analysis of available mitigation measures to achieve the identified mitigation goals. This is a long-term, continuous process sustained through development and maintenance of the LMS. The LMS Working Group will continue to consider alternative mitigation measures as it identifies future mitigation opportunities, as data and technology improve, as mitigation funding becomes available, and as LMS maintenance occurs over time.

The third step in updating the LMS is the selection and prioritization of specific mitigation actions for Polk County and its jurisdictions through the Mitigation Action Plan (MAP). The MAP represents an unambiguous and functional plan of action and is an essential outcome of the mitigation planning process.

The MAP includes a prioritized list of proposed hazard mitigation actions (policies and projects) for Polk County and its jurisdictions and partners to carry out. Each mitigation action includes those departments or individuals assigned responsibility for implementation, potential funding sources, and an estimated target date for completion. This serves as a valuable tool for monitoring success or progress over time. The cohesive collection of actions listed in the MAP can serve as an easily understood menu of mitigation policies and projects for local decision makers who want to quickly review the recommendations and proposed actions of the LMS.

In preparing the updated MAP, participants considered overall hazard risk and capability to mitigate the effects of hazards as recorded through the risk analysis process, and the ability to meet the adopted mitigation goals and unique needs of the community. The following factors serve as the basis for the prioritization of proposed mitigation actions:

- Benefits to the population;
- Health and safety considerations;
- Environmental impact;
- Consistency with other plans and programs;
- Reduced risk of future property damage;
- Support for essential or critical services;
- Probability of receiving funding for implementation;
- Feasibility of implementation;
- Community Rating System;
- Repetitive Loss Mitigation; and
- Benefit Cost Ratio (conducted prior to submitting a project for grant consideration).

Mitigation Goals and Objectives

The goal of local governments is to promote the public health, safety, and welfare of residents. The purpose of the LMS goals and objectives is to reduce or avoid long-term vulnerabilities to residents and infrastructure within Polk County. The goals and associated objectives guide the LMS Working Group and focus the efforts and resources to reduce future hazard-related losses and damages. The Implementation strategies help achieve goals and objectives. Unless specifically stated, the goals and objectives cover multiple hazards and address the needs of all jurisdictions. Unless otherwise stated, the term “County,” as used in the following goals and objectives, represents Polk County, its municipalities, and identified participants.

SECTION VII: MITIGATION ACTION PLAN

TABLE VII-1:
POLK COUNTY MITIGATION GOALS AND OBJECTIVES

GOAL 1: REDUCE THE LOSS OF LIFE, PROPERTY, AND WELFARE OF THE PUBLIC FROM THE EFFECTS OF NATURAL AND HUMAN CAUSED HAZARDS FROM ALL SOURCES, BUT ESPECIALLY HURRICANES, TORNADOES, FLOODING, OTHER SEVERE WEATHER EVENTS, CYBER ATTACKS, AND OTHER HUMAN CAUSED EVENTS.
Objective 1.1: Encourage the protection of cultural, economic, and natural resources from potential natural and human caused hazards.
Objective 1.2: Continue to develop the capacity to mitigate, prepare, respond, and recover from all hazards.
Objective 1.3: Efficiently manage all local disasters.
Objective 1.4: Reduce the cost of disaster response and recovery.
Objective 1.5: Ensure new development and redevelopment complies with all applicable Federal, State, and local regulations.
IMPLEMENTATION STRATEGIES
1a. Continue to engage additional local community stakeholders to participate in the LMS Working Group meetings.
1b. Track mitigation projects by flood basin to see past, current, and future projects and compare to flooding data.
1c. Continue to work to provide sufficient shelter space to satisfy in-County demand.
1d. Maintain and improve existing drainage systems to regulate management of storm water runoff.
1e. Protect the function of natural drainage features and surficial aquifer recharge areas.
1f. Protect and preserve wetlands, floodplains, and riverine systems to reduce the County's exposure to hazardous incidents including flooding and work to maintain economic, aesthetic, and recreational values.
1g. Integrate mitigation into existing structures during regular maintenance and replacement cycles.
GOAL 2: MAINTAIN A HIGH STATE OF PREPAREDNESS/COORDINATION TO MITIGATE AND RESPOND TO DISASTERS THROUGH PLANNING, EDUCATION, AND COORDINATION.
Objective 2.1: Optimize the effective use of all available resources by establishing public/private partnerships and encouraging intergovernmental coordination and cooperation.
Objective 2.2: Prevent and/or minimize losses from disaster events through education and regulation.
Objective 2.3: Continue dissemination of flood information to the public, non-profit, and private sector.
Objective 2.4: Support programs under the Emergency Planning and Community Right-To-Know Act.
Objective 2.5: Promote awareness and preparedness through the distribution of information on hazards and measures to mitigate them.
Objective 2.6: Increase the level of coordination of mitigation management concerns, plans, and activities at the municipal, County, State, and Federal levels of governments in relation to all hazards.
Objective 2.7: Educate the private sector about mitigation concepts and opportunities.
Objective 2.8: Coordinate effective partnerships between County and local jurisdictions for floodplain management and stormwater drainage.
Objective 2.9: Work with government, nonprofit, and private sector entities to identify and implement opportunities for the incorporation of mitigation concepts and information into outreach efforts.

Objective 2.10: Inform and educate the public, nonprofit, and private sector about potential hazards and property protection measures.
Objective 2.11: Inform and educate the public, nonprofit, and private sector about the first response to disasters to promote better disaster preparation.
Objective 2.12: Strengthen continuity planning for local government, businesses, and community partners to avoid significant disruptions of services.
IMPLEMENTATION STRATEGIES
2a. Utilize a widespread program of general information, media coverage, and participatory involvement to enhance public mitigation and engagement.
2b. Educate departments and agencies to ensure continuity of operations and a full integration of mitigation management functions.
2c. Provide information and education on new and emerging mitigation methods and products for new and retrofitting construction.
2d. Coordinate with the Certified Emergency Response Team (CERT) across the County.
2e. Host mitigation workshops to educate stakeholders and community members.
2f. Promote mitigation measures county-wide through outreach and education.
GOAL 3: SUPPORT MITIGATION INITIATIVES AND POLICIES THAT PROTECT THE COUNTY'S CULTURE, COMMERCE, ECONOMY, TOURISM, RESIDENCES, TRANSPORTATION SYSTEMS, RECREATION, AND NATURAL RESOURCES.
Objective 3.1: Support land acquisition programs that reduce or eliminate potential future losses due to natural or human caused hazards or repetitive loss and that are compatible with the protection of natural or cultural resources.
Objective 3.2: Continue to identify potentially vulnerable areas and support smart growth and development in Polk County.
Objective 3.3: Support restoration and conservation of natural resources wherever possible.
Objective 3.4: Seek mitigation opportunities that reduce economic losses and promote responsible growth.
Objective 3.5: Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure.
IMPLEMENTATION STRATEGIES
3a. Retrofit existing County and local facilities to withstand hazard impacts.
3b. Participate in activities that will further the County and local government's ability to plan for and mitigate the impacts of future vulnerability.
3c. Adopt policies that provide development standards to promote resiliency and reduce risk.
3d. Adopt building codes leading to building design criteria based on site-specific evolving and future risk.
3e. Identify mitigation projects that reduce risk to vulnerable populations that are at greater risk from hazards.
3f. Maintain or improve critical evacuation routes.
3g. Prioritize and retrofit existing critical facilities and infrastructure through capital improvement expenditures.
3h. Perform risk assessments for hazards, including cyber security.
3i. Continue to invite and work with critical facility stakeholders.

3j. Identify and track mitigation measures for existing critical facilities.
3k. Assess alternate facilities as identified in continuity of operations plans to determine if the sites are appropriately mitigated.
3l. Advocate property acquisition or retrofitting for repetitive loss properties.
3m. Assist and encourage new economic development and post-disaster redevelopment through the encouragement of public-private partnerships, economic diversification, and development.
GOAL 4: PROMOTE AND SUPPORT THE COMMUNITY RATING SYSTEM (CRS) FOR ALL COMMUNITIES IN POLK COUNTY.
Objective 4.1: Incorporate measures into the LMS to help obtain uniform credit for all CRS Communities.
Objective 4.2: Identify and track projects in the LMS to demonstrate the role of mitigation measures in reducing flood risk.
Objective 4.3: Provide outreach and educational opportunities for the public, nonprofit, and private sector regarding flooding risks and the CRS Program.
Objective 4.4: Advocate property acquisition or retrofitting for repetitive loss properties.
IMPLEMENTATION STRATEGIES
4a. Identify repetitive and severe repetitive loss areas.
4b. Identify projects that will mitigate flood risk in repetitive loss areas.

Capacity to Implement Hazard Mitigation Activities

This section examines the capacity of Polk County municipalities to implement hazard mitigation activities. Due to differences in land area, population, and funding, municipalities have varying capability levels to implement hazard mitigation activities. The Town of Hillcrest Heights and the Village of Highland Park each have fewer than 300 people and are dependent on the County for some services.

General Hazard Mitigation Alternatives

The following local resources provide guidelines, tools, and codes as well as a designated source for funding to promote and achieve mitigation activities. These mitigation alternatives are general in nature and apply to all identified hazards.

Prevention

All municipalities in Polk County have comprehensive plans and land development codes that address land use planning. In addition, all municipalities follow the Florida Building Code. Several municipalities have dedicated stormwater management systems, with funding sources to address stormwater impacts and maintenance. The City of Lakeland, City of Lake Alfred, City of Winter Haven, and Polk County (unincorporated) participate in the Community Rating System (CRS).

Natural Resource Protection

All local governments including Polk County can develop and implement natural resource protection programs to minimize the impacts of natural hazards while enhancing the local and regional environment. The Southwest Florida Water Management District has played a key role in the acquisition, preservation, and restoration of the County's natural resources.

Polk County's Environmental Lands Program acquires, preserves, protects, manages, and restores endangered and environmentally sensitive lands, water resources, and important wildlife habitats. Properties acquired by Polk County's Environmental Lands Program used for passive outdoor recreational purposes provided such uses will not disturb or degrade the environmental quality of the site.

Located in southeast Polk County and northeast Highlands County, the Avon Park Air Force Range (APAFR) plays a significant role in natural resource protection in the southeastern portion of the County. The APAFR is the largest United States Air Force training range. The APAFR consists of approximately 106,000 acres of land, of which 82,000 acres are open to the public for recreation. Public recreation activities include hunting, fishing, camping, and hiking and nature study areas. Cattle grazing leases encompass more than 96,000 acres, and timber sales take place on approximately 40,000 acres of rangeland. The Air Force engages in land management activities protecting endangered species and habitats, managing forest lands for timber production, providing cattle grazing through leases with local ranchers, and protecting cultural resources and wetlands.

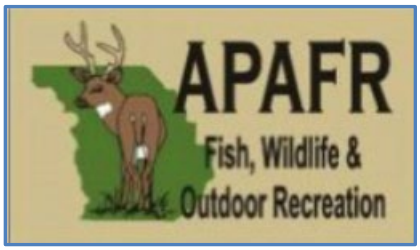


Figure VII.1: APAFR logo

The 26,000-acre Lake Wales Ridge State Forest is located east of Frostproof, consists of four separate tracts that contain outstanding examples of naturally functioning ecosystems. The Forest provides a habitat for 24 plant species and 19 animal species with threatened or endangered Federal or State status. According to the Florida Forest Service, the scrub ecosystem thrives on the Ridge and may have the highest concentration of rare and endangered plants in the continental United States. The Florida Forest Service utilizes a multiple use management system for the Lake Wales Ridge State Forest, allowing for outdoor recreation pursuits while managing the forest resources.

The Nature Conservancy's Tiger Creek Preserve consists of 4,805 acres of protected lands and is located to the north and east of Frostproof. The pristine blackwater stream that forms the spine of this sanctuary is the source of the name for Tiger Creek Preserve. The Nature Conservancy protects most of the stream and its surrounding hardwood swamps, hammocks, oak scrub, pine flatwoods, sandhill, and longleaf pine/wiregrass.

The 40-acre Barbara B. Pederson Wildlife Preserve is located on Lake Annie west of the Ridge Scenic Highway inside the southern municipal limits of Dundee. The property is -wooded urban upland with approximately 35 acres of longleaf pine in a mesic hammock. It has 1,336 feet of frontage on the Ridge Scenic Highway and 476 feet on Lake Annie. The pines are a remnant of ancient longleaf pines that grew on the uplands in Central Florida known as the "Ridge."

Natural floodplains help provide storage for surface runoff, recharge our aquifers, improve water quality, support a biologically diverse population, and many other functions. Protecting these natural resources is an essential element of a successful floodplain management plan. Activities to protect natural resources include:

- Adopting and implementing floodplain management policies that reduce impact on natural systems;
- Preserving natural areas;
- Restoring natural areas;
- Protecting wetlands;
- Preventing pollution of natural systems;
- Improving water quality; and
- Preventing erosion and sedimentation in water ways.

Emergency Services

Polk County and its jurisdictions actively participate in emergency services. Reverse 911/Alert Polk provide warning messages. The Polk County website and social media accounts provides hazard preparation information. Locations throughout the County provide sandbags to the public when needed. Intergovernmental coordination provides the extension of services and cooperation between jurisdictions. Polk County and its jurisdictions are members of the Central Florida Local Emergency Planning Committee (LEPC), which is responsible for preparing a regional hazardous materials emergency response plan. The LEPC serves as a repository for regional hazardous materials information and performs outreach functions to increase hazardous materials awareness. The following county-wide documents address emergency management: Polk County Comprehensive Emergency Management Plan, Polk County Local Mitigation Strategy, Polk County Post Disaster Redevelopment Plan, Polk County Community Wildfire Protection Plan, Central Florida Region Economic Analysis and Disaster Resiliency Study, and Statewide Regional Evacuation Study for the Central Florida Region.

Figure VII.2: LEPC District 7 logo

Public Information and Awareness

Public information activities advise residents, property owners, potential property owners, and visitors about the hazards, ways to protect people and property from the hazards, and the beneficial functions of natural floodplains. The intent of these programs is to motivate people to take precautionary steps on a pre-disaster basis, and to develop awareness. Polk County and its jurisdictions implement these activities using a variety of mediums, including electronic, audio/visual, and printed media. Activities identify target audiences and deliver specific messages about the risks that affect them. These audiences include residents, as well as managers of local, state, and federal agencies. Public information activities include:

- Flyers / door hangers;
- Real estate disclosure programs;
- Map information;
- Education programs;
- Mailings;
- Social media;
- News media;
- Billboards;
- Public outreach events; and
- Technical assistance.

Comprehensive Plans

Polk County and the municipalities have adopted comprehensive plans and land development codes. The comprehensive plans address land use and public infrastructure planning over a long-range timeframe. Comprehensive plans and land development codes regulate development by dividing municipalities into zones or districts and establishing specific development criteria for each. These development criteria include provisions for the area's known hazards. Vulnerable lands are those associated with known hazards such as areas subject to flooding, dam failure, wildland fire, and land subsidence. Proper planning includes recommendations for the use of these known vulnerable land areas, such as parks, greenways, wildlife refuges, and other open space uses protected from future development. Similarly, land development codes should include separate zones or districts with appropriate development criteria for known vulnerable land areas. Appendix D includes Comprehensive Plan Goals, objectives, and policies related to mitigation.

Land Development Codes

Polk County and the municipalities have adopted land development codes, including subdivision regulations. These regulations address how entities can subdivide land into individual lots and establish certain standards for the location and construction of buildings and associated infrastructure (i.e., roads, sidewalks, utility lines, stormwater management facilities, etc.). Land development codes include municipal-specific, hazard mitigation-related development criteria for the location and construction of buildings and other infrastructure in known hazard areas to avoid future damages and minimize existing problems. Examples of hazard mitigation-related development criteria include watershed-specific stormwater management regulations, hazard-specific building and infrastructure location limitations, and a requirement to incorporate various pre-defined, municipal-specific hazard mitigation/prevention measures into all development plans. Use of conservation subdivision design principles may be employed

to mitigate potential impacts of natural hazards. Conservation subdivision design principles involve clustering homes to avoid known hazard areas (i.e., steep slopes, floodplains, etc.) and environmentally sensitive resources (i.e., wetlands, critical wildlife habitats, etc.), thereby developing the most suitable land while permanently establishing a network of protected open spaces. Appendix D includes Land Development Code Goals, objectives, and policies related to mitigation.

Florida Building Code

The Florida Building Code regulates construction, renovation, and alteration of new and existing structures by establishing minimum building standards and providing for routine inspections by a certified building code inspector. The Florida Building Code includes standards for hazard-resistant construction including use of fire-resistant building materials, construction practices to promote wind resistance, use of waterproof or water-resistant building materials and building elevation in known flood hazard areas, and use of foundation and structure anchoring specifications in known floodwater velocity areas.

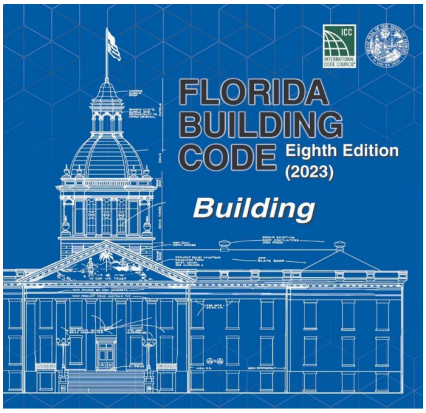


Figure VII.3: Florida Building Code

Geographic Information Systems (GIS) and Mapping

Geographic Information Systems (GIS) apply computer technology to hazard mitigation planning by linking data to maps. GIS provides a complete assessment resource for mitigation planning and other planning studies through the updating of detailed property information, socioeconomic data, critical facilities inventories, and hazard locations, among other relevant information. Not all jurisdictions in Polk County have in-house GIS capacity but may utilize the resources of other agencies to address their mapping needs.

Flood Insurance Rate Map (FIRM) information provides flood hazard information to inquirers. Residents and business owners who are aware of potential hazards can take steps to avoid future problems and reduce their exposure to flooding. Real estate agents and potential homebuyers can determine the location of a particular property in a known flood hazard area and whether lenders may require flood insurance. The Southwest Florida Water Management District is a Cooperating Technical Partner with FEMA.

Capital Improvement Plans

Capital Improvement Plans (CIPs), housed in the Capital Improvement Elements of local government comprehensive plans, outline allocation of funds for public acquisition of open space lands, capital expenditures for emergency service facilities, improvements to retrofit or relocate vulnerable critical facilities, and other capital improvements. The CIP directs the programming of capital improvements over a 5- or 10-year period, with funding identified. Municipalities should include the capital expenditure requirements of high-priority projects within a hazard mitigation plan in the CIP.

Stormwater Management

Stormwater management involves effective management of stormwater runoff from developed areas, which minimizes local and regional drainage problems and associated flooding hazards. Stormwater management practices promote infiltration work toward the minimization of drought impacts by contributing to the base flow of local streams and watercourses. Land development codes of Polk County and the municipalities include stormwater management regulations, which require developers to construct on-site stormwater management facilities that collect, convey, and store surface water runoff.

Stormwater utilities exist throughout the County to remedy stormwater pollution and flooding problems. The stormwater utilities assess property owners a fee based on the amount of impervious surface in a development. All the municipalities in Polk County have stormwater utilities in place to address these problems, except the smallest municipalities of:

- Village of Highland Park, and
- Town of Hillcrest Heights.

Polk County Vulnerability Assessment (VA)

Section 380.093 Florida Statutes specifies the requirements and guidance for conducting vulnerability assessments across the State of Florida. The Vulnerability Assessment determines the vulnerability of geographical areas and critical assets within Polk County and its municipalities to current and future flood conditions. The first Polk County VA will be completed after the adoption of this document. As recommended by the Florida Department of Environmental Protection, the Polk County VA will be incorporated as an Appendix into the next update of the LMS.

Polk County Adaptation Action Areas (AAA)

Section 163.3177(6)(g)(10), Florida Statutes, provides the requirements of Adaptation Action Areas (AAA). The Florida Department of Environmental Protection oversees the review of the Adaptation Action Areas. At the time of this update, Polk County is creating their first AAA, which will be incorporated as an Appendix into the next update of the LMS. AAAs are identified and prioritized based on the critical assets, exposure and sensitivity analysis and on each flood scenario from the Vulnerability Assessment flood modeling with the intention to improve resilience to flooding.

Emergency Response Planning

Implementation of property protection measures (i.e., relocation, elevation, or floodproofing) may not be technically or fiscally feasible in certain situations. This is most often the case for larger flood-prone

business and industry buildings where relocation is undesirable, and retrofitting techniques may be too costly or not technically feasible. One alternative to implementing physical property protection measures is to develop an emergency response plan specific to a business or industry. An emergency response plan is a guiding document that identifies and describes emergency preparation and response procedures for pre- and post-disaster implementation to minimize hazard impacts. Emergency response planning can serve to minimize impacts to structures and their contents for a specific business or industry would constitute a property protection measure.

Education and Outreach Programs

Education and outreach programs are the first step in the process of orienting property owners to property protection measures and assisting them in designing and implementing a project. These programs encourage people to seek out more information and take steps to protect themselves and their properties. These programs are particularly suitable for those hazards that lack mitigation measures such as extreme heat, lightning, and tornadoes. Outreach projects may vary with the type of identified hazard and the targeted audience. FEMA requires Polk County, the City of Lake Alfred, City of Winter Haven, and the City of Lakeland, as participants in the CRS, to provide outreach materials to Repetitive Loss Areas. This outreach identifies the various techniques for flood mitigation, as well as funding opportunities that may be of benefit to the owner.

Figure VII.4: Alert Polk County Logo

In addition, there may be a coordinated annual outreach to the community-at-large through the County or municipal Hurricane Expos. Polk County's website contains information and detailed updates during severe weather and other hazard events. Other approaches may include:

- Mass mailings or newsletters to all residents;
- Notices directed to floodplain residents;
- Displays in public buildings or shopping malls;
- Newspaper articles and special sections;
- Radio and TV news releases and interview shows;
- Presentations at meetings or relevant local organizations;
- Floodproofing open houses;
- Website notices with hyperlinks to other sources of information; and
- Hazard warning includes a comprehensive disaster warning system linking a variety of systems into a network to advise the public of emergency situations. This system includes the Alert Polk System, which can use either a recorded voice or pre-recorded messages, live broadcasts from

the Polk County Emergency Operations Center (EOC), and special public information messages on local television and radio stations.

The earlier and more accurate the warning, the greater the number of people who can take protective actions. Multiple or redundant systems are most effective; if people do not hear one warning, they may still receive the message from another part of the system. Depending on the circumstances, distribution of additional warning messages occurs through:

- NOAA weather radio;
- Mobile public address systems;
- Social media;
- Telephone trees;
- Internet weather-related sites;
- Municipal/County/State Internet sites;
- Door-to-door contact;
- Reverse 911/ Alert Polk; and
- Integrated Public Alert and Warning System.

Post Disaster Redevelopment Plan

Polk County's Post Disaster Redevelopment Plan identifies policies, operational strategies, and responsibilities for implementation of the plan. Elements of the plan include repair and replacement of housing, the resumption of local business, and economic redevelopment.

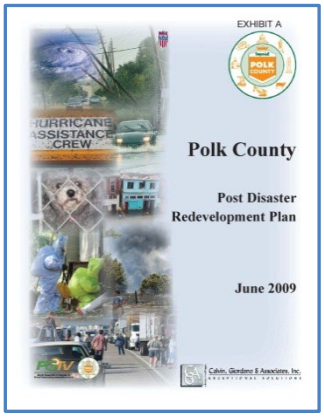


Figure VII.5: PDRP Cover

SECTION VII: MITIGATION ACTION PLAN

Identification and Analysis of Mitigation Activities and Initiatives

In formulating the LMS, the LMS Working Group considered a wide range of activities to help achieve the mitigation goals, in addition to addressing any hazard concerns. The goals and objectives identify mitigation Initiatives. The mitigation alternatives provide a link to the goals and objectives and address the risk and vulnerabilities of hazards identified by the risk assessment. These activities apply to new and existing buildings and infrastructure. Incentives for implementing hazard mitigation initiatives relate to loss reduction, public welfare, or public safety. Disincentives relate to lack of funding, staff, or resources.

Mitigation Techniques

In general, all activities considered by the LMS Working Group fall under one of the following six broad categories of mitigation techniques: prevention; property protection; natural resource protection; structural projects; emergency services; and public awareness and education. Appendix B identifies mitigation activities throughout the County.

Prevention

The goal of prevention activities is to minimize the potential development of new hazard problems and to keep existing hazard problems from becoming worse. Prevention measures include mitigation actions to alleviate those known areas of concern to ensure the issue does not continue. Prevention activities typically include government programs or regulatory actions that influence the development of land and construction of buildings. They ensure that future land development projects do not increase local and/or regional hazard risks. They are particularly effective in reducing a community's future vulnerability, especially in areas where development has not occurred, or capital improvements have not been substantial. Typically, local building, zoning, planning, and/or code enforcement officials administer prevention measures, programs, or requirements. Prevention activities include:

- Comprehensive plans;
- Land use planning/zoning efforts;
- Subdivision and land development ordinances;
- Capital Improvement Plans;
- Building codes;
- Floodplain development regulations;
- Stormwater management;
- Drainage system maintenance;
- Open space preservation;
- Operations and maintenance procedures;
- Subsurface investigation requirements;
- Detailed plans and targeted studies;
- Community Rating System programs; and
- Community Wildfire Protection Program guidance.

Figure VII.6: Drainage system maintenance

Property Protection

Property protection measures minimize an existing structure's vulnerability to a known hazard rather than mitigating or controlling the hazard itself. Property protection measures involve improvements or modifications to both public and privately-owned property to help them better withstand the impact of a hazard. Projects require the coordination (and often cost-sharing) with the respective property owners. Some measures do not affect the appearance or use of the structure, which make them appropriate for historical sites or landmarks. Frequently, implementation of a property protection measure requires acquiring a local building permit. Examples of property protection measures include:

- Acquisition;
- Relocation;
- Building elevation;
- Critical facilities protection;
- Retrofitting (e.g., wind proofing, floodproofing seismic design techniques, etc.);
- Safe rooms, shutters, shatter-resistant glass;
- Brush/scrub removal; and
- Insurance.

Figure VII.7: Building relocation; Source: The Ledger September 2014

Natural Resource Protection

Natural resource protection activities implemented as hazard mitigation measures are varied in scope, purpose, and outcome. The preservation and restoration of natural areas, environmentally sensitive resources, or the overall quality of locally-significant features play a major role in reducing damages caused by hazard events by preserving or restoring natural areas and their protective functions. Areas include floodplains, wetlands, steep slopes, and wildland parks, recreation, or conservation agencies and organizations often implement these protective measures. Examples of natural resource protection activities include:

- Floodplain protection;
- Watershed management;
- Riparian buffers;
- Forest and vegetation management (e.g., fire-resistant landscaping, fuel breaks, etc.);
- Erosion and sediment control;
- Wetland preservation and restoration;
- Habitat preservation; and
- Slope stabilization.

Structural Projects

The intent of structural mitigation projects is to lessen the impact of a hazard by modifying the progression of the hazard event through construction. Structural projects typically involve efforts to keep floodwaters and other natural hazards from impacting specific areas or structures. The Florida Building Code requires engineers to design the projects. The responsible agency's public works staff, or property owners manage or maintain the projects. From a flood hazard mitigation perspective, these projects control flows and water surface elevations and to reduce the overall impacts of flooding. In some cases, due to cost and environmental implications, structural projects may not provide full protection to individual properties. However, the design of projects like bridges and culverts may protect people and properties. Examples of structural project activities include:

- Reservoirs;
- Dams/levees/dikes/floodwalls;
- Diversions/detention/retention;
- Channel modification;
- Storm sewers;
- Firebreaks;
- Sinkhole abatement;
- Emergency water source development; and
- Safe rooms and community shelters.

Polk County and its jurisdictions have Capital Improvement Programs that include construction of improvements that reduce the risk of flooding or damage from flooding. The Mitigation Action Plan includes several of these projects.

Figure VII.8: Firebreak stopping fire

Emergency Services

Emergency services measures protect people during and immediately following a hazard event. The County and municipalities have Emergency Operations Plans (EOPs) formally documenting their emergency preparedness and response planning. The County EOP identifies standard operating procedures for various emergency management personnel and establishes the location and operating conditions of the EOC. Adopting and implementing the EOP is a first step in providing local emergency services measures in response to a hazard event. Implementation of emergency services measures occur at the local, County, State, and/or Federal level, depending on the severity of the hazard event. These actions occur immediately prior to, during, or in response to a hazard event. Examples of emergency service activities include:

- Activation of warning and notification systems;
- Evacuation planning and management;
- Emergency response training and exercises;
- Critical facilities protection;
- Sandbagging for flood protection;
- Installing temporary shutters for wind protection; and
- Post disaster recovery and mitigation.

Polk County Emergency Management coordinates the overall response to hazards, including major flood events that can result from hurricanes, tropical storms, and other major weather occurrences. The Polk County Emergency Operations Center coordinates warning and response activities with other municipalities within the County. Emergency Services activities conducted by Polk County include:

- Developing a flood warning system;
- Developing a flood response plan;
- Developing a monitoring system or plan for collecting data describing rainfall, stage, and discharge;
- Developing a plan for coordinating with local municipalities and agencies during emergencies;
- Updating and maintaining evacuation plans;
- Protecting critical facilities; and
- Performing routine emergency exercises.

Polk County utilizes the Alert Polk Notification System for emergency notifications. This system allows the County to send critical communications to all or targeted areas within the County in case of a situation

that requires immediate action. This system can dial the entire County within minutes. It delivers a recorded message from Polk County describing the situation and any instructions for immediate or future action.

Public Education and Awareness

Public education and awareness activities advise the community and visitors about hazards, hazardous areas, and mitigation techniques they can use to protect themselves and their property. Examples of public education and awareness measures include:

- Outreach projects;
- Speaker series/demonstration events;
- Hazard map information;
- Real estate disclosure;
- Library materials;
- Educational programs for school children; and
- Hazard expositions.

Flood Hazard Mitigation Alternatives

Floodplain development regulations establish regulatory criteria for construction and/or alteration of buildings and other development activities in the 100-year floodplain, to minimize potential flood-related damages and ensure that new development does not exacerbate local flood hazards. Polk County and all the municipalities, except the Village of Highland Park and the Town of Hillcrest Heights, participate in the National Flood Insurance Program (NFIP) and must adopt and enforce local floodplain development regulations that meet or exceed minimum NFIP standards and requirements. Floodplain construction standards are also part of the Florida Building Code. NFIP floodplain development regulations prohibit obstruction of the regulatory floodway and require builders of new buildings in the 100-year floodplain to protect buildings from damage from the base flood (i.e., 100-year or 1 percent annual chance flood). These regulations prevent loss of life and property as well as economic and social hardships that result from flooding.

Relocation or Moving of Structures

Relocation, or moving a building to higher ground, is a way to minimize potential flooding impacts. Removing buildings from the floodplain is not only the most effective flood protection measure available, but it also converts a problem area into a community asset with environmental benefits. Relocation is an alternative for large lots that include buildable areas outside the floodplain or where the owner has a flood-free lot available. Relocation may be expensive. While people can move almost any building, the cost increases for heavier structures such as those with exterior brick and stone walls, and for large or irregular-shaped buildings. There are factors that affect the feasibility of relocation, such as road width and grade, density of overhead utilities, and other related factors.

Acquisition of Buildings

Acquisition of buildings in a flood-prone area ensures the buildings will no longer be subject to flood damage. Government agencies may undertake acquisition, so the property owner does not bear the cost, and the government agency may convert the use of the land to a public use, such as a park. Acquisition followed by demolition is most appropriate for buildings that are difficult to move, such as larger, slab-on-grade foundation or masonry structures, and dilapidated structures that are not feasible to protect. Responsible agencies must complete a cost-benefit analysis and investigate other less costly alternatives.

Elevation of Buildings

Elevation of a flood-prone building above the base flood elevation is often the best on-site protection strategy. In Flood Zone 'A,' the property owner can raise the building to allow water to run underneath it. Alternatively, it may be possible to use fill to elevate the site on which the building sits. This approach is less expensive than relocation or acquisition and tends to be less disruptive to a neighborhood. Local floodplain regulations and the Florida Building Code require elevations for new and substantially improved buildings in a floodplain.

Dam, Levee, and Floodwall Installation

Dams, levees, and floodwalls are similar in that they control flooding by restricting floodwaters from reaching/inundating protected areas. These are probably the best-known forms of structural flood control projects implemented in the United States. Just like any other engineering feature, exceeding the design capacity of a dam, levee, and/or floodwall may compromise its functional utility. Dams, levees, and floodwalls can give a false sense of security to the property owners they protect.

Bridge/Culvert Modifications

If undersized, bridge/culvert modifications at local stream and watercourse crossings can result in floodwater backing up upstream of the structure, causing significant flooding problems. From a flood hazard mitigation perspective, bridge/culvert modifications typically involve the replacement, enlargement, and/or removal of existing roadway bridges and culverts known to cause flooding problems. Replacing, enlarging, or removing these known problematic structures is an effective approach to mitigating flooding problems.

Figure VII.9: Culvert modifications

Open Space Preservation

Open space preservation is keeping known hazard areas free of development and in a natural condition and is the best approach to minimizing or preventing potential flood damage. Preserving open space in an undeveloped floodplain not only prevents potential flood damage, but also allows for the full realization of the floodplain's natural and beneficial functions. These functions include floodwater storage/flood flow attenuation, surface water infiltration/groundwater recharge, removal/ filtering of pollutants and sediments from floodwater, habitat for flora and fauna, and recreational opportunities. Comprehensive plans and land development codes regulate open space preservation.

Wetland Protection

Floodplains and low-lying areas of a watershed require wetland protection. Many wetlands receive and store floodwater, thus slowing and reducing stream flows. Wetlands serve as natural filters that help to improve water quality and provide habitat for many species of fish, wildlife, and plants. Local wetland protection codes and programs address gaps in Federal and State regulations.

River and Stream Corridor and Lake Restoration and Protection

River and stream corridor restoration and protection measures help restore the natural and beneficial functions of riparian zones to manage floods and filter runoff. Lakeshore protection measures are in place in many incorporated areas.

Best Management Practices

Best Management Practices (BMPs) are measures that reduce the volume of surface water runoff and associated nonpoint source pollutants from entering waterways. Surface water runoff transports nonpoint source pollutants, which include lawn fertilizers, pesticides, farm chemicals, sediments, and oils from both pervious and impervious urban and rural areas. Nonpoint source pollutants not only affect the quality of local water resources, but also their ability to carry and store floodwater. Eroded soil from farmlands and construction sites deposit at locations where streams and rivers slow down and lose energy, such as when they enter a lake or confluence with another stream.

Uncontrolled surface water runoff contributes to local and regional flooding problems. From a hazard mitigation perspective, the identification and implementation of BMPs focuses on structural and non-structural erosion and sedimentation control and stormwater management facilities. Implementation of many BMP measures (structural and/or nonstructural) can address site-specific needs. New development can incorporate erosion and sedimentation control and stormwater management BMPs into retention and detention basins, drainageways, and other parts of new development.

Several local ordinances require specific BMPs and structural measures for industrial sites, mined lands, construction sites, farms, forested areas, and high-use public lands. Other engineering and construction standards include BMP guidelines to ensure that structures withstand various hazards.

Wind Mitigation Alternatives

Proper engineering and design of a structure increases its ability to withstand the lateral and uplift forces of wind. Recommended building techniques provide a continuous load path from the roof of the structure to the foundation. The LMS Working Group reviewed the following wind mitigation alternatives:

- Windproofing is the modification of the design and construction of a building to resist damage from wind events and can help to protect the building's occupants from broken glass and debris. Windproofing involves consideration of aerodynamics, materials, and the use of external features such as storm shutters. The Florida Building Code requires windproofing in the design and construction of new structures and recommends reinforcing existing structures. Improved methods for anchoring structures to foundations better protects mobile homes, which tend to be vulnerable to the effects of extreme wind events. The Florida Building Code requires installers of mobile homes to tie the homes down to their pads. The Florida Building Code requires public facilities, critical infrastructure, and public infrastructure (such as signage and traffic signals) to be windproofed in vulnerable areas. However, windproofing is not a viable mitigation technique to protect against tornadoes or extreme hurricanes.

Figure VII.10: Tie-downs for windproofing

- Safe room and community shelter requirements for new housing construction and existing mobile home parks, apartment complexes, and other planned residential communities can offer protection and reduce the risk to life. ARC 4496 and FEMA 320 Taking Shelter from the Storm include minimum design criteria for the construction of these elements.

- Underground power lines can offer uninterrupted power during and after severe wind events and storms. Burying power lines can significantly enhance a community's ability to recover in the aftermath of a disaster; however, power lines are more expensive to install and repair if there are problems and may be more vulnerable to flooding in some locations.

Figure VII.11: Underground utilities

- Encouraging back-up power sources in areas where power line burial is not feasible may enable continuity of basic operations for businesses and facilities when there is a loss of power.

Fire Mitigation Alternatives

The following are mitigation alternatives to reduce vulnerability from wildfires reviewed by the LMS Working Group.

- An urban forestry program, where several cities nationwide have participated in formal programs to protect and maintain urban forests, is helpful for the mitigation of wildfires.

- The State uses firebreaks to limit the mobility of potential wildfires. Construction of a firebreak involves removing vegetation in a linear strip to significantly diminish the available fuel load. There may be locations in the County where construction of a firebreak may prove to be a feasible and prudent wildfire hazard mitigation measure, particularly in areas where there is rural development adjacent to forested areas or limited access. This type of development scenario is particularly susceptible to wildfire hazards.

- Emergency water source development increases public water supply systems and the associated curbside hydrants for local firefighting needs. A solution for access to reliable water sources and the ability to efficiently pump water from those sources is the installation of dry hydrants at bridge and culvert crossings of local streams and watercourses.

Figure VII.12: Prescribed burning

- State and Federal land management agencies' use of planned wildland fuels burning programs (prescription burning) is the best proven method to reduce hazardous wildland fuel accumulations. This process is routinely accomplished with the establishment of firebreaks and is conducted on State, Federal, and private lands where the accumulation of wildland fuels can pose a threat to neighboring communities. These carefully planned operations must meet specific weather conditions.

- Vegetation reduction is an efficient action to reduce the risk of wildfires. Vegetation-fuel management through tree and vegetation thinning or reducing the amount of herbaceous vegetation by chopping or mowing decreases the chances of fire propagation across the landscape by breaking up the horizontal and vertical continuity of fuel. This reduces fireline intensity, significantly lowers the risk of structure loss, and creates a safer situation in which to deploy suppression resources.

Sinkhole Mitigation Alternatives

Sinkhole abatement is the treatment of new and existing sinkholes to minimize potential damage to buildings, infrastructure, and other surface features. Sinkhole treatment is usually abatement after the sinkhole forms rather than prior mitigation. Abatement involves filling the surface feature with a mixture of materials including concrete, soil, grout, synthetic filter fabrics, and various sizes of crushed stone. Since no two sinkholes are alike, abatement can vary in the type and volume of materials utilized. Precautions,

which are designed to reduce safety concerns and mitigate potential environmental impacts, include barricading the site to prevent personal injury, excavating the overlying soil to determine the appropriate abatement method and to expose a competent limestone ledge, and directing surface drainage away from the site to prevent reoccurrence.

The Favorability of Florida's Geology to Sinkhole Formation report from June 2017 outlined proposed mitigation measures within sinkhole-prone areas through proper planning, geotechnical site investigation, appropriate design, and proper maintenance of infrastructure. These include recommending building code changes to address the following sources of focused recharge (*Veni et al., 2015):*

- Roof runoff;
- Street drainage;
- Lawn irrigation systems;
- Effluent from septic tanks;
- Leaking plumbing below or beside buildings;
- Obsolete or unrepaired shallow irrigation wells;
- Unlined stormwater ponds;
- Leaking swimming pools; and
- Wastewater spray fields.

The following methods can mitigate karst activity in sensitive areas (*Gutierrez et al (2008))*

- Utilize geomembranes and geotextiles;
- Create efficient drainage systems and divert surface runoff;
- Remediate existing sinkholes;
- Grout cavities;
- Improve ground compaction by injection grouting to increase strength and weight bearing capacity of soils;
- Construct cutoff screens and grout curtains to arrest groundwater circulation;
- Construct engineered slabs;
- Reinforce foundations using beams;
- Incorporate tensile geogrids in subbase and embankments of roads and railways;
- Utilize oversized piers and pads and sacrificial piers for bridges;
- Instrument critical infrastructure with monitoring devices;
- Implement educational programs for policy and decision makers; and
- Install signage in existing hazard areas.

Mitigation is common practice for critical infrastructure such as power plants, landfills, water treatment facilities, highways, bridges, large reservoirs, pipelines, and transmission lines. A pre-construction geologic or geotechnical site investigation can be an effective mitigation tool to identify potential karst hazards. In addition to the mitigation measures listed above, those tools include:

- Visual site inspection by a licensed professional geologist (to identify potential surface anomalies);
- Geophysical surveys (to investigate for anomalous zones below ground and test surface anomalies);
- Exploratory boreholes (to test geologic strength or investigate anomalies identified by geophysics); and
- Dynamic ground improvement (to compact and strengthen subsurface geology and to collapse unforeseen cavities), including:

- Rolling surcharge;
- Dynamic compaction; and
- Vibratory compaction.

Selection of Mitigation Activities and Initiatives for Polk County

Mitigation Activities – One-Time Projects and Ongoing Projects

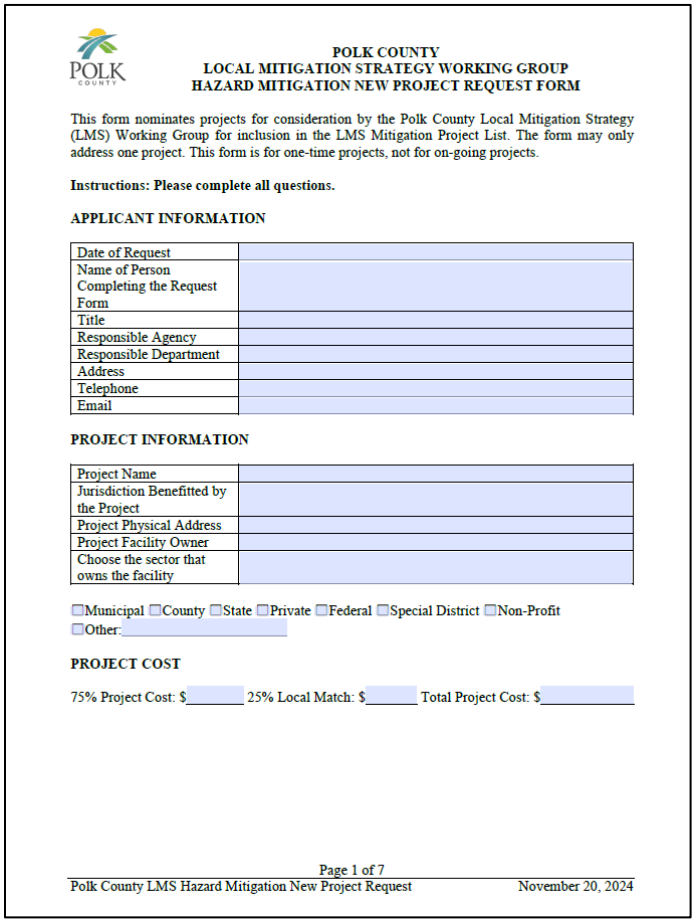
Mitigation activities include one-time projects and ongoing projects. One-time projects have a start and end date for completion. Ongoing projects repeat on a regular basis (daily, weekly, etc.). The selection of mitigation activities and initiatives described below relates to one-time projects. The *Mitigation Plan – Ongoing Projects* table identifies the ongoing mitigation activities of the LMS partners.

Project Status Verification

In keeping with FEMA requirements for MAP updates, the LMS Working Group evaluated the mitigation actions identified in the LMS to determine their 2025 implementation status. Each agency responsible for implementation of a mitigation action provided an update on implementation status (completed, deleted, or deferred), and milestones achieved or impediments to implementation of the actions. Appendix B includes the project status verification.

Mitigation Activity Project Submittal

As part of the 2025 LMS update, all jurisdictions and partners submitted project applications for new one-time projects listed in the MAP. Appendix B includes the project submittal form.



POLK COUNTY
LOCAL MITIGATION STRATEGY WORKING GROUP
HAZARD MITIGATION NEW PROJECT REQUEST FORM

This form nominates projects for consideration by the Polk County Local Mitigation Strategy (LMS) Working Group for inclusion in the LMS Mitigation Project List. The form may only address one project. This form is for one-time projects, not for on-going projects.

Instructions: Please complete all questions.

APPLICANT INFORMATION

Date of Request	
Name of Person Completing the Request Form	
Title	
Responsible Agency	
Responsible Department	
Address	
Telephone	
Email	

PROJECT INFORMATION

Project Name	
Jurisdiction Benefitted by the Project	
Project Physical Address	
Project Facility Owner	
Choose the sector that owns the facility	

☐Municipal ☐County ☐State ☐Private ☐Federal ☐Special District ☐Non-Profit
☐Other:

PROJECT COST

75% Project Cost: $_____ 25% Local Match: $_____ Total Project Cost: $_____

Page 1 of 7
Polk County LMS Hazard Mitigation New Project Request November 20, 2024

Figure VII.13: Project submittal form

The following mitigation initiative types serve as the basis for proposed projects:

- *Floodproofing*: Any combination of structural and non-structural additions, changes, or adjustments to structures that reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

- *Wind retrofitting*: Structural modifications intended to reduce the vulnerability of and damage to buildings caused by wind and wind-driven rain intrusion before, during, or after a high wind event. Areas of vulnerability include roof and wall coverings, openings (windows and doors), and load path connections.

- *Stormwater management:* Program for controlling and directing storm water runoff so it does not overwhelm or negatively impact drainage and infrastructure control systems.

- *Floodplain management*: Operation of a community program of corrective and preventative measures for reducing flood damage. These measures take a variety of forms and generally include requirements for zoning, subdivision or building, and special-purpose floodplain ordinances.

- *Infrastructure hardening*: Strengthening and/or retrofitting critical structures, such as roads, bridges, drainage conveyances, etc., to reduce vulnerability to wind, rain, and flooding events.

- *Acquisition and demolition:* Purchase and/or destruction of damaged property that is not feasible to rebuild or retrofit to prevent similar damages to future structures built in the same location.

Mitigation Initiatives

The comprehensive "Polk County Multi-Jurisdictional LMS Mitigation Initiatives" is based on ideas from the LMS Working Group and from the vulnerability analysis completed for structures within Polk County (Risk Analysis Section). The list incorporates initiatives of the County, municipalities, and Polk County Public Schools. The sponsor column identifies the sponsor of each initiative.

The entity ultimately responsible for the implementation and/or management of each initiative has sponsored the initiative through the completion and submission of a Hazard Mitigation New Project/Program Worksheet to assist with efficiency and precision of the ranking process. Appendix C includes a copy of the Hazard Mitigation New Project/Program Worksheet. The project sponsor completed the cost estimates. A detailed explanation of the process used to determine the initiatives is in the Mitigation Cost-Benefit Review and Prioritization of the LMS.

The LMS Working Group did not rank projects from the 2024 project list that were either completed or not carried forward through the submittal of a Hazard Mitigation New Project/Program Worksheet. The Deferred, Completed, or Deleted Projects Table in Appendix B includes a list of these projects to illustrate the changes from the last project list update. Some project sponsors deleted projects because the project became unnecessary, a private party assumed responsibility, or the project was not cost-feasible.

Evaluation and Prioritization of Mitigation Initiatives

To determine the most appropriate mitigation techniques for the communities in Polk County, the LMS Working Group thoroughly reviewed and considered the findings of the *Hazard Analysis and Risk Assessment*. Other considerations included the effect of each mitigation action on overall risk to life and property, ease of implementation, degree of political and community support, general cost-effectiveness, and funding availability.

In evaluating proposed mitigation alternatives, the LMS Working Group considered the importance of the identified goals and objectives. Cost estimates are based on best available data, including similar projects completed in other communities, professional judgments using costing tools such as Means Residential Cost Data and Repair and Remodeling Cost Data, or by determining fair market values for goods or services. The cost estimates are a rough determination of the cost effectiveness of the mitigation projects and are not the basis to obtain services or grant funding. The LMS Working Group also considers the benefits of each project. Benefits included the number of people positively impacted including the benefit to special needs populations, savings in structural or operating costs, benefits to the environment, and benefits to the long-term effectiveness of the project. To assess the importance of each project, the LMS Working Group considered several factors including:

- Importance for community safety;

- Whether the project addressed critical facilities vulnerability;
- The number of buildings the project would help to protect;
- The number of damages the project would help to prevent; and
- Cost effectiveness.

The LMS Working Group evaluates each proposed mitigation action to assess level of impact using the Social, Technical, Administrative, Political, Legal, Economic, and Environmental (STAPLEE) cost-benefit review format. The STAPLEE format enables the LMS Working Group to review each project against the criteria for ranking (see below). The LMS Working Group ranks the measure receiving the highest score as a high priority. In the event of ties, the LMS Working Group may list mitigation measures higher if the LMS Working Group perceives them to have the greatest benefit/cost or impact on the greatest number of people. The LMS Working Group reviews the mitigation initiatives and prioritization score draft results during regular meetings. The score may change as priorities in Polk County change and with the addition of new mitigation actions. Change is normal and healthy in the hazard mitigation process.

Mitigation actions include those that are general in nature and those specific to high-vulnerability hazards. Depending on the availability of funding for various types of projects, the LMS Working Group may consider applications for a project with a lower score. All projects submitted for funding will have an analysis completed that shows each project to be cost beneficial.

Cost-Benefit Review – STAPLEE

Since it is often impossible for entities to implement all mitigation actions identified in the LMS due to monetary and other limitations, the LMS Working Group is responsible for prioritizing proposed mitigation actions. Mitigation plans must prioritize projects with emphasis on maximization of benefits over costs. A cost-benefit review considers the benefits that would result from a mitigation action versus the cost.

The LMS uses the STAPLEE cost-benefit method to review and prioritize mitigation projects. This method uses a point system to determine a priority ranking for each mitigation action, which allows the LMS Working Group to evaluate proposed actions quickly and in a systematic fashion. The LMS Working Group amended the STAPLEE criteria and weighting to address issues specific to the County. These amended criteria require the LMS Working Group to assess each mitigation activity based on the STAPLEE constraints and opportunities for implementing the mitigation action in the community. Figure VII.14 provides an illustration of the STAPLEE Action Evaluation table, and Table VI-2 includes the criteria assessed with STAPLEE.

STAPLEE ACTION EVALUATION TABLE

STAPLEE Criteria Considerations																															
1=Favorable 0=Neutral -1=Less Favorable Multiply by number in parenthesis																															
			S (Social)			T (Technical)					A (Administrative)			P (Political)			L (Legal)					E (Economic)				E (Environmental)				
Category	Entity	Project Description	Community Acceptance	Effect of Segment of Population	Effect of Community (2)	Technically Feasible (3)	Long-term Solution	Expertise Required & Available (2)	Reasonable Timeframe	Secondary Impacts	Capability to Implement	Funding Allocated	Community Provide Maintenance (3)	Politically Acceptable	Local Champion	Public Support	Authority to Implement (2)	Comply with Environmental Regulations (3)	Legal Side Effects/Taking	HOA Bylaws/Deed Restrictions	Potential Legal Challenge	Reasonable Cost (2)	Burden on Economy	Contributes to Economic Goals (2)	Additional Jobs (2)	Impact Floodplain/Wetland (3)	Natural Environment	Environmental Regulatory Approvals (2)	Utility and Transportation Systems		

Figure VII.14: STAPLEE action evaluation table

TABLE VII-2:
CRITERIA FOR STAPLEE ACTION EVALUATION TABLE

Category	Criteria*	Description
Social	Community Acceptance:	*Is the proposed action socially acceptable to the community?*
	Effect on Segment of Population:	*Are there equity issues involved that would mean that the project treats one segment of the community unfairly?*
	Effect on Community (2):	*Will the action cause social disruption?*
Technical	Technically Feasible (3)	*Will the proposed action work?*
	Long-term Solution:	*Does it solve a problem or only a symptom?*
	Create more Problems:	*Will it create more problems than it solves?*
	Reasonable Timeframe:	*Can the responsible agency complete the project in a timely fashion?*
Administrative	Capability to Implement:	*Does the responsible agency have enough funding, staff, and technical support available to implement the action?*
	Funding secured and allocated:	*Does the responsible agency have funding secured and allocated for the project?*
	Community Provide Maintenance (3):	*Will the responsible agency be able to provide long-term maintenance for the project?*
Political	Politically Acceptable:	*Is the action politically acceptable?*
	Local Champion:	*Is there a local champion for the project to lead the effort?*
	Public Support:	*Is there public support both to implement and to maintain the project?*
Legal	Authority to Implement (2):	*Is the responsible agency authorized to implement the proposed action?*
	Side Effects/Taking: Are there legal side effects?	*Could somebody construe the activity be as a taking?*
	Comply with Environmental Regulations (3):	*Does the activity comply with environmental regulations? Will the activity require environmental permits?*

Category	Criteria*	Description
	HOA Bylaws/Deed Restrictions:	*Does the project meet HOA Bylaws/Deed Restrictions?*
	Potential Legal Challenge:	*Will someone challenge the activity?*
Economic	Reasonable Cost (2):	*Do the benefits exceed the costs?*
	Burden Economy:	*What burden will this action place on the tax base or local economy?*
	Contributes to Economic Goals (2):	*Does the action contribute to other community goals, such as capital improvements or economic development?*
	Additional Jobs (2):	*Does the action promote the addition of jobs in the Community or the County?*
Environmental	Impact Floodplain/Wetland (3):	*Will the action influence floodplains or wetlands?*
	Natural Environment:	*Will the action influence the natural environment?*
	Environmental Regulatory Approvals (2):	*Will the action need environmental regulatory approvals?*
	Utility and Transportation Systems:	*Will the action influence utility and transportation systems?*

*Numbers in parenthesis represent the weighted points.

The LMS Working Group scores every subcategory with a favorable (1), neutral (0), or less favorable (-1) ranking. Subcategories with numbers next to them indicate a weighted category, so the LMS Working Group multiplies its ranking by the number in parentheses. For example, a favorable (1) ranking for "Technically Feasible" would result in a score of 3, while an unfavorable (-1) ranking for "Authority to Implement" would result in a score of (-2). The sum of all the subcategories provided the priority ranking for that project, with higher rankings receiving higher priority. Appendix B includes the STAPLEE Action Evaluation Table.

Polk County Multi-Jurisdictional Mitigation Action Plan

The Multi-Jurisdictional Mitigation Action Plan is a listing of the mitigation actions proposed by Polk County and its jurisdictions and partners. It does not serve as a "grant wish list." As described above, it includes ongoing and one-time projects. The LMS Working Group designed The Multi-Jurisdictional Mitigation Action Plan to address the hazards impacting the County with consideration for the adopted mitigation goals and objectives. The LMS Working Group will maintain it on a regular basis according to the LMS maintenance procedures established in Section III: Planning Process, Evaluation, and Maintenance. The Multi-Jurisdictional Mitigation Action Plan represents an unambiguous and functional plan for action. The LMS Working Group has identified each proposed mitigation action as an effective measure (policy or project) to reduce hazard vulnerability.

The Multi-Jurisdictional Mitigation Action Plan includes two components that work together to outline the plan for mitigating the identified hazards, vulnerabilities, and risks. The two components include:

- Current Activities (Ongoing Projects): The ongoing (routine) projects and initiatives to mitigate potential hazards. These activities range from enforcing adopted Code requirements to street sweeping to keep stormwater systems free of garbage and debris.

- Future Initiatives (One-time Projects): An activity that involves the creation of a unique product or service that mitigates potential hazards.

Mitigation Action Plan Tables

The Polk County Multi-jurisdictional Mitigation Action Plan includes the *Deferred, Completed, or Deleted Mitigation Action Plan* table, the *Ongoing Projects* table, and the *Mitigation Initiatives* Table as described below.

- The *Mitigation Action Plan – List of Deferred, Completed, or Deleted Mitigation Projects* (Appendix B) table identifies the status of each project from the last adopted Mitigation Action Plan. The current Mitigation Action Plan Table includes all projects identified as "deferred" and "new."
- The *Mitigation Action Plan – Ongoing Projects* (Appendix B) table identifies initiatives each jurisdiction undertakes on an ongoing basis to mitigate against the identified hazards.
- The *Mitigation Action Plan – Mitigation Initiatives* (Appendix B) table is a listing of all ranked mitigation action items. The Mitigation Initiatives table includes documentation of the implementation of each mitigation measure, including the following information for each action item:
  - Funding sources;
  - Timeframe; and
  - Responsible agencies.

Funding Sources

The MAP – Mitigation Initiatives table identifies potential funding sources for the mitigation actions. Many of the mitigation actions are eligible for funding from more than one source. In these cases, the matrix includes a list of potential funding sources. Most Federal funding sources, such as FEMA, will require a percentage (usually 25 percent of the total project costs) from a local source. Appendix F includes more detailed information about potential funding sources.

Time Frame

One-time action items include short-term and long-term activities. Each action item includes an estimate of the timeline for implementation. Short-term action items are activities that agencies can implement with existing resources and authorities within one to two years. Long-term action items may require new or additional resources or authorities and may take between one and five years to implement. The MAP – Mitigation Initiatives includes the approximate timeframes for project implementation.

Responsible Agency

The responsible or lead agency is the agency with regulatory responsibility to address natural hazards, or that is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring, and evaluation. Responsible agencies may include local, County, or regional agencies, or partners are capable of or responsible for implementing activities and programs.

SECTION VIII – LMS ADOPTION AND SUPPORT

44 Code of Federal Regulations

44 CFR §201.6(c)(5): Documentation that the LMS has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council). For Multi-Jurisdictional plans, each jurisdiction requesting approval of the LMS must document that it has been formally adopted.

Plan Adoption

The LMS Working Group will submit the Polk County 2025 Multi-Jurisdictional LMS to the Florida Division of Emergency Management (FDEM) for review and approval. FDEM has the authority to review the LMS on behalf of the Federal Emergency Agency (FEMA). FDEM utilizes the Local Hazard Mitigation LMS Review Tool, which includes Polk County's 2025 LMS Crosswalk. Following notification of "Approval Pending Adoption" of the 2025 Update by FDEM and FEMA, Polk County, its jurisdictions, and all participating agencies as outlined in Section I may formally adopt the 2025 Polk County Multi-Jurisdictional Local Mitigation Strategy.

Adoption by Jurisdictions

The Polk County Clerk of the Circuit Court and each jurisdiction's Clerk (or other official keeper of records) shall maintain original signed copies of resolutions adopting the Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy (LMS). All jurisdictions must follow the participation requirements described in Section III to remain in good standing with the Polk County 2025 Multi-Jurisdictional LMS. An executed adoption resolution along with compliance with LMS participation rules qualifies partners to submit qualified mitigation projects for Federal funding consideration. The LMS Working Group anticipates adoption by the following jurisdictions:

- Polk County
- City of Auburndale
- City of Bartow
- City of Davenport
- Town of Dundee
- City of Eagle Lake
- City of Fort Meade
- City of Frostproof
- City of Haines City
- Town of Hillcrest Heights
- Village of Highland Park
- City of Lake Alfred
- Town of Lake Hamilton
- City of Lake Wales
- City of Lakeland
- City of Mulberry
- City of Polk City
- City of Winter Haven
- Golden Lakes Community Development
- Polk County School Board
- Lake Region Lakes Management District

A sample LMS adoption resolution is included at the end of this Section. Appendix G includes copies of adoption resolutions for each jurisdiction.

Adoption by Participating Agencies

SECTION VIII: LMS ADOPTION AND SUPPORT

Participating Agencies, as listed in Appendix C, must submit a letter of commitment supporting the Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy (LMS). All participating agencies must follow the participation requirements described in Section III to remain in good standing with the Polk County 2025 Multi-Jurisdictional LMS. An executed supporting letter along with compliance with LMS participation rules qualifies partners to submit qualified mitigation projects for Federal funding consideration.

A sample LMS Letter of Commitment is included at the end of this Section. Appendix G includes copies of the Letters of Commitment.

Benefits of Adoption

The LMS assesses the vulnerability of the County and its jurisdictions to hazards and elaborates on risk associated with each hazard assessed. It identifies and evaluates local mitigation efforts and their usefulness, as well as provides guidance for implementation at the jurisdictional level. Through adoption of this LMS the County, its jurisdictions, and identified participants may be eligible for funding to implement mitigation actions. Adoption of this LMS will assist the County and other jurisdictions to:

- Comply with Administrative Rules 27P-6, Florida Administrative Code (F.A.C.), requirements for local Comprehensive Emergency Management Plans to identify and describe hazard mitigation;
- Obtain universal points from the National Flood Insurance Program (NFIP) Community Rating System (CRS) for developing a Floodplain Management Program, which may help further reduce flood insurance premium rates for property owners;
- Access Federal Mitigation Assistance grant programs;
- Comply with the Disaster Mitigation Act of 2000;
- Set forth the guiding principles with which the County and jurisdictions will address the issue of all hazard mitigation;
- Identify hazards to which the County is vulnerable, identify the range of hazard impacts, and delineate individual vulnerabilities of various jurisdictions and population centers within the County;
- Develop a detailed method by which Polk County (jurisdictions, County government, and partners) can evaluate and prioritize proposed mitigation projects in accordance with Federal requirements;
- Ensure jurisdictional plans are consistent and supportive;
- Save lives and property;
- Save money;
- Speed recovery following disasters;
- Reduce future vulnerability through development and post-disaster recovery and reconstruction;
- Expedite receipt of pre-disaster and post-disaster grant funding; and
- Demonstrate a firm commitment to improving community health and safety.

SECTION VIII: LMS ADOPTION AND SUPPORT

Sample LMS Adoption Resolution

The following is a sample LMS adoption resolution. Appendix G includes copies of adoption resolutions for each jurisdiction.

SAMPLE RESOLUTION _____

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF DUNDEE, FLORIDA ADOPTING THE 2025 POLK COUNTY MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY UPDATE.

WHEREAS, areas of Polk County, including the Town of Dundee, are vulnerable to the human and economic costs of natural, technological, and societal disasters; and

WHEREAS, the Town Commission of the Town of Dundee realizes the importance of reducing or eliminating those vulnerabilities for the overall public health, safety, and welfare of the community; and

WHEREAS, a Local Mitigation Strategy presents a unified strategy to build a disaster-resilient community; and

WHEREAS, State, local and tribal governments are required by Federal law (Title 42, Part 68 of the United States Code and Title 44, Part 201 of the Code of Federal Regulations) to adopt a hazard-mitigation plan as a condition for receiving certain types of emergency or nonemergency disaster assistance; and

WHEREAS, the Disaster Mitigation Act of 2000 requires each local jurisdiction to have either its own local mitigation strategy or to actively participate in the development and maintenance of multi-jurisdictional mitigation strategy; and

WHEREAS, the Town of Dundee actively participated in the development and maintenance of the Polk County Local Mitigation Strategy as adopted in 2002, 2005, 2010, 2015, 2020, and 2025 and

WHEREAS, the Town of Dundee has actively participated in the 2025 update to the Local Mitigation Strategy through the Polk County Local Mitigation Strategy Working Group, which has established a comprehensive, coordinated planning process to eliminate or decrease these vulnerabilities; and

WHEREAS, Town of Dundee representatives and staff have identified, justified, and prioritized proposed projects and programs needed to mitigate the vulnerabilities of the Town of Dundee to the impacts of future disasters; and

SECTION VIII: LMS ADOPTION AND SUPPORT

WHEREAS, the Polk County 2025 Multi-Jurisdictional LMS incorporated these proposed projects and programs into the update that has been prepared and issued for consideration and adoption by the jurisdictions of Polk County; and

WHEREAS, the State of Florida Division of Emergency Management has issued an "Approval Pending Adoption" of the Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy.

NOW, THEREFORE, BE IT RESOLVED, by the Town Commission of the Town of Dundee:

1. The Town Commission of the Town of Dundee hereby accepts and adopts its designated portion of the "Polk County 2025 Multi-Jurisdictional LMS".

2. Agency personnel of the Town of Dundee shall pursue available funding opportunities for implementation of the proposals and projects designated therein.

3. Agencies and organizations within the Town of Dundee will, upon receipt of such funding or other necessary resources, seek to implement proposals contained in the LMS.

4. The Town of Dundee will continue to participate in the updating and expanding of the LMS in future years.

5. The Town of Dundee will encourage businesses, industries, and community groups operating within Polk County to also participate in the updating and expansion of the LMS in the years ahead.

6. The Town of Dundee will continue to participate in the furtherance of public involvement opportunities.

INTRODUCED AND PASSED by the Town Commission of the Town of Dundee, Florida, in regular session, this _____ day of _____, 2025.

(Signatures as appropriate for the jurisdiction)

SECTION VIII: LMS ADOPTION AND SUPPORT

Sample Letter of Commitment

The following is a sample LMS Letter of Commitment. Appendix G includes copies of the letters of commitment from identified participants.

LETTER OF COMMITMENT FOR POLK COUNTY 2025 MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY PLAN

<Date>

Brian C. Thurston
Polk County Emergency Management Program Manager
Emergency Operation Center
1890 Jim Keene Blvd.
Winter Haven Florida 33880
(863) 298-7023

<DATE>

RE: Letter of Commitment as Participant in the Polk County Multi-Jurisdictional Local Mitigation Strategy Plan

Dear Mr. Thurston:

As the Federal Emergency Management Agency's (FEMA) Local Mitigation Strategy Plan requirements under 44 CFR §201.6 specifically identify criteria that allow for multi-jurisdictional mitigation plans and that many issues are better resolved by evaluating hazards more comprehensively by coordinating at the county, regional, or watershed level, the <PARTICIPATING PARTNER> is submitting this letter of commitment to confirm that <PARTICIPATING PARTNER> has agreed to participate in the Polk County Multi-jurisdictional Local Mitigation Strategy Plan.

Furthermore, as a condition of participation in the mitigation planning, <PARTICIPATING PARTNER>, agrees to meet the requirements for mitigation plans identified in 44 CFR §201.6 and to provide such cooperation as is necessary and in a timely manner to Polk County Local Mitigation Strategy Working Group to complete the plan in conformance with FEMA requirements.

<PARTICIPATING PARTNER> understands that it must engage in the following planning process, as more fully described in FEMA's Local Mitigation Planning Handbook, including, but not limited to:

- Identification of hazards unique to the jurisdiction and not addressed in the master planning document;
- The conduct of a vulnerability analysis and an identification of risks, where they differ from the general planning area;

- The formulation of mitigation goals is responsive to public input and development of mitigation actions complementary to those goals. A range of actions must be identified specifically for each jurisdiction;
- Demonstration that there has been proactively offered an opportunity for participation in the planning process by all community stakeholders (examples of participation include relevant involvement in any planning process, attending meetings, contributing research, data, or other information, commenting on drafts of the plan, etc.); and
- Documentation of an effective process to maintain and implement the plan.

Therefore, with a full understanding of the obligations incurred by participating in the FEMA hazard mitigation planning process as a participant in a multi-jurisdictional plan; I <NAME OF AUTHORIZED OFFICIAL>, commit <PARTICIPATING PARTNER> to the Polk County Multi-Jurisdictional Local Mitigation Strategy. This letter provides formal adoption of the Multi-Jurisdictional Local Mitigation Strategy by the jurisdiction's governing body (each jurisdiction must officially adopt the plan).

This document is executed this <DAY OF MONTH> day of <MONTH>, <YEAR>.

Please contact <NAME OF CONTACT> at <PHONE NUMBER & EMAIL> with questions.

Sincerely,

<ADD SIGNATURE HERE OF PARTICIPATING PARTNER OFFICIAL'S SIGNATURE>

<FIRST AND LAST NAME OF PARTICIPATING PARTNER OFFICIAL>
<TITLE>
<PHONE>
<FAX>
<EMAIL>

SECTION IX – RESOURCES

Staff and the LMS Working Group relied on a variety of resources to obtain information and guidance in completing the update of the Polk County 2025 Multi-jurisdictional LMS Plan. The following list represents sources of information consulted.

Existing Plans, Documents, and Reports

- Polk County Comprehensive Plan
- Polk County Unified Land Development Code
- City of Auburndale Comprehensive Plan
- City of Auburndale Land Development Regulations
- City of Bartow Comprehensive Plan
- City of Bartow Land Development Regulations
- City of Davenport Comprehensive Plan
- City of Davenport Land Development Regulations
- City of Eagle Lake Comprehensive Plan
- City of Eagle Lake Land Development Regulations
- City of Fort Meade Comprehensive Plan
- City of Fort Meade Land Development Regulations
- City of Frostproof Comprehensive Plan
- City of Frostproof Land Development Regulations
- City of Haines City Comprehensive Plan
- City of Haines City Land Development Regulations
- City of Lake Alfred Comprehensive Plan
- City of Lake Alfred Land Development Regulations
- City of Lake Wales Comprehensive Plan

SECTION IX: RESOURCES

- City of Lake Wales Land Development Regulations
- City of Lakeland Comprehensive Plan
- City of Lakeland Land Development Regulations
- City of Mulberry Comprehensive Plan
- City of Mulberry Land Development Regulations
- Polk City Comprehensive Plan
- Polk City Land Development Regulations
- City of Winter Haven Comprehensive Plan
- City of Winter Haven Land Development Regulations
- Town of Dundee Comprehensive Plan
- Town of Dundee Land Development Regulations
- Town of Lake Hamilton Comprehensive Plan
- Town of Lake Hamilton Land Development Regulations
- Town of Hillcrest Heights Comprehensive Plan
- Town of Hillcrest Heights Land Development Regulations
- Village of Highland Park Comprehensive Plan
- Village of Highland Park Land Development Regulations
- Polk County Bone Valley Selected Area Study Existing Conditions Analysis, May 2012
- Polk County Communitywide Wildfire Protection Plan (CWPP)
- Polk County Comprehensive Emergency Management Plan (CEMP)
- Polk County Disaster Debris Management Plan (DDMP)
- Polk County 2045 Long Range Plan
- Polk County Post Disaster Redevelopment Plan (PDRP)

- Central Florida Regional Planning Council Strategic Regional Policy Plan
- Central Florida Region Economic Analysis and Disaster Resiliency Study
- Council on Homelessness Report by the Department of Children and Families, Council on Homelessness
- Division of Emergency Management 2022 Statewide Emergency Shelter Plan
- Division of Emergency Management 2023 Florida Enhanced State Hazard Mitigation Plan
- Federal Emergency Management Agency Natural Hazards Report
- Federal Emergency Management Agency Local Mitigation Handbook
- Federal Emergency Management Agency State of Florida Wildfire Hazard Mitigation Plan
- National Flood Insurance Program Community Rating System Coordinator's Manual
- National Flood Insurance Program Community Status Book
- National Flood Insurance Program Flood Insurance Manual

Agencies and Websites

- AP News
- Arizona State University Spatial Hazard Events and Losses Database for the United States, Version 18.0. https://cemhs.asu.edu/sheldus
- Bay News 9
- Center for Disease Control and Prevention
- Center for Emergency Management and Homeland Security, Arizona State University.
- Central Florida Development Council
- Central Florida Regional Planning Council (CFRPC)
- Citrus Canker and Citrus Greening in Florida Map
- Citrus Health Response Program (CHRP)
- City Lab: www.citylab.com/weather

- EquiManagement
- Federal Emergency Management Agency
- Federal Rail Administration
- FL Dept of Ag and Consumer Services (DOACS) www.Freshfromflorida.com
- Florida Charts – epidemic information
- Florida Department of Environmental Protection
- Florida Department of Health Polk County
- Florida Department of Transportation
- Florida Forest Service
- Florida Geologic Survey
- Florida Geological Survey information
- Florida Housing Data Clearinghouse – Polk County Profile
- Floridadisaster.org
- Fox 13 Tampa Bay
- Heartland 2060: Building a Resilient Region
- Hernando County Sheriff's Office
- Homeless Coalition of Polk County
- Johns Hopkins University
- Lakeland Vision
- Miami Herald
- National Climactic Data Center of National Oceanic and Atmospheric Administration www.ncdc.noaa.gov
- National Climatic Data Center storm reports

SECTION IX: RESOURCES

- National Inventory of Dams
- NRDC www.nrdc.org
- National Public Radio (NPR)
- Office of Economic and Demographic Research: www.edr.state.fl.us
- Patch www.patch.com
- Polk County Emergency Operations Center
- Polk County Property Appraiser
- Polk County Public Schools
- Polk County Transportation Planning Organization
- Polk Vision – www.polkvision.com
- Smart Growth America
- Stats America Big Radus Tool - https://www.statsamerica.org/radius/big.aspx
- Tampa Bay Times
- The Ledger
- The NewsChief
- The Tampa Tribune
- The TORRO Hail Scale: The Tornado and Storm Research Organization: http://www.torro.org.uk/site/hscale.php
- Tornado History Project http://www.tornadohistoryproject.com/tornado/Florida/Polk/export
- Tornado information and maps: http://www.spc.noaa.gov/wcm/#data
- U.S. Census Bureau American Community Survey
- University of Florida Bureau of Business and Economic Research
- US Army Corp of Engineers, National Inventory of Dams

SECTION IX: RESOURCES

- USDA Economic Research Service: http://www.ers.usda.gov/data-products/atlas-of-rural-and-small-town-america/go-to-the-atlas.aspx
- USDA Farm Service Agency
- Vaisala - Lightning information
- Weather Underground: www.weatherunderground.com/climate
- WFLA
- Worldbarefootcetner.com
- WUSF
- www.ready.gov
- www.Wildfiretoday.com

APPENDICES

APPENDIX A

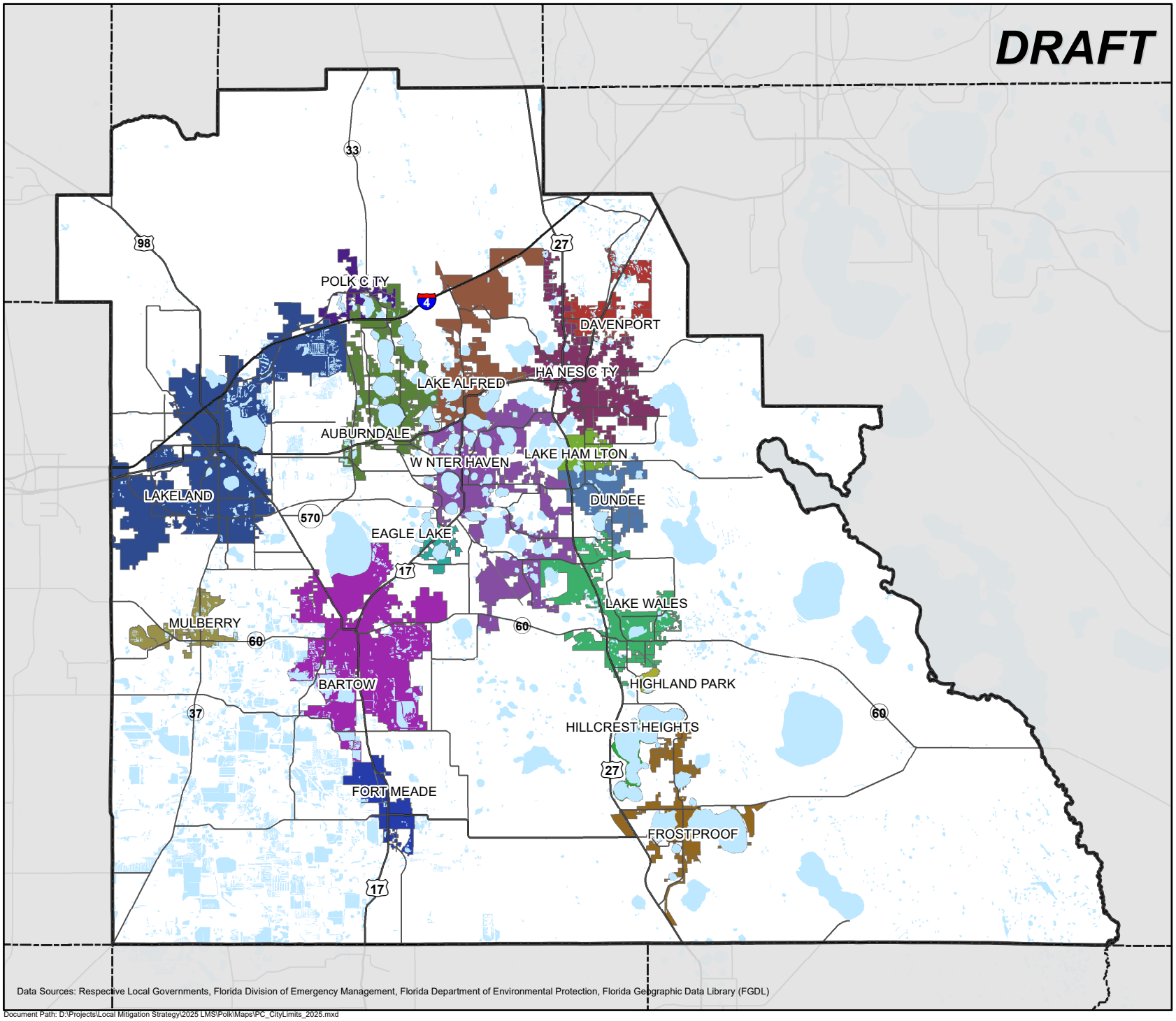
APPENDIX A – MAPS

Appendix A includes maps related to the LMS. The text includes many of these maps at a smaller scale. The appendix includes the following maps:

1. City Limits
2. Population Density
3. Population 65 Years and Older (Density)
4. Population Below Poverty Level
5. Limited English-Speaking Households
6. Vehicle Availability
7. School Locations
8. Critical Facilities
9. Building Permits 2019-2022
10. Repetitive Loss Areas
11. Hurricane Tracks
12. FEMA Flood Insurance Rate Map (FIRM) – Polk County
13. FEMA Flood Insurance Rate Map (FIRM) – Auburndale
14. FEMA Flood Insurance Rate Map (FIRM) – Bartow
15. FEMA Flood Insurance Rate Map (FIRM) – Davenport
16. FEMA Flood Insurance Rate Map (FIRM) – Dundee
17. FEMA Flood Insurance Rate Map (FIRM) – Eagle Lake
18. FEMA Flood Insurance Rate Map (FIRM) – Fort Meade
19. FEMA Flood Insurance Rate Map (FIRM) – Frostproof
20. FEMA Flood Insurance Rate Map (FIRM) – Haines City
21. FEMA Flood Insurance Rate Map (FIRM) – Highland Park
22. FEMA Flood Insurance Rate Map (FIRM) – Hillcrest Heights
23. FEMA Flood Insurance Rate Map (FIRM) – Lake Alfred
24. FEMA Flood Insurance Rate Map (FIRM) – Lake Hamilton
25. FEMA Flood Insurance Rate Map (FIRM) – Lake Wales
26. FEMA Flood Insurance Rate Map (FIRM) – Lakeland
27. FEMA Flood Insurance Rate Map (FIRM) – Mulberry
28. FEMA Flood Insurance Rate Map (FIRM) – Polk City
29. FEMA Flood Insurance Rate Map (FIRM) – Winter Haven
30. Severe Thunderstorm Hail (1960-2023)
31. Severe Thunderstorms Wind (1956-2023)
32. Tornado Touchdowns (1951-2021)
33. Tornado Tracks by Intensity (1951-2021)
34. Wildfire Hazard Potential
35. Wildfire Risk to Structure
36. Sinkhole Depths (1954-2024)
37. Sinkhole Area Types
38. Hazardous Materials Facilities
39. Existing and Proposed Pipeline Locations
40. Rail Lines and Crossings
41. Bridge Locations

APPENDIX A: MAPS

POLK COUNTY - LOCAL MITIGATION STRATEGY
City Limits



Data Sources: Respective Local Governments, Florida Division of Emergency Management, Florida Department of Environmental Protection, Florida Geographic Data Library (FGDL)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_CityLimits_2025.mxd

Legend

- Polk County
- Water Bodies

Municipalities

- Auburndale
- Bartow
- Davenport
- Dundee
- Eagle Lake
- Fort Meade
- Frostproof
- Haines City
- Highland Park
- Hillcrest Heights
- Lake Alfred
- Lake Hamilton
- Lake Wales
- Lakeland
- Mulberry
- Polk City
- Winter Haven

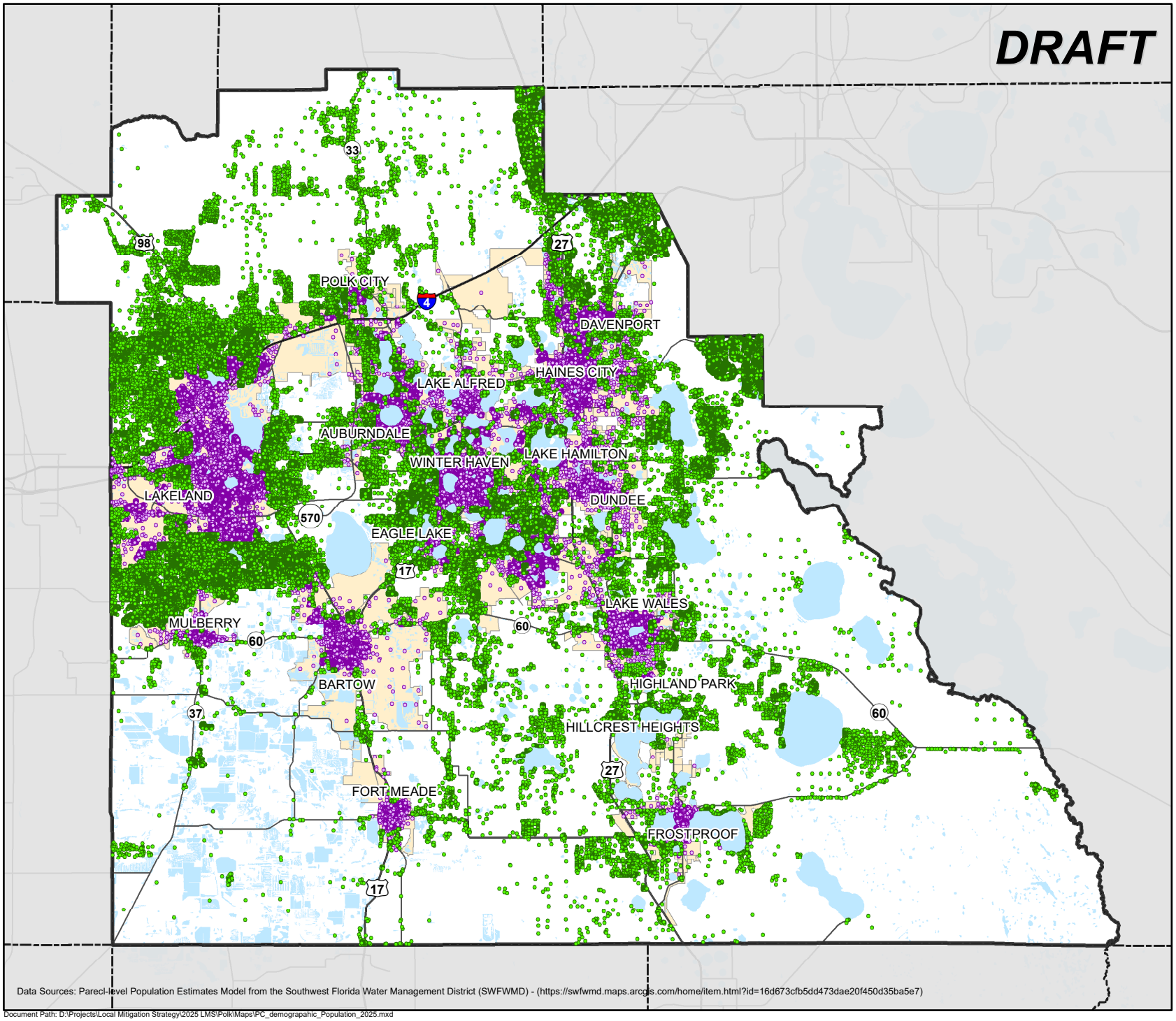
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Population Distribution



Data Sources: Parecl-level Population Estimates Model from the Southwest Florida Water Management District (SWFWMD) - (https://swfwmd.maps.arcgis.com/home/item.html?id=16d673cfb5dd473dae20f450d35ba5e7)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_demograpahic_Population_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Population Points

- Municipalities
- Unincorporated County

*These points reflect 2024 parcel-level population estimates based on a model prepared by the SWFWMD.

The points represent locations where the estimate returned a result of at least one (1) person.

The model uses property parcel data obtained from the Polk County Property Appraiser, utilizing parcel boundaries and attributes that indicate property use, the number of residential units, the year residences were built, and lot size. Additional data form other sources were also utilized. See source information for link to full description of this dataset.

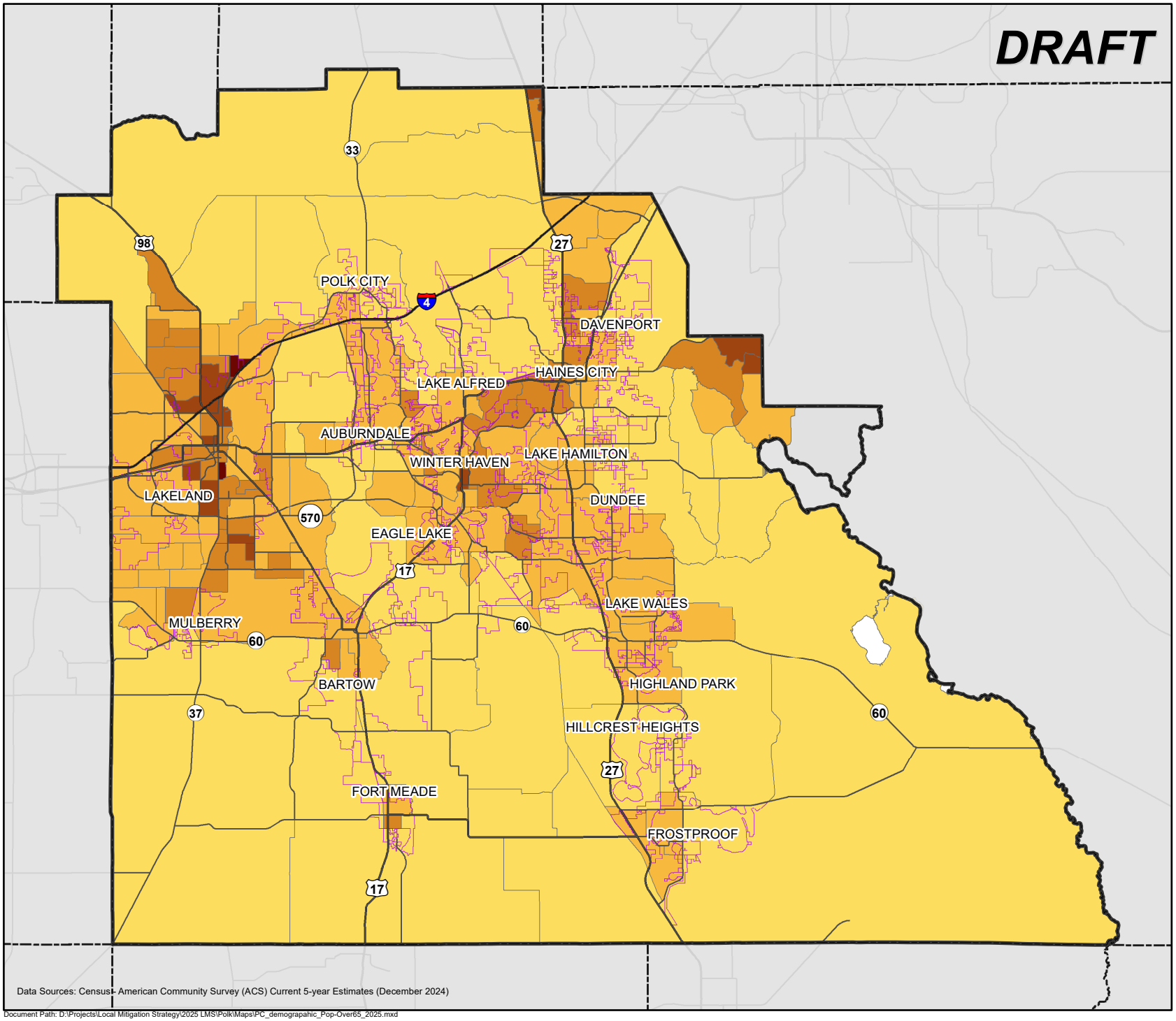
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Population 65 Years and Older (Density)



Data Sources: Census - American Community Survey (ACS) Current 5-year Estimates (December 2024)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_demograpahic_Pop-Over65_2025.mxd

Legend

- Polk County
- Municipalities

Population 65 Years and Older (per Sq.Mi.)

- 0.000
- 0.1 - 50.0
- 50.01 - 280.0
- 280.1 - 580.0
- 580.1 - 996.0
- 996.1 - 1537.0

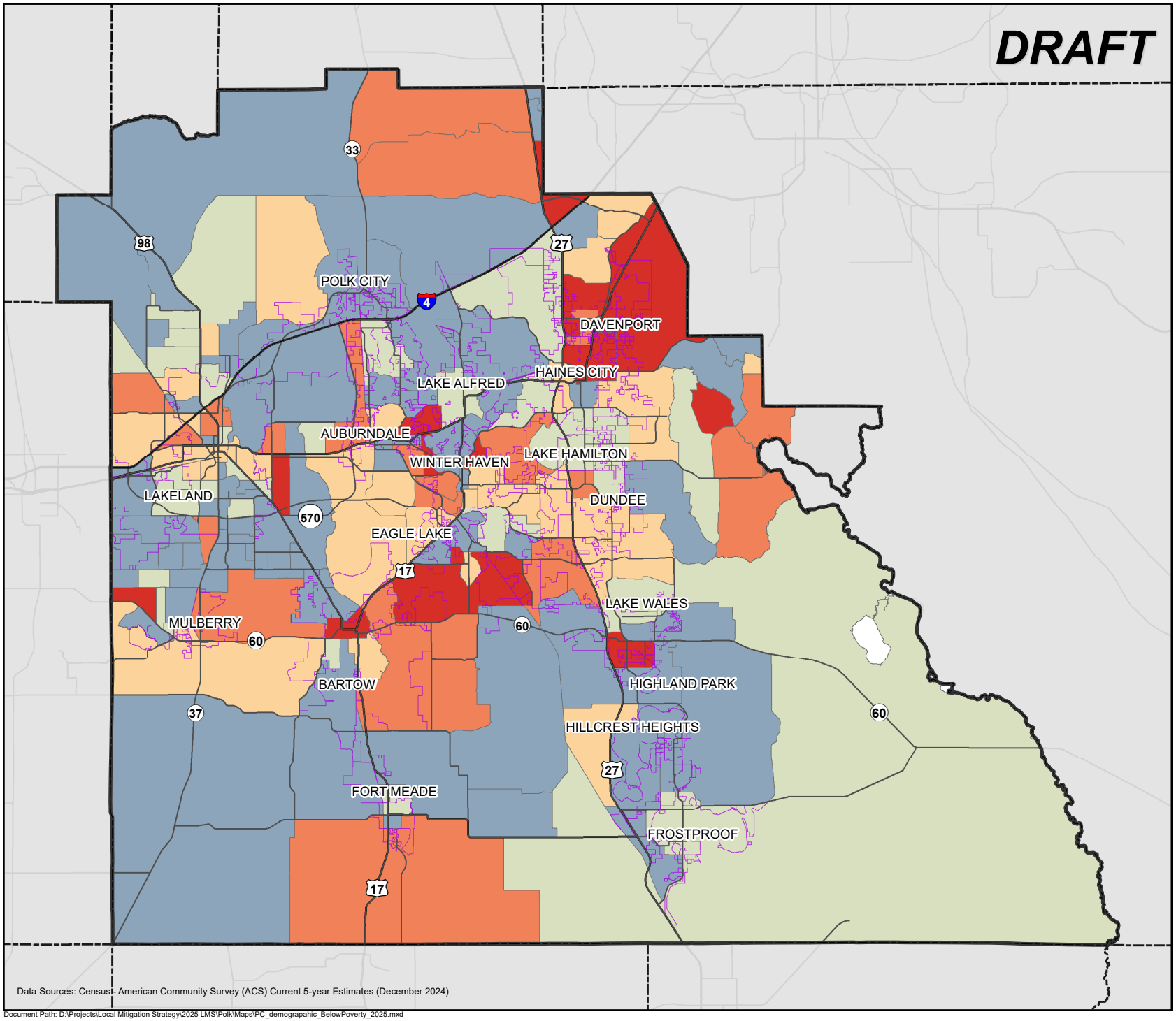
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Population Below Poverty Level



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_demograpahic_BelowPoverty_2025.mxd

Legend

- Polk County
- Municipalities

Below Poverty*

- 0
- 1 - 420
- 421 - 667
- 668 - 980
- 981 - 1381
- 1382 - 2308

*Below Poverty is based on: ACS estimate of population whose income in the past 12 months is below federal poverty level .

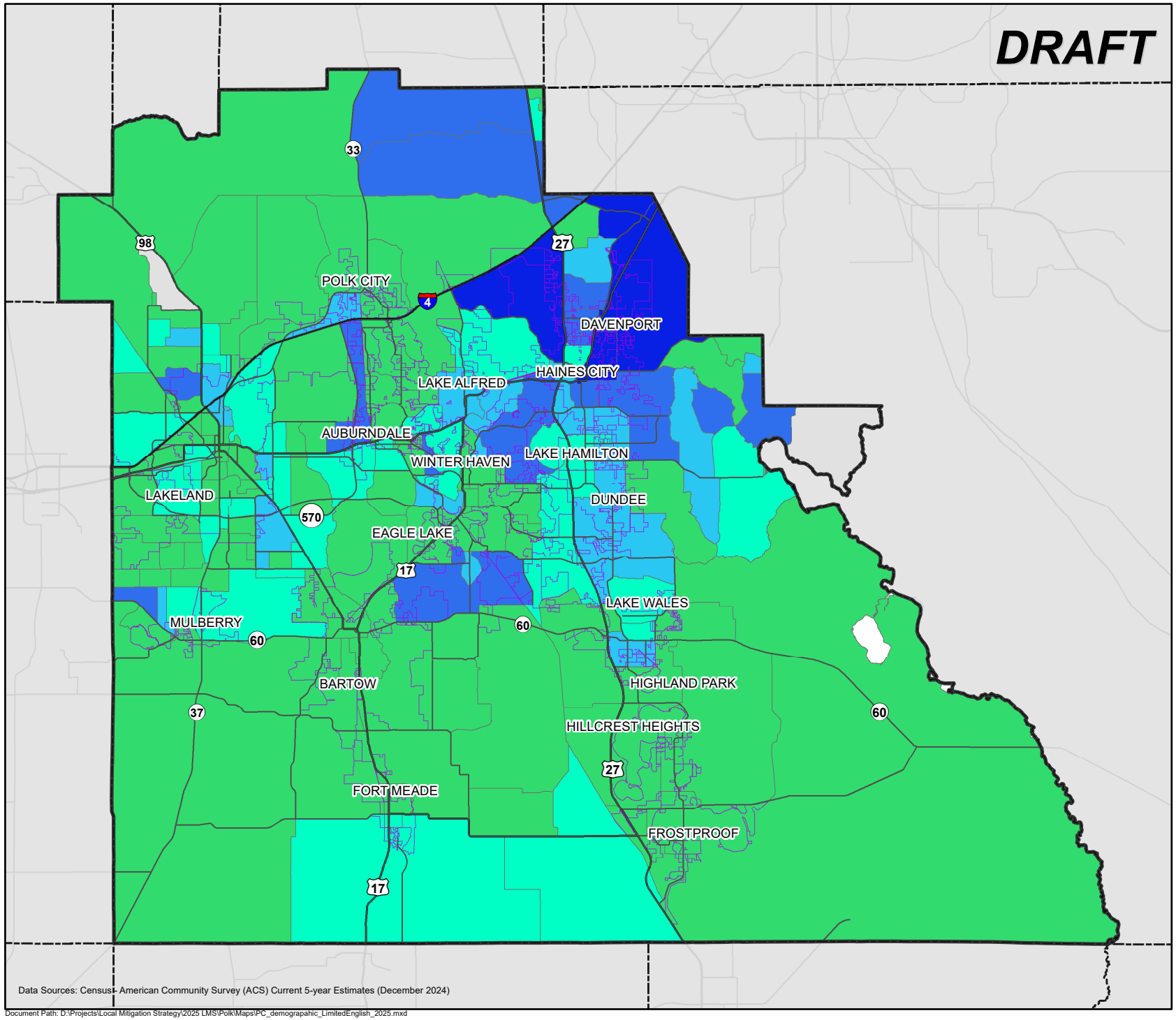
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Limited English Speaking Households



Data Sources: Census - American Community Survey (ACS) Current 5-year Estimates (December 2024)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_demograpahic_LimitedEnglish_2025.mxd

Legend

- Polk County
- Municipalities

Limited English*

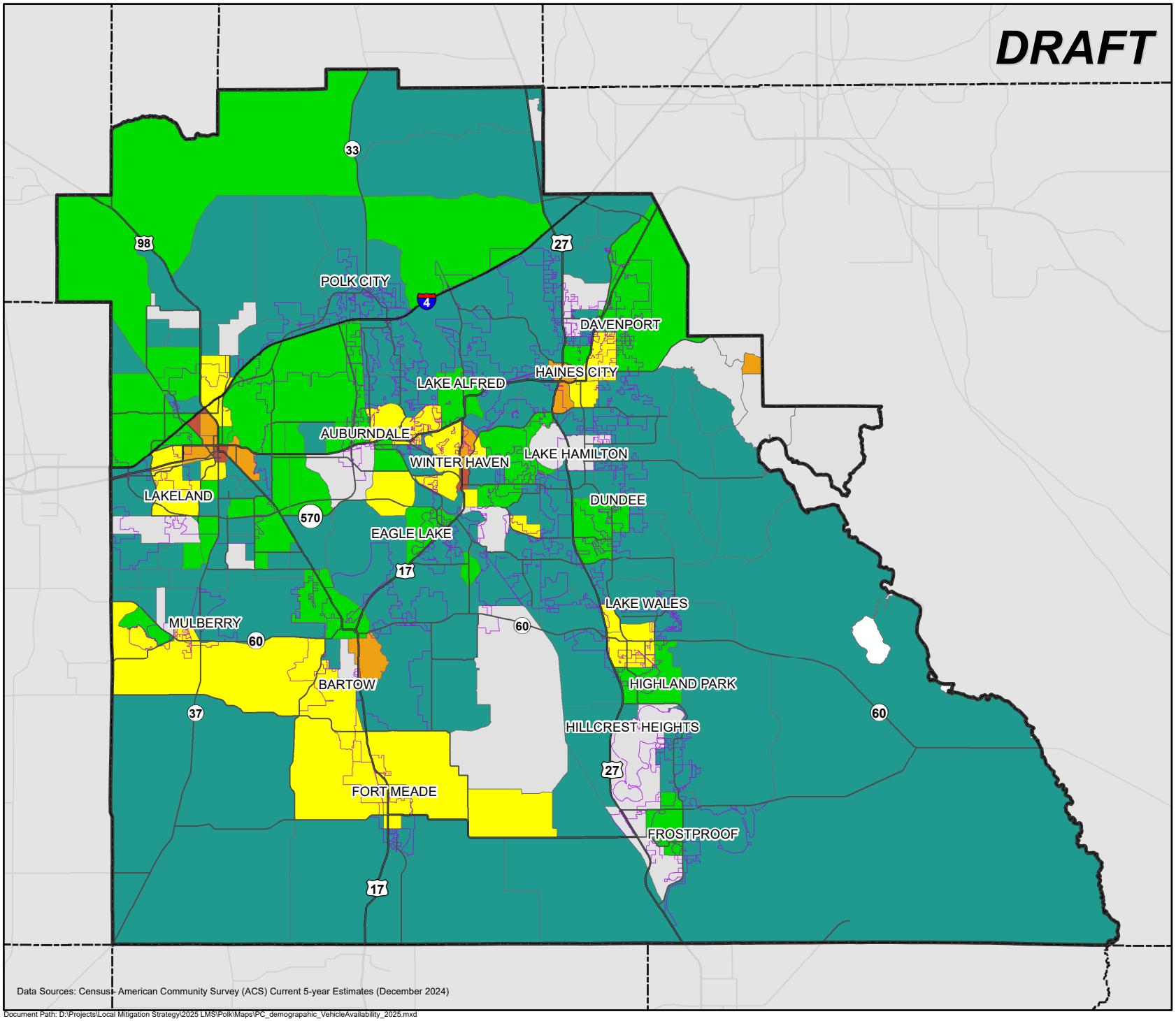
- 0
- 1 - 308
- 309 - 522
- 523 - 870
- 871 - 1537
- 1538 - 2531

*Limited English is based on:
ACS estimate of population aged 5+
who have limited english speaking ability.

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Vehicle Availability



Data Sources: Census - American Community Survey (ACS) Current 5-year Estimates (December 2024)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_demographic_VehicleAvailability_2025.mxd

Legend

- Polk County
- Municipalities

Vehicle

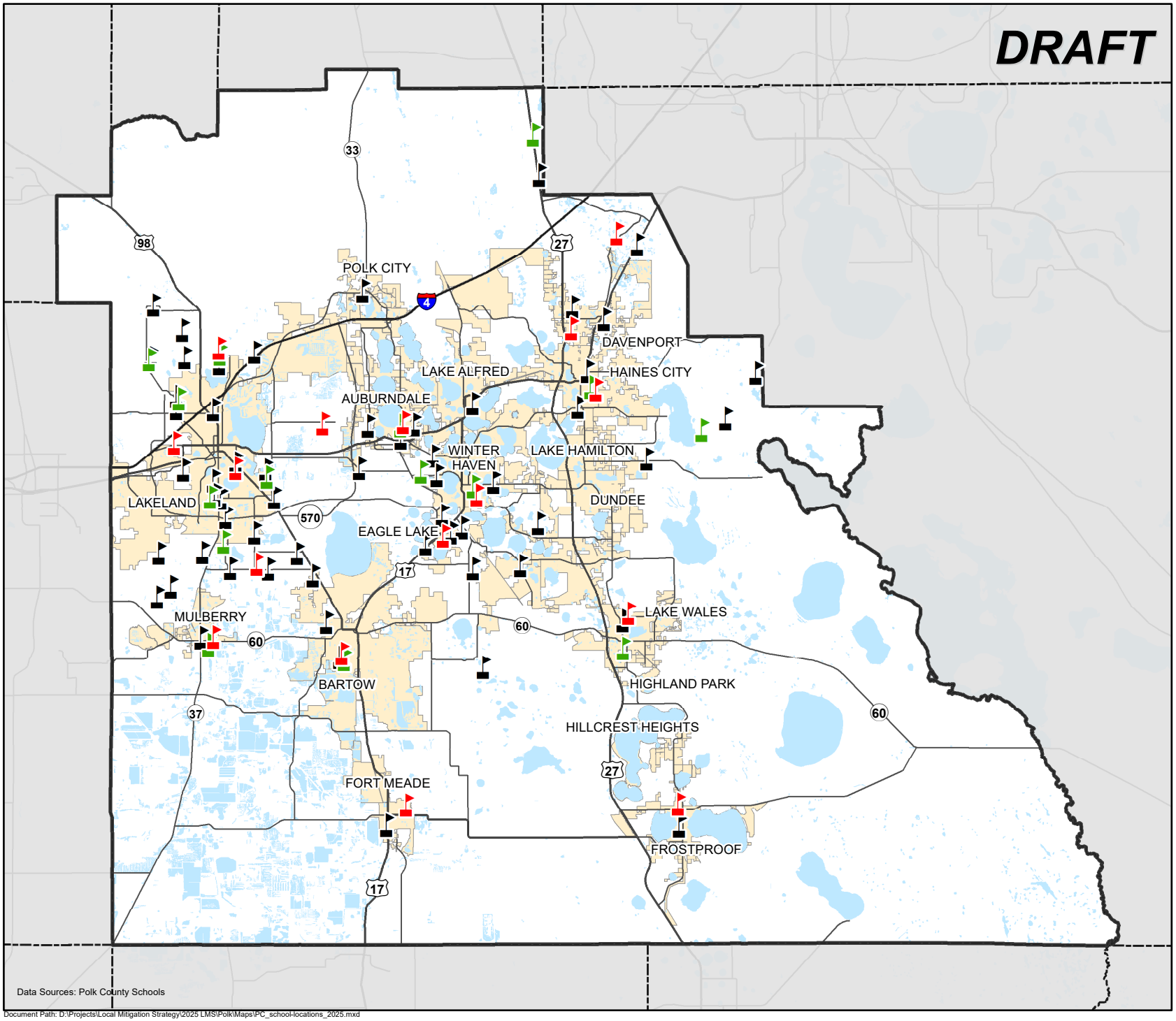
- None
- 0.1 - 5.3%
- 5.4 - 9.3%
- 9.4 - 14.6%
- 14.7 - 21.2%
- 21.3 - 36.2%

*Vehicle Availability is based on: ACS estimate of percentage of households with no vehicle available.

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Public School Locations



Data Sources: Polk County Schools

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_school-locations_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Public Schools

- Elementary School
- Middle School
- High School

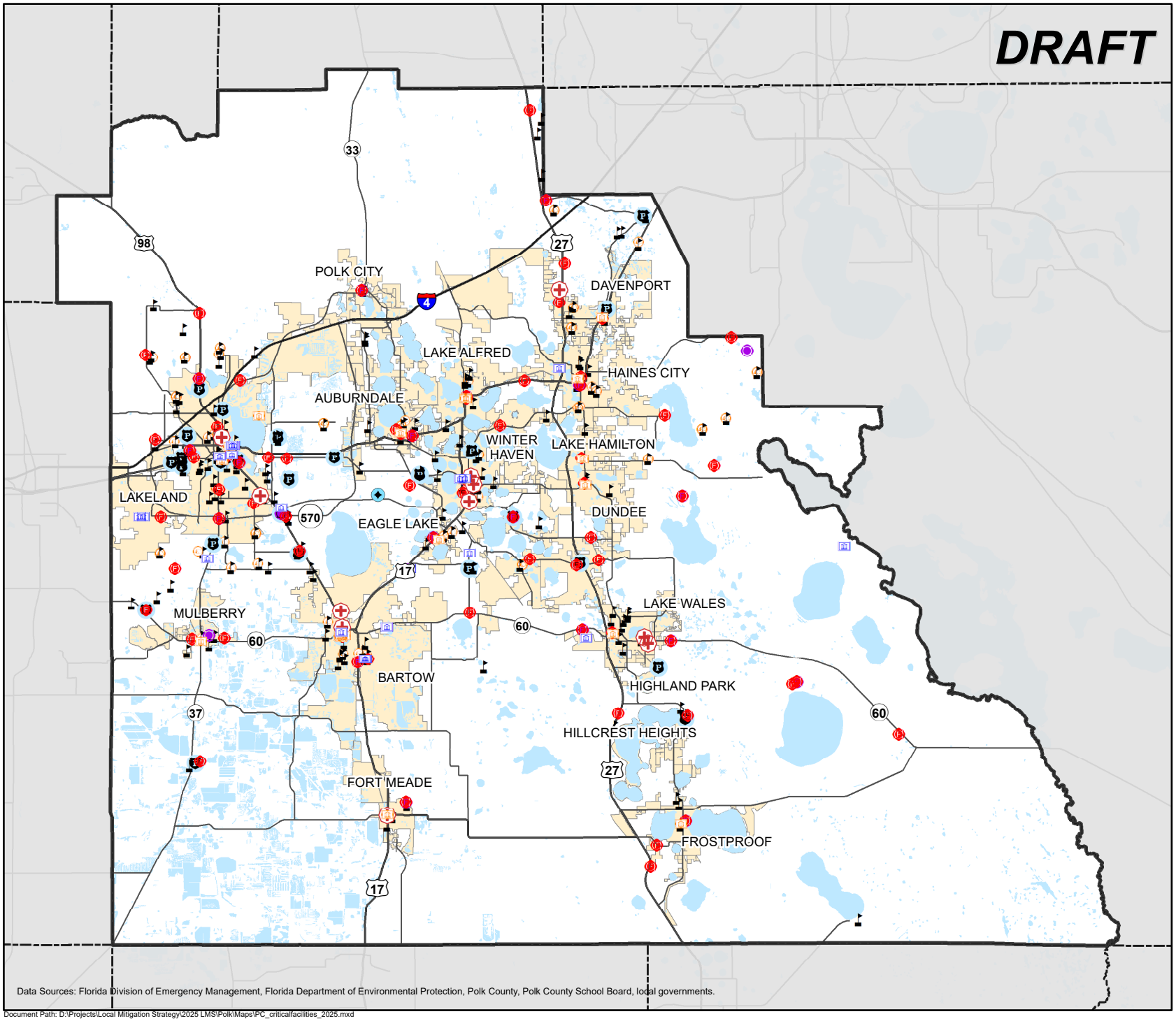
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Critical Facilities



Data Sources: Florida Division of Emergency Management, Florida Department of Environmental Protection, Polk County, Polk County School Board, local governments.

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_criticalfacilities_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Critical Facilities

- State Government Facility
- Local Government Facility
- EOC
- Law Enforcement
- Fire Station
- EMS
- Hospital/Medical Clinic
- Public School
- Shelter
- Power Plant

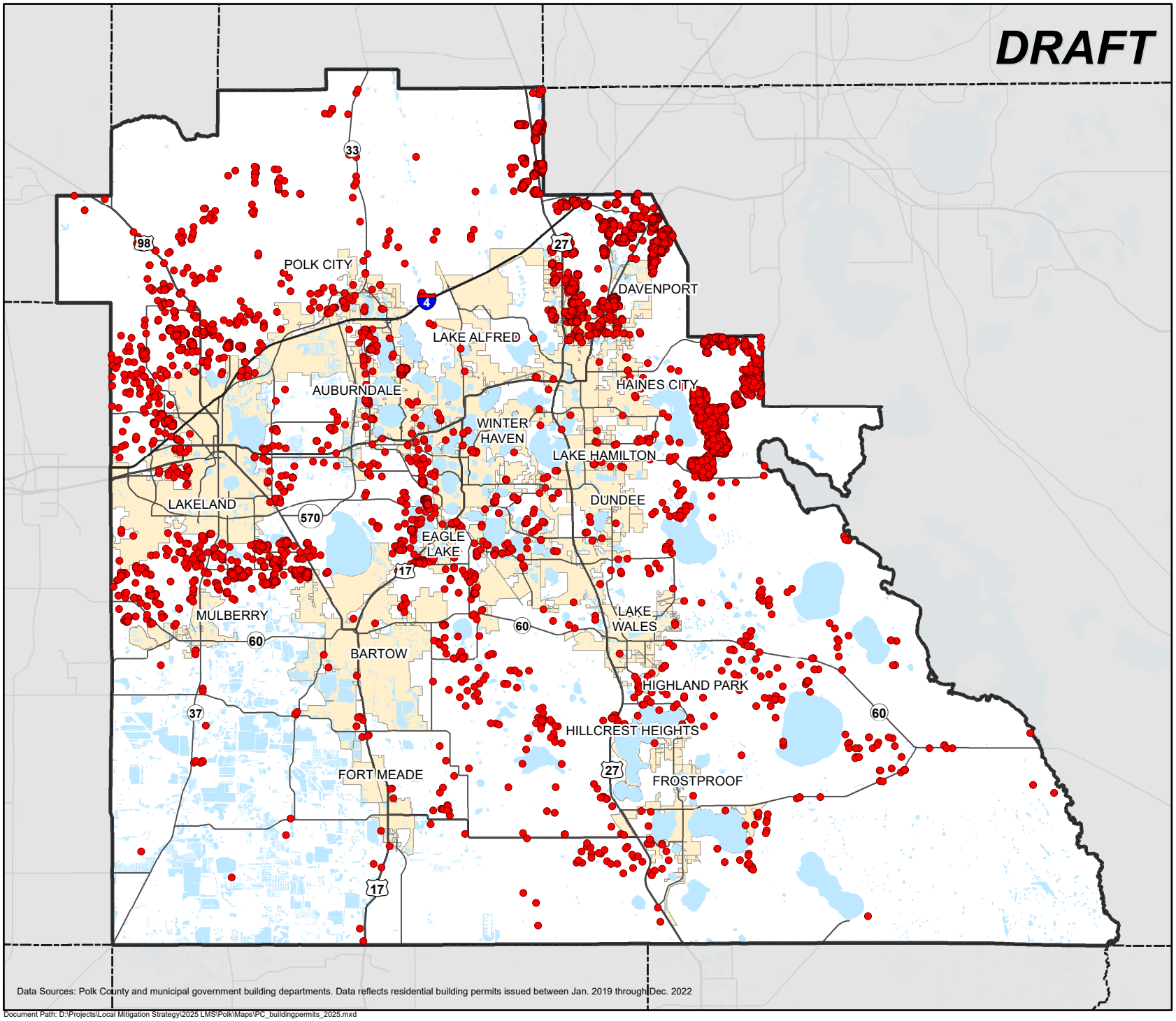
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Residential Building Permits (2019 - 2022)



Data Sources: Polk County and municipal government building departments. Data reflects residential building permits issued between Jan. 2019 through Dec. 2022

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_buildingpermits_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Building Permits

- Residential Building Permits

POLK COUNTY EMERGENCY MANAGEMENT

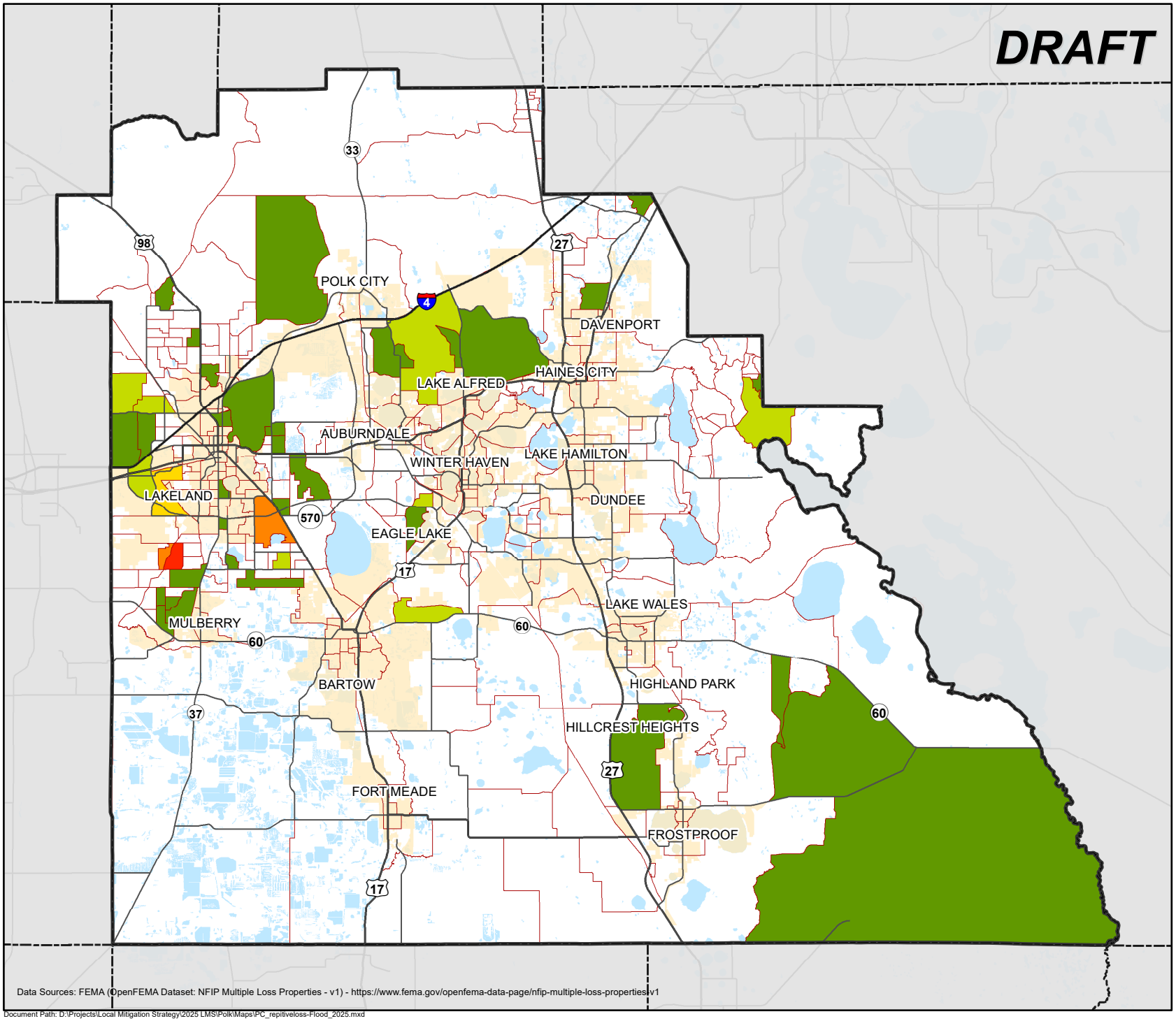
POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY

Repetitive Loss Properties - Total Losses (by Census Block Groups)



Legend

- Polk County
- Municipalities
- Water Bodies

Repetitive Loss Properties by Census Block Groups (represents # of Total Losses)

- =<1
- 2
- 3
- 4
- 5
- 7

Note:
This dataset provides information on structures that have had multiple National Flood Insurance (NFIP) claims across the history of the program. The data shown here represents NFIP-insured structures that have experienced totl losses.

POLK COUNTY EMERGENCY MANAGEMENT

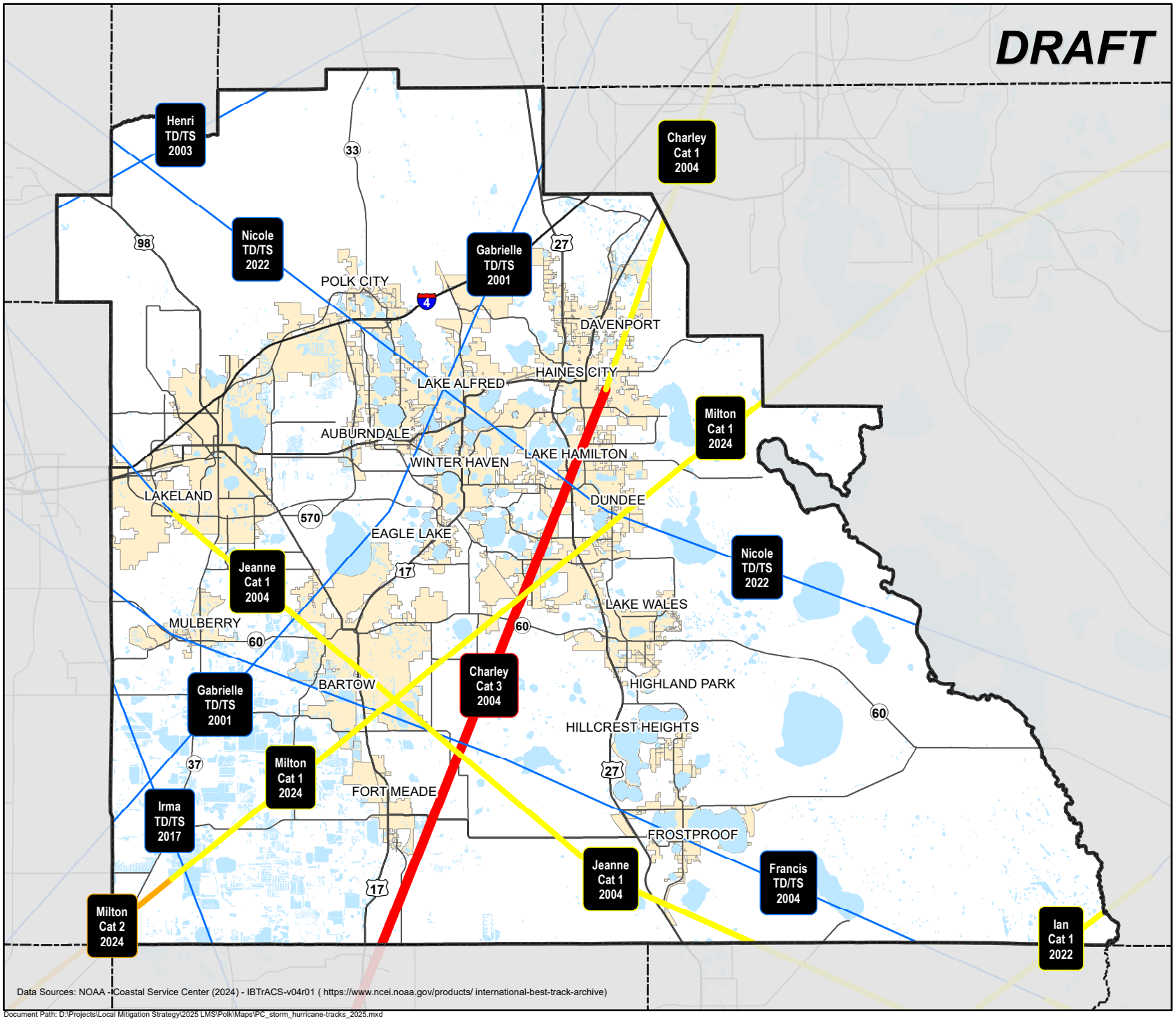
POLK COUNTY

N
W E
S

0 4 8
Miles

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_repitiveloss-Flood_2025.mxd

POLK COUNTY - LOCAL MITIGATION STRATEGY
Tropical Cyclone (Hurricane) Tracks (2000-2024)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_hurricane-tracks_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Tropical Cyclone Tracks (2000-2024)

- Tropical Depressions & Storms (<74 mph)
- Category 1 (75-95 mph)
- Category 2 (96-110 mph)
- Category 3 (111-129 mph)

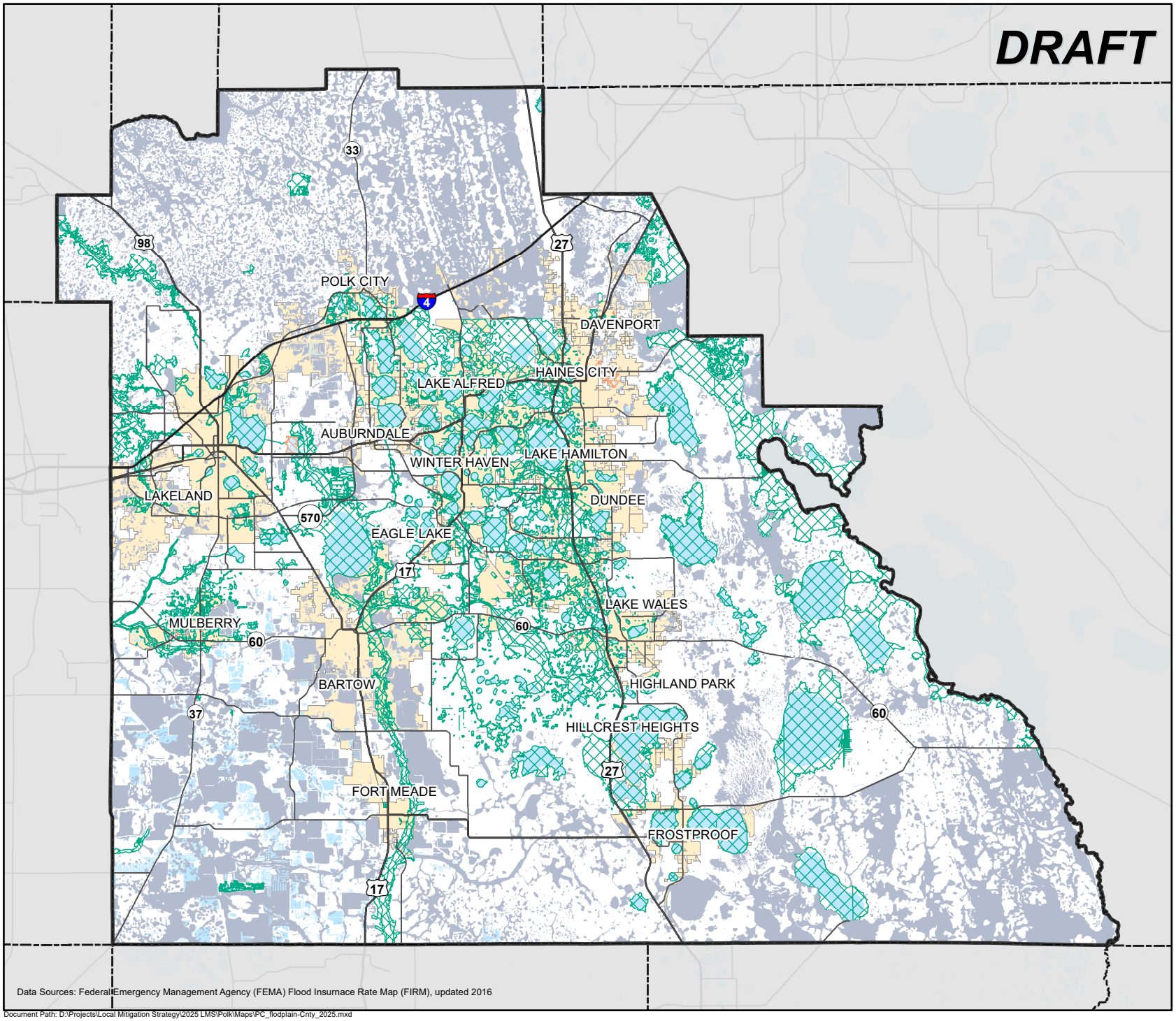
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-Cnty_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

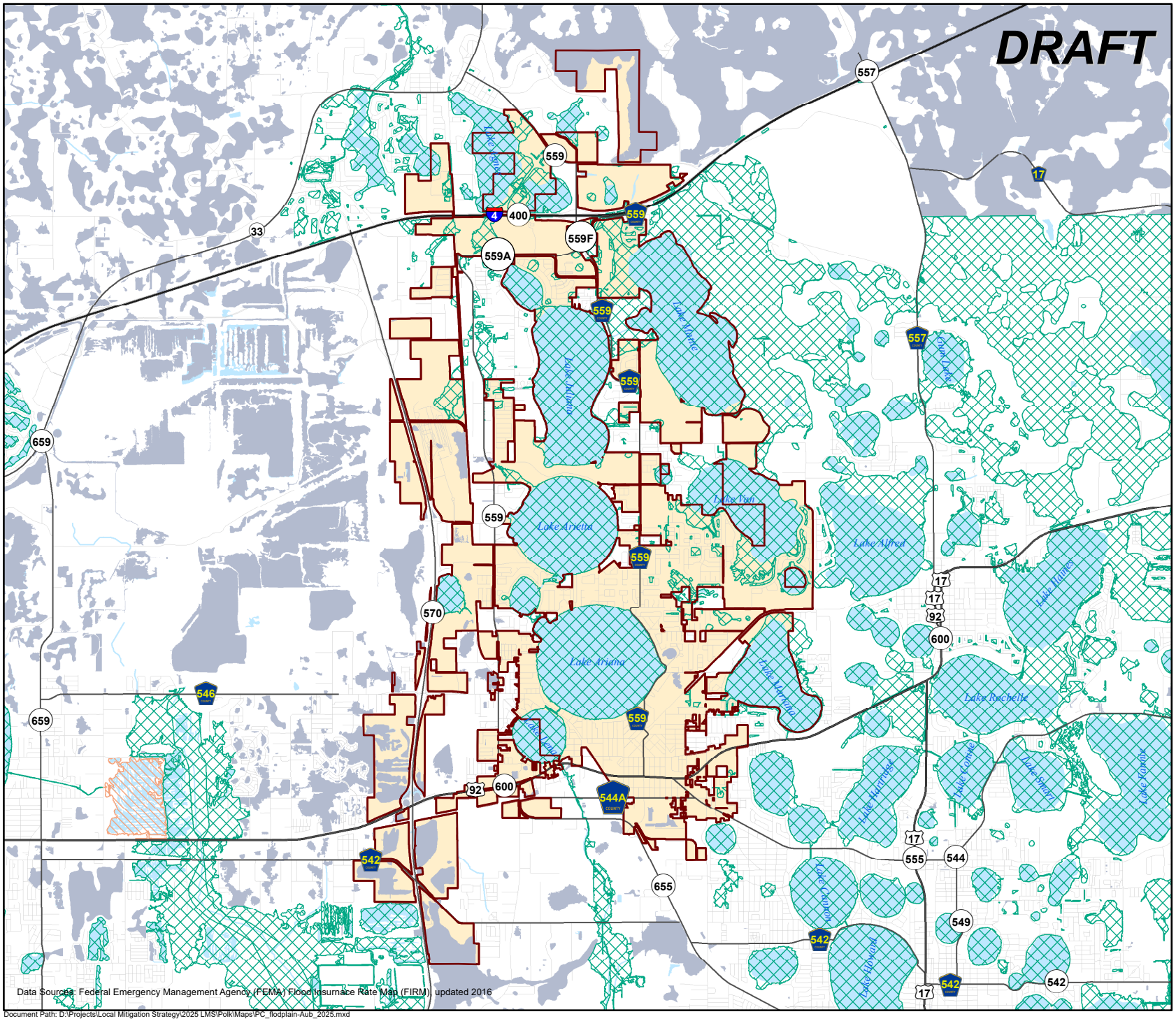
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Auburndale



Legend

- City of Auburndale
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

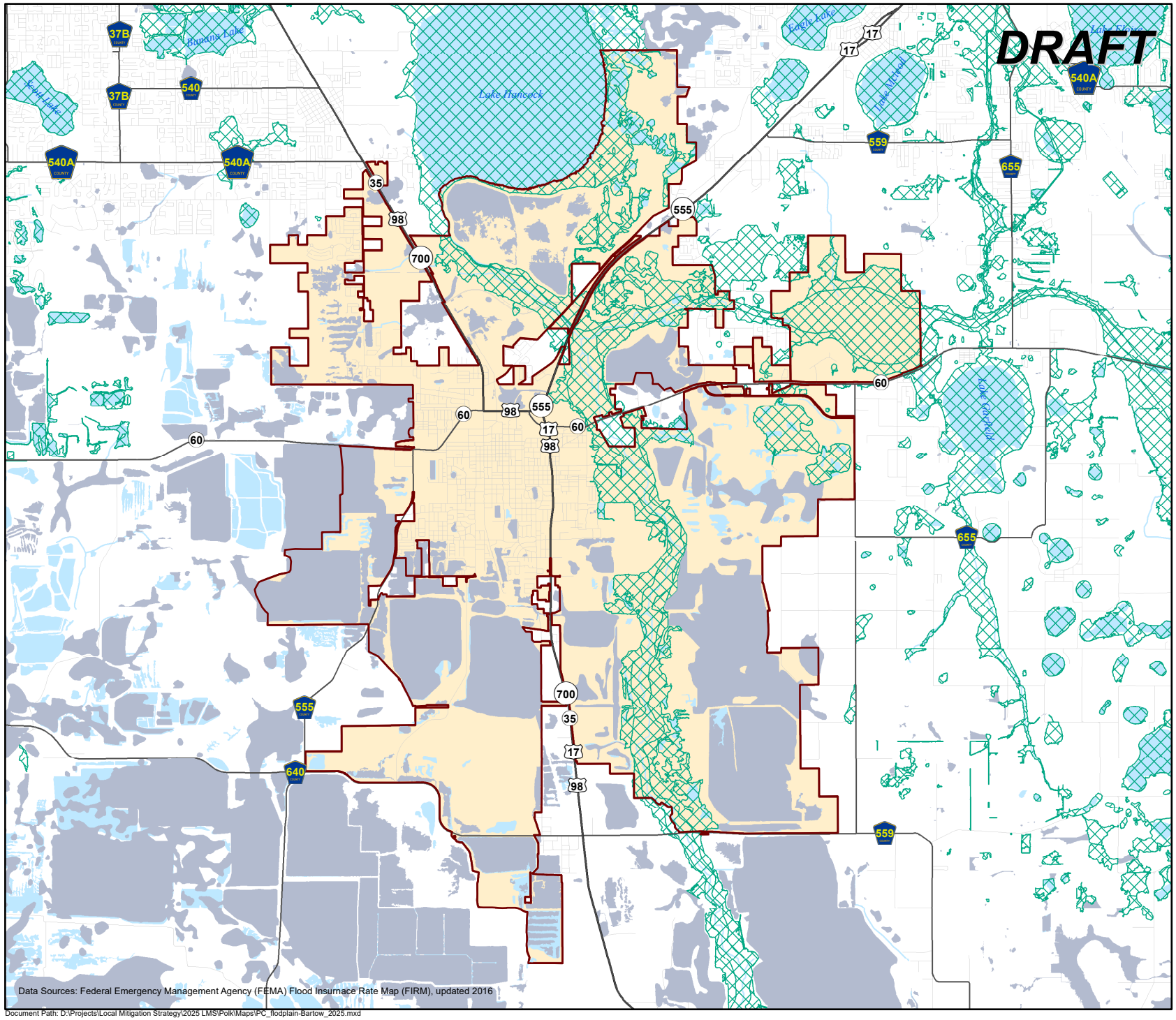
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 1 2
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Bartow



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-Bartow_2025.mxd

Legend

- City of Bartow
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

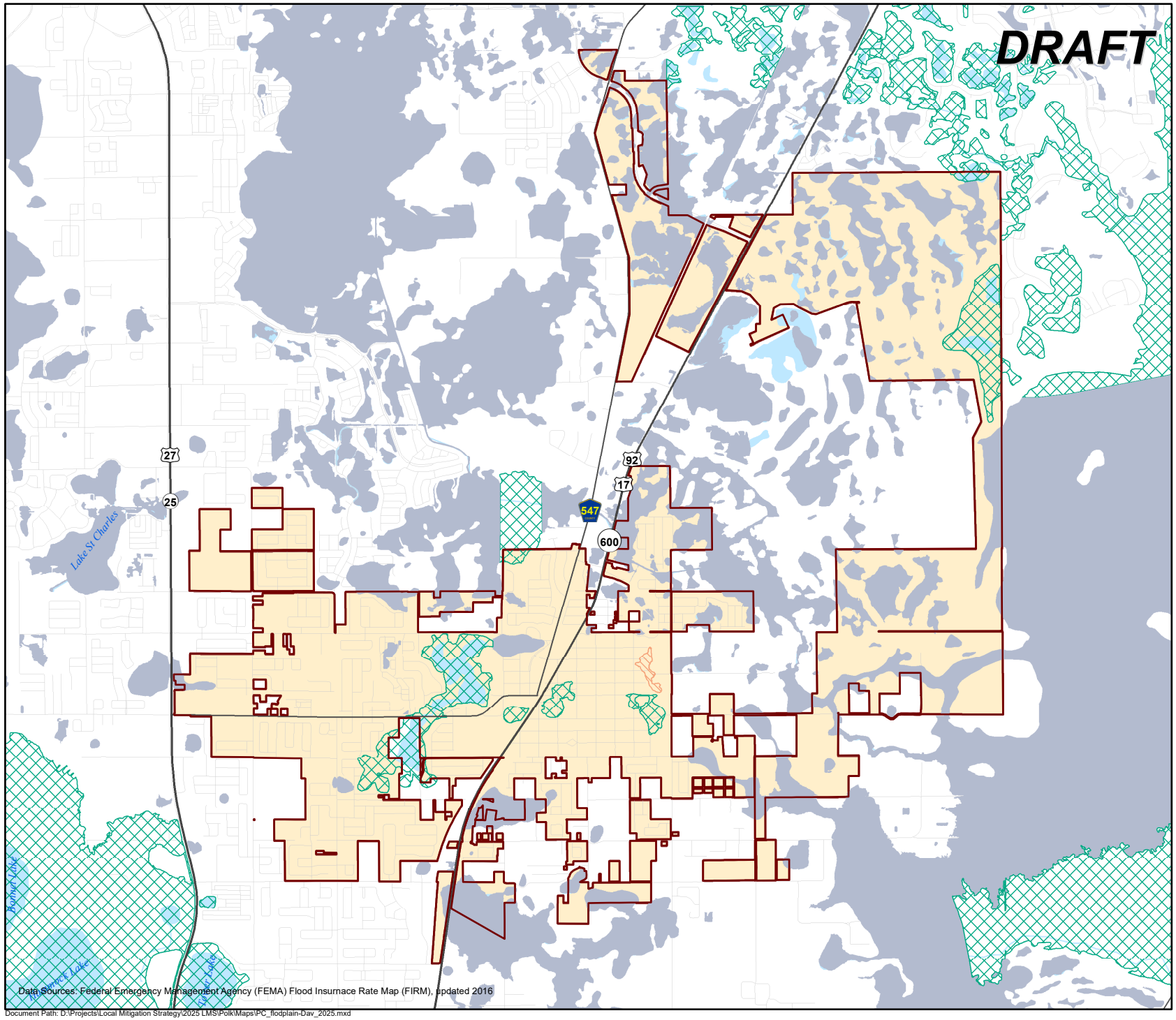
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 1 2
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Davenport



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurnace Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-Dav_2025.mxd

Legend

- City of Davenport
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

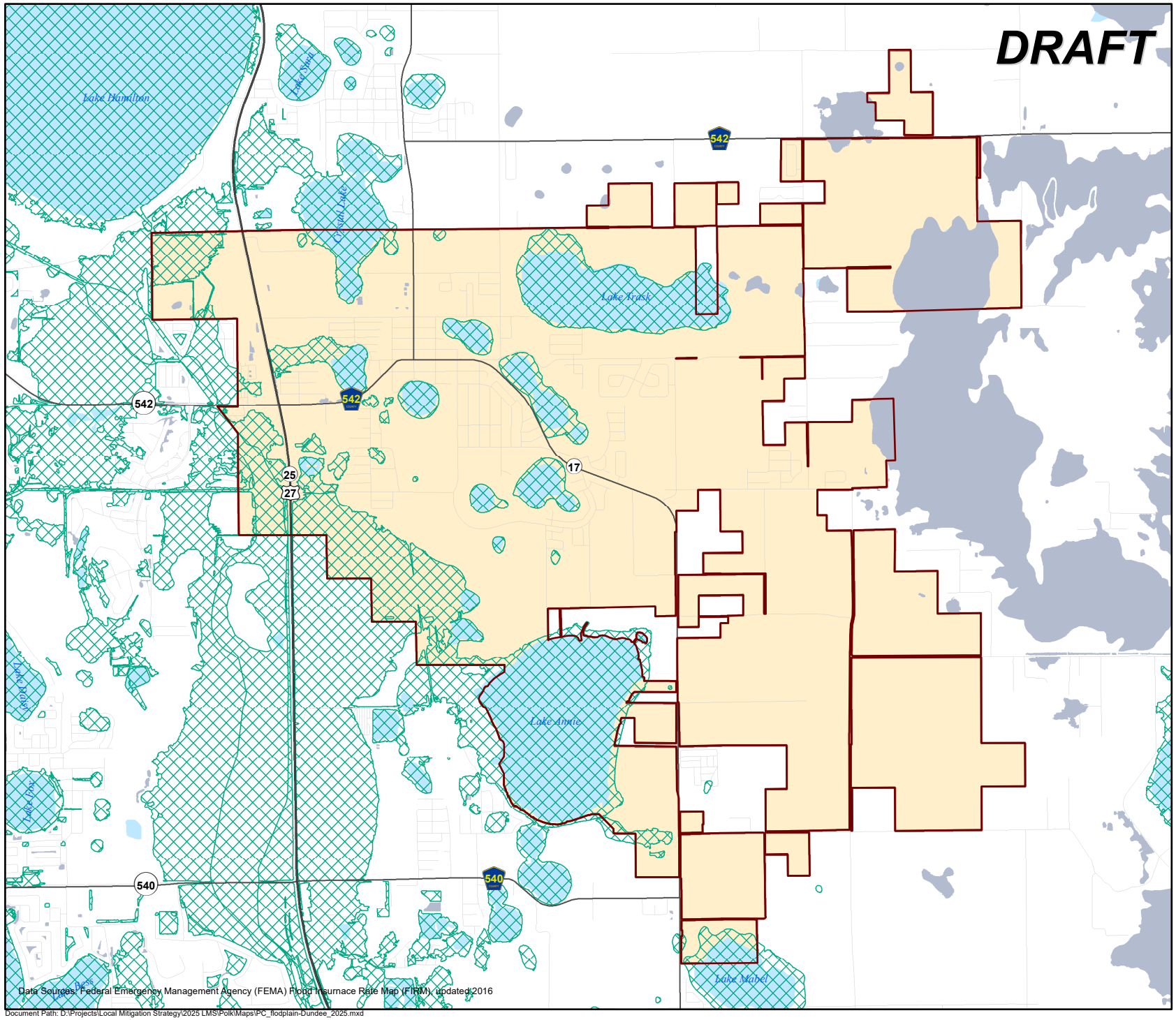
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 ½ 1
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - Town of Dundee



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurnace Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-Dundee_2025.mxd

Legend

- Town of Dundee
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

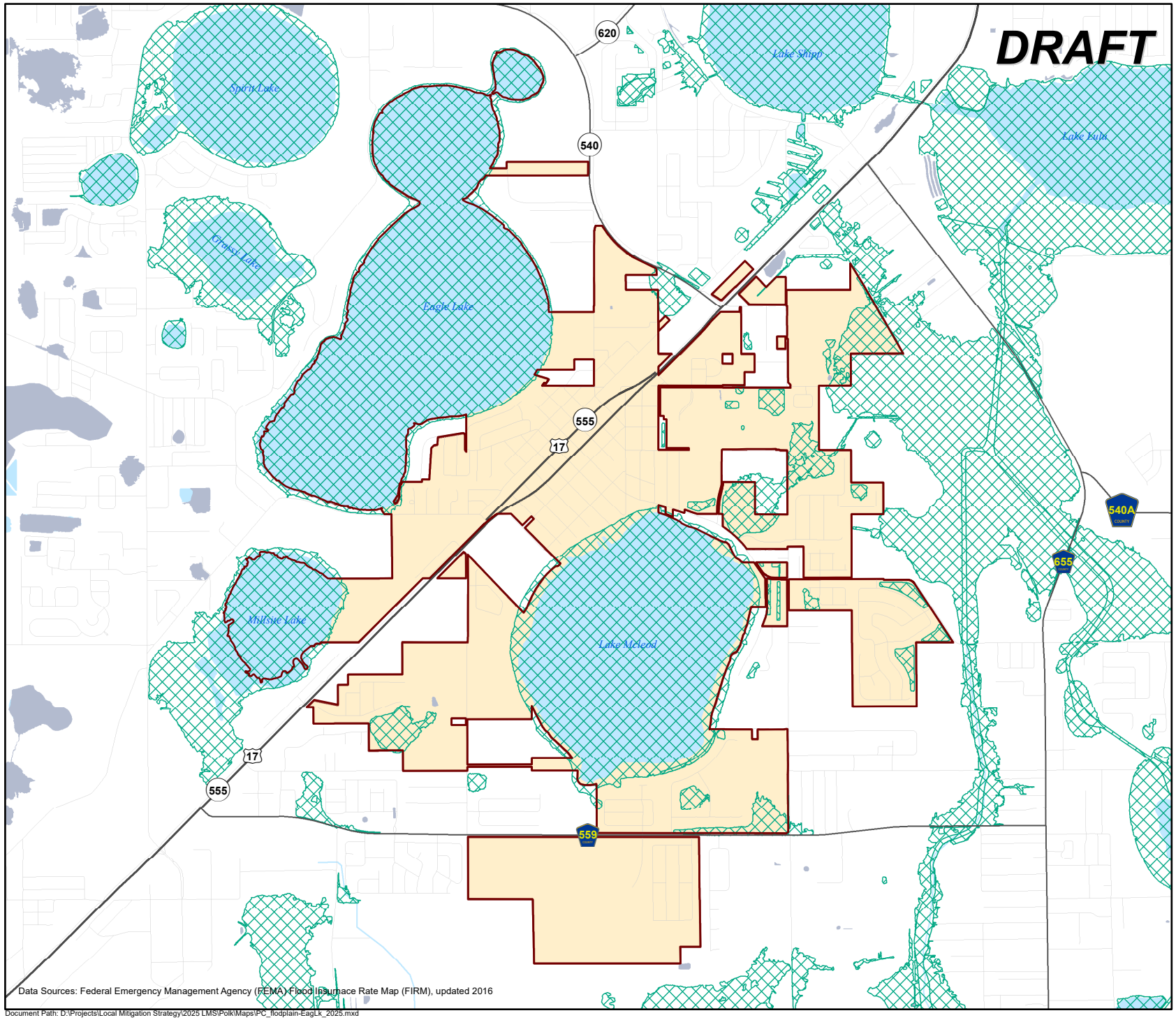
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 ½ 1
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Eagle Lake



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-EagLk_2025.mxd

Legend

- City of Eagle Lake
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

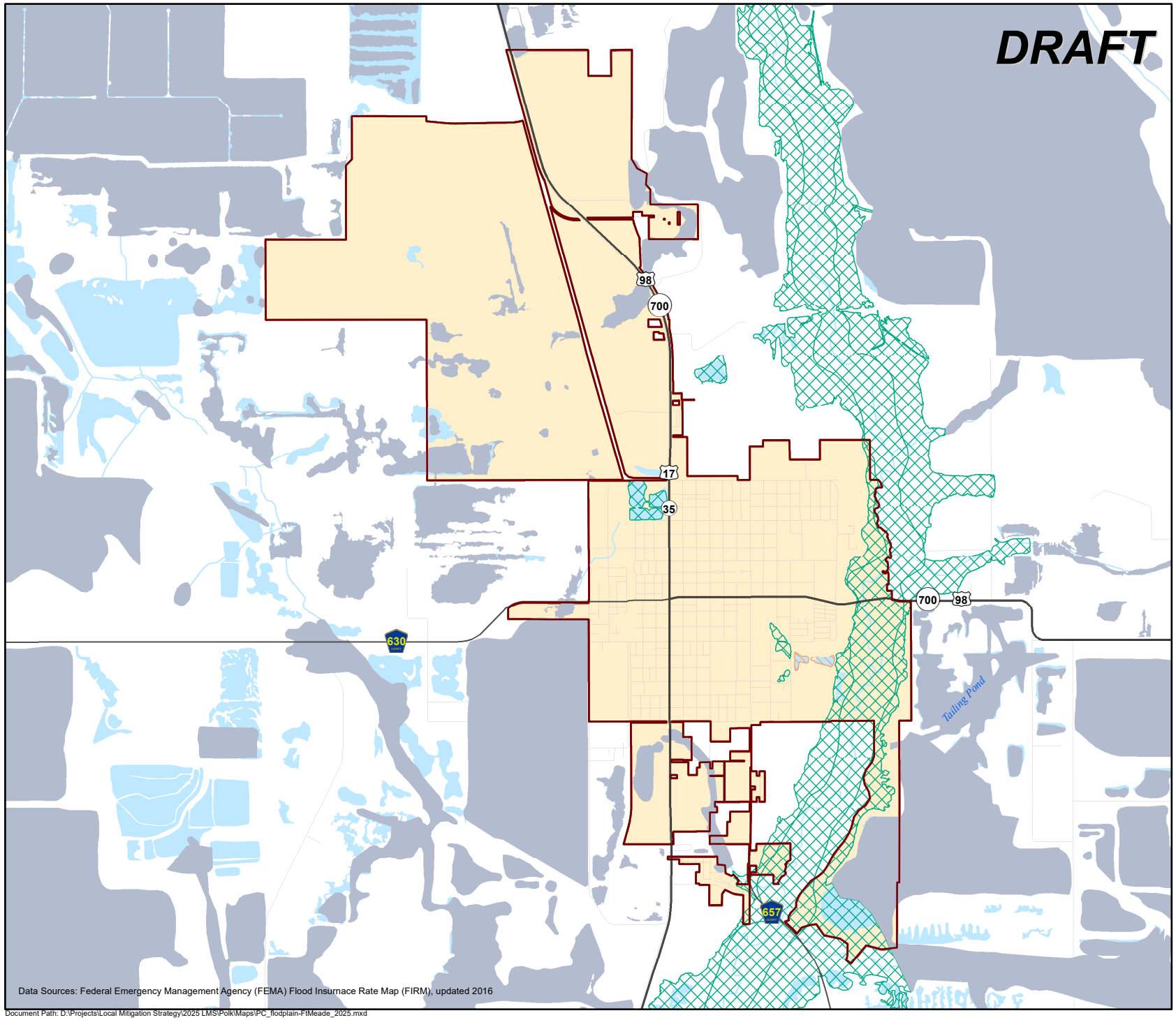
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 1,500 3,000
Feet

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Fort Meade



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurnace Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-FtMeade_2025.mxd

Legend

- City of Fort Meade
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

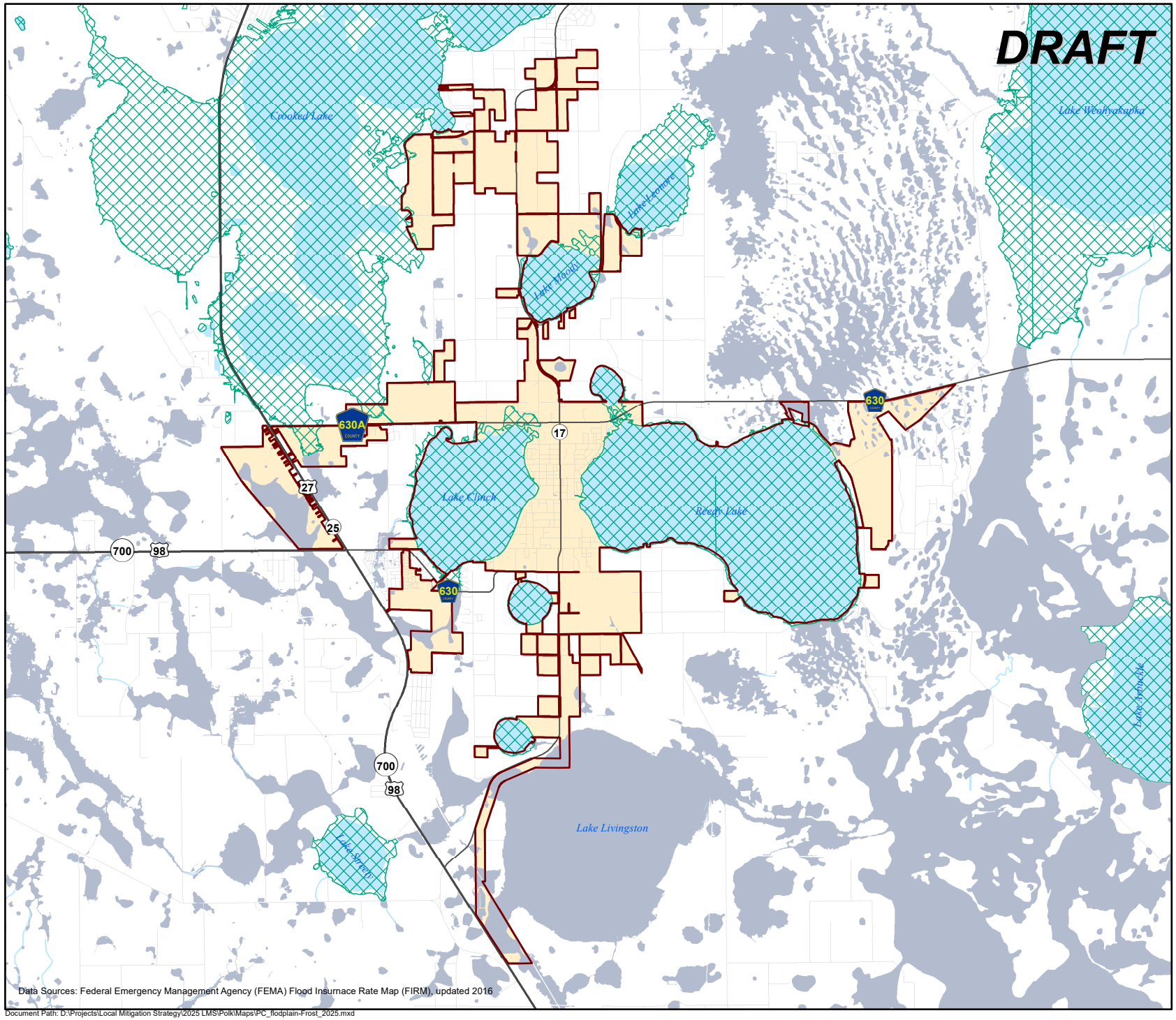
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 ½ 1
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Frostproof



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurnace Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_flodplain-Frost_2025.mxd

Legend

- City of Frostproof
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

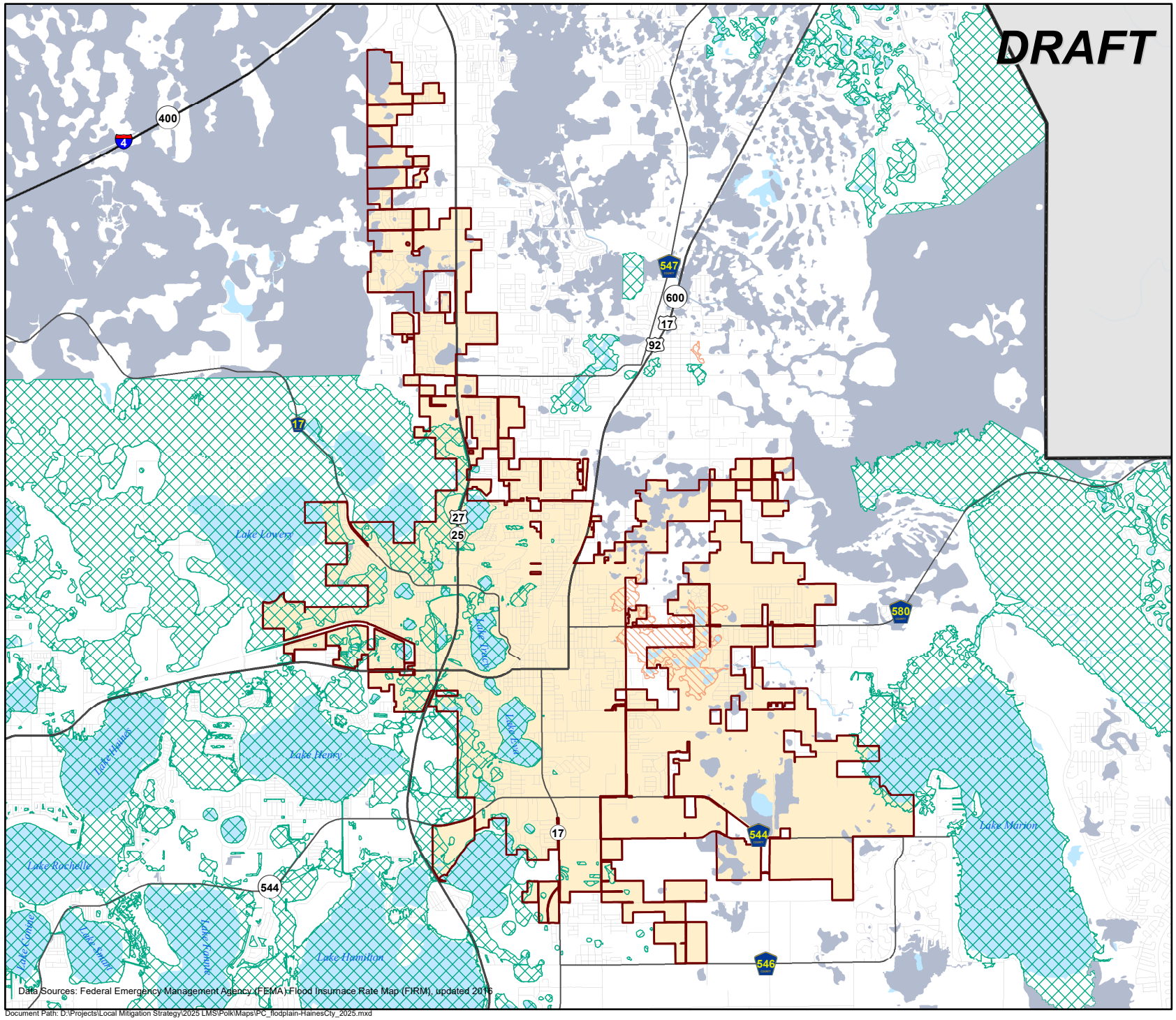
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 1 2
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Haines City



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-HainesCity_2025.mxd

Legend

- Polk County
- City of Haines City
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

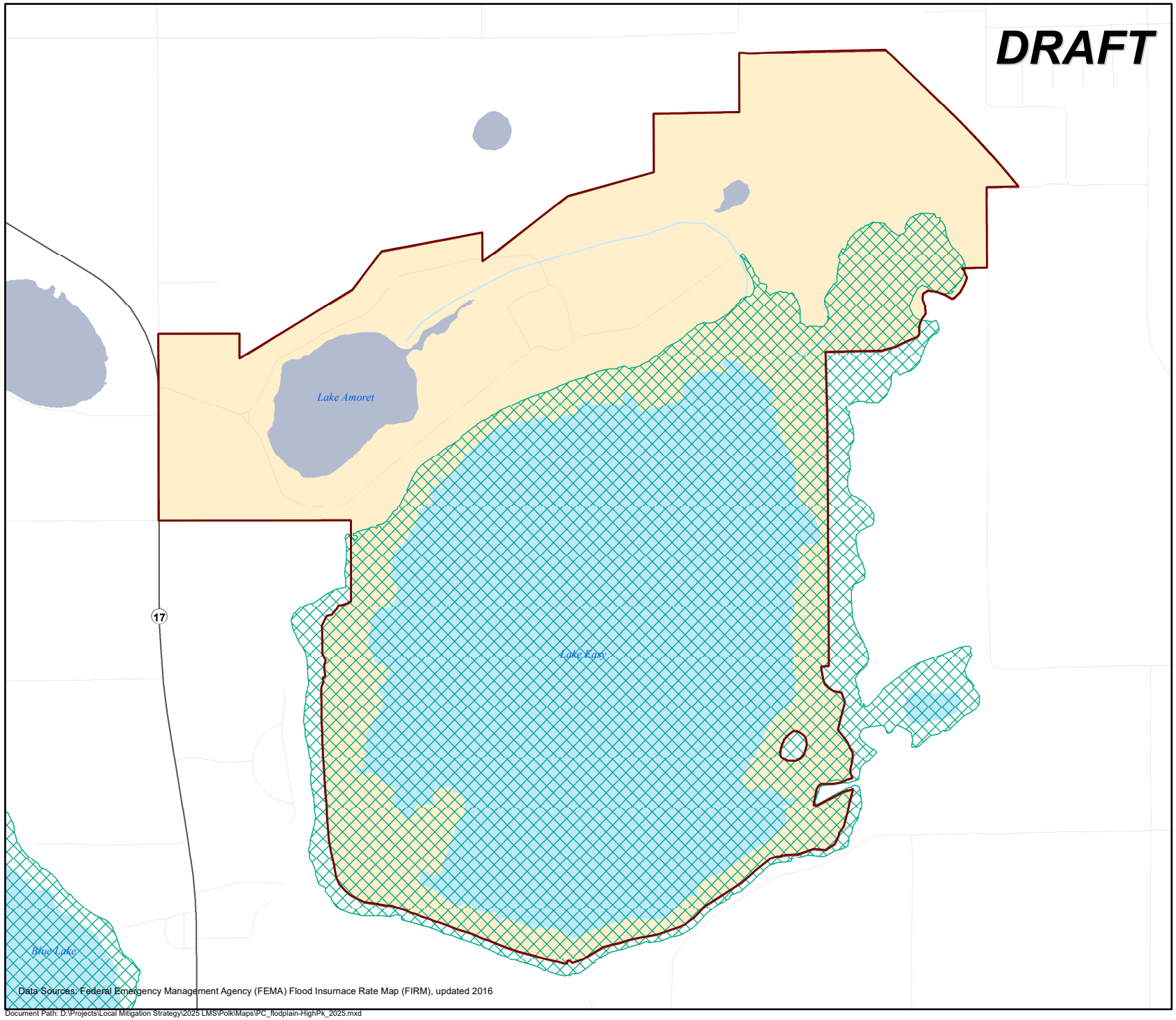
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 1 2
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - Village of Highland Park



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurnace Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-HighPk_2025.mxd

Legend

- Village of Highland Park
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

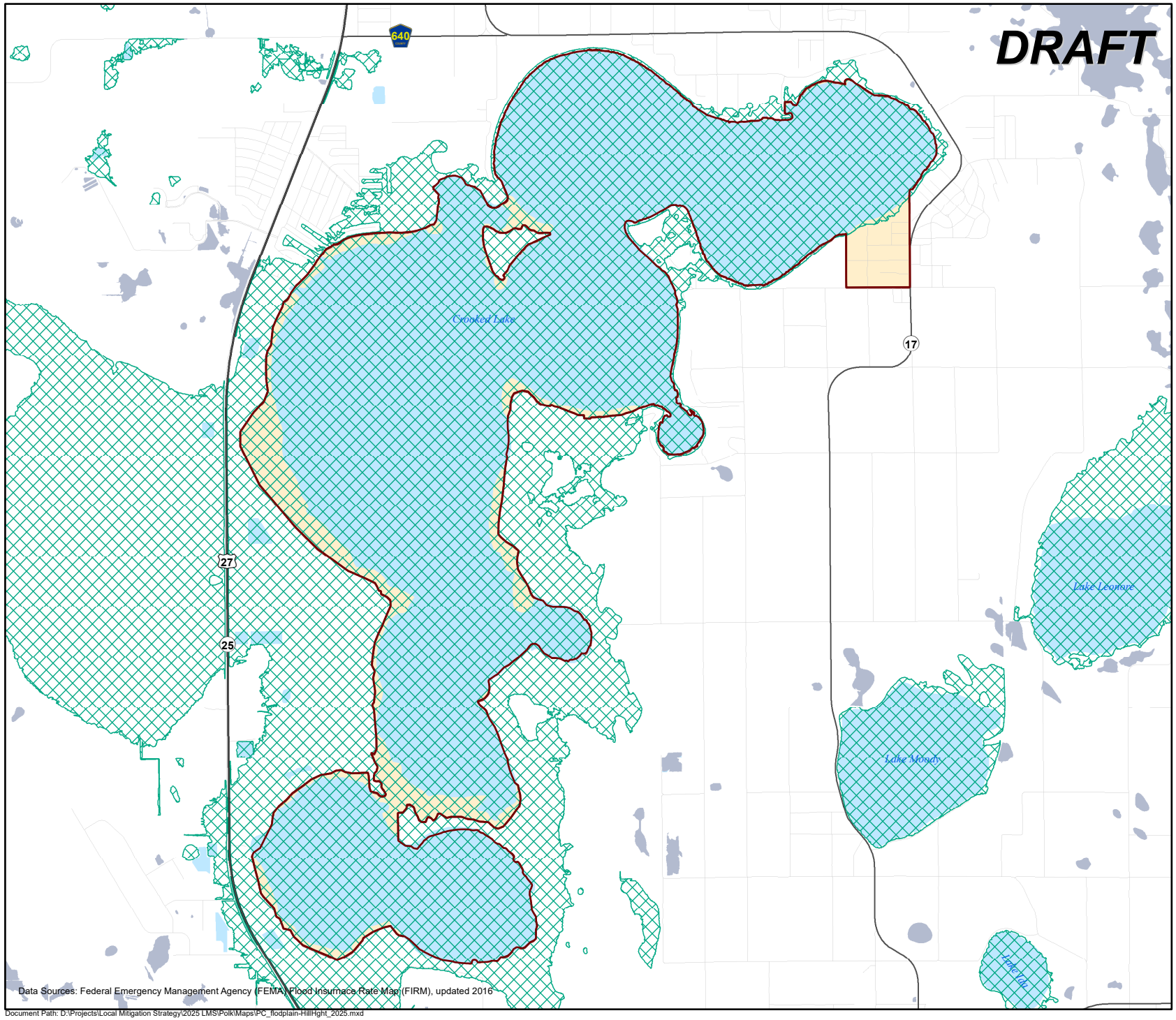
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 500 1,000
Feet

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - Town of Hillcrest Heights



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-HillHght_2025.mxd

Legend

- Town of Hillcrest Heights
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

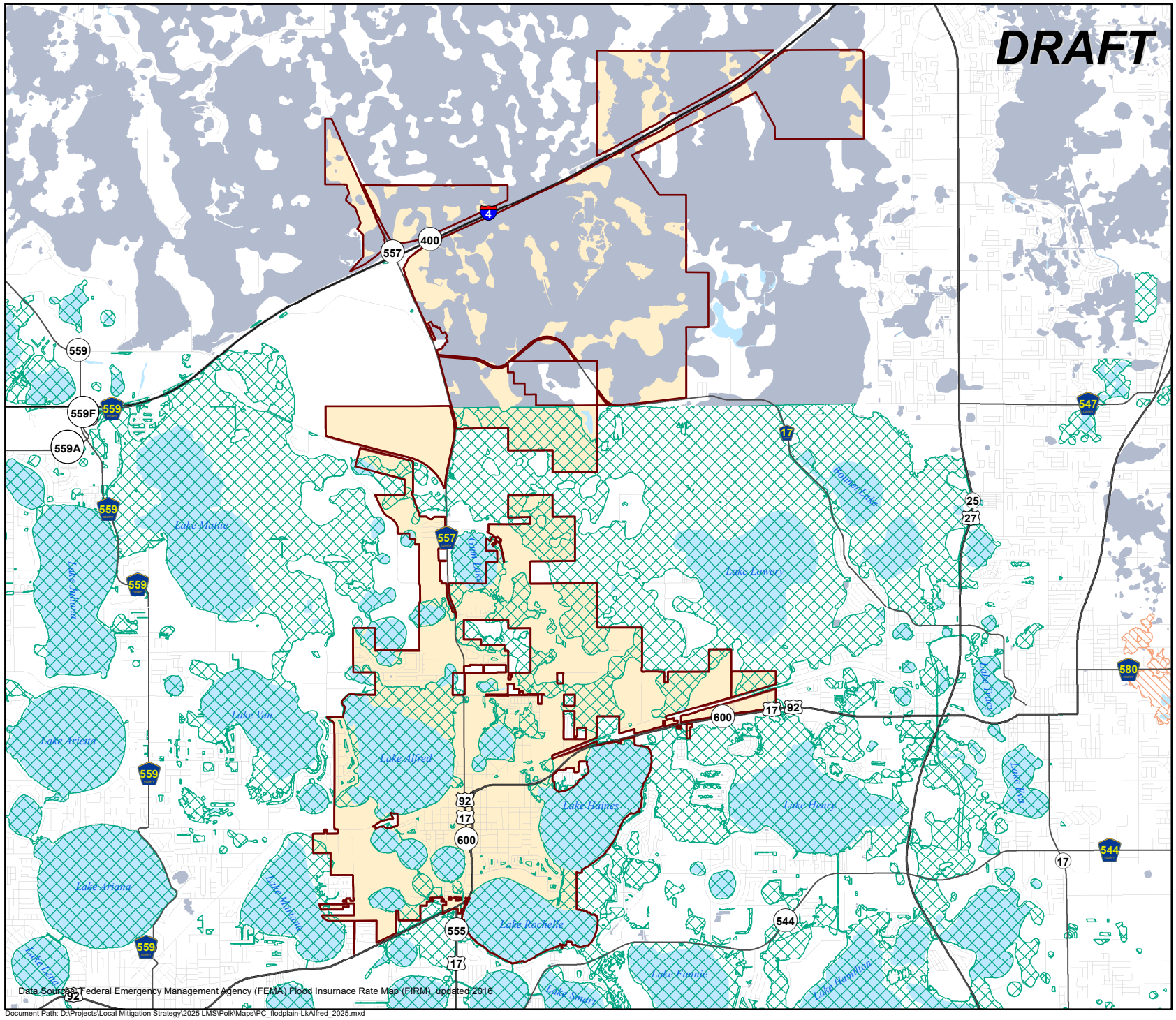
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 ½ 1
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Lake Alfred



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-LkAlfred_2025.mxd

Legend

- City of Lake Alfred
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

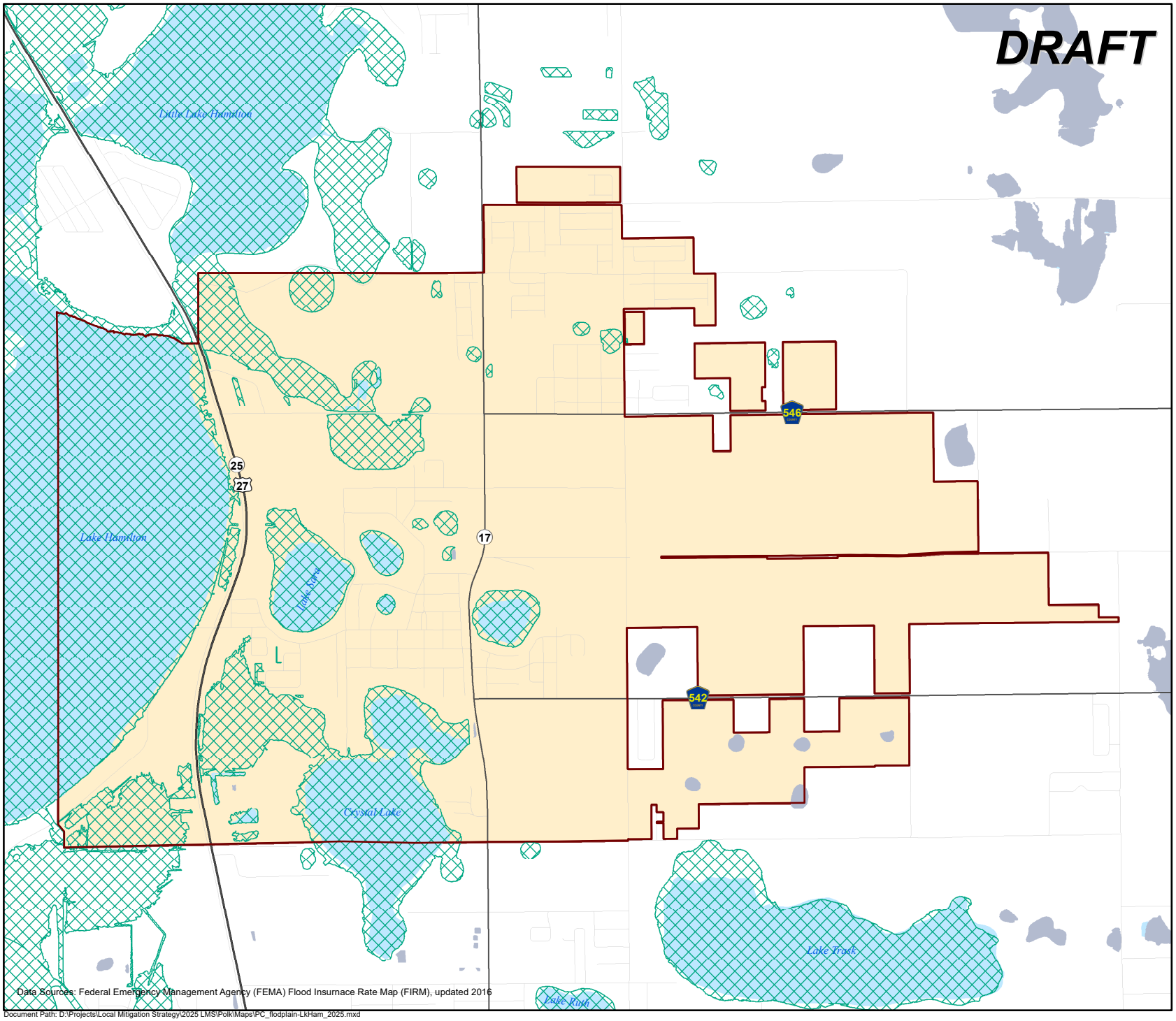
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 1 2
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - Town of Lake Hamilton



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurnace Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-LkHam_2025.mxd

Legend

- Town of Lake Hamilton
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

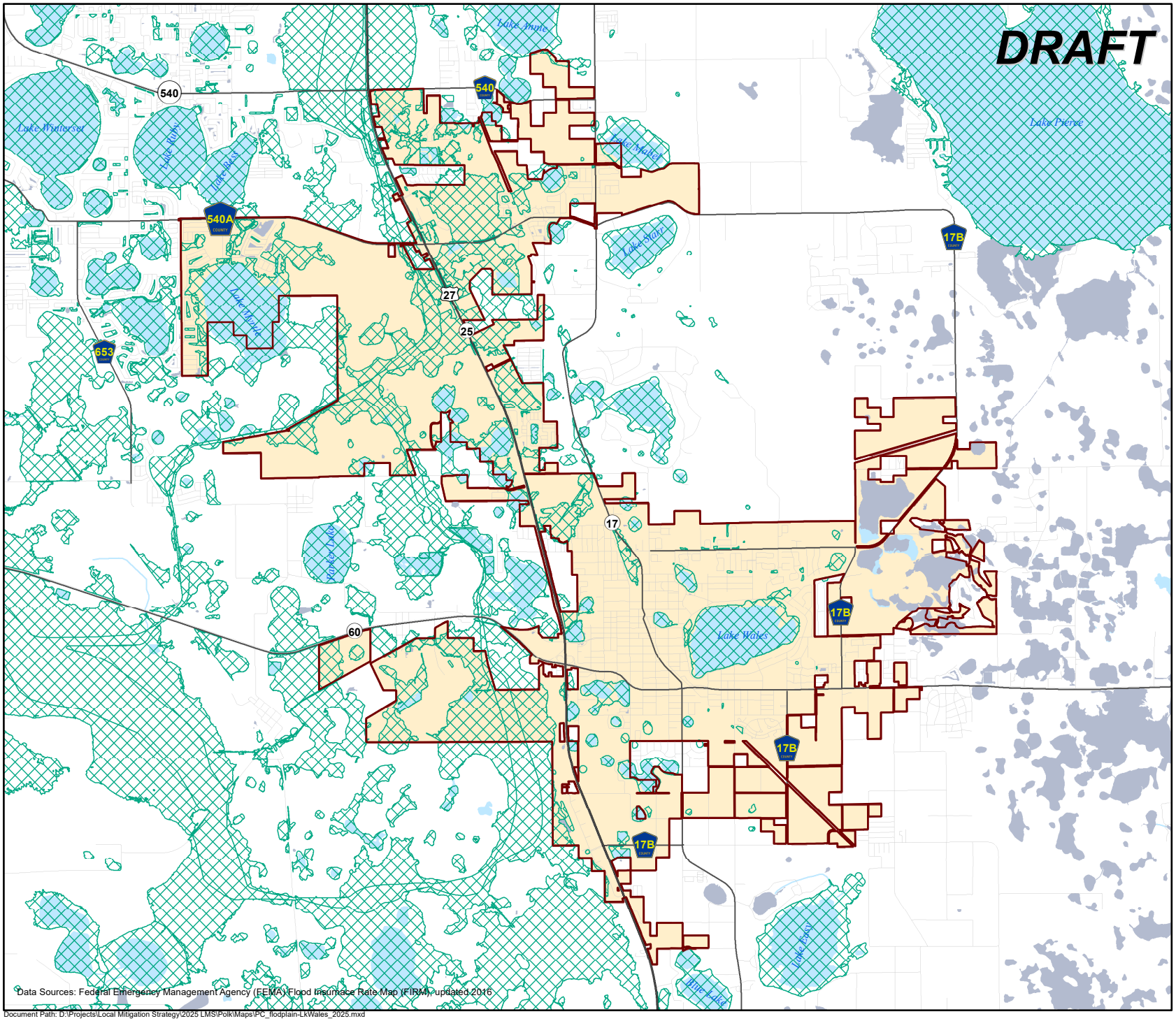
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 ¼ ½
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Lake Wales



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-LkWales_2025.mxd

Legend

- City of Lake Wales
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

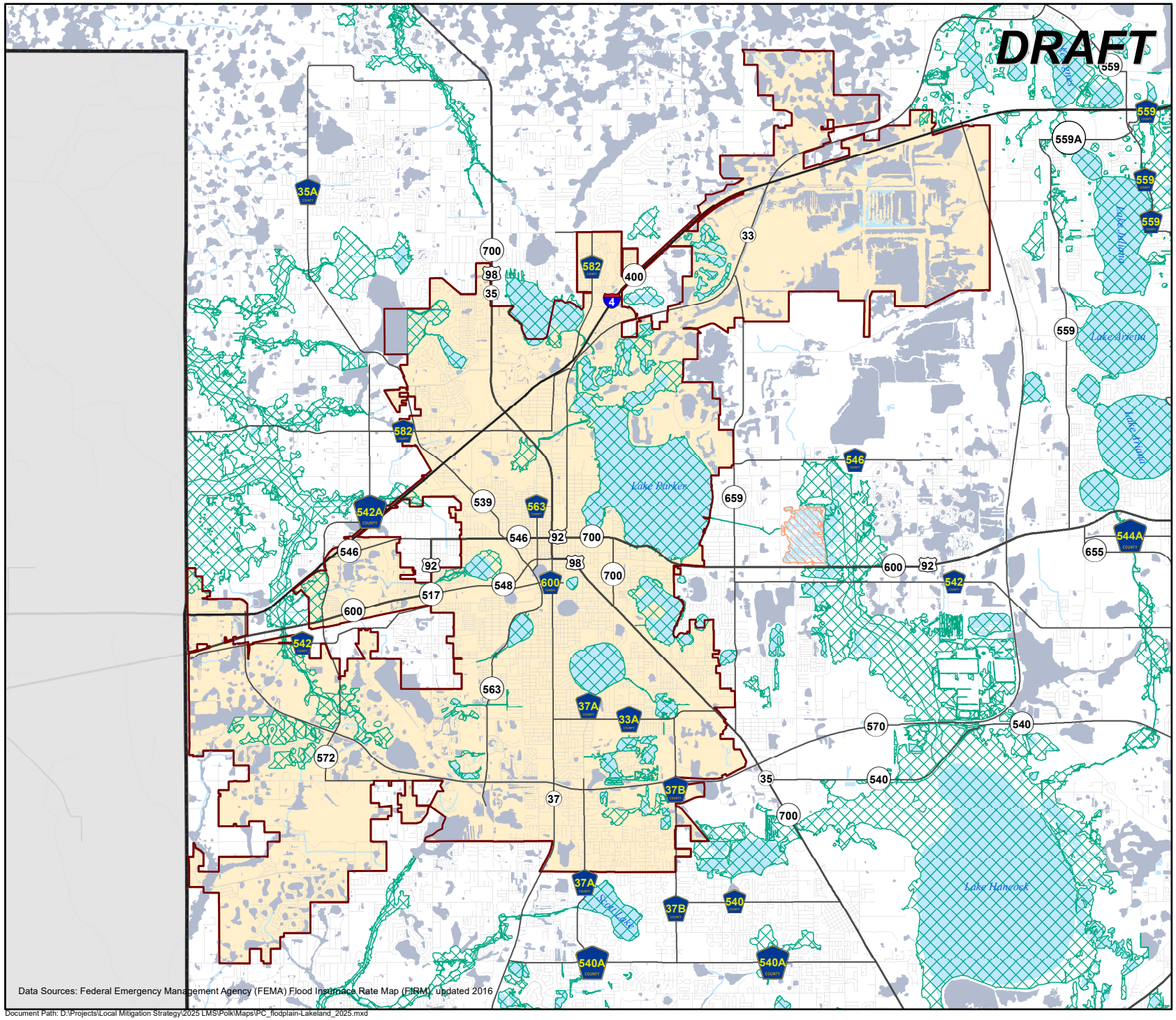
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 1 2
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Lakeland



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-Lakeland_2025.mxd

Legend

- Polk County
- City of Lakeland
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

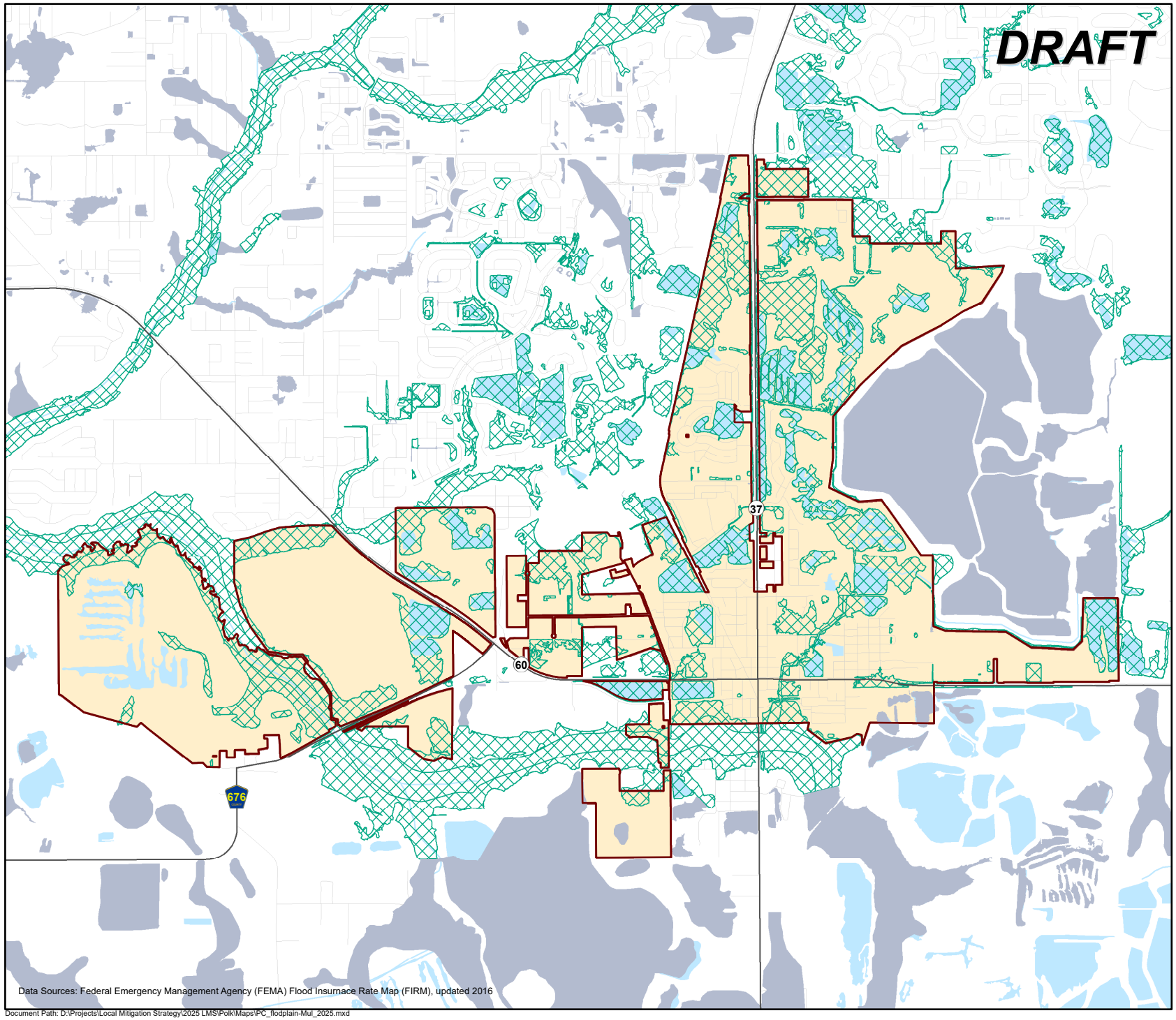
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 1½ 3
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Mulberry



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurnace Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-Mul_2025.mxd

Legend

- City of Mulberry
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

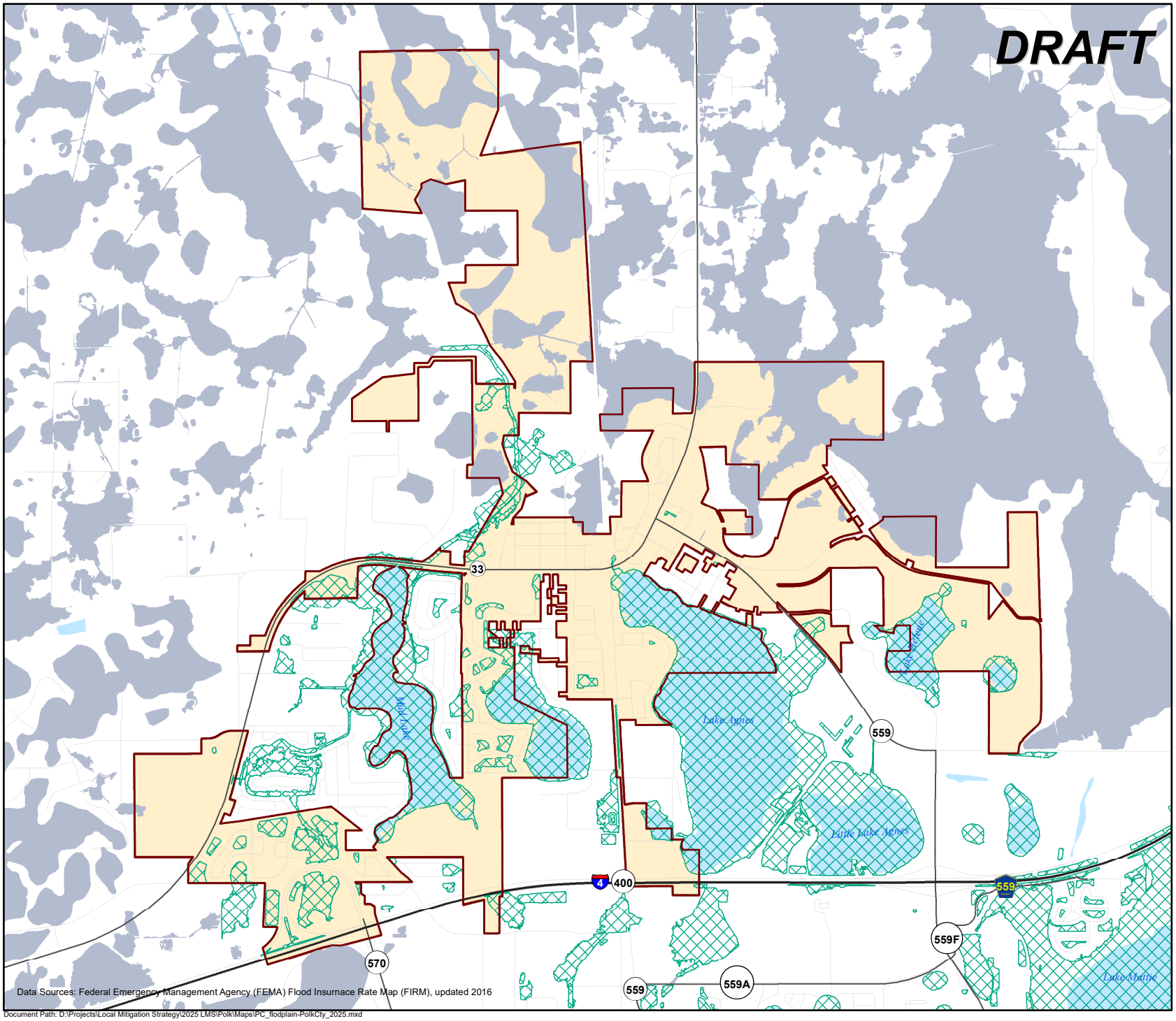
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 ½ 1
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Polk City



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurnace Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-PolkCty_2025.mxd

Legend

- City of Polk City
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

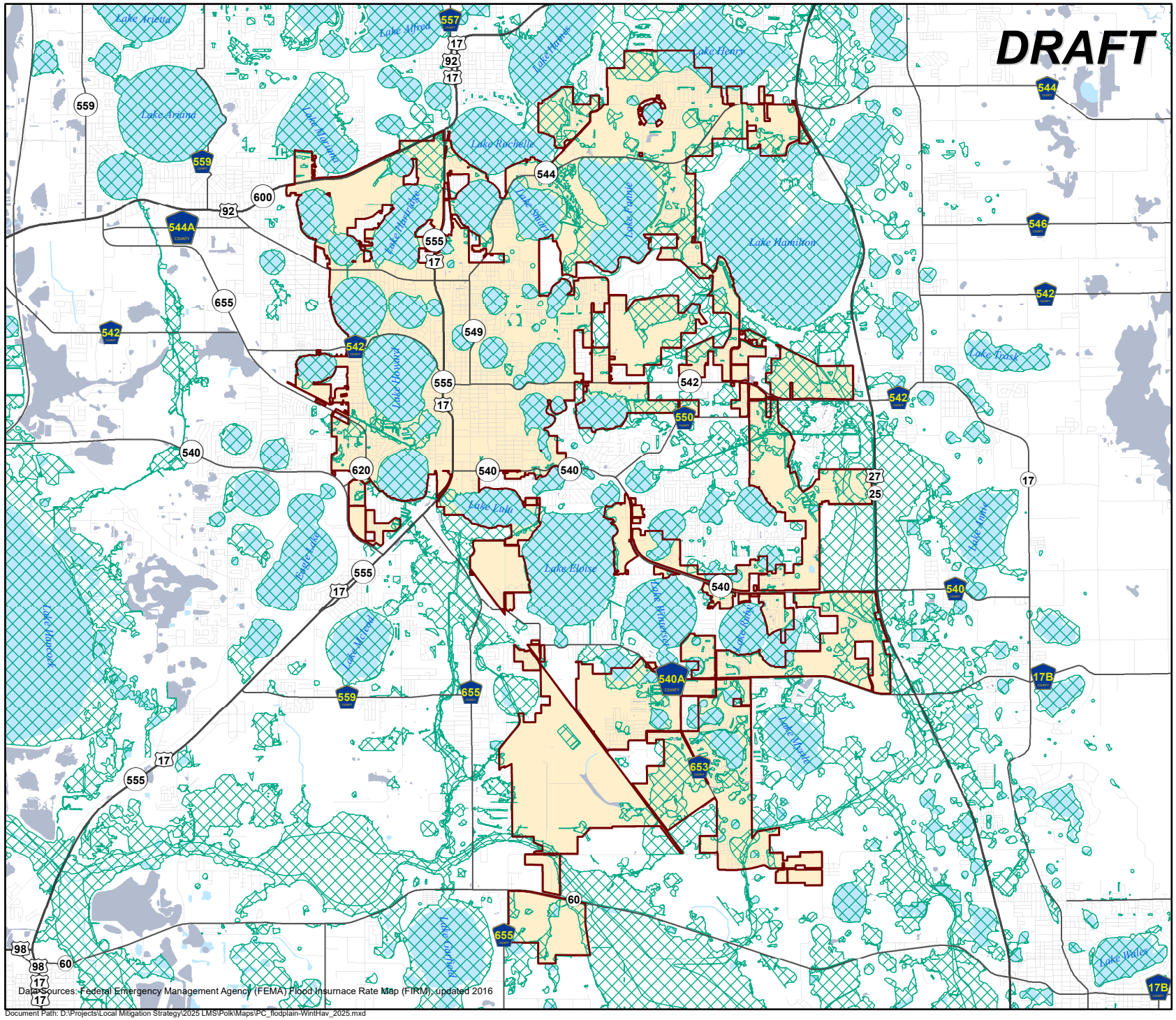
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 ½ 1
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Winter Haven



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurnace Rate Map (FIRM), updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-WintHav_2025.mxd

Legend

- City of Winter Haven
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

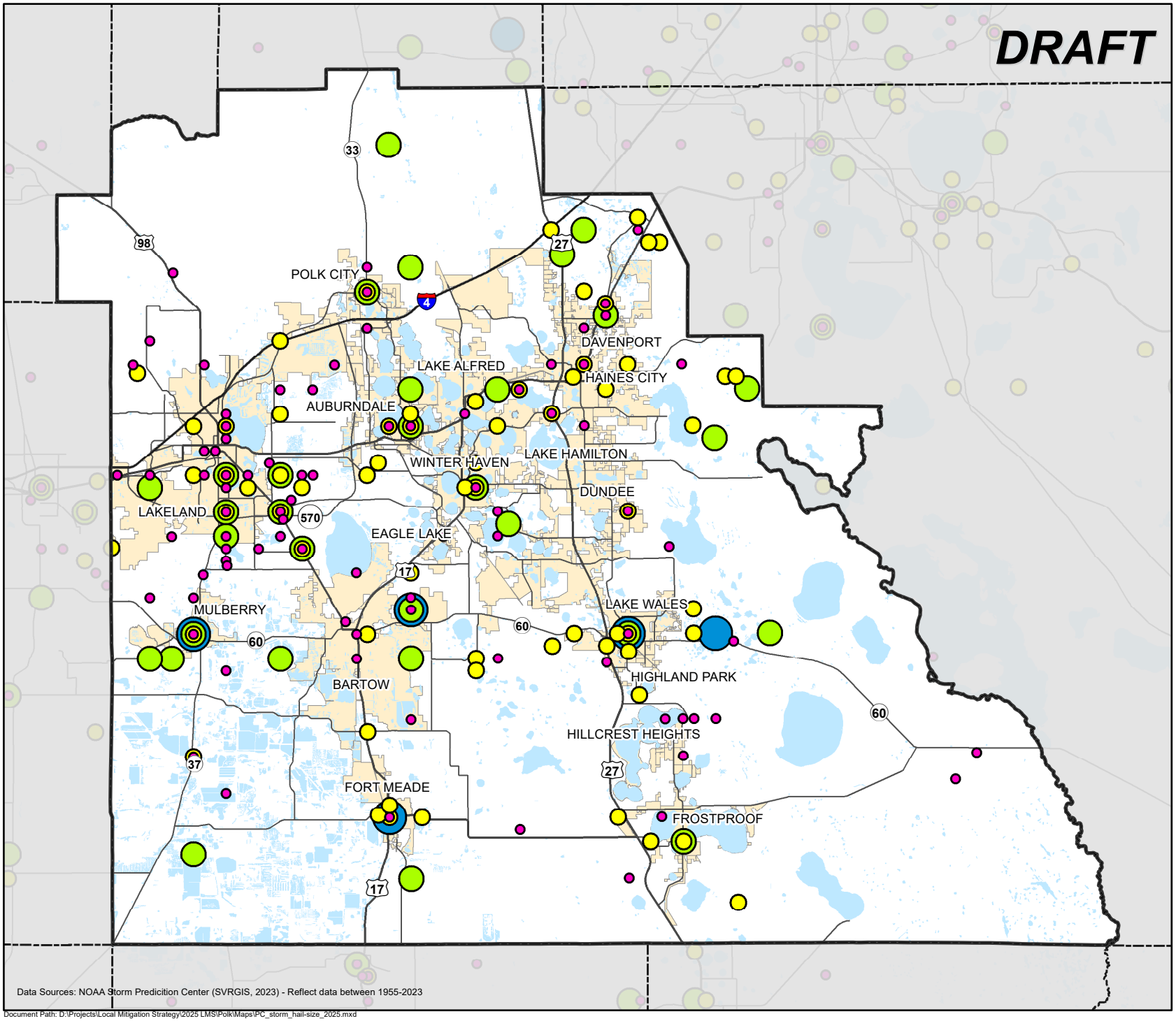
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 1½ 3
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Severe Thunderstorms - Hail (1960 - 2023)



Data Sources: NOAA Storm Predicition Center (SVRGIS, 2023) - Reflect data between 1955-2023

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_hail-size_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Hail Size (inches)

- 0.75 - 0.88
- 0.88 - 1.25
- 1.25 - 2.00
- 2.00 - 4.50

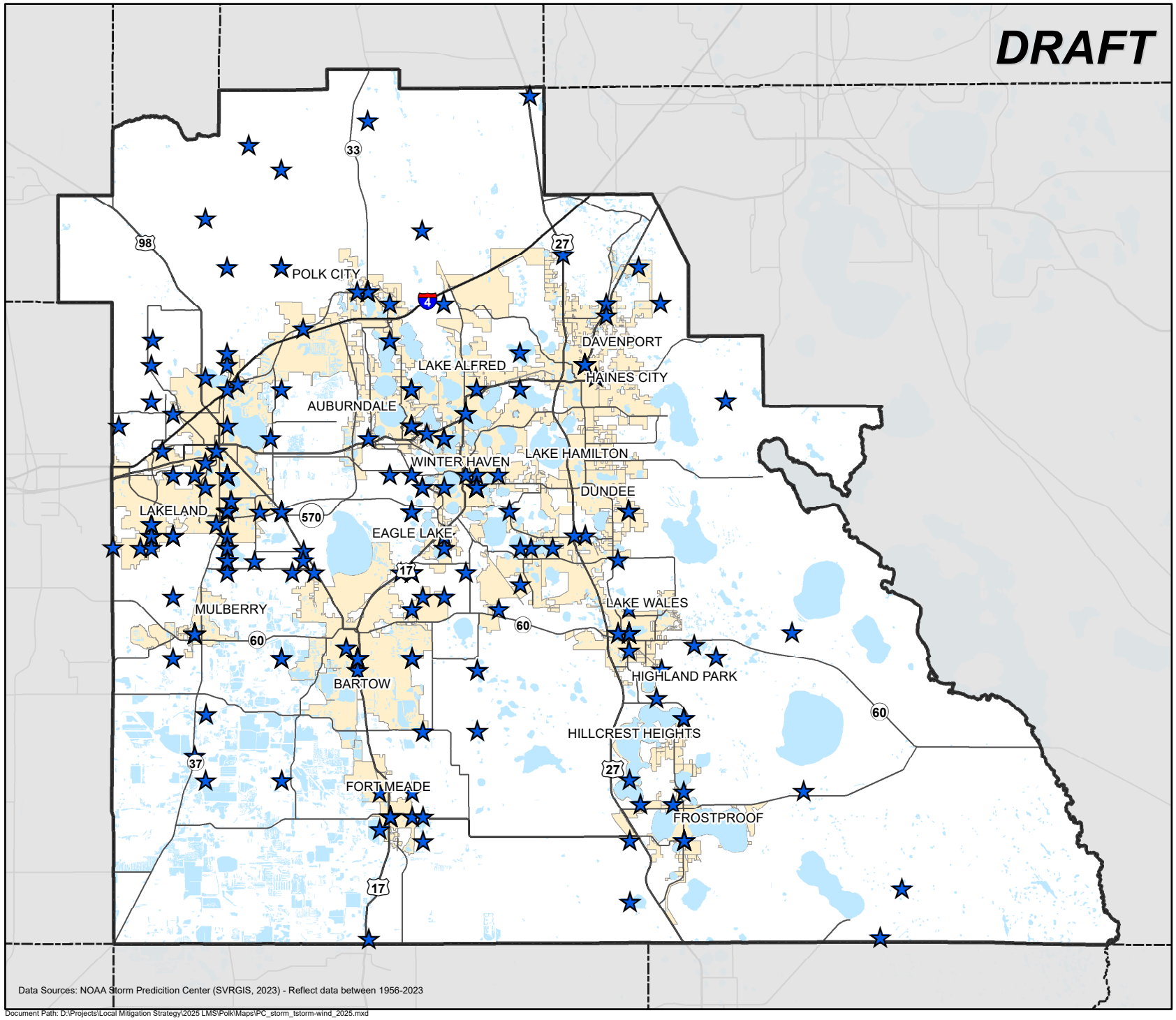
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Severe Thunderstorms - Wind (1956 - 2023)



Data Sources: NOAA Storm Predicition Center (SVRGIS, 2023) - Reflect data between 1956-2023

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_tstorm-wind_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

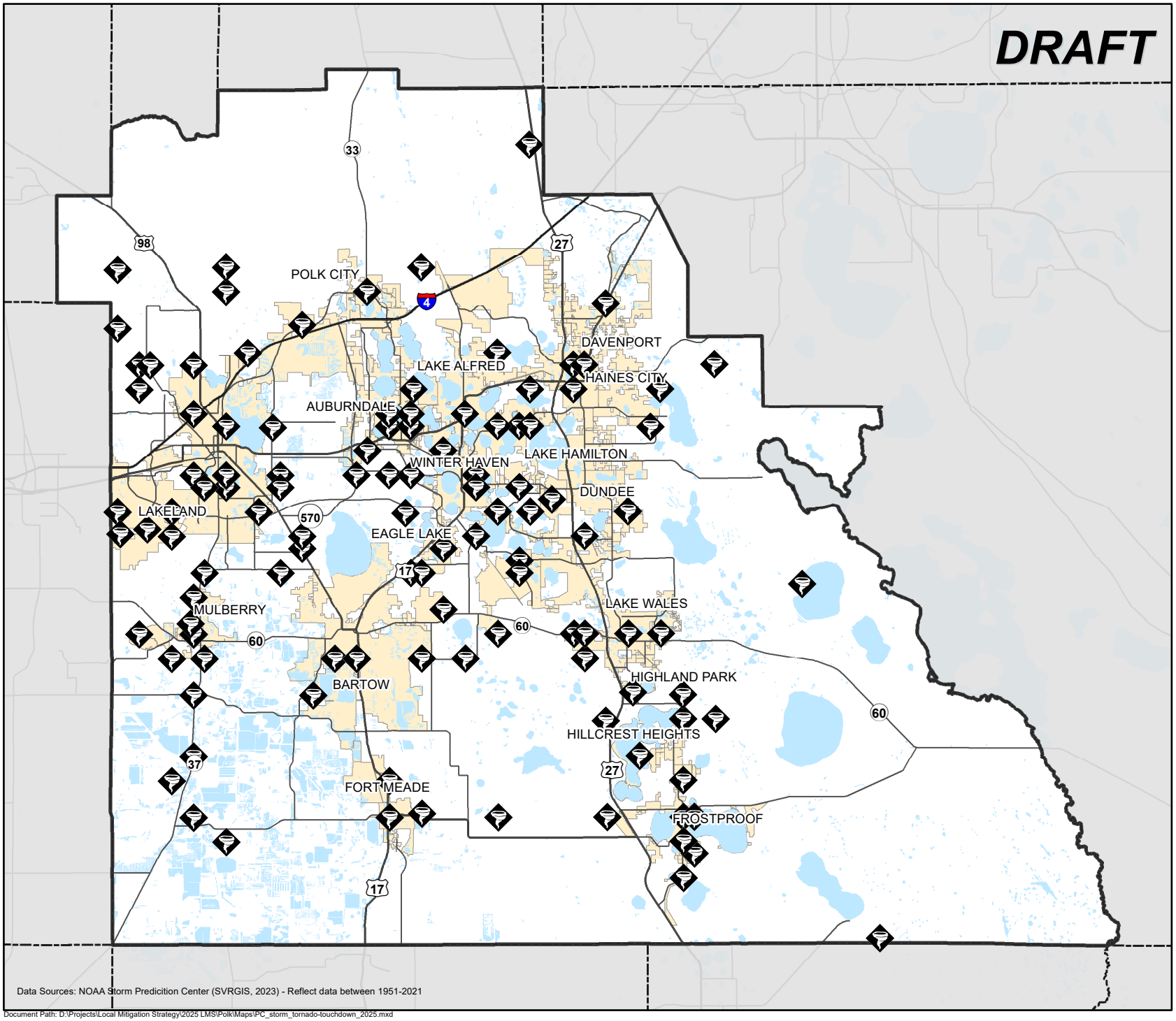
Severe Thunderstorms - Wind

- Wind Locations

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Tornado Touchdowns (1951 - 2021)



Data Sources: NOAA Storm Predicition Center (SVRGIS, 2023) - Reflect data between 1951-2021

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_tornado-touchdown_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Tornado Event

- Touchdown Location

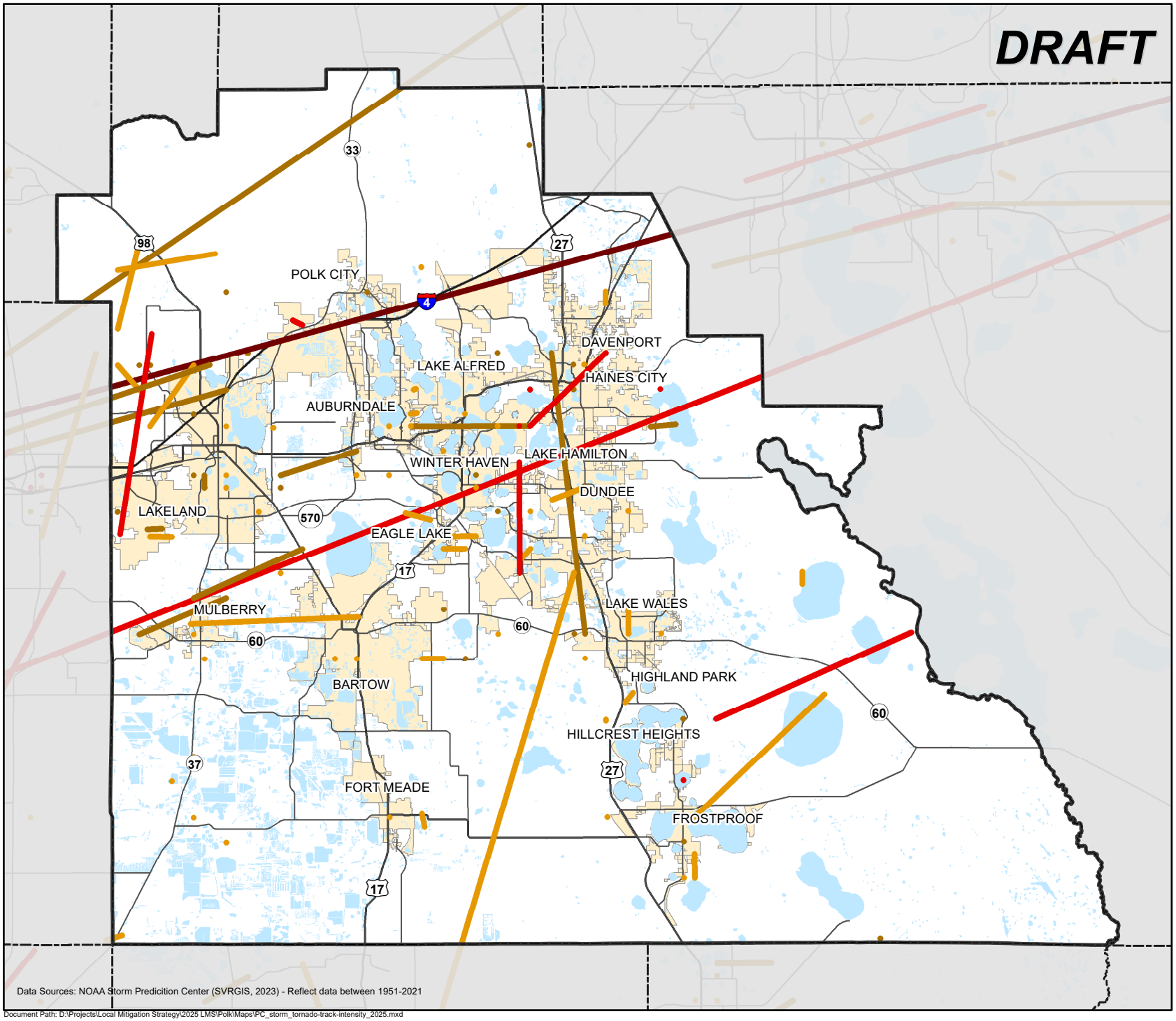
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Tornado Tracks by Intensity (1951 - 2021)



Data Sources: NOAA Storm Predicition Center (SVRGIS, 2023) - Reflect data between 1951-2021

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_tornado-track-intensity_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Tornado - Fujita (F-Scale)

- F0 (>73 MPH)
- F1 (73 - 112 MPH)
- F2 (113 - 157 MPH)
- F4 (207 - 260 MPH)

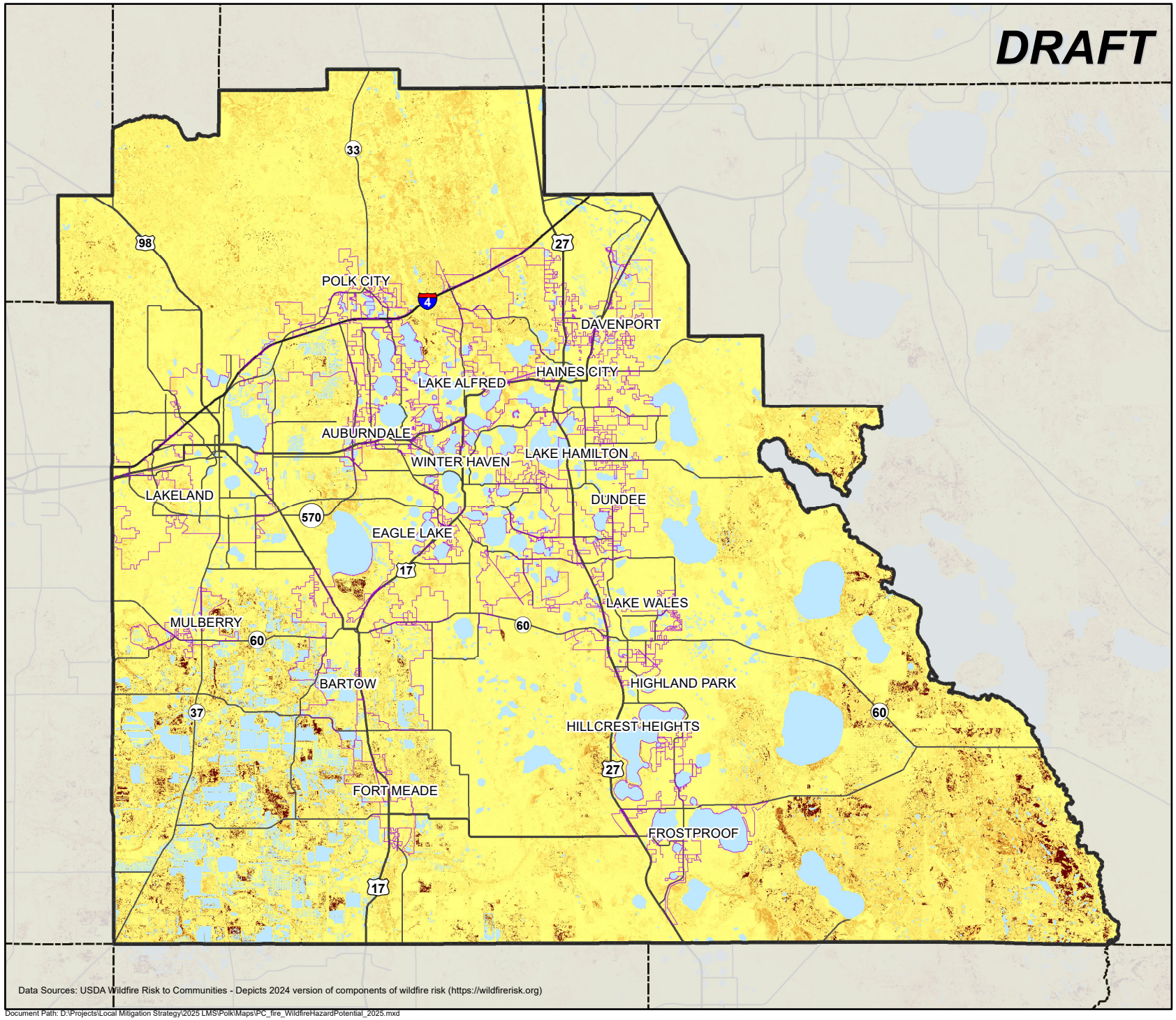
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Wildfire Hazard Potential



Data Sources: USDA Wildfire Risk to Communities - Depicts 2024 version of components of wildfire risk (https://wildfirerisk.org)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_fire_WildfireHazardPotential_2025.mxd

Legend

- Polk County
- Water Bodies

Wildfire Hazard Potential

- High
- Low

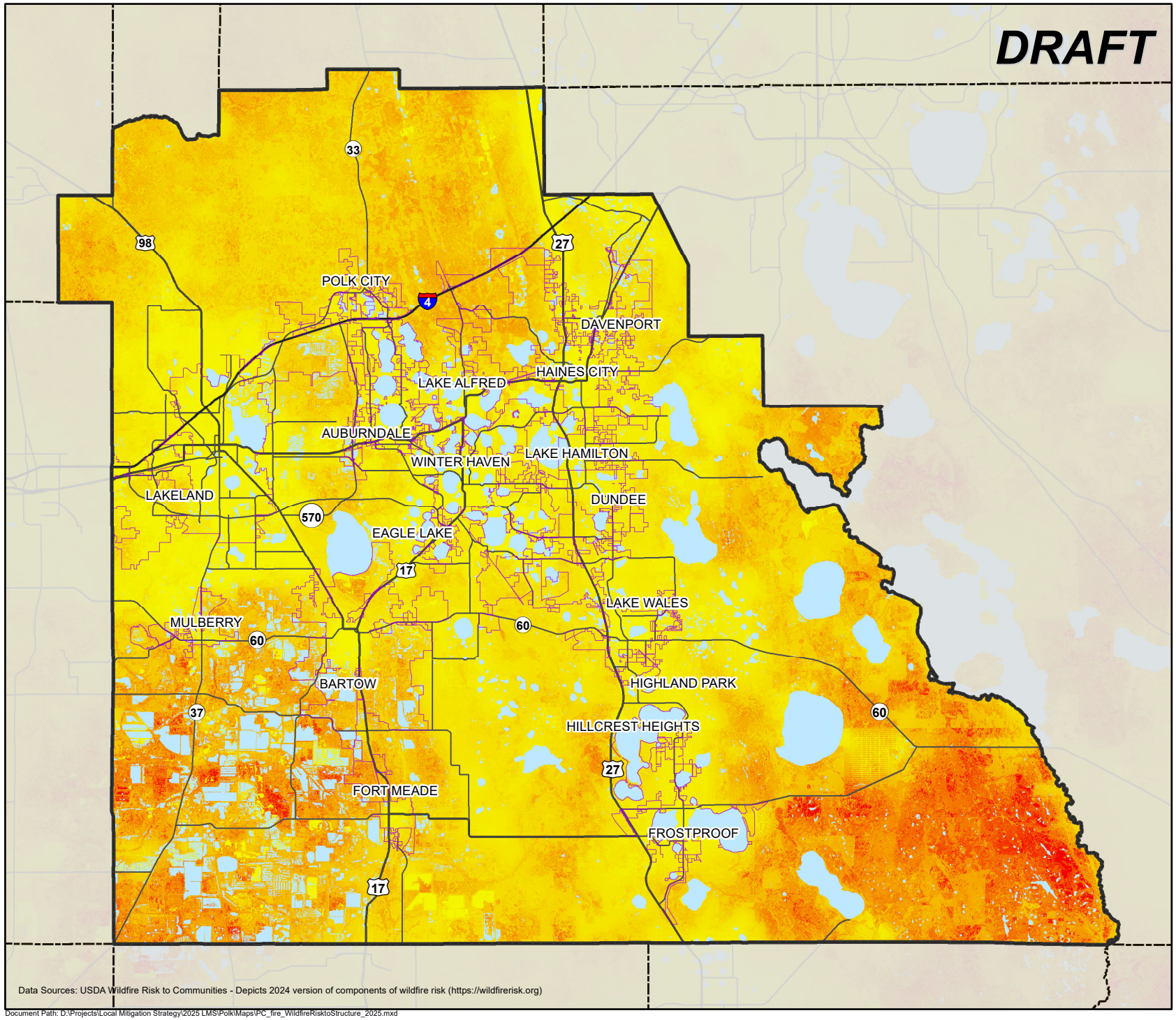
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Potential Wildfire Risk to Structures



Data Sources: USDA Wildfire Risk to Communities - Depicts 2024 version of components of wildfire risk (https://wildfirerisk.org)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_fire_WildfireRisktoStructure_2025.mxd

Legend

- Polk County
- Water Bodies

Potential Wildfire Risk

- High
- Low

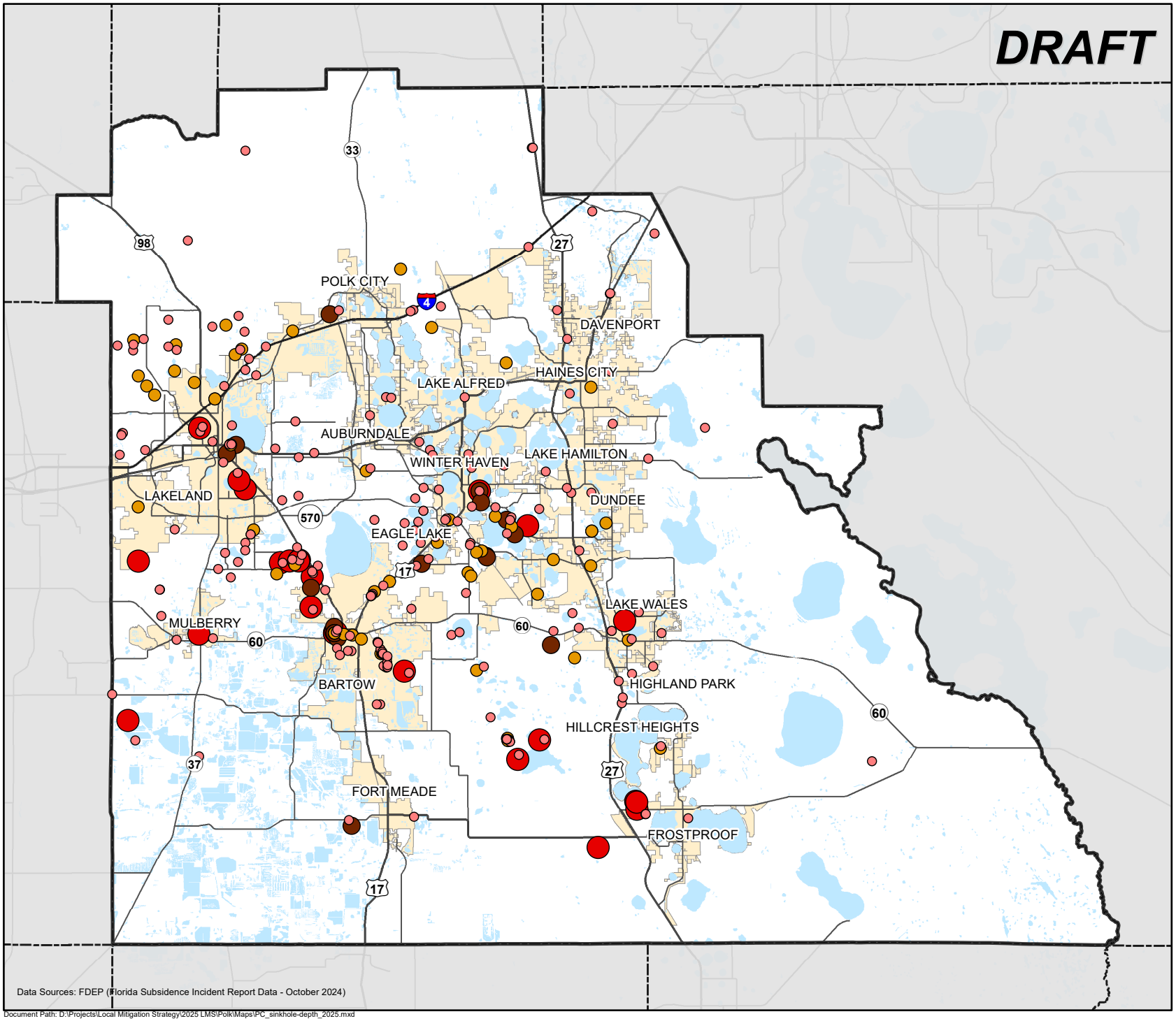
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Sinkhole Depths (1954 - 2024)



Data Sources: FDEP (Florida Subsidence Incident Report Data - October 2024)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_sinkhole-depth_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Sinkhole Depths

- < 10 feet
- 10 - 30 feet
- 30 - 50 feet
- 50 - 200 feet

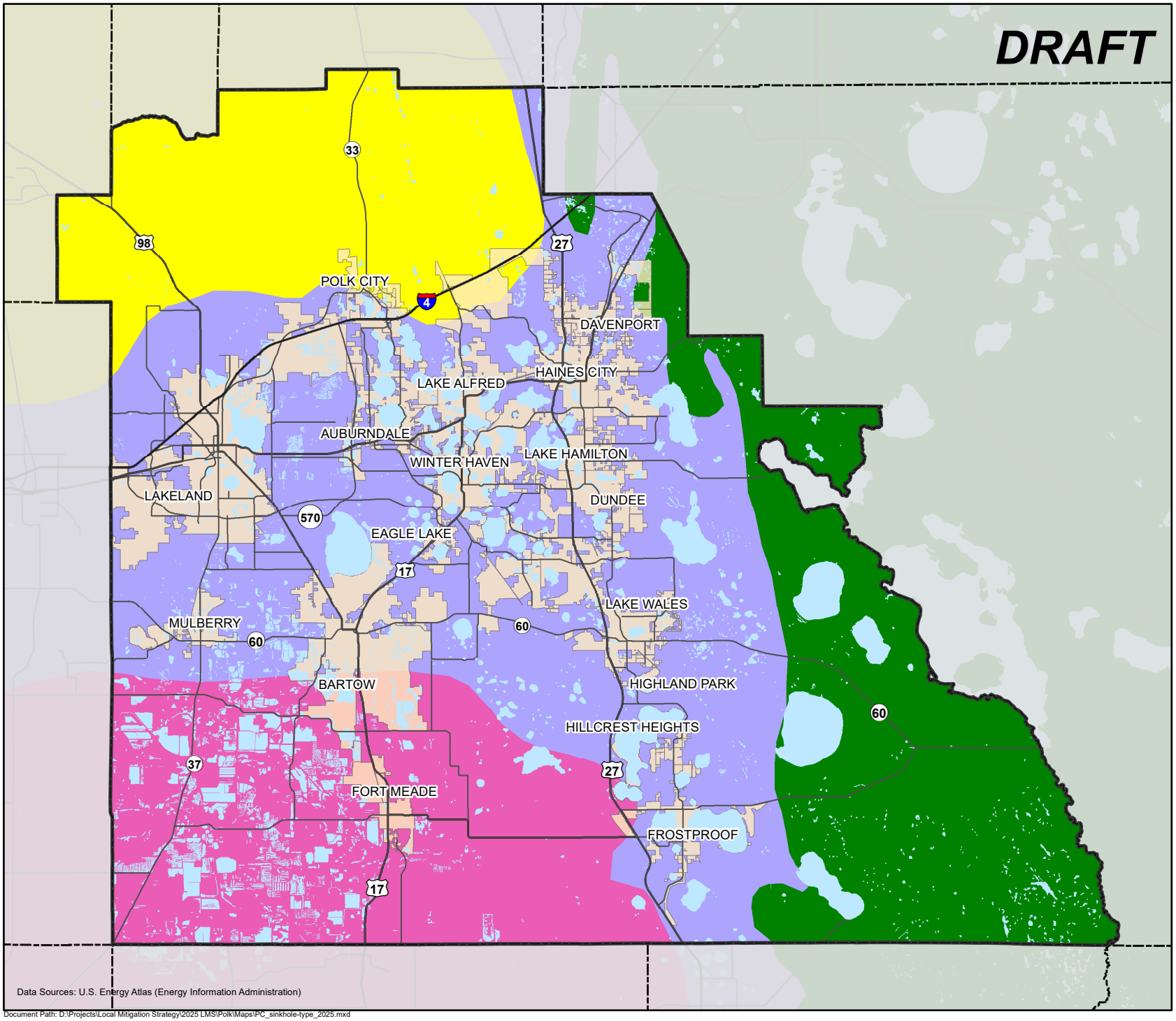
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Sinkhole Area Types



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_sinkhole-type_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Florida Sinkhole Types

- Area I
- Area II
- Area III
- Area IV

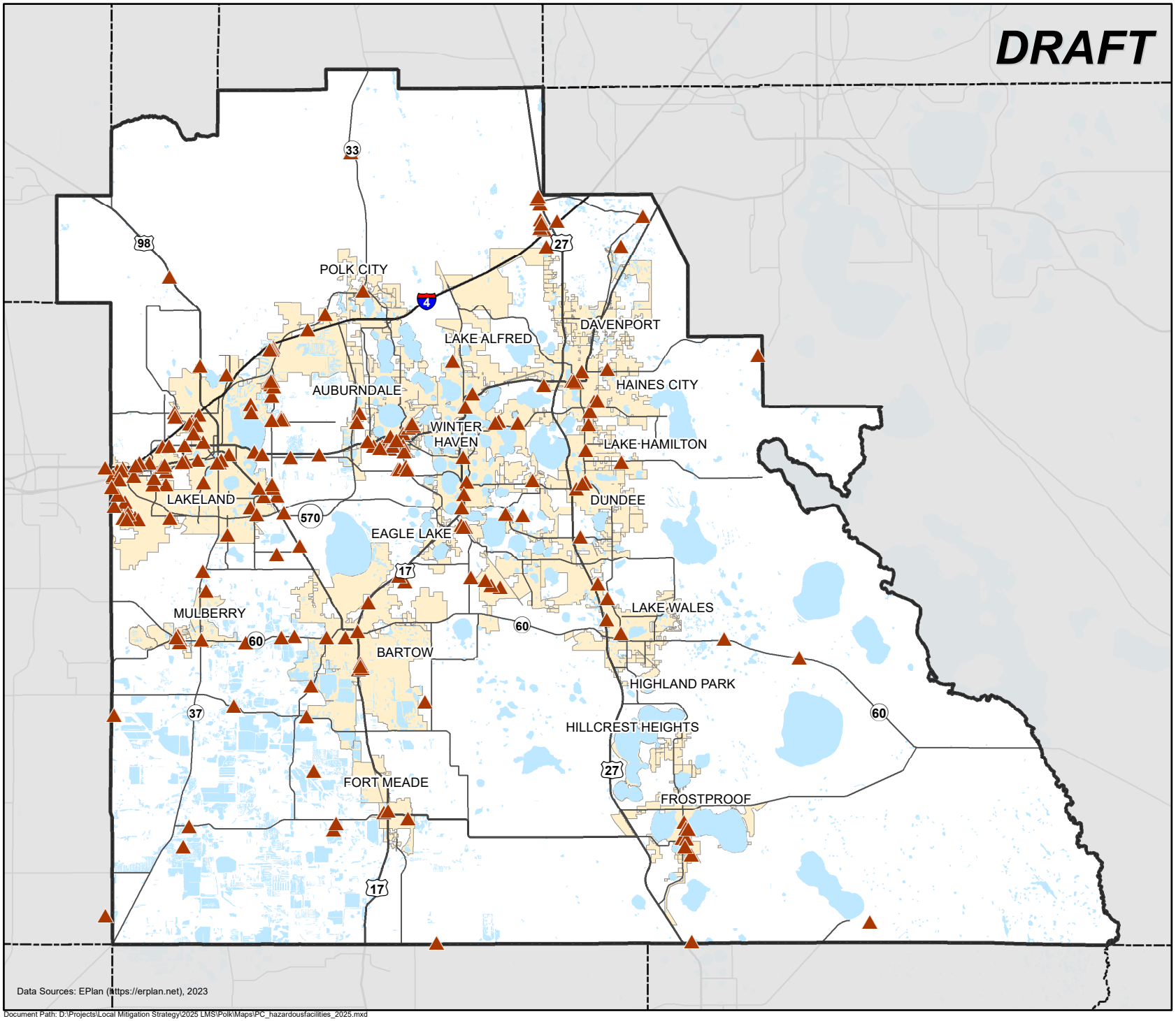
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Harzardous Facilities



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_hazardousfacilities_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Hazardous Facilities

- Facility

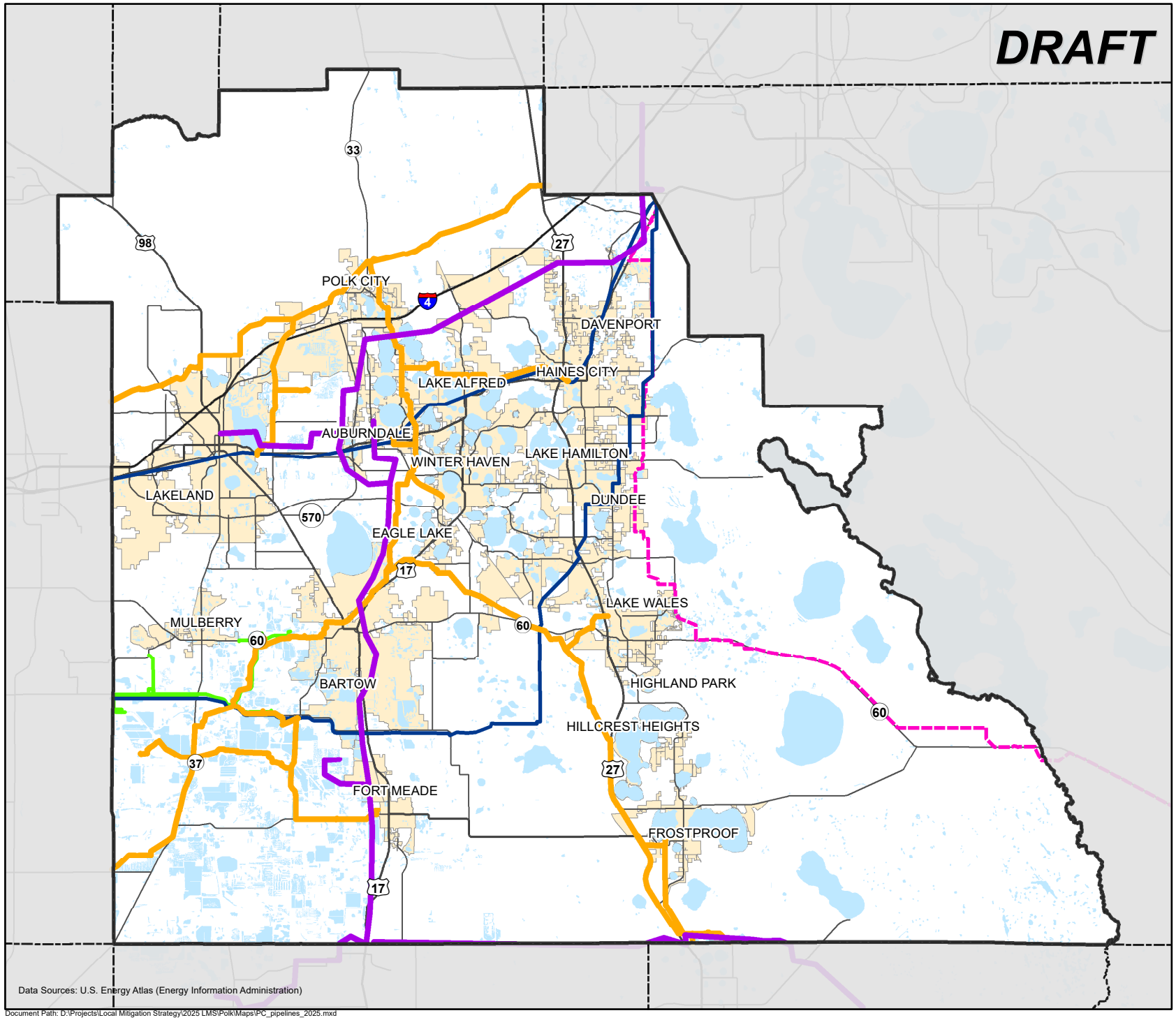
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Natural Gas Interstate & Intrastate Pipelines



Data Sources: U.S. Energy Atlas (Energy Information Administration)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_pipelines_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Pipelines

- Gulfstream Pipeline Co
- Florida Gas Trans Co
- Central FL Pipeline
- Ammonia Pipeline
- Proposed FSC Pipeline

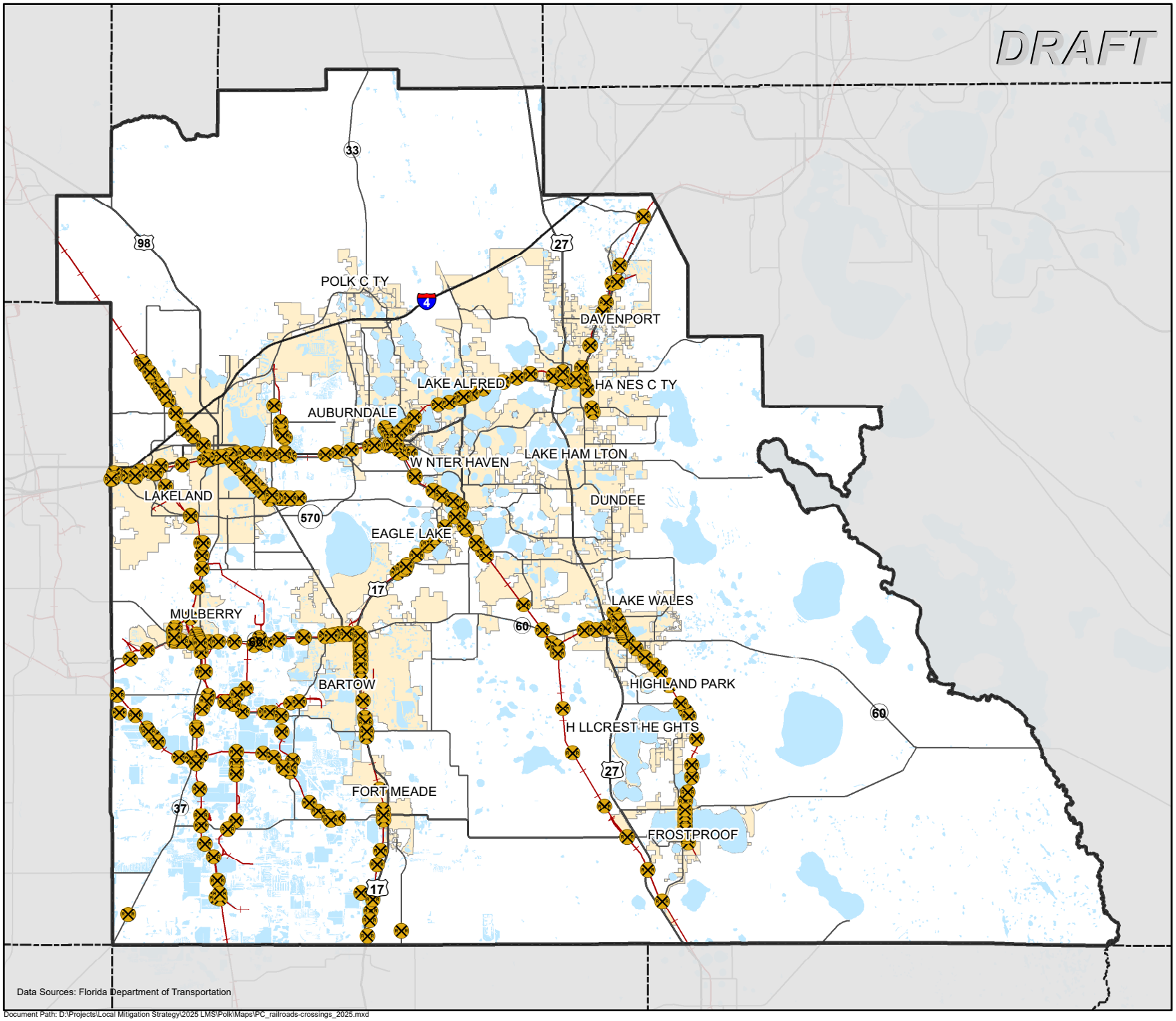
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Railroad Lines and Railroad Crossings



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_railroads-crossings_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Railroad Facilities

- Railroad Lines
- Railroad Crossings

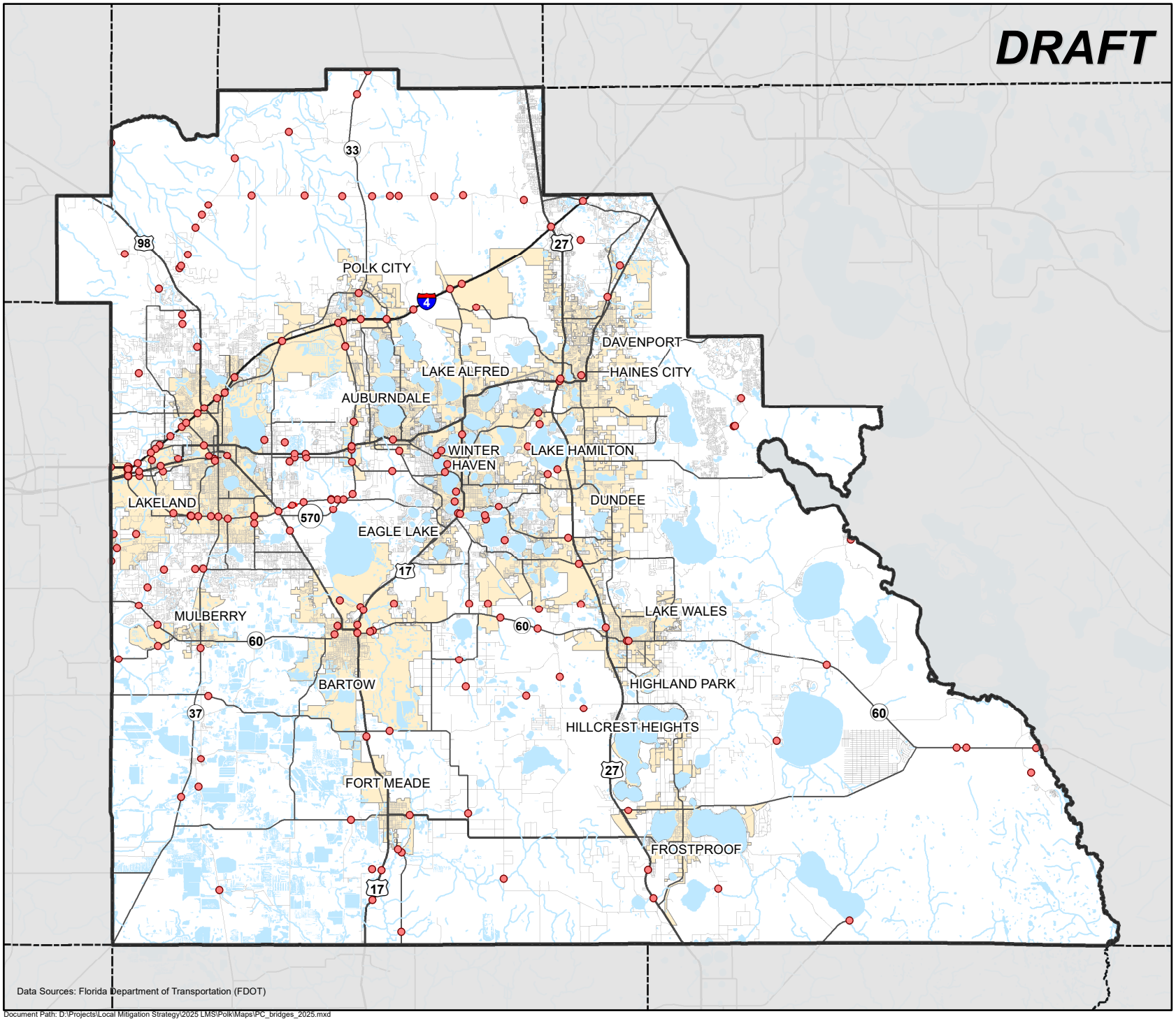
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Bridges



Data Sources: Florida Department of Transportation (FDOT)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_bridges_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Bridges

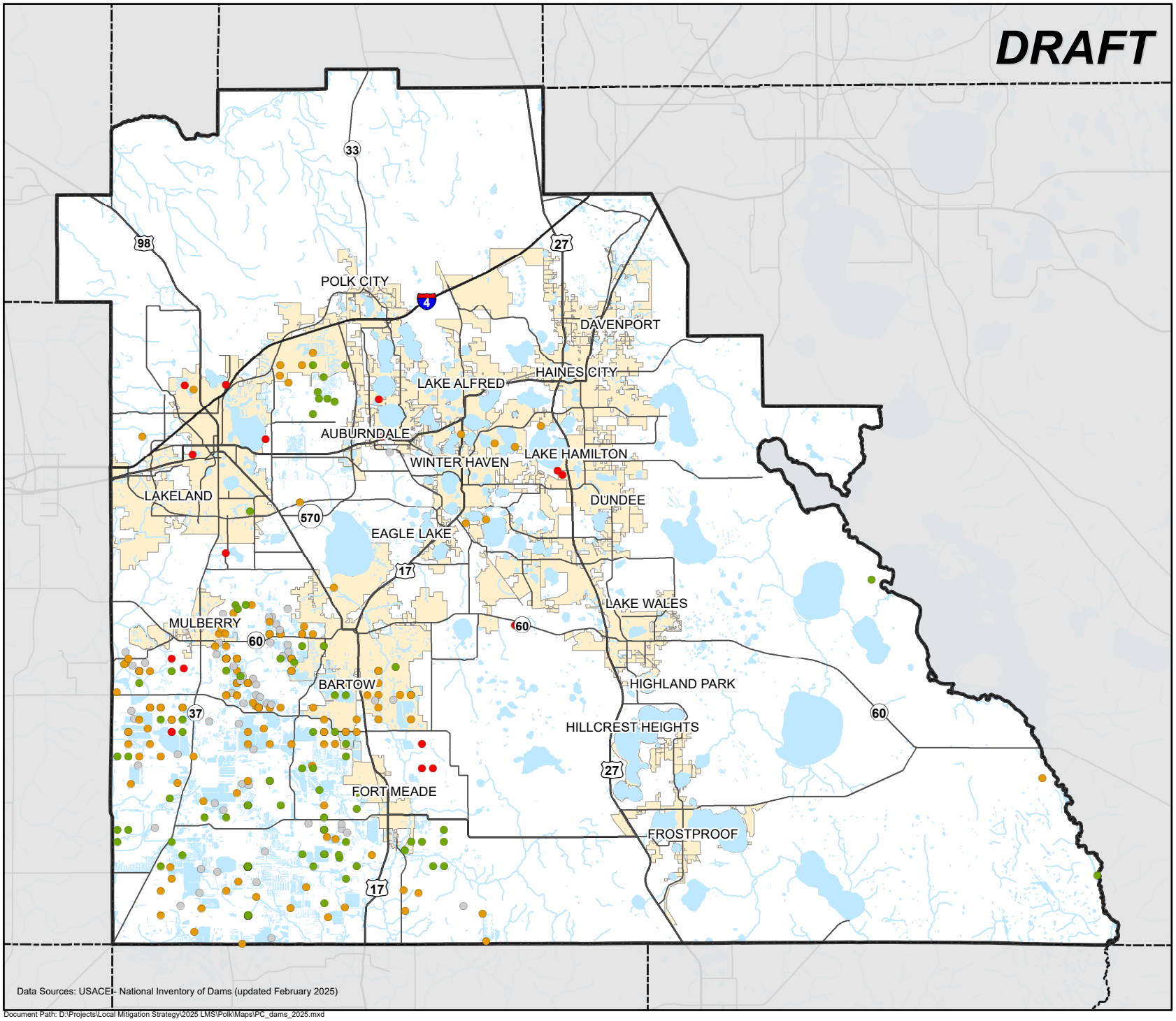
- Bridge

Disclosure:
This GIS Map is a public resource of general information. Polk County BoCC makes no warranty, representation or guarantee as to the content, sequence, accuracy, timeliness or completeness of any of the database information provided herein, The reader should not rely on the data provided herein for any reason. Polk County explicitly disclaims any representations and warranties , including, without limitation, the implied warranties of merchantability and fitness for a particular purpose. Polk County shall assume no liability for: 1) Any errors, omissions, or inaccuracies in the information provided regardless of how caused; or 2) Any decision made or action taken or not taken by any person in reliance upon any information or data furnished hereunder.

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Dams (Categorized by Hazard Level)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_dams_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Dams - Hazard Level

- High
- Significant
- Low
- Undetermined

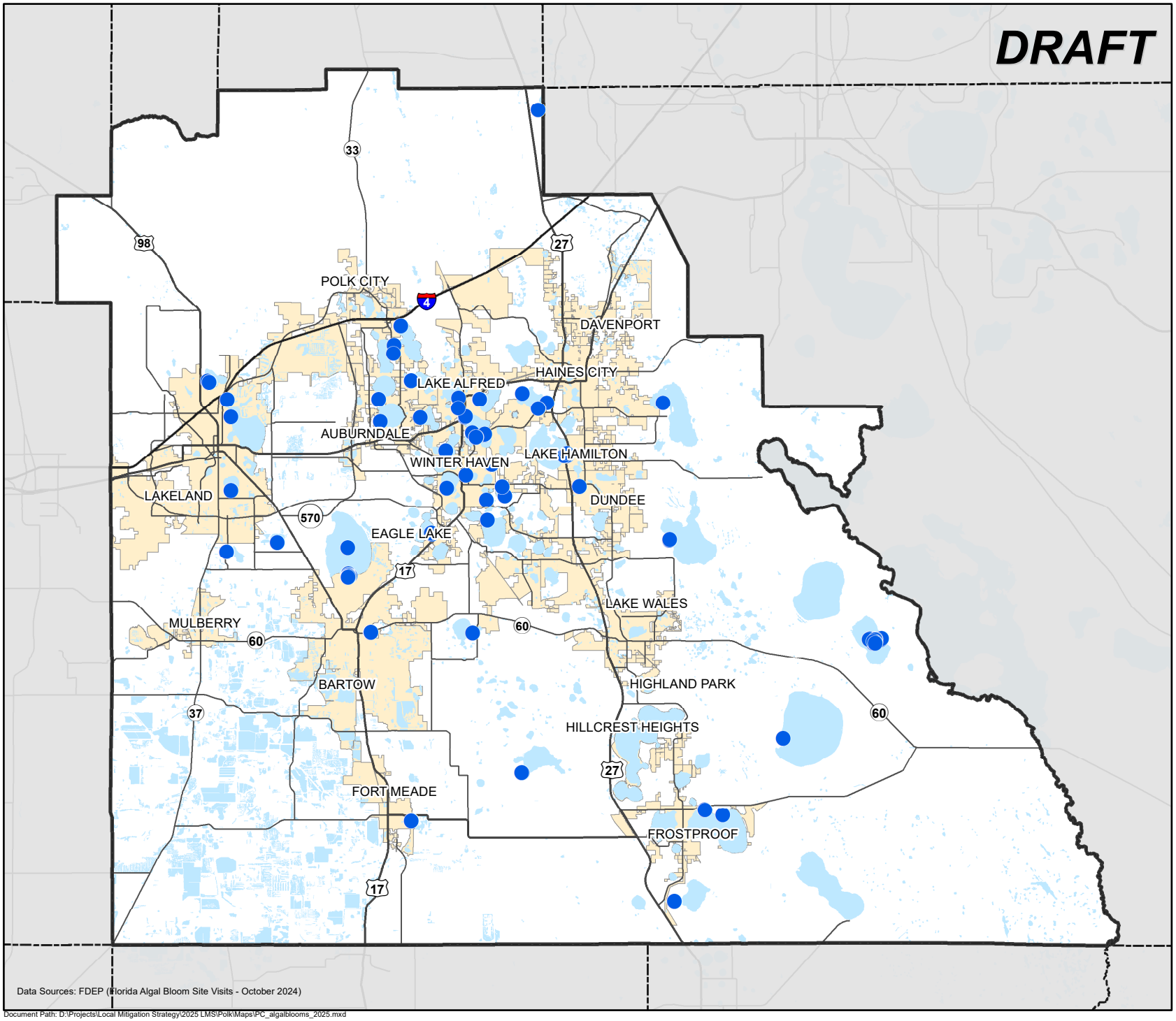
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Florida Algal Bloom Sites (2022 - 2024)



Data Sources: FDEP (Florida Algal Bloom Site Visits - October 2024)

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_algalblooms_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Algal Blooms

- Florida Algal Bloom Sites

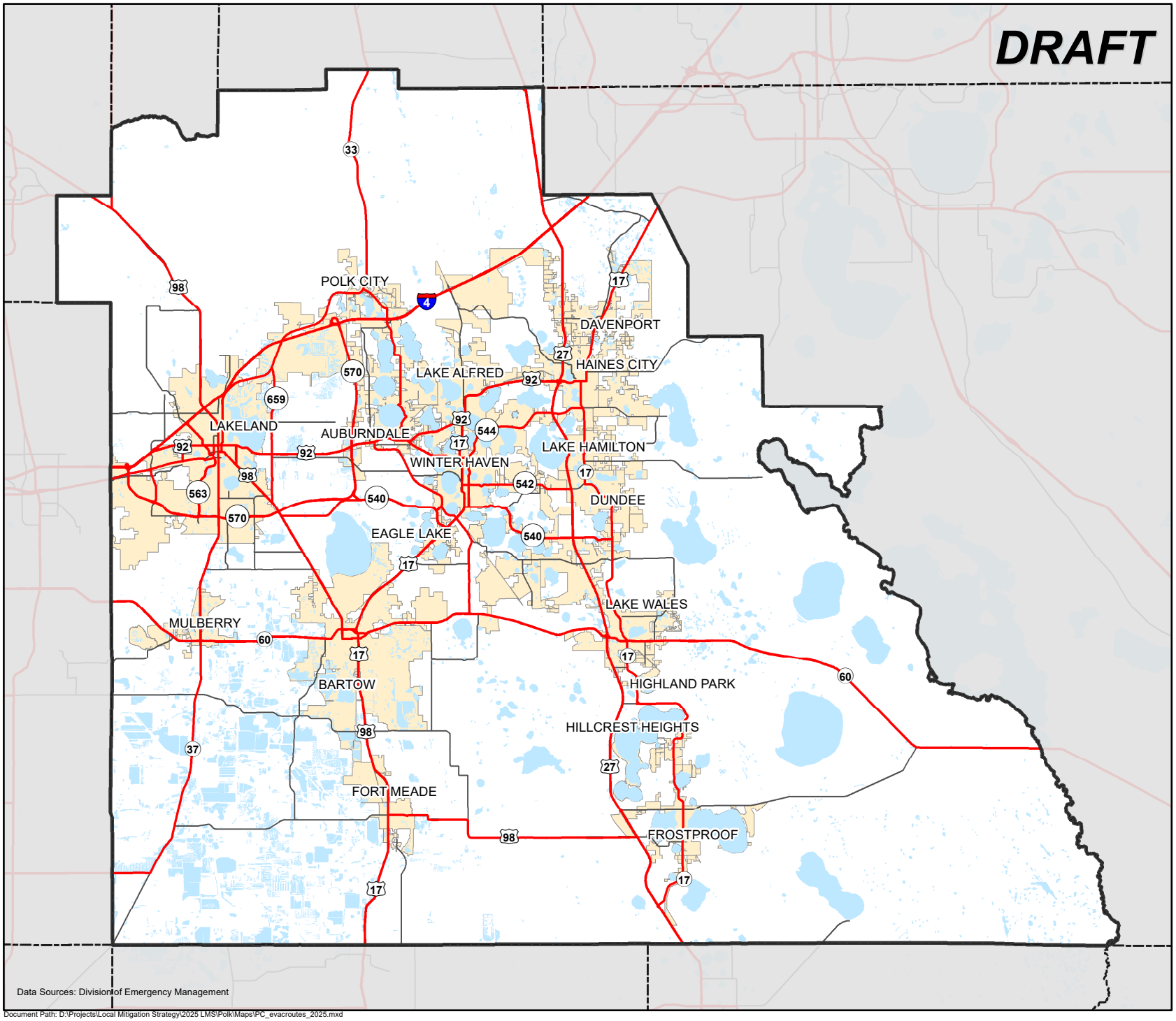
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Evacuation Routes



Data Sources: Division of Emergency Management

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_evacroutes_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Evacuation Routes

- Roadways

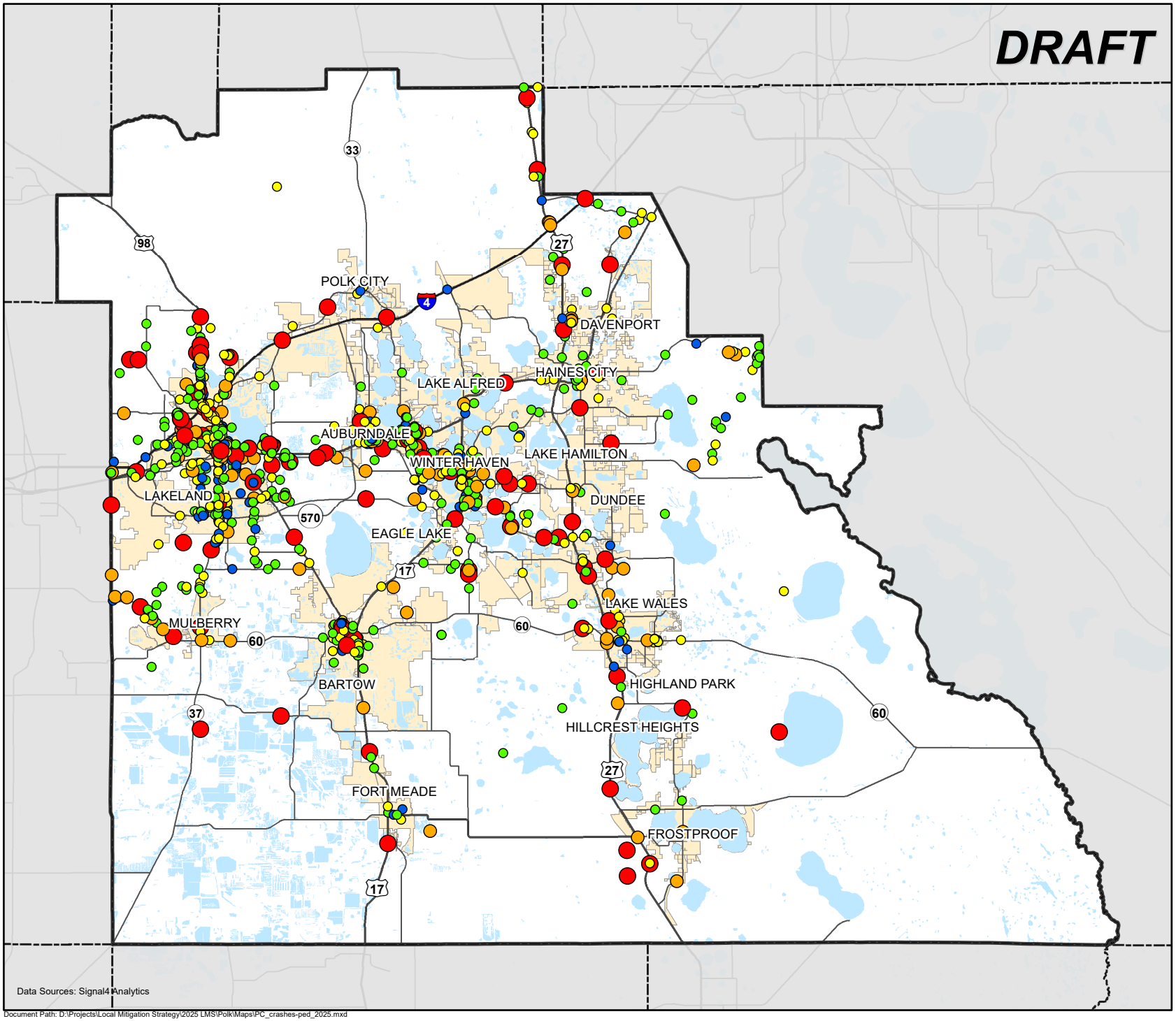
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Pedestrian Crashes (5 Year Period)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_crashes-ped_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Pedestrian Crashes - Crash Severity

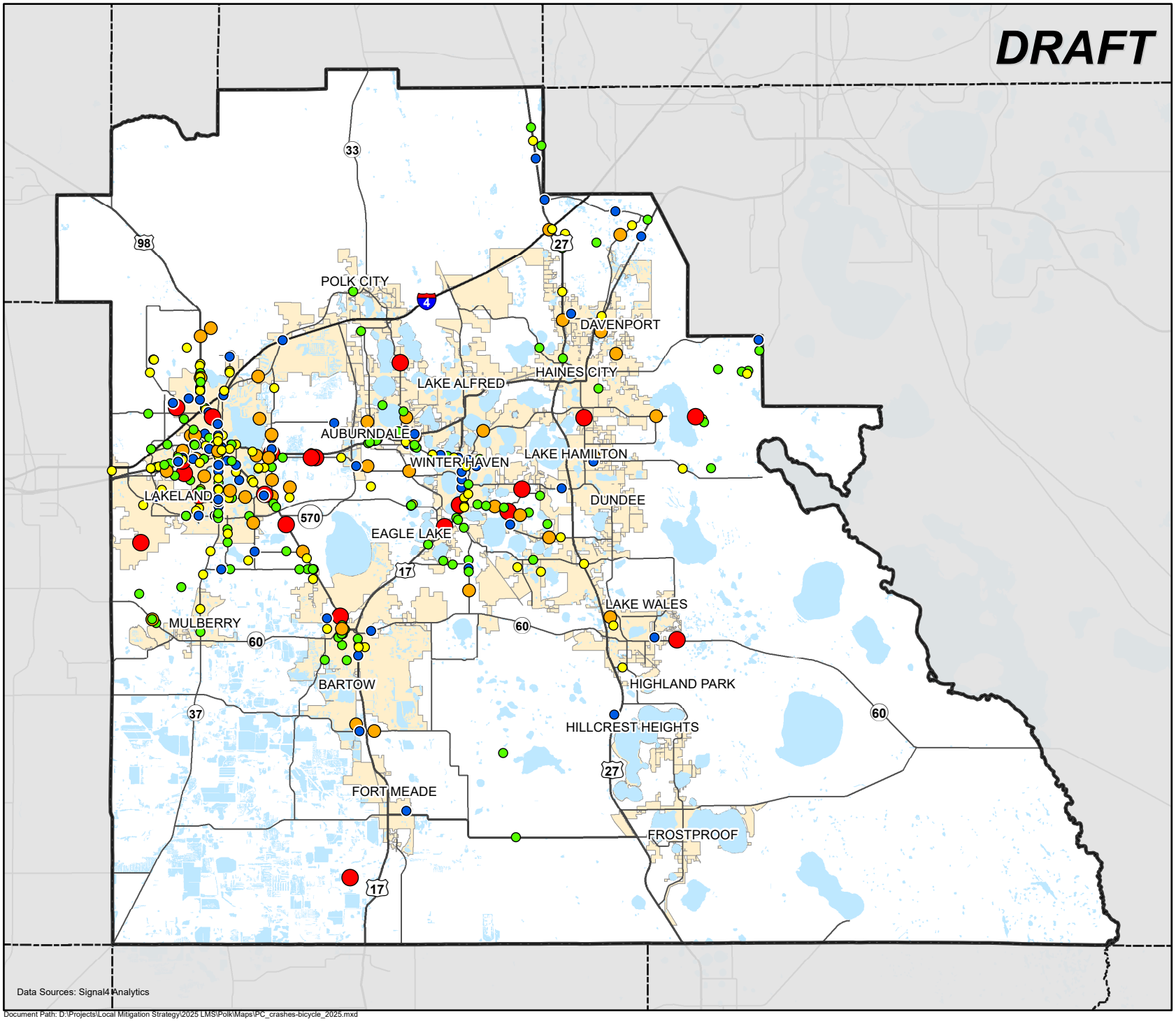
- No Injury
- Possible Injury
- Non-Incapacitating Injury
- Incapacitating Injury
- Fatal (within 30 days)

Note:
Florida Traffic Safety Dashboard - S4Analytics Data covers a 5 Year Period from 10/25/2020 to 10/25/2024.

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Bicycle Crashes (5 Year Period)



Data Sources: Signal4 Analytics

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_crashes-bicycle_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Bicycle Crashes - Crash Severity

- No Injury
- Possible Injury
- Non-Incapacitating Injury
- Incapacitating Injury
- Fatal (within 30 days)

Note:
Florida Traffic Safety Dashboard - S4Analytics Data covers a 5 Year Period from 10/25/2020 to 10/25/2024.

N
W E
S

0 4 8
Miles

APPENDIX B

APPENDIX B – MITIGATION PROJECTS

Appendix B includes information pertaining to the mitigation projects of the LMS. The appendix includes the following items:

- Mitigation Action Project Submittal Form
- STAPLEE scoring for the projects included in the Mitigation Action Plan
- Mitigation Action Plan – List of Deferred, Completed, or Deleted Projects
- Mitigation Action Plan – Ongoing Projects
- Mitigation Action Plan – Mitigation Initiatives

POLK COUNTY
LOCAL MITIGATION STRATEGY WORKING GROUP
HAZARD MITIGATION NEW PROJECT REQUEST FORM

This form nominates projects for consideration by the Polk County Local Mitigation Strategy (LMS) Working Group for inclusion in the LMS Mitigation Project List. The form may only address one project. This form is for one-time projects, not for on-going projects.

Instructions: Please complete all questions.

APPLICANT INFORMATION

Date of Request	
Name of Person Completing the Request Form	
Title	
Responsible Agency	
Responsible Department	
Address	
Telephone	
Email	

PROJECT INFORMATION

Project Name	
Jurisdiction Benefitted by the Project	
Project Physical Address	
Project Facility Owner	
Choose the sector that owns the facility	

☐Municipal ☐County ☐State ☐Private ☐Federal ☐Special District ☐Non-Profit
☐Other:_____

PROJECT COST

75% Project Cost: $_____ 25% Local Match: $_____ Total Project Cost: $_____

PROJECT DESCRIPTION AND NARRATIVE

Select all hazards the proposed project mitigates.

☐Cyber Attacks	☐Harmful Algal Blooms
☐Dam/Levee Failures	☐Hazardous Materials Incidents
☐Drought	☐Hurricanes/Tropical Storms
☐Epidemics/Pandemics	☐Severe Storms and Tornadoes (Lightning, Hail, Thunderstorms)
☐Extreme Temperatures	☐Subsidence and Sinkholes
☐Flood	☐Transportation Incidents
☐Fog	☐Wildfires

Describe the proposed mitigation project and how this project mitigates the hazard(s).

GOALS AND OBJECTIVES

List the goals and objectives supported by the mitigation project. List each Goal and Objective number the mitigation project supports. Review Goals and Objectives in the LMS, Section VII.

Goal and Objective:_____ Goal and Objective: _____ Goal and Objective: _____

Goal and Objective:_____ Goal and Objective: _____ Goal and Objective: _____

HAZARD VULNERABILITY LEVEL

The Hazard Vulnerability Level is the frequency of the hazard to occur. Review information located in the LMS, Section VI. Please check the appropriate box.

☐ Low (one occurrence every 10 years)
☐ Medium (one occurrence every 5-7 years)
☐ Medium/High (one occurrence every 3 years)
☐ High (1 or more occurrence each year)

TIME TO COMPLETE PROJECT

The expected timeframe for completion and implementation of the project upon receipt of funding. Please check the appropriate box.

☐ Less than 12 months to complete or implement
☐ 12 to 24 months to complete or implement
☐ 24 to 36 months to complete or implement
☐ More than 36 months to complete or implement

POTENTIAL FUNDING SOURCES

List the potential funding sources for this project.

STAPLEE (SOCIAL, TECHNICAL, ADMINISTRATIVE, POLITICAL, LEGAL, ECONOMIC, ENVIRONMENTAL) ANALYSIS OF PROPOSED INITIATIVE

Social

Will this action easily gain community acceptance?
☐ Yes ☐ No

Will this action have an adverse effect on any one segment of the population?
☐ Yes ☐ No ☐ N/A
If yes, please explain:

What effects will the action have on the social, historic, and cultural environment of the community?

Technical

Is this action technically feasible and does it provide the appropriate level of protection?
☐ Yes ☐ No

Is this action a long-term solution?
☐ Yes ☐ No

Explain the types of technical or professional expertise that will be required to implement the project.

Is this expertise available? ☐ Yes ☐ No
What is the cost of the expertise? _____

Will the action create more problems than it solves?
☐ Yes ☐ No

Administrative

Does the community have the capability (staff, expertise, time, funding) to implement the action?
☐ Yes ☐ No
If no, please explain why.

Does the community have the funding secured and allocated for the project?
☐ Yes ☐ No ☐ N/A

Can the community provide the necessary maintenance of the project?
☐ Yes ☐ No ☐ N/A

Political

Is mitigation action politically acceptable?
☐ Yes ☐ No

Is there a local champion for the project to lead the effort?
☐ Yes ☐ No

Will the general public support or oppose the project?
☐ Support ☐ Oppose

Legal

Does the community have the authority to implement the action?
☐ Yes ☐ No

Are there legal side effects?
☐ Yes ☐ No

Could the mitigation action be construed as a taking?
☐ Yes ☐ No

Will the action comply with local, state, and federal environmental regulations?
☐ Yes ☐ No

Do homeowner association bylaws or deed restrictions apply to the project?
☐ Yes ☐ No

Is the action likely to be challenged by stakeholders whose interests may be adversely affected?
☐ Yes ☐ No

Economic

Do the costs of the action seem reasonable for the size of the problem and the likely benefits?
☐ Yes ☐ No

What burden will be placed on the local economy to implement the action?
(Note: Just because an action has costs associated with it does not mean those costs are automatically a burden on the economy.)

☐ None ☐ Minimal ☐ Moderate ☐ Heavy
Please explain your response.

What burden will be placed on the local economy to maintain the action?
(Note: Just because an action has costs associated with it does not mean those costs are automatically a burden on the economy.)

☐ None ☐ Minimal ☐ Moderate ☐ Heavy
Please explain your response.

Will the action generate additional jobs locally?
☐ Yes ☐ No

Does the action contribute to other community goals, such as capital improvements or economic development?
☐ Yes ☐ No

Environmental

Is the proposed action in a floodplain or wetland?
☐ Yes ☐ No
If yes, please explain why.

Will the proposed action indirectly impact the natural and beneficial functions of a floodplain or wetland?
☐ Yes ☐ No
If yes, please explain why.

How will the action affect the natural environment?

Will the action require environmental regulatory approvals?
☐ Yes ☐ No

How will the action affect utility (e.g. stormwater) and transportation systems?

STAPLEE ACTION EVALUATION TABLE

STAPLEE Criteria Considerations																															
1=Favorable 0=Neutral -1=Less Favorable Multiply by number in parenthesis																															
			S (Social)			**T** (Technical)					**A** (Administrative)			**P** (Political)			**L** (Legal)					**E** (Economic)				**E** (Environmental)			
Category	Entity	Project Description	Community Acceptance	Effect of Segment of Population	Effect of Community (2)	Technically Feasible (3)	Long-term Solution	Expertise Required & Available (2)	Reasonable Timeframe	Secondary Impacts	Capability to Implement	Funding Allocated	Community Provide Maintenance (3)	Politically Acceptable	Local Champion	Public Support	Authority to Implement (2)	Comply with Environmental Regulations (3)	Legal Side Effects/Taking	HOA Bylaws/Deed Restrictions	Potential Legal Challenge	Reasonable Cost (2)	Burden on Economy	Contributes to Economic Goals (2)	Additional Jobs (2)	Impact Floodplain/Wetland (3)	Natural Environment	Environmental Regulatory Approvals (2)	Utility and Transportation Systems		

Polk County Multi-Jurisdictional LMS Mitigation Action Plan - Mitigation Initiatives

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	County Public Safety Departments (Fire, EMS, E-911, etc)	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual	Deferred	Onoing project.
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	Polk County	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual	Deferred	Ongoing project.
Auburndale	Auburndale	Alberta Street Drainage Improvement	Drainage	Relieves flooding and drainage problem at major intersection on Alberta St	Flood	Both	Auburndale	Public Works	$500,000	HMGP, FMA	12-18 Months	Deleted	County upgraded Bridgers Avenue and relieved flooding issues.
Auburndale	Auburndale	Highway 92, Lakeshore and Beach Lift Station Generator Project	Infrastructure	Highway 92, Lakeshore and Beach Lift Station Generator Project	All	Both	City of Auburndale	Public Works	$189,995	HMGP	12-18 Months	Completed	
Bartow	Bartow	Fiber Smart Grid Pilot Project	New Infrastructure, Critical Facilities	Develop and Implement Smart Grid Pilot Project	All	New	Bartow	Public Works	$2,500,000	General Fund	24-36 Months	Deleted	No longer feasible project.
Bartow	Bartow	Fire Station #1	New Building, Critical Facilities	Construct New Fire Station to improve response time and serve new population	Fire, Flood	New	Bartow	Fire Department	$2,799,999	Fire Assessment Fee, General Fund	24-36 Months	Deleted	No longer feasible project.
Bartow	Bartow	Relocate Fire Station #0	New Building, Critical Facilities	Relocate Fire Station #1 to improve response time and serve new population	Fire, Flood	Both	Bartow	Fire Department	$3,499,999	Fire Assessment Fee, General Fund	24-36 Months	Deleted	No longer feasible project.
Davenport	Davenport	City Wide	Drainage	CDS Cleaning/Replacement of damaged inlets	Flood	Existing	Davenport	Public Works	$25,000	Stormwater	Annual	Deferred	
Davenport	Davenport	Critical Facility Wind Retrofit	Critical Facilities	Wind Retrofit to City Admin Builiding that houses Fire, Police and Public Works operations.	Wind	Existing	Davenport	Public Works	$225,000	HMGP	9-12 Months	Deferred	
Davenport	Davenport	Generator for command center	Critical Facilities	Generator for comand center	Storm	Existing	Davenport	Public Works	$75,000	FEMA-Grants	4-6 months	Completed	
Davenport	Davenport	New Devlopment	Water Star Energy	Water Conservation incentives to Developers for using equipment. Incentives presented by SWFMD.	Water	New	Davenport	Building	$0	Water Management District	Annual	Deferred	
Davenport	Davenport	Stormwater Master Plan	Drainage, Infrastructure	Ability to address areas prone to flooding now and into the future	Flood	Both	Davenport	Utilities	$300,000	HMGP	12 months	Deferred	
Davenport	Davenport	Streets/Wind	Bucket Truck	Purchase a bucket truck for storm damage/storm mitigation	Wiind	New	Davenport	Streets	$245,000	FEMA-Grants	12-18 months	Completed	
Daveport	Davenport	City Hall/Building Department	Back-up Power	Installation of a Generator to run Ciy Hall, Commission Chamber, and Building Department	Wind/Storm	New	Davenport	Public Works	$75,000	FEMA-Grants	4-6 months	Completed	
Dundee	Dundee	Dundee Center St Drainage Imp	Drainage	Dundee Center St Drainage Imp	Flood	Both	Dundee	Public Works	$562,500	HMGP	12-18 Months	Deferred	
Dundee	Dundee	Dundee Community Center Auxilary Power	Infrastructure	Dundee Community Center Auxilary Power	All	Both	Dundee	Public Works	$56,650	HMGP	12-18 Months	Deferred	
Dundee	Dundee	Dundee Community Center Protective Measures	Infrastructure	Dundee Community Center Protective Measures	All	Both	Dundee	Public Works	$36,942	HMGP	12-18 Months	Deferred	
Dundee	Dundee	Dundee Drainage Assessment/Improvements	Drainage	Dundee Drainage Assessment/Improvements	Flood	Both	Dundee	Public Works	$93,750	HMGP	12-18 Months	Deferred	
Dundee	Dundee	Dundee Economy Lift Station	Infrastructure	Dundee Economy Lift Station	All	Both	Dundee	Public Works	$125,000	HMGP	12-18 Months	Deferred	
Dundee	Dundee	Dundee Fire Dept Protective Measures	Infrastructure	Dundee Fire Dept Protective Measures	All	Both	Dundee	Public Works	$27,800	HMGP	12-18 Months	Deferred	
Dundee	Dundee	Dundee Fire Dept Wind Retrofit	Infrastructure	Dundee Fire Dept Wind Retrofit	All	Both	Dundee	Public Works	$37,500	HMGP	12-18 Months	Deferred	
Dundee	Dundee	Dundee Fl Ave MLK Drainage Imp	Drainage	Dundee Fl Ave MLK Drainage Imp	Flood	Both	Dundee	Public Works	$562,500	HMGP	12-18 Months	Deferred	
Dundee	Dundee	Dundee Lk Menzie Lk Marie Restroom PM	Infrastructure	Dundee Lk Menzie Lk Marie Restroom PM	All	Both	Dundee	Public Works	$9,120	HMGP	12-18 Months	Deferred	
Dundee	Dundee	Dundee Ridgewood Area Drainage Imp	Drainage	Dundee Ridgewood Area Drainage Imp	Flood	Both	Dundee	Public Works	$245,625	HMGP	12-18 Months	Deferred	
Dundee	Dundee	Dundee Riner WTF Safe Room	Infrastructure	Dundee Riner WTF Safe Room	All	Both	Dundee	Public Works	$19,375	HMGP	12-18 Months	Deferred	
Eagle Lake	Eagle Lake	Eagle Lake Green Acres Water Plant Lift Station generator	Critical Facilities, Infrastructure	Generator for Green Acres Water Plant Lift Station	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager	$225,000	HMGP, City Utility Funds	12-18 Months	Deferred	Received notice of grant approval week of October 28
Eagle Lake	Eagle Lake	Eagle Lake Green Lift Station #2 generator	Critical Facilities, Infrastructure	Generator for Lift Station #2	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager	$275,000	HMGP, City Utility Funds	12-18 Months	Deferred	Received notice of grant approval week of October 28
Eagle Lake	Eagle Lake	Eagle Lake Lift Station #5 generator	Critical Facilities, Infrastructure	Generator for Lift Station #5	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager	$275,000	HMGP, City Utility Funds	12-18 Months	Deferred	Received notice of grant approval week of October 28

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
Eagle Lake	Eagle Lake	Eagle Lake City Hall generator	Critical Facilities, Infrastructure	Generator for City Hall	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager	$250,000	HMGP, City Utility Funds	12-18 Months	Deferred	Received notice of grant approval week of October 28
Fort Meade	Fort Meade	City Hall generator	Critical Facilities	City hall generator	All	Existing	Fort Meade	Assistant City Manager	$78,500	HMGP	12-18 Months	Deferred	
Fort Meade	Fort Meade	Citywide	Stormwater Master Plan	A review of stormwater conditions throughout the City with recommendations for improvements.	Flooding	Both	Fort Meade and Southwest Florida Water Management District	Public Works, City Manager	$160,000	City, Southwest Florida Water Management District	December 2020	Completed	Completed June 2020
Fort Meade	Fort Meade	Effluent Pump 3 Repair	Infrastructure	This pump repair will restore the effluent pumping redundancy at the WWTP. Currently 2 of the 3 pumps are operational. This will greatly reduce possibility of SSO into impaired Peace River near the city WWTP in the event of pump failure during a major storm event.	Stormwater / Natural Resources Protection	New	Fort Meade	Assistant City Manager	$15,500	HMGP	6-12 months	Deferred	
Fort Meade	Fort Meade	Rehabilitation of 143 failing/poor condition manholes	Infrastructure	Eliminates infiltration during flooding and storm events. Eliminates exfiltration during drought and low water table conditions. City gravity sewer system was heavily impacted during most recent Hurricane Ian event. Manhole rehabilitation will greatly reduce possibility of SSO into impaired Peace River near the city WWTP from hydraulic overloads.	Stormwater / Natural Resources Protection	New	Fort Meade	Assistant City Manager	$1,251,000	HMGP	12+ Months	Deferred	
Fort Meade	Fort Meade	Sheriff Substation generator	Capital Project	Sheriff Substation generator	All	Existing	Fort Meade	Assistant City Manager	$57,500	HMGP	12-18 Months	Deferred	
Fort Meade	Fort Meade	SS Inflow Manhole Guard Installation	Critical Facility	Eliminates inflow from runoff during flooding and storm events. City gravity sewer system was heavily impacted during most recent Hurricane Ian event. Inflow basin guards will greatly reduce possibility of SSO into impaired Peace River near the city WWTP.	Stormwater / Natural Resources Protection	New	Fort Meade	Assistant City Manager	$78,486	HMGP	6-12 months	Deferred	
Fort Meade	Fort Meade	Stormwater Feasibility Study - 4th & 5th Street	Flood Proofing / Stormwater	This is a feasibility study for approximately 3,871 feet of pipe for ten inlets and six manholes to control street flooding where the existing sized pipes and open ditches in the 400 & 500 block of NE 4th & 5th Street are inadequate. This area suffers of flooding and stagnant water after rain events. Area streets are submerged with standing water in residential yards. The study would allow for improved re-direction of water flow with flood proofing infrastructure.	Stormwater / Flood	New	Fort Meade	Assistant City Manager	$150,000	HMGP	6-12 months	Deferred	
Fort Meade	Fort Meade	Stormwater Retention Area - NW Langford Avenue	Stormwater Management	Stormwater improvements in the Downtown Improvement Area are primarily focused on capturing and infiltrating stormwater to reduce the contribution of nutrients to the downstream waterbodies while upgrading the stormwater conveyance system to improve the FPLOS.	Stormwater / Flood	New	Fort Meade	Assistant City Manager	$1,761,900	HMGP	12+ Months	Deferred	
Fort Meade	Fort Meade	Water plant generator	Critical Facilities	Water plant generator	All	Existing	Fort Meade	Assistant City Manager	$111,000	HMGP	12-18 Months	Deferred	
Fort Meade	Fort Meade	Water Well Generator	Critical Facilities, Capital Project	Water Well generator	All	Existing	Fort Meade	Assistant City Manager	$57,500	HMGP	12-18 Months	Deferred	
Fort Meade	Fort Meade	Watershed Management Plan - Hendry Avenue	Stormwater Management	Stormwater improvements in the South Hendry Ave area were will focus on upgrading the stormwater conveyance system to improve FPLOS while incorporating swales to capture and infiltrate stormwater to reduce the contribution of nutrients to the downstream waterbodies.	Stormwater	New	Fort Meade	Assistant City Manager	$1,499,165	HMGP	12+ Months	Deferred	
Frostproof	City of Frostproof	A street and SR 17 Drainage Project	Drainage	Localized street flooding backing up to SR17. Clean and vactor all storm pipes back to FDOT storm pond	Flooding	Existing	Frostproof	Public Works	$80,000	FMA, SWFWMD, FDOT	12-24 Months	Deferred	
Frostproof	City of Frostproof	City Maintenance Shop Generator	Public Works	Currently our only Maintenance Shop has no auxilary power	Loss of Power	Exisitng	Frostproof	Public Works	$180,000	HMGP	12-24 Months	Deferred	
Frostproof	City of Frostproof	Colony Ave StormDrainage Project	Drainage	Localized flooding at the intersection of Colony Ave and CR630 W.	Flooding	Existing	Frostproof	Public Works	$250,000	FMA, City of Frostproof, SWFWMD, Polk County	12-24 Months	Deferred	
Frostproof	City of Frostproof	Community Center Generator	Parks and Recreation	Currently our Leased Commuity center from Polk County has no back-up power. We could utilize this site as a Shelter or temporary quarters for essential personnel during hurricanes	Shelter	Exisitng	Frostproof	Parks and Rec	$200,000	HMGP	12-24 Months	Deferred	
Frostproof	City of Frostproof	D Street re-pump Lift-station Generator	Wastewater	Currently our re-pump lift-station has no auxilary power	Sanitary Sewer Overflow	Existing	Frostproof	Utilities	$200,000	HMGP	12-24 Months	Deferred	
Frostproof	City of Frostproof	Double Drive re-pump Lift station Generator	Wastewater	Currently our re-pump lift-station has no auxilary power	Sanitary Sewer Overflow	Existing	Frostproof	Utilities	$200,000	HMGP	12-24 Months	Deferred	
Frostproof	City of Frostproof	Headworks	Wastewater	Currently the City has no means of pre-limary treatment to remove rags/debri	Sanitary Sewer Overflow	Existing	Frostproof	Utilities	$750,000	HMGP, City	12-24 Months	Deferred	
Frostproof	City of Frostproof	Hydrogen Peroxide system for Water Tretment Plant #5	Drinking Water	South water treatment plant #5 has elevated sulfides 2.5 time the average limit. This is causing excessive chlorine use of 9.6gph for only a 0.100mgd system	Disinfection by-products	Existing	Frostproof	Utilities	$50,000	HMGP	12-24 Months	Deferred	
Frostproof	City of Frostproof	Lake Ave and 3rd street Drainage Project	Drainage	Localized flooding of roadway	Flooding	Existing	Frostproof	Public Works	$100,000	FMA. HMGP. SWFWMD	12-24 Months	Deferred	
Frostproof	City of Frostproof	Lake Clinch Outfalls Sedimentaion Removal	Drainage	Lake Clinch, Sedimaentaion blocking outfalls, not allowing proper drainage. Localized flooding areas.	Flooding	Exisiting	Frostproof	Public Works	$350,000	HMGP, FMA, SWFWMD	12-24 Months	Deferred	
Frostproof	City of Frostproof	Main WTP Standby Generator	Drinking Water	Currently our Main WTP has no auxilary power supply	Loss of Water	Existing	Frostproof	Utilities	$280,000	HMGP	12-24 Months	Deferred	

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
Frostproof	City of Frostproof	Oak street and First Street Drainage Project	Drainage	Localized flooding streets, caused by heavy root intrusion into storm pipes. Remove roots and slip liine pipes	Flooding	Existing	Frostproof	Public Works	$235,000	FMA. HMGP. SWFWMD	12-24 Months	Deferred	
Frostproof	City of Frostproof	Pressure Zoning	Drinking Water	Currently our system has no pressure zones, creating stagnant water in areas, extreme variation in pressures, brown and red water complaints coupled with air in lines.	Aesthetic, Health and Safety complaints	Existing	Frostproof	Utilities	$500,000	HMGP	12-24 Months	Deferred	
Frostproof	City of Frostproof	Street Sweeping	Streets	Sweeping from streets to maintain MS4 permit required cleaning	Flooding	Existing	Frostproof	Public Works	$15,000	FMA, HMGP, City	12-24 months	Deferred	
Frostproof	City of Frostproof	Sunset Road StormDrainage Project	Drainage	Localized Flooding at end of Sunset Road, causing flooding into homes	Flooding	Existing	Frostproof	Public Works	$300,000	HMGP, FMA, SWFWMD	12-24 Months	Deferred	
Frostproof	City of Frostproof	Water Treatment Plant #7 CR630 to Hwy 27	Drinking Water	Finish installing High service pumps, chlorination station, well and maintenance building alleviating areas without safe drinking water	No water in existing and development areas	New and Existin	Frostproof	Utilities	$1,600,000	HMGP, DEO. CDBG, City of Frostproof	12-24 Months	Deferred	
Frostproof	Frostproof	Bass Property Purchase	Land Acquisition	Purchase of home and property damaged due to flooding (Bass)	Flood	Existing	Frostproof	Public Works	$29,840	HMGP, FMA	12-18 Months	Deferred	
Frostproof	Frostproof	City Hall Building Retrofit	Building Retrofit	Retrofit of critical facilities/window protection to City Hall (Frostproof)	Storms	Existing	Frostproof	Public Works	$150,000	HMGP, EMPA	12-18 Months	Deferred	
Frostproof	Frostproof	Fire/EMS Building Retrofit	Building Retrofit	Retrofit/harden Fire Dept/EMS station (Frostproof)	Storms	Existing	Frostproof	Fire Department	$150,000	HMGP, EMPA	12-18 Months	Deferred	
Frostproof	Frostproof	Johnston Property Purchase	Land Acquisition	Purchase of home and property damaged due to flooding (Johnston)	Flood	Existing	Frostproof	Public Works	$53,510	HMGP, FMA	12-18 Months	Deferred	
Frostproof	Frostproof	Keen Park Road Drainage Project	Drainage	Area experienced flooding in yards and roads. Project will re-establish drainage ditches Keen Park Road	Flood	Both	Frostproof	Public Works	$50,000	HMGP	12-18 Months	Deferred	
Frostproof	Frostproof	Magnolia Ave Stormwater Project	Drainage	Magnolia Ave. drainage, increase pipe diameter for proper stormwater run off (Frostproof)	Flood	Both	Frostproof	Public Works	$100,000	FMA,HMGP,Captalization Grants for Clean Water State Revolving Funds, Nonpoint Source Implementation Grants, Watershed Protection and Flood Prevention Program	12-18 Months	Deferred	
Golden Lakes Community Development District	Golden Lakes Community Development District	Eaglebrooke 2020 Stormwater Improvements	Drainage	Point Repairs and CIPP lining to correct existing storm system pipe issues and improve pipe flow.	Flood	Both	Golden Lakes Community Development District	Golden Lakes Community Development District	$532,000	CDD Assessments and Loan	6-12 Months	Deferred	Defferal due to other funding priorities
Golden Lakes Community Development District	Golden Lakes Community Development District	Eaglebrooke 2020 Stormwater System Cleaning and Inspection	Drainage	Condition assessment of remaining stormwater system. Clean and televise storm system that has not been previously inspected.	Flood	Both	Golden Lakes Community Development District	Golden Lakes Community Development District	$150,000	CDD Assessments and Loan	6-12 Months	Deferred	Defferal due to other funding priorities
Golden Lakes Community Development District	Golden Lakes Community Development District	Eaglebrooke North Pond A1	Drainage	Eaglebrooke North Pond A1	Flood	Both	Golden Lakes Community Development District	Golden Lakes Community Development District	$244,000	HMGP	12-18 Months	Ongoing	HMGP Grant rejected by CDD due to extensive delays in approval. Project scope reduced and funded by CDD funds. Work expected to be complete by end of the year.
Haines City	Haines City	Phase I and Phase II Drainage Studies	Drainage	During recent storms, area flooded and was pumped. Phase I - feasibility study; Phase II - construction, if feasible.	Flood	Both	Haines City	Utilities	$200,000	HMGP	12-18 Months	Completed	Project completed.
Lake Alfred	Lake Alfred	Master Wastewater Lift Station Upgrade	Infrastructure	Remove existing headworks no longer in use and upgrade electrical panels	All	Existing	Lake Alfred	Utilities	$150,000	Utility Reserves	6 months	Completed	
Lake Alfred	Lake Alfred	Annual Preparations	Education, Public Awareness	Annual maintenance and repair of fire protection equipment including hoses, pump tests, equipment, and other gear.	All	Existing	Lake Alfred	Fire Department	$5,000	General Fund	Annual	Deleted	
Lake Alfred	Lake Alfred	Buena Vista Master Lift Station Upgrade	Infrastructure	Replacement of outdated canned style station to triplex wet well system to accommodate increased capacity needs and improve safety.	All	Both	Lake Alfred	Utilities	$650,000	SRF Loan	12-18 Months	Completed	
Lake Alfred	Lake Alfred	Building inspections	Infrastructure	Inspection of all existing structural upgrades a, new buildings, change of occupancy, and other as need inspections such as fire, structural, electrical, plumbing, and safety.	All	Both	Lake Alfred	Community Development	$100,000	General Fund	Annual	Deleted	
Lake Alfred	Lake Alfred	Camera System	Infrastructure	Installation of a monitoring and recording system at various facilities and city buildings.	All	New	Lake Alfred	Public Works	$25,000	General Fund	6-12 months	Completed	
Lake Alfred	Lake Alfred	CR 557 Sewer Extension	Infrastructure	Sanitary Sewer Main Line Extension along CR 557 north to CR 557A	All	New	Lake Alfred	Utilities	$1,500,000	SRF Loan	12-18 months	Deleted	
Lake Alfred	Lake Alfred	Elevated Water Storage Tank Demo	Infrastructure	Removal of elevated 65,000 gallon storage tank	All	Existing	Lake Alfred	Utilities	$150,000	Utility Reserves	3 months	Deleted	
Lake Alfred	Lake Alfred	Fire Engine Replacement	Infrastructure	Fire engine replacement program to include new equipment and ensure compliance with regulations.	All	Existing	Lake Alfred	Fire Department	$450,000	General Fund	10-year	Completed	
Lake Alfred	Lake Alfred	Fire Prevention Programs	Education, Public Awareness	Community outreach and education program by the Fire Department to school, community organizations and HOA, retirement facilities regrading Fire Safety and Prevention.	All	Existing	Lake Alfred	Fire Department	$1,500	General Fund	Annual	Completed	
Lake Alfred	Lake Alfred	Fire staff training	Education, Public Awareness	Continuing education for the Fire Department staff including, Storm Ready, Sky Warn, Fire, Disease, Health, Safety, and Fire prevention.	All	Existing	Lake Alfred	Fire Department	$5,000	General Fund	Annual	Deleted	Funding from general fund.
Lake Alfred	Lake Alfred	Fire Vehicles	Infrastructure	Fire vehicle replacement program to include new equipment and ensure compliance with regulations.	All	Existing	Lake Alfred	Fire Department	$150,000	General Fund	5-year	Completed	
Lake Alfred	Lake Alfred	Flood evaluations improvement program	Infrastructure	Monitoring program to evaluate localized flooding issues and propose corrective measures	Hurricanes, Climate change, Flooding, Severe Storms	Existing	Lake Alfred	Streets	$50,000	Storm water Fund	5-year	Deferred	2 year timeframe to complete
Lake Alfred	Lake Alfred	Hurricane Expo	Education, Public Awareness	Flood safety/ CRS	Hurricanes, Flooding, Severe Storms	Both	Lake Alfred	Community Development	$0	Building Funds	Annual	Deleted	Funding from general fund.

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
Lake Alfred	Lake Alfred	IT Maintenance	Infrastructure	On-going maintenance of IT systems.	All	Existing	Lake Alfred	Finance	$44,000	General Fund	Annual	Deleted	Funding from general fund.
Lake Alfred	Lake Alfred	IT Upgrades	Infrastructure	Equipment evaluations and upgrades including, replacement of the exchange server with the virtual server and equipment changes to thin client system.	All	Both	Lake Alfred	Finance	$250,000	General Fund	5-year	Completed	
Lake Alfred	Lake Alfred	Lane repurpose	Infrastructure	The City is working with the FDOT to improve the safety along US 17/92 within the city-limits.	All	Existing	Lake Alfred	Streets	estimated $2 million	FDOT and City	10-years	Deferred	
Lake Alfred	Lake Alfred	Lift Station Generator	Infrastructure	Lift Station Generator	All	Both	Lake Alfred	Utilities	$208,500	HMGP	12-18 Months	Completed	
Lake Alfred	Lake Alfred	Lift Station Generator	Infrastructure	Lift Station Generator	All	Existing	Lake Alfred	Utilities	$208,500	HMGP	12-18 Months	Completed	
Lake Alfred	Lake Alfred	Lift station repair and maintenance Program	Infrastructure	Program to repair or replace lift station pumps and panels to prevent sewage spillage or overflows.	All	Existing	Lake Alfred	Utilities	$75,000	Utility Fund	Annual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Phone system replacement	Infrastructure	Replacement of the existing phone network.	All	Existing	Lake Alfred	Finance	$100,000	General Fund	1-year	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Police Department IT System Upgrade	Infrastructure	Equipment evaluations and upgrades to ensure communications with other public safety agencies on a secure network..	All	Existing	Lake Alfred	Police Department	$5,000	General Fund	Annul	Completed	
Lake Alfred	Lake Alfred	Portable Communication Center	Infrastructure	Purchase of a mobile communications center (vehicle/trailer) to provide remote, secondary, or emergency communication support.	All	New	Lake Alfred	Police Department	$85,000	General Fund	5-year	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Public Safety Complex Generator	Infrastructure	Public Safety Complex Generator	All	Both	Lake Alfred	Utilities	$89,980	HMGP	12-18 Months	Completed	
Lake Alfred	Lake Alfred	Public Safety Facility Repairs	Infrastructure	Repair and replacement of the windows and shutters on the Public Safety Facility (PD/Fire).	All	Existing	Lake Alfred	Public Works	$10,000	General Fund	6-12 months	Completed	
Lake Alfred	Lake Alfred	Radio Upgrade	Infrastructure	Upgrade of all remote communication devices for all Public Safety and associated administrative staff.	All	Existing	Lake Alfred	Police Department	$160,000	General Fund	6-12 months	Completed	
Lake Alfred	Lake Alfred	Railroad crossing upgrades	Infrastructure	Program to repair and upgrade all of the railroad crossings within the city-limits. Three crossings will be repaired and paved. Five crossings will be repaired and upgraded to concrete crossings.	All	Existing	Lake Alfred	Streets	$100,000	CSX and City General Fund	2-years	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	ROW maintenance	Transportation	Maintenance of ROW, maintaining capacity and access through maintenance of infrastructure and landscaping	All	Existing	Lake Alfred	Streets	$20,000	General Fund	Annual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Safety Training	Education, Public Awareness	In-house training - Safety and like pipes	All	Existing	Lake Alfred	Utilities	$5,000	Utility Fund	Annual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Sidewalk Program	Transportation	Maintenance of sidewalk infrastructure by evaluating the existing sidewalks for repair, replacement, and ADA improvements. Extensions and expansions of the sidewalk network based on the Parks Master Plan.	All	Existing	Lake Alfred	Streets	$50,000	General Fund	Annual	Completed	
Lake Alfred	Lake Alfred	Storm grate replacements program	Infrastructure	Program to inventory, evaluate and replace or repair storm grate inlets through out City.	Hurricanes, Climate change, Flooding, Severe Storms	Existing	Lake Alfred	Utilities	$50,000	General Fund	5-year	Deferred	
Lake Alfred	Lake Alfred	Storm ready	Education, Public Awareness	Community preparedness program to prepare for severe storms.	Hurricanes, Climate change, Flooding, Severe Storms	Existing	Lake Alfred	Fire Department	$0	General Fund	Annual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Storm water Education Program	Education, Public Awareness	Annual storm water training for City staff and the public.	Hurricanes, Climate change, Flooding, Severe Storms	Existing	Lake Alfred	Utilities	$0	Storm water Fund	Annual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Storm water Monitoring	Infrastructure	Monitoring program to evaluate the volumes and water quality at various location in the City.	Hurricanes, Climate change, Flooding, Severe Storms	Existing	Lake Alfred	Streets	$1,500	Storm water Fund	Annual	Deferred	
Lake Alfred	Lake Alfred	Street Light Project	Infrastructure	Program to evaluate and identify streets needing installation of street lighting. The first project area is Mackay Blvd.	All	Existing	Lake Alfred	Streets	$250,000	Grants, Lighting District, and General Fund	5-year	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Street Resurfacing	Infrastructure	Program to evaluate and identify streets needing repairs and resurfacing. The program involves a two year cycle of evaluation and then paving of priority projects.	All	Existing	Lake Alfred	Streets	$200,000	Gas Tax	biannual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Street Sign Preplacement Program	Infrastructure	Program to inventory, evaluate and replace street signs through out City with high visibility signs for safety and evacuation purposes.	All	Existing	Lake Alfred	Streets	$50,000	General Fund	5-year	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Street Sweeping	Maintenance	Monthly sweeping of streets throughout the City to prevent contaminates from reaching the storm water system.	Hurricanes, Climate change, Flooding, Severe Storms	Both	Lake Alfred	Storm water	$20,000	General Fund	Annual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Utility line replacement	Infrastructure	Program to replace or repair existing water or wastewater utility lines.	All	Existing	Lake Alfred	Utilities	$50,000	Utility Fund	Annual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Wastewater Repair and Maintenance Program	Infrastructure	Program to repair or replace wastewater equipment to ensure proper wastewater processing and treatment.	All	Existing	Lake Alfred	Utilities	$70,000	Utility Fund	Annual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Water Conservation Program	Infrastructure	Program to evaluate water conservation methods that can reduce water waste. Plan , implement, and educate the public on the various techniques. When possible incentivize or provide tools for program implementation.	All	Existing	Lake Alfred	Utilities	$20,000	Utilities	Annual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Water plant repair and maintenance Program	Infrastructure	Program to repair or replace equipment to operate water treatment facility..	All	Existing	Lake Alfred	Utilities	$30,000	Utility Fund	Annual	Deleted	No longer feasible project.
Lake Alfred	Lake Alfred	Water Quality Testing	Infrastructure	Water Quality Testing	All	Existing	Lake Alfred	Utilities	$0	Utility Fund	Annual	Deleted	No longer feasible project.

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
Lake Hamilton	Lake Hamilton	CDBG Stormwater Improvement for Marye Jayne Heights	Drainage	Project includes infrastruction improvements to benefit low and mdoerate income persons living in the effected area. Project includes design, property acquisition and construction of project	flooding	both	Lake Hamilton	Public Works	$670,000	DEO Grant/Local match	Winter 2020	Completed	
Lake Hamilton	Lake Hamilton	Generator - Hwy 27 Lift Station	Capital Project	With the events of Hurricanes occurring more frequently and the loss of power a permit Generator is needed for the Towns Wastewater Lift station on Hwy 27 to make sure there would be no backup of Sewer in the event of power loss that occurs over several days.	Power Outages / Hurricanes / Tropical Storms	New	Lake Hamilton	Town Manager	$168,750	HMGP	6-12 months	Deferred	Project has been put out to bid, funding from SRF
Lake Hamilton	Lake Hamilton	Generator - Mary Jayne Neighborhodd	Capital Project	With the events of Hurricanes occurring more frequently and the loss of power a permit Generator is needed for the Towns Wastewater Lift station in the Mary Jayne Neighborhood to make sure there would be no backup of Sewer	Power Outages / Hurricanes / Tropical Storms	New	Lake Hamilton	Town Manager	$156,250	HMGP	6-12 Months	Deferred	Researching funding opportunities
Lake Hamilton	Lake Hamilton	Road enhancment	Transportation/infrastruture	Project includes infrastruction improvements to all the roads in Lake Hamilton, to include adding stormdrains, sidewalks, paving.	transportation incidents	both	Lake Hamilton	Public Works	unknown	grants, loans, assessments, gas tax revenue	on going	Completed	
Lake Hamilton	Lake Hamilton	Upgrade Town Hall	Hardending facility	The historic school house, which has been used as Town Hall required an update due to black mold and limited space condiditions. The project will also build a new police department to adress safety	Hazardous Materials	both	Lake Hamilton	All	1.5 Million	Commercial Loan	Spring 2020	Completed	
Lake Hamilton	Lake Hamilton	Water Distribution System Upgrade	Infrastructure	The of Lake Hamilton will be replacing water lines in many areas of the service area of the municipal uitility. The project will create loops and eliminate shutting water down for the entire town.	Hazardous Materials	Both	Lake Hamilton	Public Works	4.2 million	USDA Grant/Loan	Spring 2021	Deferred	Project has been awarded to contractor. Construction should start first quarter in 2025. Funding from SRF
Lake Region Lakes Management District	Lake Region Lakes Management District	Wahneta Drainage Improvement	Land Acquisition, Drainage	Wahneta Drainage Improvement	Flood	Both	Lake Region Lakes Management District	Lake Region Lakes Management District	$2,000,000	HMGP	12-18 Months		
Lake Wales	Lake Wales	Lakes Wales City Hall hardening	Critical Facilities, Infrastructure	Hardening of City Hall	Severe weather / Hurricanes / Tropical Storms	both	Lake Wales	Assistant City Manager	$369,131	HMGP, General Funds	6-12 months	Delete	Used ARPA funds
Lake Wales	Lake Wales	Lakes Wales City Hall generator	Critical Facilities, Infrastructure	Generator for City Hall	Power Outages / Hurricanes / Tropical Storms	both	Lake Wales	Special Projects Administrator	$145,975	HMGP, General Funds	6-12 months	Deferred	
Lakeland	Lakeland	Cardinal St/Robin St Drainage Improvements	Drainage	Outfall in area is inefficient. Design, permit and construct efficient outfall. Cardinal St./Robin St	Flood	Both	Lakeland	Public Works	$75,000	HMGP	12-18 Months	Deferred	Feasibility still to be assessed, other projects took priority
Lakeland	Lakeland	DARTS	Capture Damage Assessment, Data Collection, & FEMA Reimbursement	Utilized ESRI applications "Collector" and "Survey 123" in conjunction with internal dashboards to create an easy to use mobile solution for all facets of damage assessment and data collection to include FEMA reimbursement information	Damage Assessment of Lakeland Electric customers	N/A	Lakeland	LE	$13,500	Local/State	ongoing	Completed	Completed
Lakeland	Lakeland	Drainage Improvement in Residential Areas	Drainage	Residences and roads flood during excessive rain. Project consists of providing positive outfall for drainage.	Flood	Both	Lakeland	Public Works	$1,000,000	HMGP	12-18 Months	Ongoing	Engineering studies in progress
Lakeland	Lakeland	Drainage Improvements for City	Drainage	Area experience severe flooding for many years, exacerbated by continued growth in area. Feasibility study completed; Project will install positive outfall system to alleviate flooding/create more storage in lake	Flood	Both	Lakeland	Public Works	$1,700,000	HMGP	12-18 Months	Ongoing	Engineering studies in progress
Lakeland	Lakeland	Drainage Outfall Project	Drainage	Area experienced flooding over road and around homes. Project will provide outfall for drainage.	Flood	Both	Lakeland	Public Works	$250,000	HMGP	12-18 Months	Ongoing	Engineering studies in progress
Lakeland	Lakeland	Forestview Estates Drainage Project	Drainage	Growth along County Line area and in subdivision may have altered drainage patterns. Project consists of feasibility study, design, permitting and construction of positive outfall drainage system. Forestview Estates	Flood	Both	Lakeland	Public Works	$200,000	HMGP	12-18 Months	Deferred	Feasibility still to be assessed, other projects took priority
Lakeland	Lakeland	Fuel Storage Tank Acquisition	Infrastructure	Purchase and install two auxiliary fuel storage tanks to ensure adequate supply of fuel to city vehicles.	All	Existing	Lakeland	Public Works	$75,000	HMGP	12-18 Months	Deferred	Determining overall need, to be reassessed at next budget planning
Lakeland	Lakeland	Generator Acquisition	Infrastructure	Generators are required at several key intersections to ensure safe traffic control.	All	Existing	Lakeland	Public Works	$10,000	HMGP	12-18 Months	Completed.	5 of the 20 generators purchased have been stolen over the years and the generators are reaching the age of needing replacement. We are investigating the idea of a response trailer with generators for the signals, a 150 gallon fuel tank for refueling them, and some parts for making basic make-safe repairs after a hurricane.
Lakeland	Lakeland	Generator installation for sewage lift stations	Wastewater	Install new emergency generators or diesel bypass pumps at lift stations that do not have emergency backup equiomemt	Hazardous Materials	Both	Lakeland	Water Utilities	$200,000	Watstewater	12-18 Months	Recurring	
Lakeland	Lakeland	Intersection Drainage Improvement	Drainage	Homes in high growth area around intersection subject to flooding. Project will implement findings of 1997 study.	Flood	Both	Lakeland	Public Works	$900,000	HMGP	12-18 Months	Deferred	Feasibility still to be assessed, other projects took priority
Lakeland	Lakeland	Phase I and Phase II Drainage Studies	Drainage	Residences and roads flood during excessive rain. Phase I - feasibility study to improve drainage systems; Phase II construction, if feasible	Flood	Both	Lakeland	Public Works	$540,000	HMGP	12-18 Months	Ongoing	Phase I in progress
Lakeland	Lakeland	Sanitary Sewer System Inspection and Repair	Stormwater Improvement	Inspection and repair sanitary sewer system to prevent back flow of wastewater in the surface flooding after major rain events	Flood	Both	Lakeland	Water Utilities	$476,000 -	HMGP, FMA	12-18 Months	Recurring	
Lakeland	Lakeland	Sanitary Sewer System Inspection and Repair	Wastewater	Inspection and repair sanitary sewer system to prevent back flow of wastewater after major rain events	Hazardous Materials	Both	Lakeland	Water Utilities	$1,500,000	Wastewater	12-18 Months	Recurring	

Polk County Multi-Jurisdictional LMS Mitigation Action Plan - Mitigation Initiatives

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
Lakeland	Lakeland	Traffic Management Center (TMC) - 100% redundant interconnected traffic signal fiber system.	Operation & Maintenance of City-wide Traffic Signal Control System	In part, with the utilization of 90 CCTV cameras for live fully remote/integrated, monitoring and the Regional Integrated Transportation Information System, (RITIS) along these corridors, our division monitors real-time traffic conditions and collects travel times in real-time. FDOT District 1 provides resources and works with the City of Lakeland's T.M.C. staff to implement signal timing changes to enhance traffic flow and reduce motorist delay. Also, FDOT District 7's Sun Guide Center in Tampa, Florida Turnpike Center in Turkey Lake, and the City of Lakeland T.M.C. work together through the Traffic Incident Management (T.I.M.) Team to improve interstate-arterial coordination during incidents on I-4 and the Polk Parkway through Lakeland. The hours of operation are Monday through Friday 7AM to 7PM.	Traffic signal CCTV surveillance and crash mitigation, response and reduction of motorists' delay.	Both	Lakeland	Public Works/Traffic Ops	$750,000	Local/State FDOT	ongoing	Completed.	We have 85 CCTV cameras now. Hours of operation are 6am to 7pm. FDOT will begin providing after-hours monitoring this year following a standard operating procedure. The I-4 FRAME project is currently under construction which will establish diversion routes with signage to manage incidents that occur on I-4.
Lakeland	Lakeland	Window film on City Building Windows	Building Retrofit	Install window film on the windows of six selected mission essential buildings in the city to protect them from damage during storms.	Storms	Existing	Lakeland	Public Works	$138,200	HMGP	12-18 Months	Deferred	Other remodel activities took priority, to be reassessed at next budget planning
Lakeland	Lakeland	Pilot Project: Intersection Collision Avoidance Safety Program (iCASP)	Preventing Red Light Running Crashes	The City is implementing an Intersection Collision Avoidance Safety Program or iCASP. iCASP is designed to effectively predict red light running motorists and then extend the "All-Red" signal phase (perpendicular green light will be delayed) to avoid intersection crashes. This program is in conjunction with the City of Lakeland Police Department (LPD) red-light running safety program.	Vehicle Crashes	Both	Lakeland	Public Works/Traffic Ops	$75,000	Local/State FDOT	12-24 Months	Completed.	Project was completed. Second project to expand the system began in 2022. $775,000 ($500k state, $275k local funds). This additional phase will be completed by December 2024.
Mulberry	Mulberry	Drainage & Stormwater Feasibility Study	Drainage	Area experienced flooding in yards due to inadequate drainage system. Project is a feasibility study to determine how to handle stormwater runoff.	Flood	Both	Mulberry	Public Works	$50,000	HMGP	12-18 Months		
Mulberry	Mulberry	Nw 10th Drive Drain System	Drainage	Street floods in heavy rains; some homes did flood, others were protected by sandbag barriers during hurricanes. Updated drain system will alleviate these flooding issues. NW 10th Dr.	Flood	Both	Mulberry	Public Works	$1,000,000	HMGP, FMA	12-18 Months		
Mulberry	Mulberry	NW 10th Drive Drainage Project	Drainage	Alleviate flooding of streets and homes along NW 10th Dr. (Mulberry)	Flood	Both	Mulberry	Public Works	$600,000	SWFWMD, Stormwater Utility Fund	6-8 months		
Mulberry	Mulberry	Protective Measures - City Facilities	Infrastructure	Protective Measures - City Facilities	All	Both	Mulberry	Public Works	$220,827	HMGP	12-18 Months		
Mulberry	Mulberry	SW 5th Avenue Stabilization Project	Bank Stabilization	Stabilize the bank with gabions along SW 5th Ave. (Mulberry)	Flood	Both	Mulberry	Public Works	$200,000	SWFWMD, Stormwater Utility Fund	6-8 months		
Polk County	Polk County	Ariana Boulevard Stormwater Installation	Drainage	Properties and Structures on Ariana Blvd. flooded from water flowing from Whistler Est. to Lake Ariana. Current drainage system cannot handle runoff. Project consists of design, permitting and construction of stormwater system	Flood	Both	Polk County	Roads & Drainage	$200,000	HMGP, Property Tax	12-18 Months	Deferred	Awaiting funding
Polk County	Polk County	Auxilary Power for 22 Liftstations	Infrastructure	Auxilary Power for 22 Liftstations	All	Both	Polk County	Utilities	$2,043,475	HMGP	12-18 Months	Completed	Completed.
Polk County	Polk County	Bridge Rehabilitation	Maintenance	Maintain Bridges	Storms	Existing	Polk County	Roads & Drainage	$740,000	Taxes	Annually	Deferred	Annual, reoccuring.
Polk County	Polk County	Bridgers Avenue Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$2,600,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2023.
Polk County	Polk County	Central County Jail Auxilary Power	Infrastructure	Central County Jail Auxilary Power	All	Both	Polk County	Facilities Management	$1,507,750	HMGP	12-18 Months	Completed	Completed 2024.
Polk County	Polk County	Collier Drive/Alachua Drive Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$700,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2022
Polk County	Polk County	Culvert Failure Contingency	Maintenance	Repair and Replace Culverts and associated Drainage Systems	Storms	Existing	Polk County	Roads & Drainage	$2,500,000	Property Taxes	Annually	Deferred	Annual maintenance
Polk County	Polk County	Eloise Loop Road	Drainage	Eloise Loop Road	Flood	Both	Polk County	Roads & Drainage	$285,782	HMGP	12-18 Months	Deferred	Awaiting construction funds.
Polk County	Polk County	Eloise Resource Center	Infrastructure	Wind impact protection for all windows -review doors and storefront glass for impact resistance and replace where needed.	All	Both	Polk County	Facilities Management	$116,250	HMGP	12-18 Months	Deleted	No longer feasible project.
Polk County	Polk County	Fire/EMS Station Auxilary Power	Infrastructure	Fire/EMS Station Auxilary Power	All	Both	Polk County	Facilities Management	$1,837,300	HMGP	12-18 Months	Completed	
Polk County	Polk County	Fire/EMS Station Protective Measures	Infrastructure	Fire/EMS Station Protective Measures	All	Both	Polk County	Facilities Management	$1,730,432	HMGP	12-18 Months	Completed	
Polk County	Polk County	Fueling Facilities Auxilary Power	Infrastructure	Fueling Facilities Auxilary Power	All	Both	Polk County	Facilities Management	$286,930	HMGP	12-18 Months	Completed	
Polk County	Polk County	Garden Grove Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Storms/Flood	Existing	Polk County	Roads & Drainage	$2,200,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2020.
Polk County	Polk County	Griffin Ave Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$210,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2022.
Polk County	Polk County	Heather Heights/Kristina Court Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$600,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2021.

Polk County Multi-Jurisdictional LMS Mitigation Action Plan - Mitigation Initiatives

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
Polk County	Polk County	Install Generation Set at Landfill (Phase I)	Auxiliary Power	Phase I. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station)	Flood	Existing	Polk County	Waste & Recycling	$29,000	HMGP	12-18 Months	Deferred	
Polk County	Polk County	Install Generation Set at Landfill (Phase II)	Auxiliary Power	Phase II. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station)	Flood	Existing	Polk County	Waste & Recycling	$29,000	HMGP	12-18 Months	Completed	Completed
Polk County	Polk County	Install Generation Set at Landfill (Phase III)	Auxiliary Power	Phase III. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station South)	Flood	Existing	Polk County	Waste & Recycling	$35,000	HMGP	12-18 Months	Deferred	
Polk County	Polk County	Install Generator Set at Landfill (Phase V)	Auxiliary Power	Phase V. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station)	Flood	Existing	Polk County	Waste & Recycling	$45,000	HMGP	12-18 Months	Deferred	
Polk County	Polk County	Install Generator Set at Landfill (Phase VI)	Auxiliary Power	Phase VI. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station)	Flood	proposed (2020)	Polk County	Waste & Recycling	$45,000	HMGP	12-18 Months	Deferred	Phase VI-A and VI-B
Polk County	Polk County	Keen Park Road Drainage Project	Drainage	Area experienced flooding in yards and roads. Project will re-establish drainage ditches Keen Park Road	Flood	Both	Polk County	Roads & Drainage	$50,000	HMGP, Property Tax	12-18 Months	Deferred	Awaiting funding
Polk County	Polk County	Keith Lane Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$560,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2020.
Polk County	Polk County	Lake Parker Regional Drainage System Phase IV	Drainage	Provide slope stabilization to prevent further erosion of drainage system.	Flood	Existing	Polk County	Roads & Drainage	$720,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2021.
Polk County	Polk County	Lift Station 5 Relocation Outside of Floodplain and Auxilary Power	Infrastructure	Lift Station 5 Relocation Outside of Floodplain and Auxilary Power	Flood, All	Both	Polk County	Utilities	$690,588	HMGP	12-18 Months	Deferred	Local funding used for this project and is expected to be completed by April 1, 2025.
Polk County	Polk County	Maitenance of Stormwater Facilities	Maintenance	Maintain existing Stormwater Facilities (Ponds/Ditches)	Storms	Existing	Polk County	Roads & Drainage	$500,000	Property Taxes	Annually	Deferred	Annual maintenance
Polk County	Polk County	Moss Road/Jones Road Drainage Ditch Improvements	Drainage	Area experienced flooding in yards and roads. Project will re-establish drainage ditches. Moss Rd./Jones Rd.	Flood	Both	Polk County	Roads & Drainage	$50,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2020.
Polk County	Polk County	North Central Landfil Storage Building Replacement	Building Retrofit	Replace 4 portable storage sheds that store tools, equipment and supplies with a wind resistant permanent metal building at the North Central Landfill.	Wind, Storms	Existing	Polk County	Waste & Recycling	$650,000	HMGP	12-18 Months	Deferred	
Polk County	Polk County	Oakland Rd N Drainage Improvements	Drainage	Area experienced flooding in yards and roads. Project will establish drainage system along roadway. Oakland Road North	Flood	Both	Polk County	Roads & Drainage	$200,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2019.
Polk County	Polk County	Pavement Management	Maintenance	Maintain our Pavement Surfaces on Roadways	Storms	Existing	Polk County	Roads & Drainage	$18,000,000	Taxes	Annually	Deferred	Annual maintenance
Polk County	Polk County	Rolling Oaks Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$800,000	HMGP, Property Tax	12-18 Months	Deferred	Under design.
Polk County	Polk County	Silver Sands Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$600,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2018.
Polk County	Polk County	South Carter Road Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$2,000,000	HMGP, Property Tax	12-18 Months	Deleted	No longer feasible project.
Polk County	Polk County	Sunset Trail SW Water Quality / Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$1,000,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2021.
Polk County	Polk County	SW Canal at Cherrywood Circle Pipe System Project	Drainage	During recent storms, area flooded and was pumped. Project will install pipe system to SW Canal at Cherrywood Circle	Flood	Both	Polk County	Roads & Drainage	$75,000	HMGP	12-18 Months	Deferred	Awaiting funding.
Polk County	Polk County	Tillery/Clubhouse Road Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$500,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2024.
Polk County	Polk County	W.H Conference Stuart Center	Infrastructure	Wind impact protection for all windows -review doors and storefront glass for impact resistance and replace where needed.	All	Both	Polk County	Facilities Management	$20,200	HMGP	12-18 Months	Completed	Completed.
Polk County	Polk County	West Lake Eloise Drive Drainage Improvements	Drainage	Raise road to prevent flooding of roadway	Flood	Existing	Polk County	Roads & Drainage	$1,100,000	HMGP, Property Tax	12-18 Months	Completed	Completed 2022.
Polk County	Polk County	Wildfire Mitigation	Vegetation Management	Increase defensable space between County conservation lands and neighboring homes and businesses.	Wildfire	Both	Polk County	Parks and Natural Resources	$500,000	HMGP	12 months	Completed.	Completed
Polk County	Polk County	Wildwood Subdivision Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$600,000	HMGP, Property Tax	12-18 Months	Deferred	Under construction.
Polk County	Polk County	Wilson Acres	Drainage	Wilson Acres	Flood	Both	Polk County	Roads & Drainage	$1,991,361	HMGP	12-18 Months	Deferred	Awaiting funding.

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
Polk County	Polk County, Bartow, Homeland, Fort Meade	Upper Peace River Corridor Restoration, Protecting Central Florida's Water, Wildlife and Wilderness Corridor	Stormwater Management, Flood Proofing, Restoration of Natural Features		Flood, Stormwater	New	Polk County	Parks and Natural Resources	$7,500,000	FDEM-DEO, FDEP Sta	3 years	Deferred	Awaiting funding.
Polk County Public Schools	Elbert Elementary 205 15th Street NE Winter Haven, FL 33881	Elbert Elementary Install retaining wall	Property Protection	Install retaining wall to prevent erosion from to hinder stormwater runoff from city streets	Flooding	Existing	Polk County School Board	Facilities	$50,000	Sales Tax and HMGP	1 year	Deleted	School has been demolished and rebuilt. Retaining wall was a component of the rebuild.
Polk County Public Schools	Jewett School of the Arts 2250 8th Street Winter Haven, FL 33881	Jewett School of the Arts Improve flat/ballasted roofs to metal Blds 1, 2	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities	$2,071,403	Sales Tax and HMGP	1 year		
Polk County Public Schools	Lake Alfred Elementary 550 E Cummings Lake Alfred, FL 33850	Lake Alfred Elementary Improve drainage from Blds 1, 2, & 3 to playground	Property Protection	Bring gutter/downspouts from buildings and tie into stormwater system	Flooding	Existing	Polk County School Board	Facilities	$75,000	Sales Tax and HMGP	1 year	Deleted	School is scheduled to be demolished and rebuilt in 2027.
Polk County Public Schools	Lake Alfred Elementary 550 E Cummings Lake Alfred, FL 33850	Lake Alfred Elementary Improve flat/ballasted roofs to metal Blds 1, 2, 3, 4, 5,7, 8, 9	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities	$2,510,271	Sales Tax and HMGP	1 year	Deleted	School is scheduled to be demolished and rebuilt in 2027.
Polk County Public Schools	Lake Alfred Polytech 925 N Buena Vista Dr Lake Alfred, FL 33850	Lake Alfred Polytech Install gutters	Property Protection	Install gutters to improve drainage and reduce erosion	Flooding	Existing	Polk County School Board	Facilities	$48,000	Sales Tax and HMGP	1 year		
Polk County Public Schools	Lewis-Anna Woodbury Elem 610 S Charleston Ave Fort Meade, FL 33841	Lewis-Anna Woodbury Elem Improve flat/ballasted roofs to metal Blds 1, 2, 5, 6, 7, 8	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities	$1,294,752	Sales Tax and HMGP	1 year		
Polk County Public Schools	Medulla Elementary 850 Schoolhouse Road Lakeland, FL 33813	Medulla Elementary Improve flat/ballasted roofs to metal Blds 2, 3, 4, 5	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities	$3,471,853	Sales Tax and HMGP	1 year		
Polk County Public Schools	North Lakeland Elementary 410 W Robson St Lakeland, FL 33805	North Lakeland Elementary Improve flat/ballasted roofs to metal Blds 1, 2, 3, 4,5	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities	$2,516,747	Sales Tax and HMGP	1 year		
Polk County Public Schools	R. Bruce Wagner Elem. 5500 Yates Road Lakeland, FL 33811	R. Bruce Wagner Elem. Install gutters	Property Protection	Install gutters to improve drainage and reduce erosion	Flooding	Existing	Polk County School Board	Facilities	$100,000	Sales Tax and HMGP	1 year		
Polk County Public Schools	Sleepy Hill Middle 2215 Sleepy Hill Road Lakeland, FL 33809	Sleepy Hill Middle Install gutters	Property Protection	Install gutters to improve drainage and reduce erosion	Flooding	Existing	Polk County School Board	Facilities	$140,000	Sales Tax and HMGP	1 year		
Polk County Public Schools	Walter Caldwell Elementary 141 Dairy Road Auburndale, FL 33823	Walter Caldwell Elementary Improve flat/ballasted roofs to metal Blds 1, 2, 3, 4,8, 12,16, 17	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities	$2,120,580	Sales Tax and HMGP	1 year		
Polk State College	Polk State College	Wet and Dry Flood Proofing Systems for LAC Electrical Room	Infrastructure	Wet and Dry Flood Proofing Systems for LAC Electrical Room	Flood	Both	Polk State College	Facilities	$85,836	HMGP	12-18 Months	Delete	No longer feasible project.
Webber International University	Webber International University	Campus Flood Mitigation Project	Drainage	Mitigate campus flooding	Flood	New	Webber International University	VP of Student Life	$275,250	HMGP	12-18 Months	Deferred	
Webber International University	Webber International University	Webber Generator Projects	Critical Facilities	Install generators for: IT building, Yentes Center, Learning Commons, Babson Center, Waste Water Treatement Pump, and Lift Station	Hurricanes / Tropical Storms / Power outages	New	Webber International University	VP of Student Life	$597,406	HMGP	12-18 Months	Deferred	
Winter Haven	City of Winter Haven	Lift Station Generators	Infrastructure	Lift Station Generators	All	Both	Winter Haven	Utility Services	$210,848	HMGP	12-18 Months	Completed	Completed 2019.
Winter Haven	Winter Haven	City Pipe System Replacement	Drainage	Area’s pipe system has deteriorated, needs replacement	Flood	Both	Winter Haven	Utility Services	$1,100,000	HMGP	12-18 Months	Deferred	Annual maintenance
Winter Haven	Winter Haven	Emergency power generation @ the Winter Haven Regional Airport	Infrastruture	Install power generation infrastruture to provide resiliency and insure continuous operation and utilization of a major transportation facility (the airport) Provide power to Winter Haven Airport for continious power, Providing an alternate LSA	All	Both	Winter Haven	Growth Management	$250,000	HMPG	12-60 Months	Deferred	Under construction 2025.
Winter Haven	Winter Haven	Fire Station 2 Infrstructure	Hardending facility	Hardening of Building, Bay doors, windows	All	New	Winter Haven	Public Safety	$52,000	HMGP, FEMA	12-60 Months	Deferred	Under construction 2025.
Winter Haven	Winter Haven	Grey to Green stormwater pond alterations	Drainage	Retrofit existing stormwater ponds in high infiltration areas by utilizing landscape buffer areas increasing storage and infiltration of stormwater and reducing the size of existing traditional ponds.	Flood/Water quality	Existing	Winter Haven	Public Works/Natural Resources	1,500,00	HMPG	12-60 Months	Deferred	

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
Winter Haven	Winter Haven	Harden Public Works Facility	Critical Facilities	Improve facility where Public Works Operations including fleet maintenance is housed to better weather storm events.	All	Existing	Winter Haven	Public Works	$300,000	HMGP,City Budget	12-18 months	Deferred	
Winter Haven	Winter Haven	Lake Elbert Permanent Pump Upgrade	Flood Proofing	Lake Elbert, is a 169-acre public lake located in Winter Haven (Florida). The lake is surrounded by residential neighborhoods and receives extensive rainfall and stormwater discharges from a 772-acre drainage basin. Despite several areas where water discharges into the lake, water can only leave the lake through infiltration and evaporation. The Southwest Florida Water Management District has set water level guidelines for Lake Elbert (133.0-ft low, 135.5-ft high). After above-average summer rainfall and Hurricane Ian, the water level in Lake Elbert rose to nearly 2-ft above the guidance high (137.3-ft). The high water levels in Lake Elbert threatened property and structures through flooding and erosion. In response, the City used a temporary emergency pump to drain water from Lake Elbert into Lake Otis, which has an outlet for the water to continue downstream. This application is a request of funds to purchase and install a permanent pump to an existing structure designed for this purpose, which will allow for the future management of water levels.	Stormwater	New	Winter Haven	Natural Resources Manager	$94,000	HMGP	6-12 months	Deferred	In HMGP process as of 2/25/2025
Winter Haven	Winter Haven	Land Acquisition - Flood Prevention	Flood Storage and Prevention	The City has identified approximately 5,500 acres of drained wetlands. Restoring the wetlands would increase water storage and reduce flooding during storm events throughout the Winter Haven area.	Flood	Both	Winter Haven	Utility Services	$44,000,000	HMGP, FEMA	12-60 Months	Deferred	Ongoing.
Winter Haven	Winter Haven	Lift Station Generators	Infrastructure	Lift Station Generators - The City owns and operates 210 santiary sewer lift stations. Emergency power is available to 36 lift stations with permanent generators. The City owns 7 portable generators and 5 portable by-pass pumps to prevent santiary sewer overflows. To prevent future sanitary sewer overflows, the City should provide emergency power or pumping capacity to 50% of the lift stations. This would require 57 additional generators or by-pass pumps.	All	Both	Winter Haven	Utility Services	$3,500,000	HMGP, FEMA	12-60 Months	Completed	Completed 2020.
Winter Haven	Winter Haven	Saphire Necklace	Water storage	Purchaase land and construct the Saphire Necklace, a regional water storage system planned in Winter Haven to store water, restore wetland areas, and alleviate downstream flooding.	Flood	Both	Winter Haven	Utilitiy Services/Natural Resources/Growth Management	$1,100,000	HMPG	12-60 Months	Deferred	Ongoing project.
Winter Haven	Winter Haven	Street Sweeping	Drainage	Sweep streets in areas where stormwater system exists to limit debris build up in system.	Flood	Both	Winter Haven	Public Works	$140,000	City Beget	On going annually	Deferred	Ongoing project.
Winter Haven	Winter Haven	Traffic Response Enhancement	Emergency Traffic Management	Currently maintain battery backups for traffic signals that provide short term support in the event of power failure	Traffic	Both	Winter Haven	Public Works	$150,000	City Budget	On going annually	Deferred	
Winter Haven	Winter Haven	Traffic Response Enhancement	Emergency Traffic Management	Purchase 10 small generators to be able to utilize traffic signals when power is down.	Traffic	Both	Winter Haven	Public Works	$25,000	HGMP	6 months	Deferred	
Winter Haven	Winter Haven	WWTP #2 By-Pass Pump	Infrastructure	During storm events, the primary sewage lift station for WWTP #2 has experienced failure conditions. A diesel driven by-pass pump will eliminate future santiary sewer overflows (SSO).	All	Existing	Winter Haven	Utility Services	$74,643	HMGP, FEMA	12-18 Months	Completed	Completed in 2019.
Winter Haven	Winter Haven	Lake Howard Stormwater Park overflow pipe replacement	Drainage	The pipe drainaing from 21st street to Lake Howard is in need of replacement, purchase and reroute drainage through the adjacent wetland to mitigate storm impacts.	Flood	Both	Winter Haven	Public Works	$1,500,000	HGMP,SWFWMD, FDEP, City Budget	12-18 Months	Deferred	Ongoing project.
Winter Haven	Winter Haven	Stormwater line clearing	Drainage	routinely inspect, maintain, and repair stormwater lines throughout the City	Flood	Both	Winter Haven	Public Works	$500,000	City Budget	On going annually	Deferred	Ongoing project.

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
	John Hopkins All Children's Hospital	Critical Facility Retrofit	Critical Facility / Infrastructure	This project is to replace the exterior main entry door and interior main entry doors. The exterior main entry door will be hurricane rated impact resistant bi parting automatic sliding dor pcae he interior main entry door will be a glazed ¼" clear tempered glass door package. These doors will have new electronic controls installed which will allows them to be controlled from the primary operations center in Pinellas County. In past event the type of door currently in place has failed in high winds allowing water intrusion into a similar facility. The project also includes replacement of windows with high impact, hurricane resistant materials. The current type of window failed during Hurricane Ian at an similar facility allowing water intrusion and slowing the reopening process. The exterior entryway has a concrete planter that in the past high rain events has funneled water into the building. This project will permanently remove this planter.	Stormwater / Flood / Hurricanes / Tropical Storms / Wind	New	Lakeland	Director of Safety / Emergency Preparedness	$4,204,765	HMGP	12+ Months	Deferred	

ON-GOING PROJECT TABLE

Project	Polk County	Auburndale	Bartow	Davenport	Dundee	Eagle Lake	Fort Meade	Frostproof	Haines City	Highland Park	Hillcrest Heights	Lake Alfred	Lake Hamilton	Lake Wales	Lakeland	Mulberry	Polk City	Winter Haven	PCPS
Natural Hazards																			
Extreme Temperatures																			
Code requirements for landscape shading to reduce the urban heat island effect		X	X	X	X	X		X		X							X		
Fog																			
Encourage area news media to broadcast emergency information concerning fog that addresses safety precautions and/or the need to avoid certain travel corridors during a fog event																			
Hurricane/Tropical Storms																			
Adopt regulations governing residential construction to prevent wind damage.			X	X	X	X		X								X	X		
Promote or Require Site and Building Design Standards to Minimize Wind Damage			X	X	X			X		X						X			
Requirements to bury power lines to provide uninterrupted power after severe storms		X	X	X	X														
Severe Storms and Tornadoes (Hail, Lightning, and Thunderstorms)																			
Installing and maintaining surge protection on critical electronic equipment.			X	X	X	X	X				X					X			
Requiring tie-downs with anchors and ground anchors appropriate for the soil type for manufactured homes		X	X	X	X	X	X	X								X	X		
Sinkholes																			
Code requirements preventing and/or limiting development in soil-limited areas				X	X		X	X											
Drought																			
Require mandatory water conservation measures during drought emergencies		X	X	X	X		X	X			X						X		
Incorporating drought tolerant or xeriscape practices into landscape ordinances to reduce dependence on irrigation.			X	X			X	X									X		
Developing agreements for secondary water sources that may be used during drought conditions			X		X														
Flood																			
Enforcing adopted development requirements for development in wetlands and floodplains	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Adopting the International Building Code (IBC) and International Residential Code (IRC).		X			X	X	X	X		X									
Adding or increasing “freeboard” requirements (feet above base flood elevation) in the flood damage ordinance.		X		X	X		X										X		
Requiring a drainage study with new development			X	X			X												

Project	Polk County	Auburndale	Bartow	Davenport	Dundee	Eagle Lake	Fort Meade	Frostproof	Haines City	Highland Park	Hillcrest Heights	Lake Alfred	Lake Hamilton	Lake Wales	Lakeland	Mulberry	Polk City	Winter Haven	PCPS
Encouraging the use of Low Impact Development techniques		X		X													X		
Participate in the CRS	X											X			X			X	
Performing regular drainage system maintenance, such as sediment and debris clearance, as well as detection and prevention of discharges into stormwater and sewer systems from home footing drains, downspouts, or sewer pumps.			X	X	X	X	X	X									X		
Depending on its infrastructure capabilities, using check valves, sump pumps, and backflow prevention devices in homes and buildings.		X		X	X		X										X		
Wildfire																			
Hazardous Fuels Reduction				X			X												
Open burning regulations			X	X	X			X			X								
Required Radius of Defensible Space																			
Vegetation Management			X		X														
Addressing fire mitigation through access, signage, fire hydrants, water availability, vegetation management, and special building construction standards			X	X	X			X			X						X		
Firewise USA Community																			
Human Caused Hazards																			
Civil Disturbance/Terrorism																			
Hardening and/or increased security measures at places of public assembly – City Halls, etc			X	X	X			X									X		
Deputies at all public schools			X	X	X														
Cyber-Attacks																			
Increased security of systems including firewalls, back-up systems, etc		X	X	X	X			X			X						X		
Dam/Levee Failures																			
Epidemics/Pandemics																			
Mosquito surveillance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mosquito spraying	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hazardous Materials Incidents																			
Citrus Health Response Program (CHRP) Assessment																			
Code of Ordinance requirements providing for regulation of the storage, handling, use or production of hazardous substances within zones of protection surrounding potable water supply wells				X	X		X				X						X		
Code of Ordinance requirements addressing the handling and discharge of hazardous waste			X	X	X			X			X						X		

Project	Polk County	Auburndale	Bartow	Davenport	Dundee	Eagle Lake	Fort Meade	Frostproof	Haines City	Highland Park	Hillcrest Heights	Lake Alfred	Lake Hamilton	Lake Wales	Lakeland	Mulberry	Polk City	Winter Haven	PCPS
Requirements for back flow preventers on wastewater or water systems			X	X	X		X										X		
Transportation Incidents																			
Adopted Complete Streets program	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Polk County Multi-Jurisdictional LMS Mitigation Action Plan - Mitigation Initiatives

Jurisdiction Benefitted	Date Added/Updated/Reviewed	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Contact	Estimated Cost	Possible Funding Source(s)	Time to Complete
All	n/a	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	County Public Safety Departments (Fire, EMS, E-911, etc)	County Public Safety Departments (Fire, EMS, E-911, etc)		$25,000	Public Safety Admin	Annual and Bi-annual
All	n/a	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	Polk County	County Public Safety Departments (Fire, EMS, E-911, etc)		$25,000	Public Safety Admin	Annual and Bi-annual
Auburndale	11/18/2024	Auburndale	Sevilla Street Stormwater Mitigation	Drainage	Install underground stormwater pipes and create a stormwater treatment pond	Flood, Hurricanes/Tropical Storms	New	Auburndale	Public Works		$250,000	Local	12-24 Months
Bartow	1/31/2025	Bartow	Tee Avenue Acquisition/Demolition	Acquisition/Demolition	The proposed project would purchase and demolish 5 residential properties (880, 840, 810 Tee Avenue and 2425 Washington Ave, 2400 Booker St) abutting the Peace River flood plain that experience recurring flooding during major storm events. These property owners have experienced flooding that caused failures of their sewer systems, blocked access to their homes, and created public health issues during numerous major storm events dating back to the three hurricanes in 2004. These flooding events have become more frequent since SWFWMD raised the level of Lake Hancock and are directly related to rainfall and high discharges of water from the upstream basins during these storm events. These properties would be graded to provide additional flood storage adjacent to the Peace River.	Flooding	Existing	Bartow	Finance Department	Sarah Jones, Grants Administrator	$2,000,000	HMGP, General Funds, SWFWMD Cooperative Funding, Stat Appropriations	12 to 24 months
Bartow	1/31/2025	Bartow	Wastewater Treatment Facility Interim Floodproofing Project	Critical Facility / Infrastructure	The proposed project would provide for an interim solution to the recurrent flooding experienced at the City's wastewater treatment facility. Currently, every time a severe storm / hurricane threatens the area, the City has to scramble to locate Tiger Dams or other temporary dyke materials to keep the Peace River from flooding the plant site and shutting down the operation of this regional treatment facility. These proposed improvements would create a more permanent berm system and provide a permanent pumping system to make sure flood waters do not adversely impact the treatment plant.	Flood / Hurricanes/Tropical Storms	Existing	Bartow	Finance Department	Sarah Jones, Grants Administrator	$2,200,000	City Utility Funds, Polk County Utility Funds, City of Eagle Lake Utility Funds, SWFWMD Cooperative Funding, State Appropriations, HMGP	12 to 24 months
Bartow	1/31/2025	Bartow	Wastewater Treatment Facility Relocation Feasibility Study	Critical Facility / Infrastructure	The proposed project would determine the feasibility for relocating the City's wastewater treatment facility out of the Peace River floodplain. This is a regional wastewater treatment facility serving the Cities of Bartow and Eagle Lake as well as one of Polk County's regional utility service areas. This facility experiences recurring flooding during major storm events. This flooding has created serious public health issues during numerous major storm events dating back to the three hurricanes in 2004. These flooding events have become more frequent since SWFWMD raised the level of Lake Hancock and are directly related to rainfall and high discharges of water from the upstream basins during these storm events.	Dam/Levee Failures / Hurricanes/Tropical Storms / Flood	Existing	Bartow	Finance Department	Sarah Jones, Grants Administrator	$500,000	City General Funds, SWFWMD Cooperative Funding, State Appropriations, HMGP	12 to 24 months
Davenport	11/7/2024	Davenport	City Wide	Drainage	CDS Cleaning/Replacement of damaged inlets	Flood	Existing	Davenport	Public Works		$25,000	Stormwater	Annual
Davenport	11/7/2024	Davenport	Critical Facility Wind Retrofit	Critical Facilities	Wind Retrofit to City Admin Builiding that houses Fire, Police and Public Works operations.	Wind	Existing	Davenport	Public Works		$225,000	HMGP	9-12 Months
Davenport	11/7/2024	Davenport	New Devlopment	Water Star Energy	Water Conservation incentives to Developers for using equipment. Incentives presented by SWFMD.	Water	New	Davenport	Building		$0	Water Management District	Annual
Davenport	11/7/2024	Davenport	Stormwater Master Plan	Drainage, Infrastructure	Ability to address areas prone to flooding now and into the future	Flood	Both	Davenport	Utilities		$300,000	HMGP	12 months
Dundee		Dundee	Dundee Center St Drainage Imp	Drainage	Dundee Center St Drainage Imp	Flood	Both	Dundee	Public Works		$562,500	HMGP	12-18 Months

Jurisdiction Benefitted	Date Added/Updated/Reviewed	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Contact	Estimated Cost	Possible Funding Source(s)	Time to Complete
Dundee		Dundee	Dundee Community Center Auxilary Power	Infrastructure	Dundee Community Center Auxilary Power	All	Both	Dundee	Public Works		$56,650	HMGP	12-18 Months
Dundee		Dundee	Dundee Community Center Protective Measures	Infrastructure	Dundee Community Center Protective Measures	All	Both	Dundee	Public Works		$36,942	HMGP	12-18 Months
Dundee		Dundee	Dundee Drainage Assessment/Improvements	Drainage	Dundee Drainage Assessment/Improvements	Flood	Both	Dundee	Public Works		$93,750	HMGP	12-18 Months
Dundee		Dundee	Dundee Economy Lift Station	Infrastructure	Dundee Economy Lift Station	All	Both	Dundee	Public Works		$125,000	HMGP	12-18 Months
Dundee		Dundee	Dundee Fire Dept Protective Measures	Infrastructure	Dundee Fire Dept Protective Measures	All	Both	Dundee	Public Works		$27,800	HMGP	12-18 Months
Dundee		Dundee	Dundee Fire Dept Wind Retrofit	Infrastructure	Dundee Fire Dept Wind Retrofit	All	Both	Dundee	Public Works		$37,500	HMGP	12-18 Months
Dundee		Dundee	Dundee Fl Ave MLK Drainage Imp	Drainage	Dundee Fl Ave MLK Drainage Imp	Flood	Both	Dundee	Public Works		$562,500	HMGP	12-18 Months
Dundee		Dundee	Dundee Lk Menzie Lk Marie Restroom PM	Infrastructure	Dundee Lk Menzie Lk Marie Restroom PM	All	Both	Dundee	Public Works		$9,120	HMGP	12-18 Months
Dundee		Dundee	Dundee Ridgewood Area Drainage Imp	Drainage	Dundee Ridgewood Area Drainage Imp	Flood	Both	Dundee	Public Works		$245,625	HMGP	12-18 Months
Dundee		Dundee	Dundee Riner WTF Safe Room	Infrastructure	Dundee Riner WTF Safe Room	All	Both	Dundee	Public Works		$19,375	HMGP	12-18 Months
Eagle Lake	11/20/2024	Eagle Lake	Eagle Lake Green Acres Water Plant Lift Station generator	Critical Facilities, Infrastructure	Generator for Green Acres Water Plant Lift Station	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager		$225,000	HMGP, City Utility Funds	12-18 Months
Eagle Lake	11/20/2024	Eagle Lake	Eagle Lake Green Lift Station #2 generator	Critical Facilities, Infrastructure	Generator for Lift Station #2	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager		$275,000	HMGP, City Utility Funds	12-18 Months
Eagle Lake	11/20/2024	Eagle Lake	Eagle Lake Lift Station #5 generator	Critical Facilities, Infrastructure	Generator for Lift Station #5	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager		$275,000	HMGP, City Utility Funds	12-18 Months
Eagle Lake	11/20/2024	Eagle Lake	Eagle Lake City Hall generator	Critical Facilities, Infrastructure	Generator for City Hall	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager		$250,000	HMGP, City Utility Funds	12-18 Months
Fort Meade		Fort Meade	City Hall generator	Critical Facilities	City hall generator	All	Existing	Fort Meade	Assistant City Manager		$78,500	HMGP	12-18 Months
Fort Meade	11/18/2024	Fort Meade	Railroad Avenue Stormwater Improvements	Stormwater	Installation of stormwater pipes	Dam/Levee Failures, Flood, Harmful Algal Blooms, Hazardous Materials Incidents, Hurricanes/Tropical Storm, Severe Storms	New	Fort Meade	Assistant City Manager		$1,771,400	FMEA, HMGP, Federal, Local	Less than 12 Months
Fort Meade	11/18/2024	Fort Meade	Peace River Cleanup and Restoration	Water Quality, Stormwater Management	Restoring and cleaning up Peace River	Dam/Levee Failures, Drought, Extreme Temperatures, Flood, Harmful Algal Blooms, Hazardous Materials Incidents, Hurricanes/Tropical Storms, Severe Storms	New	Fort Meade	Assistant City Manager		$2,000,000	FMEA, HMGP, Federal, Local	12-24 Months
Fort Meade	11/18/2024	Fort Meade	Lift Station #2 River Ridge Rehabilitation	Critical Faciilities	Rehabilitation of lift station	Epidemics/Pandemics, Flood, Hurricanes/Tropical Storms, Severe Storms	New	Fort Meade	Assistant City Manager		$910,000	Wastewater Fund, Grants	Less than 12 Months
Fort Meade	11/18/2024	Fort Meade	Effluent Pump 3 Repair	Infrastructure	This pump repair will restore the effluent pumping redundancy at the WWTP. Currently 2 of the 3 pumps are operational. This will greatly reduce possibility of SSO into impaired Peace River near the city WWTP in the event of pump failure during a major storm event.	Stormwater / Natural Resources Protection	New	Fort Meade	Assistant City Manager		$15,500	HMGP	6-12 months
Fort Meade	11/18/2024	Fort Meade	Rehabilitation of 143 failing/poor condition manholes	Infrastructure	Eliminates infiltration during flooding and storm events. Eliminates exfiltration during drought and low water table conditions. City gravity sewer system was heavily impacted during most recent Hurricane Ian event. Manhole rehabilitation will greatly reduce possibility of SSO into impaired Peace River near the city WWTP from hydraulic overloads.	Stormwater / Natural Resources Protection	New	Fort Meade	Assistant City Manager		$1,251,000	HMGP	12+ Months

Polk County Multi-Jurisdictional LMS Mitigation Action Plan - Mitigation Initiatives

Jurisdiction Benefitted	Date Added/Updated/Reviewed	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Contact	Estimated Cost	Possible Funding Source(s)	Time to Complete
Fort Meade	11/18/2024	Fort Meade	Sheriff Substation generator	Capital Project	Sheriff Substation generator	All	Existing	Fort Meade	Assistant City Manager		$57,500	HMGP	12-18 Months
Fort Meade	11/18/2024	Fort Meade	SS Inflow Manhole Guard Installation	Critical Facility	Eliminates inflow from runoff during flooding and storm events. City gravity sewer system was heavily impacted during most recent Hurricane Ian event. Inflow basin guards will greatly reduce possibility of SSO into impaired Peace River near the city WWTP.	Stormwater / Natural Resources Protection	New	Fort Meade	Assistant City Manager		$78,486	HMGP	6-12 months
Fort Meade	11/18/2024	Fort Meade	Stormwater Feasibility Study - 4th & 5th Street	Flood Proofing / Stormwater	This is a feasibility study for approximately 3,871 feet of pipe for ten inlets and six manholes to control street flooding where the existing sized pipes and open ditches in the 400 & 500 block of NE 4th & 5th Street are inadequate. This area suffers of flooding and stagnant water after rain events. Area streets are submerged with standing water in residential yards. The study would allow for improved re-direction of water flow with flood proofing infrastructure.	Stormwater / Flood	New	Fort Meade	Assistant City Manager		$150,000	HMGP	6-12 months
Fort Meade	11/18/2024	Fort Meade	Stormwater Retention Area - NW Langford Avenue	Stormwater Management	Stormwater improvements in the Downtown Improvement Area are primarily focused on capturing and infiltrating stormwater to reduce the contribution of nutrients to the downstream waterbodies while upgrading the stormwater conveyance system to improve the FPLOS.	Stormwater / Flood	New	Fort Meade	Assistant City Manager		$1,761,900	HMGP	12+ Months
Fort Meade	11/18/2024	Fort Meade	Water plant generator	Critical Facilities	Water plant generator	All	Existing	Fort Meade	Assistant City Manager		$111,000	HMGP	12-18 Months
Fort Meade	11/18/2024	Fort Meade	Water Well Generator	Critical Facilities, Capital Project	Water Well generator	All	Existing	Fort Meade	Assistant City Manager		$57,500	HMGP	12-18 Months
Fort Meade	11/18/2024	Fort Meade	Watershed Management Plan - Hendry Avenue	Stormwater Management	Stormwater improvements in the South Hendry Ave area were will focus on upgrading the stormwater conveyance system to improve FPLOS while incorporating swales to capture and infiltrate stormwater to reduce the contribution of nutrients to the downstream waterbodies.	Stormwater	New	Fort Meade	Assistant City Manager		$1,499,165	HMGP	12+ Months
Fort Meade	11/18/2024	Fort Meade	Ditch Cleaning	Stormwater Management	Citywide. Ditch cleaning is a crucial practice for stormwater mitigation. Removing debris and sediment from ditches enhances the capacity to carry stormwater, reducing flooding.	Stormwater	Both	Fort Meade	Public Works		n/a	City	Ongoing
Fort Meade	11/18/2024	Fort Meade	Streetsweeping	Stormwater Management	Citywide. Streetsweeping is an effective stormwater mitigation practice. Keeping storm drains and inlets free of debris ensuring effieicent stomwater flow.	Stormwater	Both	Fort Meade	Public Works		n/a	City	Ongoing
Fort Meade	11/18/2024	Fort Meade	Rehabilitation of Liftstation 2 at River Ridge	Critical Facilities, Capital Project	Rehabilitating a lift station significantly enhances stormwater mitigation efforts. Lift stations can help mitigate flooding risks, prevent overflows and spills.	All	New	Fort Meade	Public Works		$ 910,000.00	HMGP	12-18 Months
Fort Meade	11/18/2024	Fort Meade	FDOT Street Paving	Capital Project	Street paving significantly contributes to stormwater mitigation by improving road surface and drainage infrastructure	All	New	Fort Meade	Assistant City Manager		$ 1,000,000.00	FDOT, City	12-18 Months
Fort Meade	11/18/2024	Fort Meade	American Legion RV Park Wastewater System Installation	Infrastructure	Adding sewer connections can improve stormwater mitigation by reducing the potential for wastewater spills and polution	Wastewater/Stormwater	New	Fort Meade	Assistant City Manager		$ 785,000.00	CDBG	12-18 Months
Fort Meade	11/18/2024	Fort Meade	Library/Hurricane Shelter	Critical Facilities, Capital Project		All	New	Fort Meade	Assistant City Manager		$ 4,000,000.00	CDBG	12-24 Months
Fort Meade	11/18/2024	Fort Meade	Peace River Restoration	Flood Proofing / Stormwater	River restoration is a valuable tool for mitigation the impacts of stormwater runoff. By restoring natural processes it will improve water quality, reduce flood risks, and enhance ecological health.	Stormwater	New	Fort Meade	Assistant City Manager		$ 2,000,000.00	FEMA, HMGP	12-18 months
Fort Meade	11/18/2024	Fort Meade	Stormwater improvements to Railroad Ave	Flood Proofing / Stormwater	Installing stormwater pipes in the ditch on Railroad Ave will mitigate flooding in the area	Stormwater	New	Fort Meade	Public Works		$ 1,771,401.00	HMGP	6-12 months
Frostproof		City of Frostproof	A street and SR 17 Drainage Project	Drainage	Localized street flooding backing up to SR17. Clean and vactor all storm pipes back to FDOT storm pond	Flooding	Existing	Frostproof	Public Works		$80,000	FMA, SWFWMD, FDOT	12-24 Months
Frostproof		City of Frostproof	City Maintenance Shop Generator	Public Works	Currently our only Maintenance Shop has no auxilary power	Loss of Power	Exisitng	Frostproof	Public Works		$180,000	HMGP	12-24 Months
Frostproof		City of Frostproof	Colony Ave StormDrainage Project	Drainage	Localized flooding at the intersection of Colony Ave and CR630 W.	Flooding	Existing	Frostproof	Public Works		$250,000	FMA, City of Frostproof, SWFWMD, Polk County	12-24 Months
Frostproof		City of Frostproof	Community Center Generator	Parks and Recreation	Currently our Leased Commuity center from Polk County has no back-up power. We could utilize this site as a Shelter or temporary quarters for essential personnel during hurricanes	Shelter	Exisitng	Frostproof	Parks and Rec		$200,000	HMGP	12-24 Months
Frostproof		City of Frostproof	D Street re-pump Lift-station Generator	Wastewater	Currently our re-pump lift-station has no auxilary power	Sanitary Sewer Overflow	Existing	Frostproof	Utilities		$200,000	HMGP	12-24 Months
Frostproof		City of Frostproof	Double Drive re-pump Lift station Generator	Wastewater	Currently our re-pump lift-station has no auxilary power	Sanitary Sewer Overflow	Existing	Frostproof	Utilities		$200,000	HMGP	12-24 Months

Jurisdiction Benefitted	Date Added/Updated/Reviewed	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Contact	Estimated Cost	Possible Funding Source(s)	Time to Complete
Frostproof		City of Frostproof	Headworks	Wastewater	Currently the City has no means of pre-limary treatment to remove rags/debri	Sanitary Sewer Overflow	Existing	Frostproof	Utilities		$750,000	HMGP, City	12-24 Months
Frostproof		City of Frostproof	Hydrogen Peroxide system for Water Tretment Plant #5	Drinking Water	South water treatment plant #5 has elevated sulfides 2.5 time the average limit. This is causing excessive chlorine use of 9.6gph for only a 0.100mgd system	Disinfection by-products	Existing	Frostproof	Utilities		$50,000	HMGP	12-24 Months
Frostproof		City of Frostproof	Lake Ave and 3rd street Drainage Project	Drainage	Localized flooding of roadway	Flooding	Existing	Frostproof	Public Works		$100,000	FMA. HMGP. SWFWMD	12-24 Months
Frostproof		City of Frostproof	Lake Clinch Outfalls Sedimentaion Removal	Drainage	Lake Clinch, Sedimaentaion blocking outfalls, not allowing proper drainage. Localized flooding areas.	Flooding	Exisiting	Frostproof	Public Works		$350,000	HMGP, FMA, SWFWMD	12-24 Months
Frostproof		City of Frostproof	Main WTP Standby Generator	Drinking Water	Currently our Main WTP has no auxilary power supply	Loss of Water	Existing	Frostproof	Utilities		$280,000	HMGP	12-24 Months
Frostproof		City of Frostproof	Oak street and First Street Drainage Project	Drainage	Localized flooding streets, caused by heavy root intrusion into storm pipes. Remove roots and slip liine pipes	Flooding	Existing	Frostproof	Public Works		$235,000	FMA. HMGP. SWFWMD	12-24 Months
Frostproof		City of Frostproof	Pressure Zoning	Drinking Water	Currently our system has no pressure zones, creating stagnant water in areas, extreme variation in pressures, brown and red water complaints coupled with air in lines.	Aesthetic, Health and Safety complaints	Existing	Frostproof	Utilities		$500,000	HMGP	12-24 Months
Frostproof		City of Frostproof	Street Sweeping	Streets	Sweeping from streets to maintain MS4 permit required cleaning	Flooding	Existing	Frostproof	Public Works		$15,000	FMA, HMGP, City	12-24 months
Frostproof		City of Frostproof	Sunset Road StormDrainage Project	Drainage	Localized Flooding at end of Sunset Road, causing flooding into homes	Flooding	Existing	Frostproof	Public Works		$300,000	HMGP, FMA, SWFWMD	12-24 Months
Frostproof		City of Frostproof	Water Treatment Plant #7 CR630 to Hwy 27	Drinking Water	Finish installing High service pumps, chlorination station, well and maintenance building alleviating areas without safe drinking water	No water in existing and development areas	New and Existin	Frostproof	Utilities		$1,600,000	HMGP, DEO. CDBG, City of Frostproof	12-24 Months
Frostproof		Frostproof	Bass Property Purchase	Land Acquisition	Purchase of home and property damaged due to flooding (Bass)	Flood	Existing	Frostproof	Public Works		$29,840	HMGP, FMA	12-18 Months
Frostproof		Frostproof	City Hall Building Retrofit	Building Retrofit	Retrofit of critical facilities/window protection to City Hall (Frostproof)	Storms	Existing	Frostproof	Public Works		$150,000	HMGP, EMPA	12-18 Months
Frostproof		Frostproof	Fire/EMS Building Retrofit	Building Retrofit	Retrofit/harden Fire Dept/EMS station (Frostproof)	Storms	Existing	Frostproof	Fire Department		$150,000	HMGP, EMPA	12-18 Months
Frostproof		Frostproof	Johnston Property Purchase	Land Acquisition	Purchase of home and property damaged due to flooding (Johnston)	Flood	Existing	Frostproof	Public Works		$53,510	HMGP, FMA	12-18 Months
Frostproof		Frostproof	Keen Park Road Drainage Project	Drainage	Area experienced flooding in yards and roads. Project will re-establish drainage ditches Keen Park Road	Flood	Both	Frostproof	Public Works		$50,000	HMGP	12-18 Months
Frostproof		Frostproof	Magnolia Ave Stormwater Project	Drainage	Magnolia Ave. drainage, increase pipe diameter for proper stormwater run off (Frostproof)	Flood	Both	Frostproof	Public Works		$100,000	FMA,HMGP,Captalization Grants for Clean Water State Revolving Funds, Nonpoint Source Implementation Grants, Watershed Protection and Flood Prevention Program	12-18 Months
Golden Lakes Community Development District	11/20/2024	Golden Lakes Community Development District	Eaglebrooke 2020 Stormwater Improvements	Drainage	Point Repairs and CIPP lining to correct existing storm system pipe issues and improve pipe flow.	Flood	Both	Golden Lakes Community Development District	Golden Lakes Community Development District		$532,000	CDD Assessments and Loan	6-12 Months
Golden Lakes Community Development District	11/20/2024	Golden Lakes Community Development District	Eaglebrooke 2020 Stormwater System Cleaning and Inspection	Drainage	Condition assessment of remaining stormwater system. Clean and televise storm system that has not been previously inspected.	Flood	Both	Golden Lakes Community Development District	Golden Lakes Community Development District		$150,000	CDD Assessments and Loan	6-12 Months
Golden Lakes Community Development District	11/20/2024	Golden Lakes Community Development District	Eaglebrooke North Pond A1	Drainage	Eaglebrooke North Pond A1	Flood	Both	Golden Lakes Community Development District	Golden Lakes Community Development District		$244,000	HMGP	12-18 Months
Haines City	11/18/2024	Haines City	Street Sweeping	Streets	Annual Sweeping of streets to maintain MS4 permit required cleaning	Flooding	Existing	Haines City	Public Works		$12,000	General Fund	On-going Annually
Haines City	11/18/2024	Haines City	13th S. N Stormwater Upgrades	Stormwater	Upsize stormwater conveyance to aleviate flooding	Flooding	Existing	Haines City	Stormwater		$3,874,777	HMGP	24-36 Months
Haines City	11/18/2024	Haines City	Radio system	Public Works	Upgrade communications system for better service during storm related activities/loss of cell service and power	Health/Safety	Existing	Haines City	Public Works		$165,000	HMGP	6-12 Months
Haines City	11/18/2024	Haines City	Lake Tracy Rain Garden	Stormwater	Construct 2 Rain Gardens, 2 Bio-swales that collectively, will filter 57.25 acres of collected stormwater run-off	Flood/Water Quality	Existing	Haines City	Stormwater		$585,000	FDEP	6-12 Months
Haines City	11/18/2024	Haines City	Lift Station Bypass pump	Critical Facilities, Infrastructure	Miacle Toyota lift station location, Commercial district with emergency medical facility	Health/Safety	New	Haines City	Utilities		$280,000	HMGP	18-24 Months
Haines City	11/18/2024	Haines City	Lift Station Bypass pump	Critical Facilities, Infrastructure	Estates of Lake Charles lift station, large residential communiy serviced by this lift station	Health/Safety	New	Haines City	Utilities		$240,000	HMGP	18-24 Months
Haines City	11/18/2024	Haines City	Debris containment basins	Stormwater/ Drainage	Install debris catch basins around all outfall discharging into lakes	Aesthetics/ Water Quality	New	Haines City	Stormwater		$94,000	Capital project/HMGP	12-18 Months

Jurisdiction Benefitted	Date Added/Updated/Reviewed	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Contact	Estimated Cost	Possible Funding Source(s)	Time to Complete
Haines City	11/18/2024	Haines City	Lift Station Bypass pump	Critical Facilities, Infrastructure	Randa Ridge lift station, large residential communiy serviced by this lift station	Health/Safety	New	Haines City	Utilities		$225,000	HMGP	18-24 Months
Haines City	11/18/2024	Haines City	Commerce Ave	Stormwater/ Drainage	Allevite street flooding by recontouring stormwater drainage swell and converting it to concrete	Flooding	New	Haines City	Stormwater		$362,000	Capital project/HMGP	12-18 Months
Haines City	11/18/2024	Haines City	Lake Eva Event Center Generator	Critical Facilities, Infrastructure	Facility is capable of housing an emergency shelter for residents and/or First Responders/Emergency Personnel	Hurricanes/ Tropical Storms	New	Haines City	Parks and Recreation		$240,000	HMGP	12-18 Months
Haines City	11/18/2024	Haines City	Lift Station Bypass pump	Critical Facilities, Infrastructure	Walmart lift station, large commercial area serviced by this lift station	Health/Safety	New	Haines City	Utilities		$235,000	HMGP	18-24 Months
Haines City	11/18/2024	Haines City	Lift Station Bypass pump	Critical Facilities, Infrastructure	Patterson Groves lift station, large residential communiy serviced by this lift station	Health/Safety	New	Haines City	Utilities		$235,000	HMGP	18-24 Months
Haines City	11/18/2024	Haines City	Lake Eva Parks Compound Generator	Critical Facilities, Infrastructure	Future staging area for staff and equipment during EOC mandated standby	Hurricanes/ Tropical Storms	New	Haines City	Parks and Recreation		$180,000	HMGP	12-18 Months
Haines City	11/18/2024	Haines City	Street Light Project	Transportation	Replace existing decorative street lighting on Hinson Ave. with LED Fixtures	Aesthetics, Safety, Traffic	Existing	Haines City	Transportation		$360,000	City budget, FDOT	12-16 Months
Haines City	11/18/2024	Haines City	Lake Elsie Rain Gardens Project	Stormwater	Construct a rain garden along the shore of Lake Elsie that will filter 70 acres of collected stormwater run-off	Flood/Water Quality	New	Haines City	Stormwater		$1,335,000	City budget, DEPGrants, SWFWMD	36 Months
Haines City	11/18/2024	Haines City	Stormwater line clearing	Drainage	routinely inspect, maintain, and repair stormwater lines throughout the City	Flood	Both	Haines City	Public Works		$150,000	City Budget	On going annually
John Hopkins All Children's Hospital	2/24/2025	John Hopkins All Children's Hospital	Critical Facility Retrofit	Critical Facility / Infrastructure	This project is to replace the exterior main entry door and interior main entry doors. The exterior main entry door will be hurricane rated impact resistant bi parting automatic sliding dor pcae he interior main entry door will be a glazed ¼" clear tempered glass door package. These doors will have new electronic controls installed which will allows them to be controlled from the primary operations center in Pinellas County. In past event the type of door currently in place has failed in high winds allowing water intrusion into a similar facility. The project also includes replacement of windows with high impact, hurricane resistant materials. The current type of window failed during Hurricane Ian at an similar facility allowing water intrusion and slowing the reopening process. The exterior entryway has a concrete planter that in the past high rain events has funneled water into the building. This project will permanently remove this planter.	Stormwater / Flood / Hurricanes / Tropical Storms / Wind	New	Lakeland	Director of Safety / Emergency Preparedness		$4,204,765	HMGP	12+ Months
Lake Alfred		Lake Alfred	Flood evaluations improvement program	Infrastructure	Monitoring program to evaluate localized flooding issues and propose corrective measures	Hurricanes, Climate change, Flooding, Severe Storms	Existing	Lake Alfred	Streets		$50,000	Storm water Fund	5-year
Lake Alfred		Lake Alfred	Lane repurpose	Infrastructure	The City is working with the FDOT to improve the safety along US 17/92 within the city-limits.	All	Existing	Lake Alfred	Streets		estimated $2 million	FDOT and City	10-years
Lake Alfred		Lake Alfred	Storm grate replacements program	Infrastructure	Program to inventory, evaluate and replace or repair storm grate inlets through out City.	Hurricanes, Climate change, Flooding, Severe Storms	Existing	Lake Alfred	Utilities		$50,000	General Fund	5-year
Lake Alfred		Lake Alfred	Storm water Monitoring	Infrastructure	Monitoring program to evaluate the volumes and water quality at various location in the City.	Hurricanes, Climate change, Flooding, Severe Storms	Existing	Lake Alfred	Streets		$1,500	Storm water Fund	Annual
Lake Hamilton	2/24/2025	Lake Hamilton	Generator - Hwy 27 Lift Station	Capital Project	With the events of Hurricanes occurring more frequently and the loss of power a permit Generator is needed for the Towns Wastewater Lift station on Hwy 27 to make sure there would be no backup of Sewer in the event of power loss that occurs over several days.	Power Outages / Hurricanes / Tropical Storms	New	Lake Hamilton	Town Manager		$168,750	HMGP	6-12 months
Lake Hamilton	2/24/2025	Lake Hamilton	Generator - Mary Jayne Neighborhodd	Capital Project	With the events of Hurricanes occurring more frequently and the loss of power a permit Generator is needed for the Towns Wastewater Lift station in the Mary Jayne Neighborhood to make sure there would be no backup of Sewer	Power Outages / Hurricanes / Tropical Storms	New	Lake Hamilton	Town Manager		$156,250	HMGP	6-12 Months
Lake Hamilton	2/24/2025	Lake Hamilton	Water Distribution System Upgrade	Infrastructure	The of Lake Hamilton will be replacing water lines in many areas of the service area of the municipal uitility. The project will create loops and eliminate shutting water down for the entire town.	Hazardous Materials	Both	Lake Hamilton	Public Works		4.2 million	USDA Grant/Loan	Spring 2021
Lake Region Lakes Management District		Lake Region Lakes Management District	Wahneta Drainage Improvement	Land Acquisition, Drainage	Wahneta Drainage Improvement	Flood	Both	Lake Region Lakes Management District	Lake Region Lakes Management District		$2,000,000	HMGP	12-18 Months
Lake Wales	1/2/2025	Lake Wales	Lakes Wales City Hall generator	Critical Facilities, Infrastructure	Generator for City Hall	Power Outages / Hurricanes / Tropical Storms	both	Lake Wales	Special Projects Administrator		$145,975	HMGP, General Funds	6-12 months
Lakeland	2/24/2025	Lakeland	Cardinal St/Robin St Drainage Improvements	Drainage	Outfall in area is inefficient. Design, permit and construct efficient outfall. Cardinal St./Robin St	Flood	Both	Lakeland	Public Works		$75,000	HMGP	12-18 Months

Jurisdiction Benefitted	Date Added/Updated/Reviewed	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Contact	Estimated Cost	Possible Funding Source(s)	Time to Complete
Lakeland	2/24/2025	Lakeland	Drainage Improvement in Residential Areas	Drainage	Residences and roads flood during excessive rain. Project consists of providing positive outfall for drainage.	Flood	Both	Lakeland	Public Works		$1,000,000	HMGP	12-18 Months
Lakeland	2/24/2025	Lakeland	Drainage Improvements for City	Drainage	Area experience severe flooding for many years, exacerbated by continued growth in area. Feasibility study completed; Project will install positive outfall system to alleviate flooding/create more storage in lake	Flood	Both	Lakeland	Public Works		$1,700,000	HMGP	12-18 Months
Lakeland	2/24/2025	Lakeland	Drainage Outfall Project	Drainage	Area experienced flooding over road and around homes. Project will provide outfall for drainage.	Flood	Both	Lakeland	Public Works		$250,000	HMGP	12-18 Months
Lakeland	2/24/2025	Lakeland	Forestview Estates Drainage Project	Drainage	Growth along County Line area and in subdivision may have altered drainage patterns. Project consists of feasibility study, design, permitting and construction of positive outfall drainage system. Forestview Estates	Flood	Both	Lakeland	Public Works		$200,000	HMGP	12-18 Months
Lakeland	2/24/2025	Lakeland	Fuel Storage Tank Acquisition	Infrastructure	Purchase and install two auxiliary fuel storage tanks to ensure adequate supply of fuel to city vehicles.	All	Existing	Lakeland	Public Works		$75,000	HMGP	12-18 Months
Lakeland	2/24/2025	Lakeland	Generator installation for sewage lift stations	Wastewater	Install new emergency generators or diesel bypass pumps at lift stations that do not have emergency backup equioment	Hazardous Materials	Both	Lakeland	Water Utilities		$200,000	Watstewater	12-18 Months
Lakeland	2/24/2025	Lakeland	Intersection Drainage Improvement	Drainage	Homes in high growth area around intersection subject to flooding. Project will implement findings of 1997 study.	Flood	Both	Lakeland	Public Works		$900,000	HMGP	12-18 Months
Lakeland	2/24/2025	Lakeland	Phase I and Phase II Drainage Studies	Drainage	Residences and roads flood during excessive rain. Phase I - feasibility study to improve drainage systems; Phase II construction, if feasible	Flood	Both	Lakeland	Public Works		$540,000	HMGP	12-18 Months
Lakeland	2/24/2025	Lakeland	Sanitary Sewer System Inspection and Repair	Stormwater Improvement	Inspection and repair sanitary sewer system to prevent back flow of wastewater in the surface flooding after major rain events	Flood	Both	Lakeland	Water Utilities		$476,000 -	HMGP, FMA	12-18 Months
Lakeland	2/24/2025	Lakeland	Sanitary Sewer System Inspection and Repair	Wastewater	Inspection and repair sanitary sewer system to prevent back flow of wastewater after major rain events	Hazardous Materials	Both	Lakeland	Water Utilities		$1,500,000	Wastewater	12-18 Months
Lakeland	2/24/2025	Lakeland	Window film on City Building Windows	Building Retrofit	Install window film on the windows of six selected mission essential buildings in the city to protect them from damage during storms.	Storms	Existing	Lakeland	Public Works		$138,200	HMGP	12-18 Months
Mulberry	2/24/2025	Mulberry	Drainage & Stormwater Feasibility Study	Drainage	Area experienced flooding in yards due to inadequate drainage system. Project is a feasibility study to determine how to handle stormwater runoff.	Flood	Both	Mulberry	Public Works		$50,000	HMGP	12-18 Months
Mulberry	2/24/2025	Mulberry	Nw 10th Drive Drain System	Drainage	Street floods in heavy rains; some homes did flood, others were protected by sandbag barriers during hurricanes. Updated drain system will alleviate these flooding issues. NW 10th Dr.	Flood	Both	Mulberry	Public Works		$1,000,000	HMGP, FMA	12-18 Months
Mulberry	2/24/2025	Mulberry	NW 10th Drive Drainage Project	Drainage	Alleviate flooding of streets and homes along NW 10th Dr. (Mulberry)	Flood	Both	Mulberry	Public Works		$600,000	SWFWMD, Stormwater Utility Fund	6-8 months
Mulberry	2/24/2025	Mulberry	Protective Measures - City Facilities	Infrastructure	Protective Measures - City Facilities	All	Both	Mulberry	Public Works		$220,827	HMGP	12-18 Months
Mulberry	2/24/2025	Mulberry	SW 5th Avenue Stabilization Project	Bank Stabilization	Stabilize the bank with gabions along SW 5th Ave. (Mulberry)	Flood	Both	Mulberry	Public Works		$200,000	SWFWMD, Stormwater Utility Fund	6-8 months
Polk County	2/24/2025	Polk County	Ariana Boulevard Stormwater Installation	Drainage	Properties and Structures on Ariana Blvd. flooded from water flowing from Whistler Est. to Lake Ariana. Current drainage system cannot handle runoff. Project consists of design, permitting and construction of stormwater system	Flood	Both	Polk County	Roads & Drainage		$200,000	HMGP, Property Tax	12-18 Months
Polk County	2/24/2025	Polk County	Bridge Rehabilitation	Maintenance	Maintain Bridges	Storms	Existing	Polk County	Roads & Drainage		$740,000	Taxes	Annually
Polk County	2/24/2025	Polk County	Culvert Failure Contingency	Maintenance	Repair and Replace Culverts and associated Drainage Systems	Storms	Existing	Polk County	Roads & Drainage		$2,500,000	Property Taxes	Annually
Polk County	2/24/2025	Polk County	Eloise Loop Road	Drainage	Eloise Loop Road	Flood	Both	Polk County	Roads & Drainage		$285,782	HMGP	12-18 Months
Polk County	2/24/2025	Polk County	Install Generation Set at Landfill (Phase I)	Auxiliary Power	Phase I. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station)	Flood	Existing	Polk County	Waste & Recycling		$29,000	HMGP	12-18 Months
Polk County	2/24/2025	Polk County	Install Generation Set at Landfill (Phase III)	Auxiliary Power	Phase III. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station South)	Flood	Existing	Polk County	Waste & Recycling		$35,000	HMGP	12-18 Months

Jurisdiction Benefitted	Date Added/Updated/Reviewed	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Contact	Estimated Cost	Possible Funding Source(s)	Time to Complete
Polk County	2/24/2025	Polk County	Install Generator Set at Landfill (Phase V)	Auxiliary Power	Phase V. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station)	Flood	Existing	Polk County	Waste & Recycling		$45,000	HMGP	12-18 Months
Polk County	2/24/2025	Polk County	Install Generator Set at Landfill (Phase VI)	Auxiliary Power	Phase VI. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station)	Flood	proposed (2020)	Polk County	Waste & Recycling		$45,000	HMGP	12-18 Months
Polk County	2/24/2025	Polk County	Keen Park Road Drainage Project	Drainage	Area experienced flooding in yards and roads. Project will re-establish drainage ditches Keen Park Road	Flood	Both	Polk County	Roads & Drainage		$50,000	HMGP, Property Tax	12-18 Months
Polk County	2/24/2025	Polk County	Lift Station 5 Relocation Outside of Floodplain and Auxilary Power	Infrastructure	Lift Station 5 Relocation Outside of Floodplain and Auxilary Power	Flood, All	Both	Polk County	Utilities		$690,588	HMGP	12-18 Months
Polk County	2/24/2025	Polk County	Maitenance of Stormwater Facilities	Maintenance	Maintain existing Stormwater Facilities (Ponds/Ditches)	Storms	Existing	Polk County	Roads & Drainage		$500,000	Property Taxes	Annually
Polk County	2/24/2025	Polk County	North Central Landfil Storage Building Replacement	Building Retrofit	Replace 4 portable storage sheds that store tools, equipment and supplies with a wind resistant permanent metal building at the North Central Landfill.	Wind, Storms	Existing	Polk County	Waste & Recycling		$650,000	HMGP	12-18 Months
Polk County	2/24/2025	Polk County	Pavement Management	Maintenance	Maintain our Pavement Surfaces on Roadways	Storms	Existing	Polk County	Roads & Drainage		$18,000,000	Taxes	Annually
Polk County	2/24/2025	Polk County	Rolling Oaks Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage		$800,000	HMGP, Property Tax	12-18 Months
Polk County	2/24/2025	Polk County	SW Canal at Cherrywood Circle Pipe System Project	Drainage	During recent storms, area flooded and was pumped. Project will install pipe system to SW Canal at Cherrywood Circle	Flood	Both	Polk County	Roads & Drainage		$75,000	HMGP	12-18 Months
Polk County	2/24/2025	Polk County	Wildwood Subdivision Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage		$600,000	HMGP, Property Tax	12-18 Months
Polk County	2/24/2025	Polk County	Wilson Acres	Drainage	Wilson Acres	Flood	Both	Polk County	Roads & Drainage		$1,991,361	HMGP	12-18 Months
Polk County	2/24/2025	Polk County, Bartow, Homeland, Fort Meade	Upper Peace River Corridor Restoration, Protecting Central Florida's Water, Wildlife and Wilderness Corridor	Stormwater Management, Flood Proofing, Restoration of Natural Features		Flood, Stormwater	New	Polk County	Parks and Natural Resources		$7,500,000	HMGP, NOAA, EPA-BRIC, FDEM-DEO, FDEP State Resiliency, SWFWMD CFI	3 years
Polk County	2/24/2025	Polk County and all municipalities	Mosquito Surveillance	Mosquito Surveillance	Countywide mosquito surveillance	Epidemics/Pandemics	Existing	Polk County	Parks and Natural Resources	Jackson Mosley	$449,000	General Fund, State Funds	Ongoing
Polk County	2/24/2025	Polk County and all municipalities	Mosquito Spraying	Mosquito Spraying	Countywide mosquito spraying	Epidemics/Pandemics	Existing	Polk County	Parks and Natural Resources	Jackson Mosley	$588,800	General Fund, State Funds	Ongoing
Polk County	1/22/2025	Polk County, Haines City, Lake Wales, Winter Haven, Dundee, Bartow, Lake Hamilton	Peace Creek Canal Basin Flood Protection through Acquisition and Restoration of Historic Wetlands to Establish water storage areas.	Property Protection	Acquisition through full fee and less than fee of historic wetlands, includes design and permitting and construction to create flood storage infrastructure. These lands would provide additional flood storage in a highly variable system, which will allow to storage to be able to slow water entering the Peace River from the Peace Creek Canal, which should help alleviate pressure on critical assets in Bartow.	Hurricanes/Tropical Storms, Severe Storms and Tornadoes, Flood	New	Polk County	Parks and Natural Resources	Tabitha Biehl	$135,000,000		More than 36 months
Polk County	1/22/2025	Polk County, Haines City, Lake Wales, Winter Haven, Dundee, Bartow, Lake Hamilton	Peace Creek Canal Basin Flood Protection through Acquisition and Restoration of Historic Wetlands to Establish water storage areas.	Property Protection	Acquisition through full fee and less than fee of historic wetlands, includes design and permitting and construction to create flood storage infrastructure. These lands would provide additional flood storage in a highly variable system, which will allow to storage to be able to slow water entering the Peace River from the Peace Creek Canal, which should help alleviate pressure on critical assets in Bartow.	Hurricanes/Tropical Storms, Severe Storms and Tornadoes, Flood	New	Polk County	Parks and Natural Resources	Tabitha Biehl	$135,000,000		More than 36 months
Polk County Public Schools		Elbert Elementary 205 15th Street NE Winter Haven, FL 33881	Elbert Elementary Install retaining wall	Property Protection	Install retaining wall to prevent erosion from to hinder stormwater runoff from city streets	Flooding	Existing	Polk County School Board	Facilities		$50,000	Sales Tax and HMGP	1 year
Polk County Public Schools		Jewett School of the Arts 2250 8th Street Winter Haven, FL 33881	Jewett School of the Arts Improve flat/ballasted roofs to metal Blds 1, 2	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities		$2,071,403	Sales Tax and HMGP	1 year
Polk County Public Schools		Lake Alfred Elementary 550 E Cummings Lake Alfred, FL 33850	Lake Alfred Elementary Improve drainage from Blds 1, 2, & 3 to playground	Property Protection	Bring gutter/downspouts from buildings and tie into stormwater system	Flooding	Existing	Polk County School Board	Facilities		$75,000	Sales Tax and HMGP	1 year

Jurisdiction Benefitted	Date Added/Updated/Reviewed	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Contact	Estimated Cost	Possible Funding Source(s)	Time to Complete
Polk County Public Schools		Lake Alfred Elementary 550 E Cummings Lake Alfred, FL 33850	Lake Alfred Elementary Improve flat/ballasted roofs to metal Blds 1, 2, 3, 4, 5,7, 8, 9	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities		$2,510,271	Sales Tax and HMGP	1 year
Polk County Public Schools		Lake Alfred Polytech 925 N Buena Vista Dr Lake Alfred, FL 33850	Lake Alfred Polytech Install gutters	Property Protection	Install gutters to improve drainage and reduce erosion	Flooding	Existing	Polk County School Board	Facilities		$48,000	Sales Tax and HMGP	1 year
Polk County Public Schools		Lewis-Anna Woodbury Elem 610 S Charleston Ave Fort Meade, FL 33841	Lewis-Anna Woodbury Elem Improve flat/ballasted roofs to metal Blds 1, 2, 5, 6, 7, 8	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities		$1,294,752	Sales Tax and HMGP	1 year
Polk County Public Schools		Medulla Elementary 850 Schoolhouse Road Lakeland, FL 33813	Medulla Elementary Improve flat/ballasted roofs to metal Blds 2, 3, 4, 5	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities		$3,471,853	Sales Tax and HMGP	1 year
Polk County Public Schools		North Lakeland Elementary 410 W Robson St Lakeland, FL 33805	North Lakeland Elementary Improve flat/ballasted roofs to metal Blds 1, 2, 3, 4,5	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities		$2,516,747	Sales Tax and HMGP	1 year
Polk County Public Schools		R. Bruce Wagner Elem. 5500 Yates Road Lakeland, FL 33811	R. Bruce Wagner Elem. Install gutters	Property Protection	Install gutters to improve drainage and reduce erosion	Flooding	Existing	Polk County School Board	Facilities		$100,000	Sales Tax and HMGP	1 year
Polk County Public Schools		Sleepy Hill Middle 2215 Sleepy Hill Road Lakeland, FL 33809	Sleepy Hill Middle Install gutters	Property Protection	Install gutters to improve drainage and reduce erosion	Flooding	Existing	Polk County School Board	Facilities		$140,000	Sales Tax and HMGP	1 year
Polk County Public Schools		Walter Caldwell Elementary 141 Dairy Road Auburndale, FL 33823	Walter Caldwell Elementary Improve flat/ballasted roofs to metal Blds 1, 2, 3, 4,8, 12,16, 17	Property Protection	Rertrofit flat and ballasted roof systems to reduce future wind and water damage	Hurricanes & Tropical Storms	Existing	Polk County School Board	Facilities		$2,120,580	Sales Tax and HMGP	1 year
Webber International University	11/18/2024	Webber International University	Campus Flood Mitigation Project	Drainage	Mitigate campus flooding	Flood	New	Webber International University	VP of Student Life		$275,250	HMGP	12-18 Months
Webber International University	11/18/2024	Webber International University	Webber Generator Projects	Critical Facilities	Install generators for: IT building, Yentes Center, Learning Commons, Babson Center, Waste Water Treatement Pump, and Lift Station	Hurricanes / Tropical Storms / Power outages	New	Webber International University	VP of Student Life		$597,406	HMGP	12-18 Months
Winter Haven	2/24/2025	Winter Haven	City Pipe System Replacement	Drainage	Area's pipe system has deteriorated, needs replacement	Flood	Both	Winter Haven	Utility Services		$1,100,000	HMGP	12-18 Months
Winter Haven	2/24/2025	Winter Haven	Emergency power generation @ the Winter Haven Regional Airport	Infrastruture	Install power generation infrastruture to provide resiliency and insure continuous operation and utilization of a major transportation facility (the airport) Provide power to Winter Haven Airport for continious power, Providing an alternate LSA	All	Both	Winter Haven	Growth Management		$250,000	HMPG	12-60 Months
Winter Haven	2/24/2025	Winter Haven	Fire Station 2 Infrstructure	Hardening facility	Hardening of Building, Bay doors, windows	All	New	Winter Haven	Public Safety		$52,000	HMGP, FEMA	12-60 Months
Winter Haven	2/26/2025	Winter Haven	Grey to Green stormwater pond alterations	Drainage	Retrofit existing stormwater ponds in high infiltration areas by utilizing landscape buffer areas increasing storage and infiltration of stormwater and reducing the size of existing traditional ponds	Flood/Water quality	Existing	Winter Haven	Public Works/Natural Resources		1,500,00	HMPG	12-60 Months

Jurisdiction Benefitted	Date Added/Updated/Reviewed	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Contact	Estimated Cost	Possible Funding Source(s)	Time to Complete
Winter Haven	2/26/2025	Winter Haven	Harden Public Works Facility	Critical Facilities	Improve facility where Public Works Operations including fleet maintenance is housed to better weather storm events.	All	Existing	Winter Haven	Public Works		$300,000	HMGP,City Budget	12-18 months
Winter Haven	2/26/2025	Winter Haven	Lake Elbert Permanent Pump Upgrade	Flood Proofing	Lake Elbert, is a 169-acre public lake located in Winter Haven (Florida). The lake is surrounded by residential neighborhoods and receives extensive rainfall and stormwater discharges from a 772-acre drainage basin. Despite several areas where water discharges into the lake, water can only leave the lake through infiltration and evaporation. The Southwest Florida Water Management District has set water level guidelines for Lake Elbert (133.0-ft low, 135.5-ft high). After above-average summer rainfall and Hurricane Ian, the water level in Lake Elbert rose to nearly 2-ft above the guidance high (137.3-ft). The high water levels in Lake Elbert threatened property and structures through flooding and erosion. In response, the City used a temporary emergency pump to drain water from Lake Elbert into Lake Otis, which has an outlet for the water to continue downstream. This application is a request of funds to purchase and install a permanent pump to an existing structure designed for this purpose, which will allow for the future management of water levels.	Stormwater	New	Winter Haven	Natural Resources Manager		$94,000	HMGP	6-12 months

APPENDIX C

APPENDIX C – PLANNING PROCESS DOCUMENTATION

Appendix C provides information on the Polk County 2025 Multi-jurisdictional Local Mitigation Statement (LMS) planning process. Included is a roster of individuals who represent each jurisdiction in Polk County to the LMS Working Group. Larger jurisdictions may have more than one representative. Some smaller jurisdictions designated staff from the Central Florida Regional Planning Council to serve as their representatives.

This Appendix includes the following items:

- LMS Working Group membership roster
- List of Identified Participants
- Survey results
- LMS Working Group meeting flyers, agendas, sign-in sheets, presentations, and minutes
- Community event support information

Events related to the update of the LMS document include:

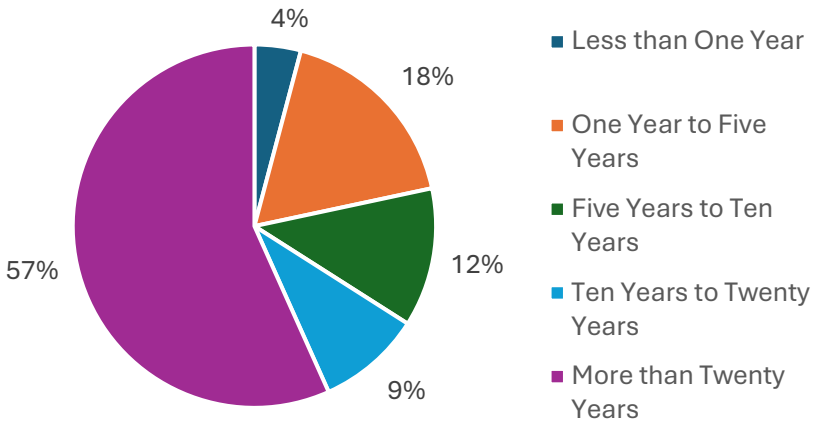
- July 10, 2024 CFRPC Kickoff Meeting
- August 14, 2024 LMS Working Group Meeting
- September 18, 2024 LMS Working Group Meeting
- September 18, 2024 CRS Subcommittee Meeting
- September 30, 2024 Fort Meade Meeting
- November 12, 2024 Polk County EBA Meeting
- November 13, 2024 GATI Community Meeting at Blake Academy
- November 20, 2024 LMS Working Group Meeting
- November 20, 2024 CRS Subcommittee Meeting
- December 10, 2024 Circle B Bar Reserve
- January 10, 2025 EPAC Workshop
- January 22, 2025 LMS Working Group Meeting
- February 19, 2025 LMS Working Group Meeting
- June 4, 2025 LMS Working Group Meeting (Scheduled)

LIST OF PARTICIPATING AGENCIES

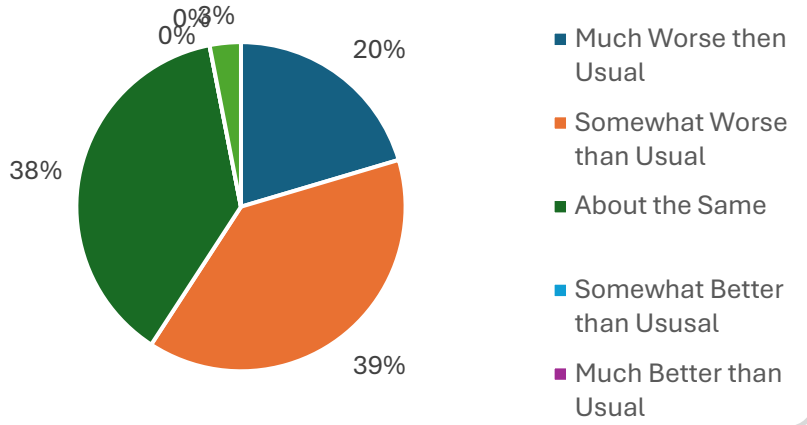
- Golden Lakes Community Development
- Johns Hopkins All Children's Hospital
- Polk County Public School Board
- Webber International University

Survey Results through March 5, 2025

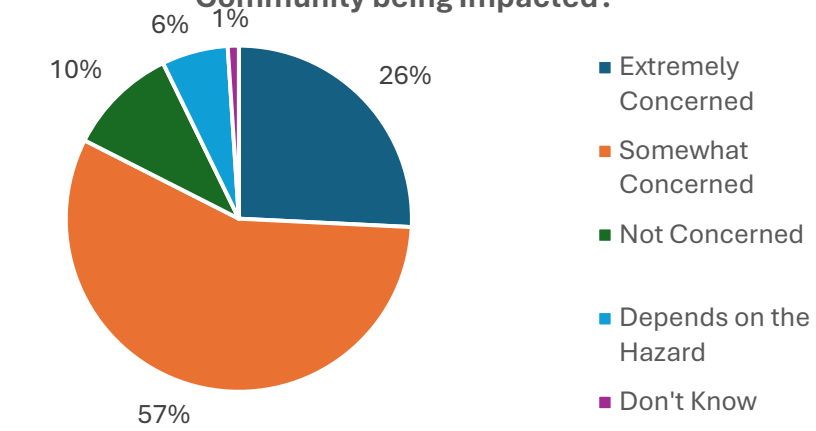
How Long have you Lived in Polk County?



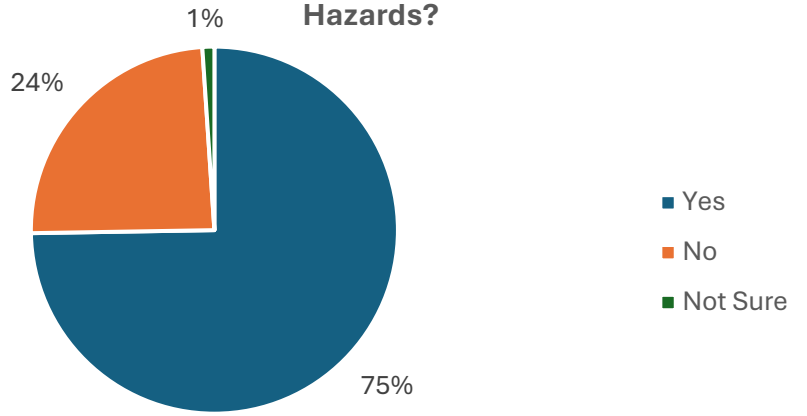
Over the Past Several Years, the Weather has Been:

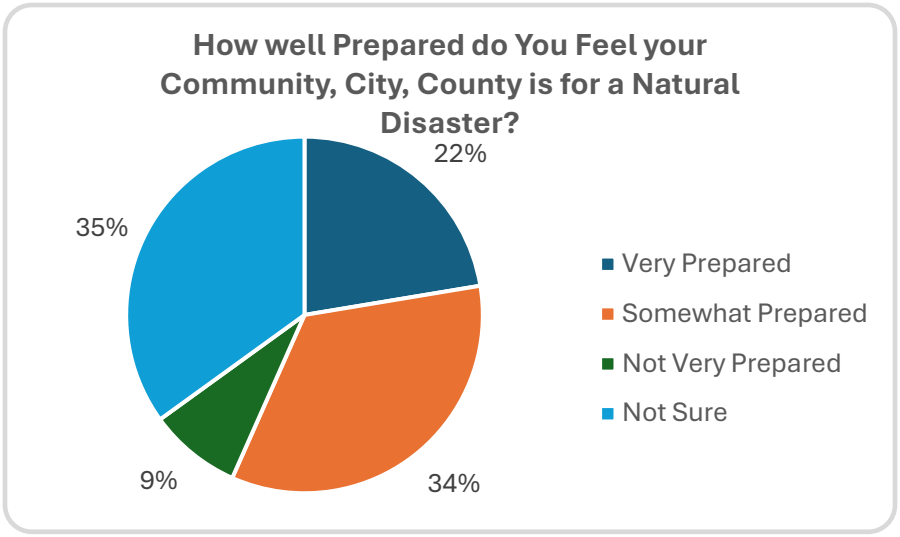


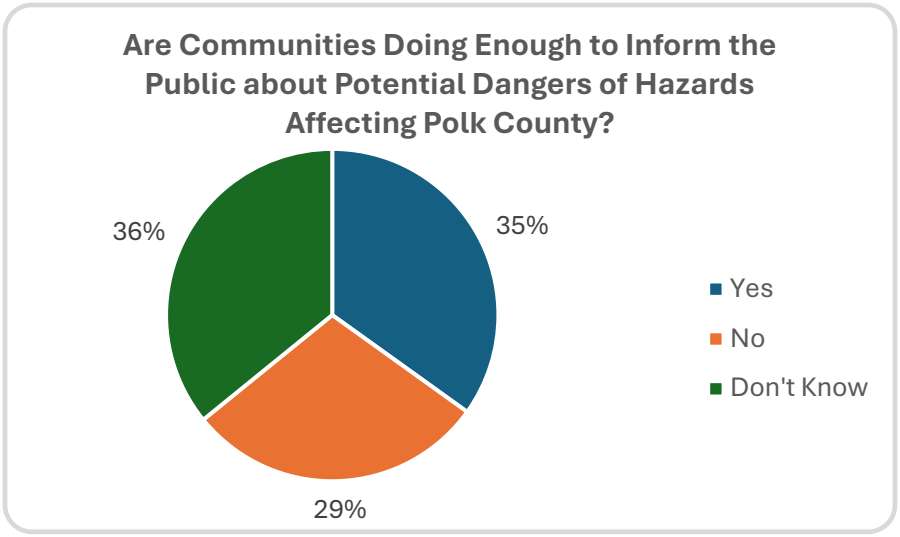
How Concerend are You about Your Community being Impacted?

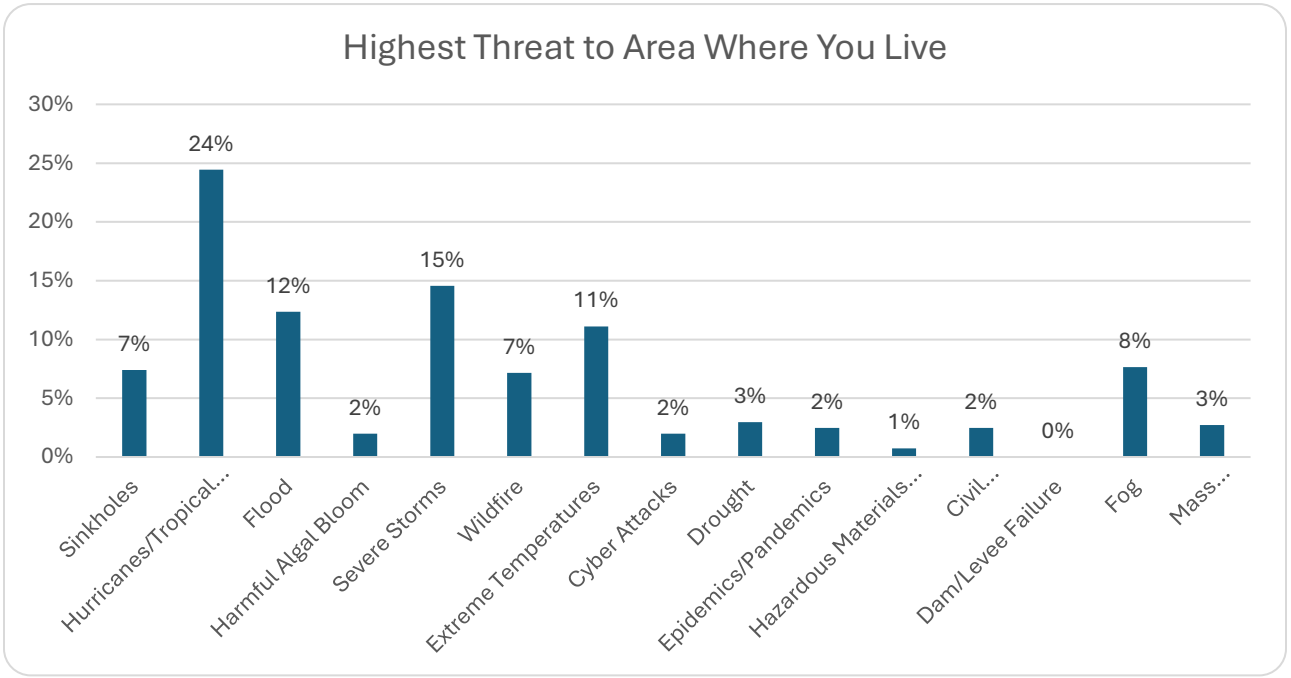


Have You Taken Actions to be More Resistant to Hazards?



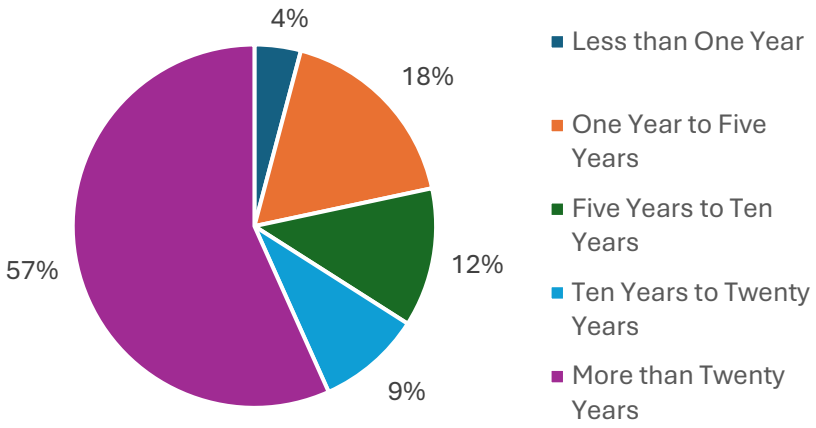

How well Prepared do You Feel your Community, City, County is for a Natural Disaster?
22%
35%
9%
34%
Very Prepared
Somewhat Prepared
Not Very Prepared
Not Sure


Are Communities Doing Enough to Inform the Public about Potential Dangers of Hazards Affecting Polk County?
36%
35%
29%
Yes
No
Don't Know

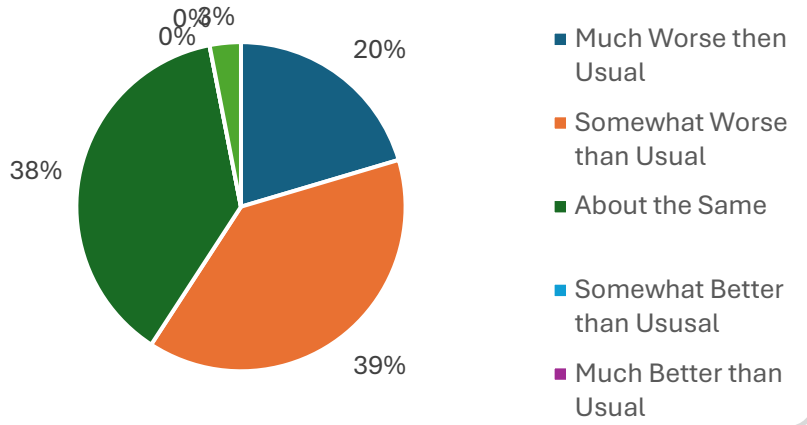

Highest Threat to Area Where You Live
30%
25%
20%
15%
10%
5%
0%
7%
24%
12%
2%
15%
7%
11%
2%
3%
2%
1%
2%
0%
8%
3%
Sinkholes
Hurricanes/Tropical...
Flood
Harmful Algal Bloom
Severe Storms
Wildfire
Extreme Temperatures
Cyber Attacks
Drought
Epidemics/Pandemics
Hazardous Materials...
Civil...
Dam/Levee Failure
Fog
Mass...

Survey Results through March 5, 2025

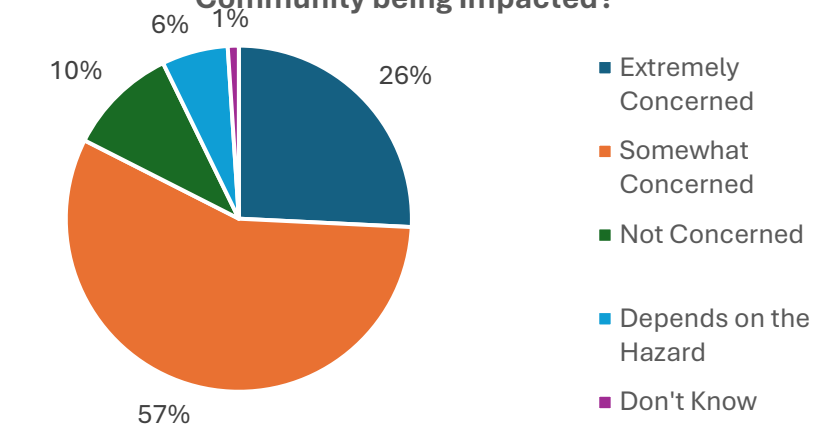
How Long have you Lived in Polk County?



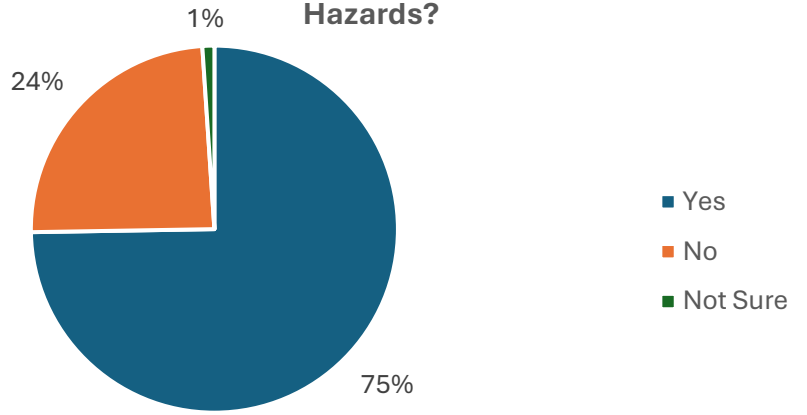
Over the Past Several Years, the Weather has Been:

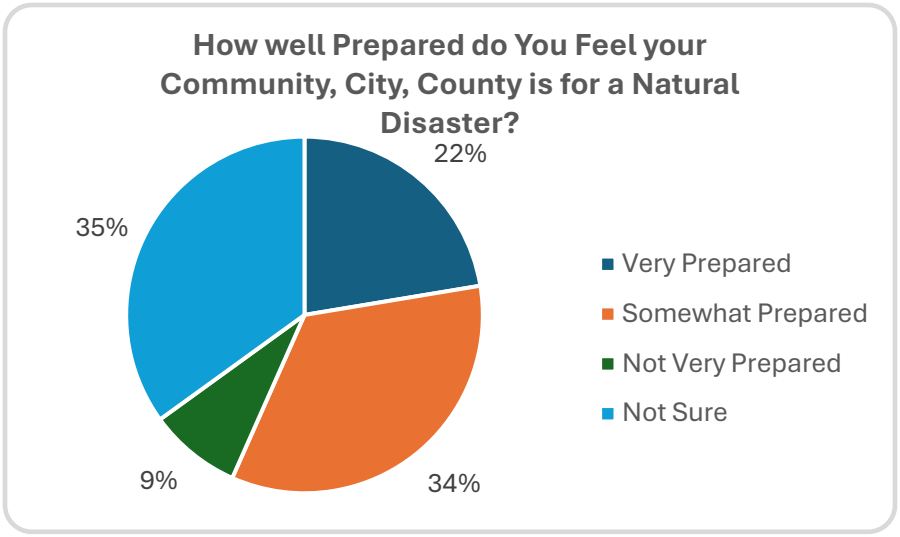


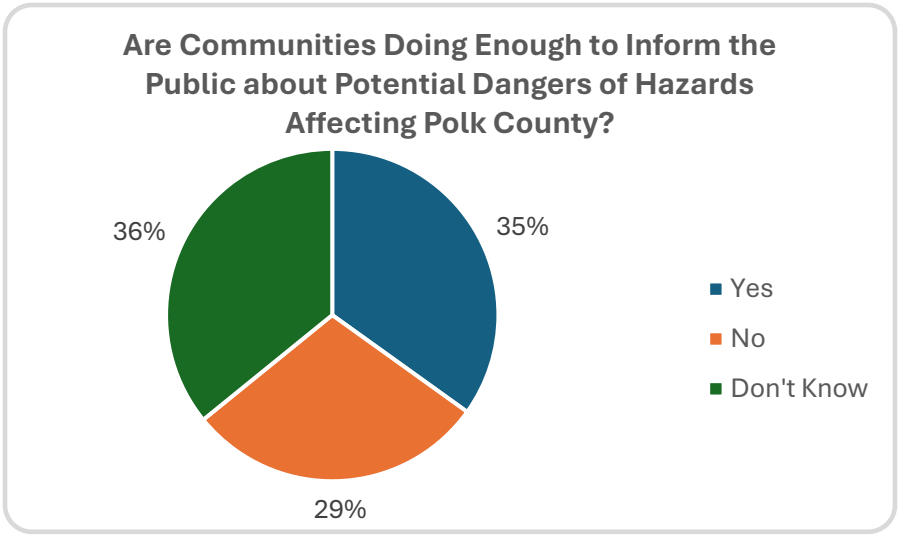
How Concerend are You about Your Community being Impacted?

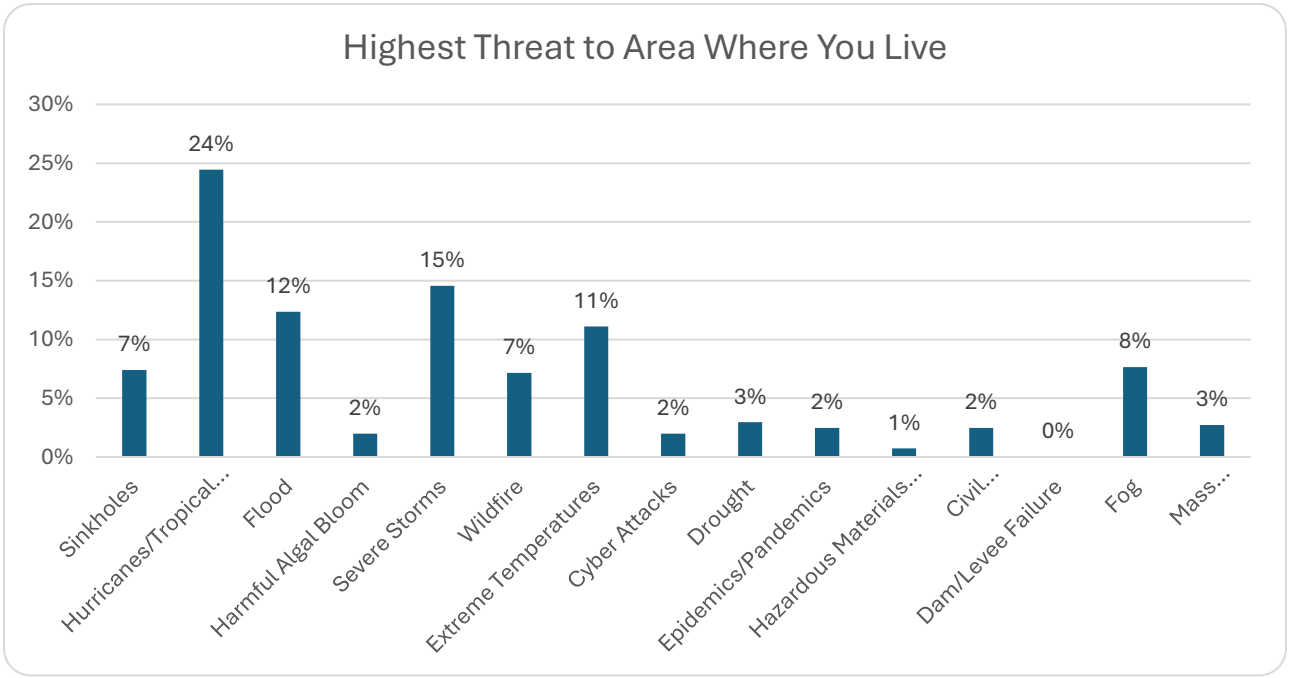


Have You Taken Actions to be More Resistant to Hazards?




How well Prepared do You Feel your Community, City, County is for a Natural Disaster?
22%
35%
9%
34%
Very Prepared
Somewhat Prepared
Not Very Prepared
Not Sure


Are Communities Doing Enough to Inform the Public about Potential Dangers of Hazards Affecting Polk County?
36%
35%
29%
Yes
No
Don't Know


Highest Threat to Area Where You Live
30%
25%
20%
15%
10%
5%
0%
7%
24%
12%
2%
15%
7%
11%
2%
3%
2%
1%
2%
0%
8%
3%
Sinkholes
Hurricanes/Tropical...
Flood
Harmful Algal Bloom
Severe Storms
Wildfire
Extreme Temperatures
Cyber Attacks
Drought
Epidemics/Pandemics
Hazardous Materials...
Civil...
Dam/Levee Failure
Fog
Mass...

POLK COUNTY LOCAL MITIGATION STRATEGY (LMS)
WORKING GROUP MEETING
JUNE 17, 2020

AGENDA

I. Welcome and Introductions

II. LMS Update

A. State of Florida Division of Emergency Management Approved Pending Adoption Letter

B. Changes to Draft LMS since February 18, 2020 LMS Working Group Meeting

C. Draft LMS Working Group Vote:
- Vote to approve Draft LMS and transmit to jurisdictions for approval

IIII. Next Steps

A. Public review of document online

B. Incorporation of comments
- Community Rating System Subcommittee
- LMS Working Group members
- Public

C. Adoption hearings

Meeting ID	Topic	Start Time
89949326830	LMS	6/17/2020 8:35

Name (Original Name)	User Email	Join Time
Emergency Management Zoo	EM2_Zoom@polk-county.net	6/17/2020 8:35
Greg Becker	gregbecker@polk-county.net	6/17/2020 8:40
Sara Irvine	sara@townoflakehamilton.com	6/17/2020 8:48
Josh	joshua.mclemore@polk-county.net	6/17/2020 8:48
Cole Edwards# PE# CFM	cole.edwards@lakelandgov.net	6/17/2020 8:48
Cole Edwards# PE# CFM	cole.edwards@lakelandgov.net	6/17/2020 8:49
Steven Shealey	sshealey@pennoni.com	6/17/2020 8:52
Chanda Bennett	chandabennett@polk-county.net	6/17/2020 8:53
Brian Corcoran	briancorcoran@polk-county.net	6/17/2020 8:54
csmith	csmith@mydavenport.org	6/17/2020 8:54
Steven Hunnicutt	shunnicutt@mydavenport.org	6/17/2020 8:55
marisa barmby	mbarmby@cfrpc.org	6/17/2020 8:55
18635346000		6/17/2020 8:55
Judy Robinson	judyrobinson@polk-county.net	6/17/2020 8:56
Laurie Smith	laurie.smith@lakelandgov.net	6/17/2020 8:57
Tim Allen	timothy.allen@baycare.org	6/17/2020 8:58
david knowles	dknowles@mywinterhaven.com	6/17/2020 8:58
Denise Andreu	dandreu@polk.edu	6/17/2020 8:59
Audrey Cain	audrey.cain@lakelandgov.net	6/17/2020 9:00
Tom Mulvaney	tmulvaney@townofdundee.com	6/17/2020 9:00
Jerry Torrance	jtorrance@cityoffrostproof.com	6/17/2020 9:00
Amee Bailey	abailey@mylakealfred.com	6/17/2020 9:01
18632071933		6/17/2020 9:02
Jay Jarvis	jayjarvis@polk-county.net	6/17/2020 9:03
brile	bryan.riley@lakelandgov.net	6/17/2020 9:04
18638346795		6/17/2020 9:06
Joe Jenkins	jjenkins@lakewalesfl.gov	6/17/2020 9:07
Steven Lawson	slawson@auburndalefl.com	6/17/2020 9:10
Pam Luce	pam.luce@polk-fl.net	6/17/2020 9:11
Amee Bailey	abailey@mylakealfred.com	6/17/2020 9:13
Maricela Arteaga	marteaga@mydavenport.org	6/17/2020 9:17
Sara Irvine	sara@townoflakehamilton.com	6/17/2020 9:18

End Time	User Email	Duration (Minutes)	Participants
6/17/2020 9:19	EM2_Zoom	44	31

Leave Time	Duration (Minutes)	Agency
6/17/2020 9:19	44	Jerri Kaplan - Polk County EM
6/17/2020 9:19	39	Polk County EM
6/17/2020 9:04	16	Lake Hamilton
6/17/2020 9:18	30	Polk County Land Development
6/17/2020 8:49	1	Lakeland
6/17/2020 9:19	30	Lakeland
6/17/2020 9:18	26	
6/17/2020 9:18	25	Polk County
6/17/2020 9:18	25	Polk County
6/17/2020 9:18	25	Davenport
6/17/2020 9:18	24	Davenport
6/17/2020 9:18	24	Central FL Regional Planning Council
6/17/2020 9:18	23	
6/17/2020 9:18	23	Polk County EM
6/17/2020 9:18	22	Lakeland
6/17/2020 9:18	20	Baycare
6/17/2020 9:18	20	Winter Haven
6/17/2020 9:18	19	Polk State College
6/17/2020 9:18	19	Lakeland
6/17/2020 9:18	19	Dundee and Lake Hamilton
6/17/2020 9:18	18	Frostproof
6/17/2020 9:10	10	Lake Alfred
6/17/2020 9:18	17	
6/17/2020 9:18	16	Polk County Roads and Drainage
6/17/2020 9:18	14	Lakeland
6/17/2020 9:18	12	
6/17/2020 9:18	12	Lake Wales
6/17/2020 9:19	9	Auburndale
6/17/2020 9:18	7	Polk County School Board
6/17/2020 9:18	6	Lake Alfred
6/17/2020 9:19	2	Davenport
6/17/2020 9:19	1	Lake Hamilton

LMS Working Group Meeting

Polk County LMS Update

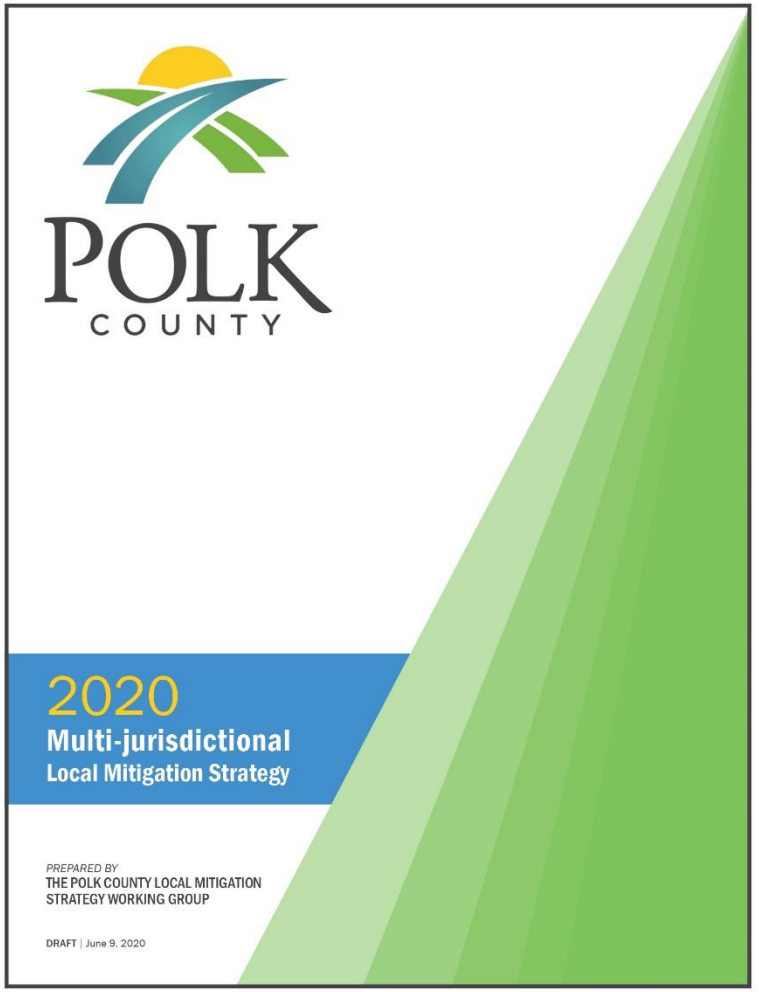
June 17, 2020

AGENDA

- Adoption Pending Approval
- Changes Since February 28, 2020 LMS Working Group Meeting
- Vote on Transmittal to Jurisdictions for Approval
- Next Steps

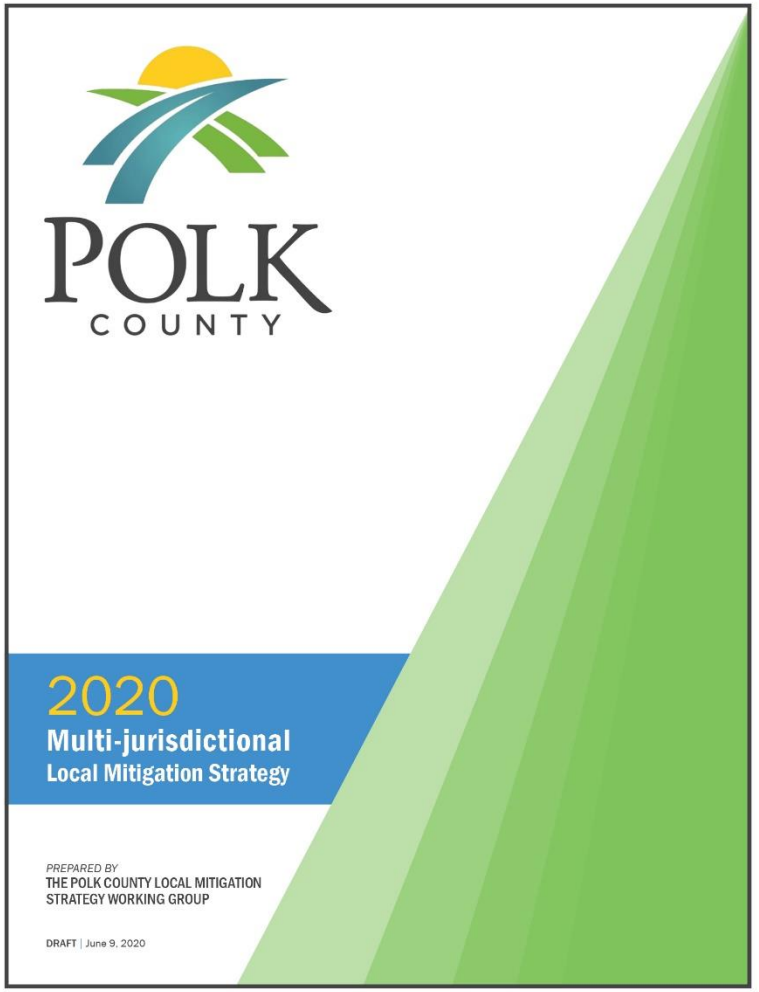
LMS Plan Structure

- Section I – Introduction
- Section II – What's New
- Section III – Planning Process, Evaluation, and Maintenance
- Section IV – Community Profile
- Section V – Hazard Identification Analysis
- Section VI – Hazard Vulnerability and Risk Assessment
- Section VII – Mitigation Plan



LMS Plan Structure

- Section VIII – Plan Adoption
- Section IX – Resources
- Appendices
  - A: Maps
  - B: Mitigation Action Plan
  - C: Planning Process Documentation
  - D: LMS Crosswalk
  - E: Wildfire Risk Assessment Reports
  - F: Potential Funding and Technical Sources
  - G: Articles
  - H: Resolutions



Adoption Pending Approval Letter

STATE OF FLORIDA

DIVISION OF EMERGENCY MANAGEMENT

Ron DeSantis
Governor

Jared Moskowitz
Director

June 10, 2020

Paul Womble, Director
Polk County Emergency Management
1890 Jim Keene Blvd.
Winter Haven, FL 33880

Re: Polk County Local Hazard Mitigation Plan Approved Pending Adoption

Dear Director Womble,

This is to confirm that we have completed a State review of the Polk County Local Mitigation Strategy (LMS) update for compliance with the federal hazard mitigation planning standards contained in 44 CFR 201.6(b)-(d). Based on our review and comments, Polk County developed and submitted all the necessary plan revisions and our staff has reviewed and approved these revisions. We have determined that the Polk County LMS plan is compliant with federal standards, subject to formal community adoption, for the jurisdictions below:

- Polk County, Unincorporated
- Polk County School Board
- City of Auburndale
- City of Bartow
- City of Davenport
- Town of Dundee
- City of Eagle Lake
- City of Fort Meade
- City of Frostproof
- City of Haines City
- City of Mulberry
- City of Polk City
- City of Winter Haven
- Village of Highland Park
- Town of Hillcrest Heights
- City of Lake Alfred
- Town of Hamilton
- City of Lake Wales
- City of Lakeland

Upon submittal of a copy of all participating jurisdictions' documentation of their adoption resolutions to our office, we will send all necessary documentation to the Federal Emergency Management Agency (FEMA) who will issue formal approval of the Polk County LMS.

If you have any questions regarding this matter, please contact your LMS Liaison Dan Curcio at Daniel.Curcio@em.myflorida.com or 850-815-4504.

DIVISION HEADQUARTERS
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100

Telephone: 850-815-4000
www.FloridaDisaster.org

STATE LOGISTICS RESPONSE CENTER
2702 Directors Row
Orlando, FL 32809-5631

Respectfully,

Miles E. Anderson

Digitally signed by Miles E. Anderson
DN: cn=Miles E. Anderson, ou=DEM, ou=Mitigation, email=miles.anderson@em.myflorida.com, c=US
Date: 2020.06.10 10:03:51 -04'00'

Miles E. Anderson,
Bureau Chief, Mitigation
State Hazard Mitigation Officer

MEA/dc

Attachments: MEMORADUM: State approval of LMS plans under Program Administration by States (PAS)

cc: FEMA Region IV, Mitigation Division – Risk Analysis Branch

Changes Since February 18th LMS Working Group Meeting

State Review Comment 1:

- **Is there a description of each hazard's impacts on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? Does this also include a list of critical facilities to remain open during times of a disaster?**

- **Required Revisions:** Specify which jurisdictions these impacts apply to. If they are for the entire planning area, you can state that.

Response to State Review Comment 1:

- *Section VI: Staff added a statement in that the impacts apply to all jurisdictions as described.*

Methodology

The maps in Appendix A demonstrate vulnerability or potential effects of hazards for Polk County and municipalities. The maps identify structures for each hazard, and include municipal boundaries. While the impacts apply to the entire planning area, the analysis includes specific information for municipalities when available. The building and total valuations in Tables VI-1 and VI-2 serve as the basis for the potential estimated dollar losses. These numbers change based on the identified potential hazard impact areas, as applicable and the narrative for each identified hazard includes a summary by municipality.

State Review Comment 2:

- **Does the Plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs?**

- **Required Revisions:** A great list of plans has been provided, but how can these be expanded upon to include mitigation actions? You can just provide a brief narrative to explain this.

Response to State Review Comment 2:

- *Section III: Staff added a section that addresses how the jurisdictions may expand and improve upon the policies and programs*

Ability to Expand on and Improve the Policies and Programs Identified

As the population grows in Polk County, the County and the jurisdictions within the County must ensure hazard mitigation laws address construction of new structures in areas susceptible to hazards either through prohibition, limitation, or additional requirements to reduce potential losses.

Local governments and the private sector shall provide ongoing training and information sessions for the public. Clear, unbiased knowledge is a key ingredient for safety of the public. Ongoing training may include public information notices and continuous training sessions online and at libraries, hospitals, and schools. Training and equipment to prepare for and subsequently resolve hazardous situations are necessary and vital. Jurisdictions must identify alternative financial resources and include these costs in respective governmental budgets.

Response to State Review Comment 2:

- ***Section III: Staff added a section that addresses how the jurisdictions can expand and improve upon the policies and program.***

Periodic review and revision of the local government ordinances, policies, and programs shall occur no less than once every other year.

Each municipality that has not yet done so should adopt a floodplain management ordinance and participate in the CRS. At the present time, the LMS serves as a jurisdiction's floodplain management plan when a municipality adopts the LMS as their floodplain management plan.

State Review Comment 3:

- **Does the Plan identify the position, office, department, or agency responsible for implementing and administering the action/project, estimated cost, potential funding sources and expected timeframes for completion?**

- **Required Revisions:** Some projects don't have the agencies listed. Also, some projects are missing an estimated cost.

Response to State Review Comment 3:

- *Appendix B: Staff worked with jurisdictions to add missing information relating to agencies and estimated costs in the Mitigation Action Plan. Staff also completed corrections to hazard titles and added information.*

Polk County Multi-Jurisdictional LMS Mitigation Action Plan - Mitigation Initiatives

DRAFT May 6, 2020

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Department	Estimated Cost	Possible Funding Source(s)	Time to Complete
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	County Public Safety Departments (Fire, EMS, E-911, etc)	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual
Auburndale	Auburndale	Alberta Street Drainage Improvement	Drainage	Relieves flooding and drainage problem at major intersection on Alberta St	Flood	Both	Auburndale	Public Works	$500,000	HMGP, FMA	12-18 Months
Auburndale	Auburndale	Highway 92, Lakeshore and Beach Lift Station Generator Project	Infrastructure	Highway 92, Lakeshore and Beach Lift Station Generator Project	All	Both	City of Auburndale	Public Works	$189,995	HMGP	12-18 Months
Bartow	Bartow	Fire Station #1	New Building, Critical Facilities	Construct New Fire Station to improve response time and serve new population	Fire, Flood	New	Bartow	Fire Department	$2,799,999	Fire Assessment Fee, General Fund	24-36 Months
Bartow	Bartow	Relocate Fire Station #0	New Building, Critical Facilities	Relocate Fire Station #1 to improve response time and serve new population	Fire, Flood	Both	Bartow	Fire Department	$3,499,999	Fire Assessment Fee, General Fund	24-36 Months
Bartow	Bartow	Fiber Smart Grid Pilot Project	New Infrastructure, Critical Facilities	Develop and Implement Smart Grid Pilot Project	All	New	Bartow	Public Works	$2,500,000	General Fund	24-36 Months
Davenport	Davenport	City Wide	Drainage	CDS Cleaning/Replacement of damaged inlets	Flood	Existing	Davenport	Public Works	$20,000	Stormwater	Annual
Davenport	Davenport	City Hall/Building Department	Back-up Power	Installation of a Generator to run City Hall, Commission Chamber, and Building Department	Wind/Storm	New	Davenport	Public Works	$75,000	FEMA-Grants	4-6 months
Davenport	Davenport	New Development	Water Star Energy	Water Conservation incentives to Developers for using equipment. Incentives presented by SWFWMD.	Water	New	Davenport	Building	$0	Water Management District	Annual
Davenport	Davenport	Critical Facility	Fire Department, Station- 1	Generator for command center	Storm	Existing	Davenport	Public Works	$50,000	FEMA-Grants	4-6 months
Davenport	Davenport	Streets/Wind	Bucket Truck	Purchase a bucket truck for storm damage/storm mitigation	Wiind	New	Davenport	Streets	$245,000	FEMA-Grants	12-18 months
Davenport	Davenport	Critical Facility Wind Retrofit	Property Protection	Wind Retrofit to City Admin Building that houses Fire, Police and Public Works operations.	Wind	Existing	Davenport	Public Works	$160,000	HMGP	9-12 Months
Dundee	Dundee	Dundee Community Center Auxiliary Power	Infrastructure	Dundee Community Center Auxiliary Power	All	Both	Dundee	Public Works	$56,650	HMGP	12-18 Months
Dundee	Dundee	Dundee Community Center Protective Measures	Infrastructure	Dundee Community Center Protective Measures	All	Both	Dundee	Public Works	$36,942	HMGP	12-18 Months
Dundee	Dundee	Dundee Economy Lift Station	Infrastructure	Dundee Economy Lift Station	All	Both	Dundee	Public Works	$125,000	HMGP	12-18 Months
Dundee	Dundee	Dundee Fire Dept Protective Measures	Infrastructure	Dundee Fire Dept Protective Measures	All	Both	Dundee	Public Works	$27,800	HMGP	12-18 Months
Dundee	Dundee	Dundee Fire Dept Wind Retrofit	Infrastructure	Dundee Fire Dept Wind Retrofit	All	Both	Dundee	Public Works	$37,500	HMGP	12-18 Months
Dundee	Dundee	Dundee Lk Menzie Lk Marie Restroom PM	Infrastructure	Dundee Lk Menzie Lk Marie Restroom PM	All	Both	Dundee	Public Works	$9,120	HMGP	12-18 Months
Dundee	Dundee	Dundee Riser WTF Safe Room	Infrastructure	Dundee Riser WTF Safe Room	All	Both	Dundee	Public Works	$19,375	HMGP	12-18 Months
Dundee	Dundee	Dundee Center St Drainage Imp	Drainage	Dundee Center St Drainage Imp	Flood	Both	Dundee	Public Works	$562,500	HMGP	12-18 Months
Dundee	Dundee	Dundee Drainage Assessment/Improvements	Drainage	Dundee Drainage Assessment/Improvements	Flood	Both	Dundee	Public Works	$93,750	HMGP	12-18 Months
Dundee	Dundee	Dundee Fl Ave MLK Drainage Imp	Drainage	Dundee Fl Ave MLK Drainage Imp	Flood	Both	Dundee	Public Works	$562,500	HMGP	12-18 Months
Dundee	Dundee	Dundee Ridgewood Area Drainage Imp	Drainage	Dundee Ridgewood Area Drainage Imp	Flood	Both	Dundee	Public Works	$245,625	HMGP	12-18 Months
Fort Meade	Fort Meade	Citywide	Stormwater Master Plan	A review of stormwater conditions throughout the City with recommendations for improvements.	Flooding	Both	Fort Meade and Southwest Florida Water Management District	Public Works, City Manager	$160,000	City, Southwest Florida Water Management District	December 2020
Frostproof	City of Frostproof	Pressure Zoning	Drinking Water	Currently our system has no pressure zones, creating stagnant water in areas, extreme variation in pressures, brown and red water complaints coupled with air in lines.	Aesthetic, Health and Safety complaints	Existing	Frostproof	Utilities	$500,000	HMGP	12-24 Months

State Review Comment 4:

- **Was the plan revised to reflect changes in development?**

- **Required Revisions:** Tie the changes in development back to the plan and hazards.

Response to State Review Comment 4:

- ***Section IV: Staff added a statement to describe how the changes in development impact the LMS and hazards.***

Development Changes

As Polk County's population grows, the need for expanding and improving mitigation techniques grows exponentially. Municipalities continue to annex land and developers turn former agricultural land into housing. Infrastructure throughout the County is aging, which leads to increased impacts from hazard events. Development in the 100-year flood risk area meet the strict National Flood Insurance Program (NFIP) floodplain management standards. Comprehensive Plan policies and permitting processes help protect wetlands. These actions result in more disaster-resistant communities. An informed and educated populace is a necessity. As growing demands continue to challenge first responders and resources, it is imperative that Polk County residents are knowledgeable and prepared to face and recover from disasters. Providing information and training to Polk County residents helps save lives, spares property, and helps return life to normal more rapidly after a disaster.

State Review Comment 5:

- **Was the plan revised to reflect progress in local mitigation efforts? (Were projects completed, deleted or deferred and why if they were deleted or deferred?)**

- **Required Revisions:** Explain why projects have been deleted or deferred.

Response to State Review Comment 5:

- *Appendix B: Staff worked with the jurisdictions to include the reason the jurisdiction is deferring or deleting a project.*

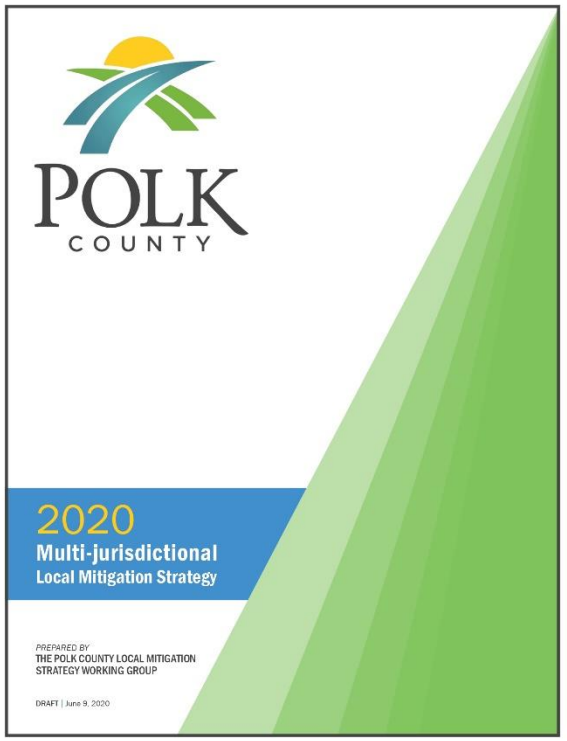
Polk County LMP PLan Update on Deferred, Completed, or Deleted Mitigtion Project Initiatives
Draft May 6, 2020

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Mitigation Goal(s) Addressed	Hazard Mitigated*	Address New or Existing	Responsible Agency	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	If Deleted or Deferred, Why?
Auburndale	Auburndale	Alberta Street Drainage Improvement	Drainage	Relieves flooding and drainage problem at major intersection on Alberta St	5,6,9	Flood	Both	Auburndale	$500,000	HMGP, FMA	12-18 Months	Deferred	Ongoing Project, Working on Plans
Auburndale	Auburndale	Highway 92, Lakeshore and Beach Lift Station Generator Project	Infrastructure	Highway 92, Lakeshore and Beach Lift Station Generator Project	3.4, 6.2, 6.3	All	Both	Auburndale	$189,995.00	HMGP	12-18 Months	Deferred	Ongoing Project, Working on Plans
Bartow	Bartow	City-wide Sewer Improvements	Stormwater Improvement, Building Retrofit	Provide improvements to 14,700 linear feet of gravity sewer, 25 manholes, and the airbase master lift station	2,8,9	Flood, Storms	Existing	Bartow	$1,500,000	HMGP	12-18 Months	Completed	
Bartow	Bartow	City-wide Stormwater Improvements	Stormwater Improvement	Provide needed improvements to substandard stormwater infrastructure	8,9	Flood, Storms	Both	Bartow	$13,000,000	HMGP	12-18 Months	Completed	
Bartow	Bartow	Polk Street and Carver Recreation Center Retrofits	Building Retrofits	Retrofit the Polk St. Recreation Center and Carver Recreation Center to be used by nearby residents as hurricane shelters	1,2,10	Storms	Existing	Bartow	$35,000	HMGP	12-18 Months	Deleted	Project is not cost effective
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur . Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	1,2, 5	All	Both	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual	Deferred	Ongoing project
Davenport	Davenport	Critical Facility Wind Retrofit	Property Protection	Wind Retrofit to City Admin Building that houses Fire, Police and Public Works operations.	1,2	Wind	Existing	Davenport	$160,000	HMGP	9-12 Months	Deferred	on-going project
Davenport	Davenport	Phase I and Phase II Drainage Studies	Drainage	Area experienced flooding in yards due to inadequate drainage system. Phase I - feasibility study to determine how to handle stormwater runoff; phase II - construction, if feasible. (Matching funds may be available through Neighborhood Revitalization)	5,6,9	Flood	Both	Davenport	$2,100,000	HMGP	12-18 Months	Completed	Completed
Frostproof	Frostproof	Bass Property Purchase	Land Acquisition	Purchase of home and property damaged due to flooding (Bass)	5,6,9	Flood	Existing	Frostproof	$29,840	HMGP, FMA	12-18 Months	Deferred	Awaiting funds
Frostproof	Frostproof	Johnston Property Purchase	Land Acquisition	Purchase of home and property damaged due to flooding (Johnston)	5,6,9	Flood	Existing	Frostproof	$53,510	HMGP, FMA	12-18 Months	Deferred	Awaiting funds
Frostproof	Frostproof	Keen Park Road Drainage Project	Drainage	Area experienced flooding in yards and roads. Project will re-establish drainage ditches Keen Park Road	5,6,9	Flood	Both	Frostproof	$50,000	HMGP	12-18 Months	Deferred	Awaiting funds
Frostproof	Frostproof	City Hall Building Retrofit	Building Retrofit	Retrofit of critical facilities/window protection to City Hall (Frostproof)	1,2,5,10	Storms	Existing	Frostproof Public Works	$150,000	HMGP, EMPA	12-18 Months	Deferred	Awaiting funds
Frostproof	Frostproof	Fire/EMS Building Retrofit	Building Retrofit	Retrofit/harden Fire Dept/EMS station (Frostproof)	1,2,5,10	Storms	Existing	Frostproof Public Works	$150,000	HMGP, EMPA	12-18 Months	Deferred	Awaiting funds

LMS Working Group Decision

Approval and Transmittal of Draft LMS Document to Jurisdictions

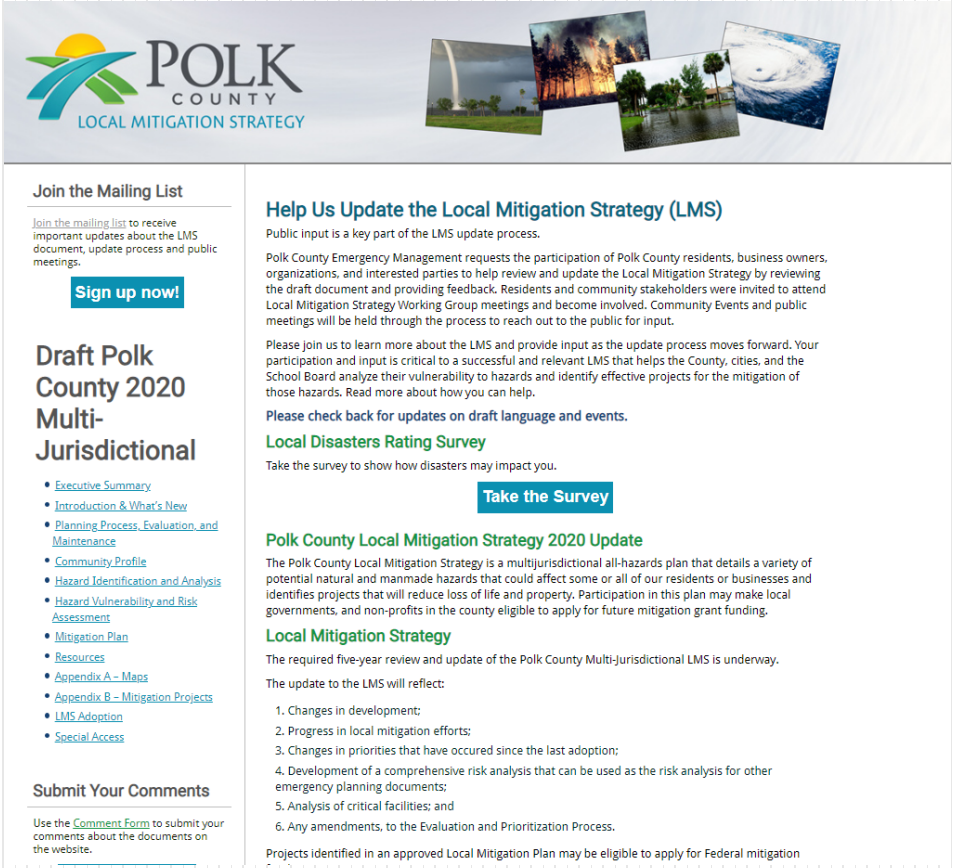
- **Recommend Approval of Draft LMS and Transmittal to Jurisdictions for Approval**



Next Steps

Next Steps

- Public Review of Documents Online
  - https://polkcountylms.org/
- Draft to Jurisdictions
  - Review and Comment
- Incorporation of Comments
  - CRS Subcomittee
  - LMS Working Group
  - Public



Next Steps

- Adoption Hearings
  - Polk County BoCC
  - Polk County School Board
  - Municipalities

SAMPLE RESOLUTION _____

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF DUNDEE, FLORIDA ADOPTING THE 2020 POLK COUNTY MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY UPDATE.

WHEREAS, areas of Polk County, including the Town of Dundee, are vulnerable to the human and economic costs of natural, technological, and societal disasters; and

WHEREAS, the Town Commission of the Town of Dundee realizes the importance of reducing or eliminating those vulnerabilities for the overall public health, safety, and welfare of the community; and

WHEREAS, a Local Mitigation Strategy is a LMS which presents a unified strategy to building a disaster-resilient community; and

WHEREAS, the Disaster Mitigation Act of 2000 requires each local jurisdiction to have either its own local mitigation strategy or to actively participate in the development and maintenance of multi-jurisdictional mitigation strategy; and

WHEREAS, the Town of Dundee actively participated in the development and maintenance of the Polk County Local Mitigation Strategy as adopted in 2002, 2005, 2010, and 2015; and

WHEREAS, the Town of Dundee has actively participated in the 2020 update to the Local Mitigation Strategy through the Polk County Local Mitigation Strategy Working Group, which has established a comprehensive, coordinated planning process to eliminate or decrease these vulnerabilities; and

WHEREAS, Town of Dundee representatives and staff have identified, justified, and prioritized proposed projects and programs needed to mitigate the vulnerabilities of the Town of Dundee to the impacts of future disasters; and

WHEREAS, the Polk County 2020 Multi-Jurisdictional LMS incorporated these proposed projects and programs into the update that has been prepared and issued for consideration and adoption by the jurisdictions of Polk County; and

WHEREAS, the State of Florida Division of Emergency Management has issued an "Approval Pending Adoption" of the Polk County 2020 Multi-Jurisdictional Local Mitigation Strategy.

NOW, THEREFORE, BE IT RESOLVED, by the Town Commission of the Town of Dundee:

1. The Town Commission of the Town of Dundee hereby accepts and adopts its designated portion of the "Polk County 2020 Multi-Jurisdictional LMS".
2. Agency personnel of the Town of Dundee shall pursue available funding opportunities for implementation of the proposals and projects designated therein.
3. Agencies and organizations within the Town of Dundee will, upon receipt of such funding or other necessary resources, seek to implement proposals contained in the LMS.
4. The Town of Dundee will continue to participate in the updating and expanding of the LMS in future years.
5. The Town of Dundee will encourage businesses, industries, and community groups operating within Polk County to also participate in updating and expansion of the LMS in the years ahead.
6. The Town of Dundee will continue to participate in the furtherance of public involvement opportunities.

INTRODUCED AND PASSED by the Town Commission of the Town of Dundee, Florida, in regular session, this _____ day of _____, 2020.

(Signatures as appropriate for the jurisdiction)

LMS Meeting
June 17, 2020
9:00

This meeting was held via Zoom. Attendance was captured through Zoom registration.

Jerri Kaplan opened the meeting with a welcome followed by Marisa Barmby. Marisa went through the slide show and explained the updates to the LMS. Since the February meeting the Florida Division of Emergency Management (FDEM) needed further explanation in certain areas after reviewing it for federal compliance. FDEM reviewed the LMS after changes were made and has sent an approval letter, pending jurisdiction adoption.

The LMS will go before the Board of County Commissioners on August 4 for adoption. The maps will be on display the morning of the meeting to gather any additional public comment.

The LMS can be found at polkcountylms.org. Please share the website in order to garner public comment. The survey is also still on the website.

Steven Hunnicutt made the motion to approve submitting the LMS to the jurisdictions for adoption. Cliff Smith seconded the motion. All in favor, none opposed. Motion carried.

It was explained that after the Board of County Commissioners approves the LMS adoption, the jurisdictions and city managers would receive an email from Jerri with a sample resolution. Once the resolution is adopted by the jurisdiction, they are to send the resolution to Jerri, who will forward it to Florida Division of Emergency Management.

News Details

Polk Emergency Management Mitigation Strategy Meeting

Published on Feb 1, 2021

Bartow, Fla. (Feb. 1, 2021) — Polk County planners will hold the next local mitigation strategy meeting in a virtual format this month.

The meeting, which is open to the public, begins at 9 a.m., Feb. 9 and will be held in a Zoom video conference call.

The Polk County Local Mitigation Strategy, which was updated last year, is the county's plan on how to avoid or lessen the impacts of various disasters. Anyone who would like to have a voice in helping reduce the impacts of disasters to the county or want to learn more about mitigation is encouraged to attend.

For additional meeting information, please contact Polk County Emergency Management Planner Jerri Kaplan at (863) 298-7033, jerrikaplan@polk-county.net.

Polk Emergency Management Mitigation Strategy Meeting

Tue, Feb 9, 9:00 AM

Going?

2 Going · 2 Maybe

Event details

Polk County planners will hold the next local mitigation strategy meeting in a virtual format this month.

The meeting, which is open to the public, begins at 9 a.m., Feb. 9 and will be held in a Zoom video conference call.

The Polk County Local Mitigation Strategy, which was updated last year, is the county's plan on how to avoid or lessen the impacts of various disasters. Anyone who would like to have a voice in helping reduce the impacts of disasters to the county or want to learn more about mitigation is encouraged to attend.

For additional meeting information, please contact Polk County Emergency Management Planner Jerri Kaplan at (863) 298-7033, jerrikaplan@polk-county.net.

Polk County Local Mitigation Strategy (LMS)

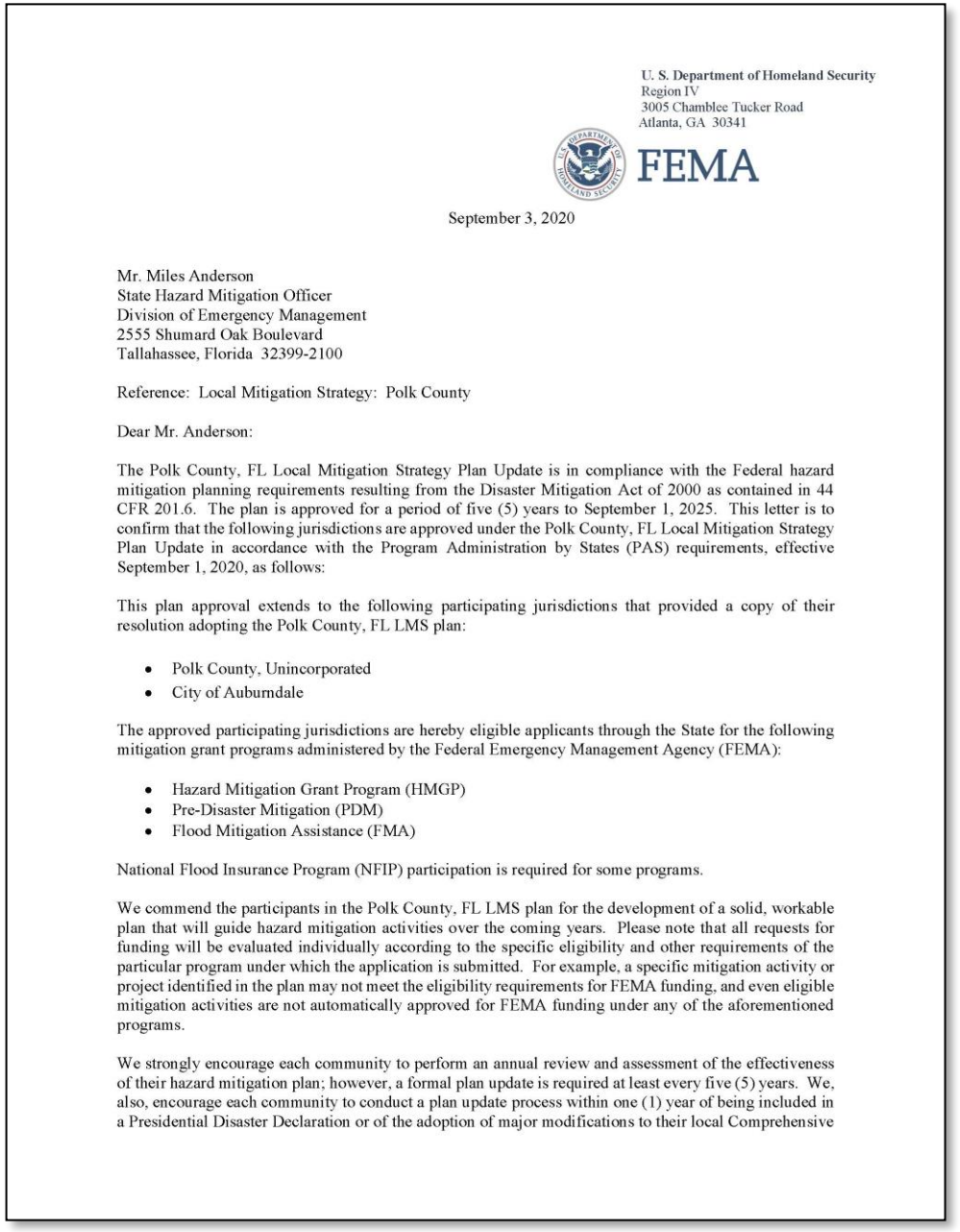
FEBRUARY 9, 2021

Agenda

- LMS Status
- LMS Resolutions
- Working Group Membership
- Project List
- Annual LMS Compliance

LMS Status

- Accepted by Florida Division of Emergency Management on June 11, 2020 pending LMS adoption
- Polk County Board of County Commissioners adopted LMS on August 4, 2020
- Accepted by FEMA on September 3, 2020
- LMS will expire on September 1, 2025



U. S. Department of Homeland Security
Region IV
3005 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

September 3, 2020

Mr. Miles Anderson
State Hazard Mitigation Officer
Division of Emergency Management
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

Reference: Local Mitigation Strategy: Polk County

Dear Mr. Anderson:

The Polk County, FL Local Mitigation Strategy Plan Update is in compliance with the Federal hazard mitigation planning requirements resulting from the Disaster Mitigation Act of 2000 as contained in 44 CFR 201.6. The plan is approved for a period of five (5) years to September 1, 2025. This letter is to confirm that the following jurisdictions are approved under the Polk County, FL Local Mitigation Strategy Plan Update in accordance with the Program Administration by States (PAS) requirements, effective September 1, 2020, as follows:

This plan approval extends to the following participating jurisdictions that provided a copy of their resolution adopting the Polk County, FL LMS plan:

- Polk County, Unincorporated
- City of Auburndale

The approved participating jurisdictions are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

We commend the participants in the Polk County, FL LMS plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We, also, encourage each community to conduct a plan update process within one (1) year of being included in a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive

LMS Resolutions

Agency/Municipality	Resolution Adopted
Auburndale	Yes
Bartow	No
BoCC	Yes
Davenport	Yes
Dundee	Yes
Eagle Lake	Yes
Fort Meade	Yes
Frostproof	Yes
Haines City	Yes
Highland Park	No

Agency/Municipality	Resolution Adopted
Hillcrest Heights	Yes
Lake Alfred	Yes
Lake Hamilton	Yes
Lake Region Lakes Water Mgmt. District	Yes
Lake Wales	Yes
Lakeland	No
Mulberry	No
Polk City	Yes
Winter Haven	Yes
School Board	No

Working Group Membership

- Annual update
- Due date extended to February 19

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
2020

Affiliation	Name	Department and/or Title	Address	Email	Signature
Polk County	Michael Gease	Floodplain Tech	330 W. Church Street, Bartow	michaelgease@polk-county.net	
Polk County	Michele Sims	Procurement Manager	330 W. Church Street Bartow	michelesims@polk-county.net	
Polk County	Michelle Orton	Land Development	330 W. Church Street, Bartow	michelleorton@polk-county.net	
Polk County	Michelle Shiver	RSVP Polk	1290 Golfview Avenue Bartow	michelleshiver@polk-county.net	
Polk County	Paul Womble	Emergency Management Director	1890 Jim Keene Blvd Winter Haven	paulwomble@polk-county.net	
Polk County	Rebecca Howard	Special Needs Coordinator	1890 Jim Keene Blvd Winter Haven	rebeccahoward@polk-county.net	
Polk County	Rick Parnell	Assistant Fire Chief		rickparnell@polk-county.net	
Polk County	Robert Weech	Fire Chief	2470 Clower Lane Bartow	robertweech@polk-county.net	
Polk County	Tamara West	Housing and Neighborhood Dev.	1290 Golfview Avenue	tamarawest@polk-county.net	
Polk County	Tim Gibson	Park and Natural Resources, Fiscal Mgr.	4177 Ben Durrance Road, Bartow	timgibson@polk-county.net	
Polk County	Todd Bond	Budget Director	330 W. Church Street Bartow	toddbond@polk-county.net	
Polk County School Board	Angela Usher			Angela.usher@polk-fl.net	
Polk County School Board	Linda King	Director of Risk Management	1915 S. Floral Avenue Bartow	Linda.king@polk-fl.net	
Polk County School Board	Pam Luce	Facilities Planning Senior Coordinator	1915 S. Floral Avenue Bartow	pam.luce@polk-fl.net	
Polk County School Board	Richard Alderman	Director of Architectural Services	1915 S. Floral Avenue Bartow	richard.alderman@polk-fl.net	
Polk State College	Denise Andreu	Administration	3425 Winter Lake Road, Lakeland	dandreu@polk.edu	

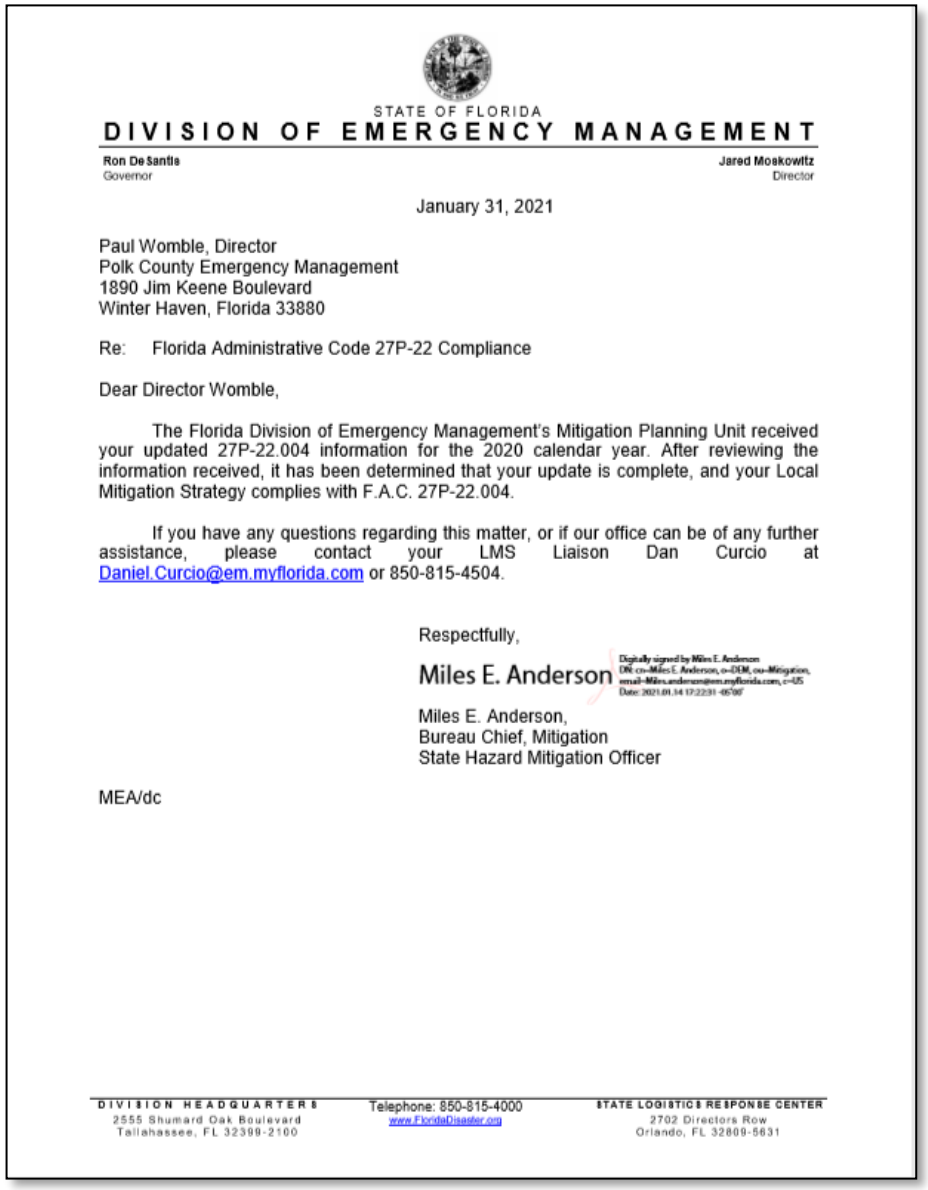
Mitigation Project List

- CHANGES DUE FEBRUARY 19

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existing	Responsible Agency	Responsible Departmen	Estimated Cost	Possible Funding Source(s)	Time to Complete
Polk County	Polk County	Install Generation Set at Landfill (Phase III)	Auxiliary Power	Phase III. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station	Flood	Existing	Polk County	Waste & Recycling	$35,000	HMGP	12-18 Months
Polk County	Polk County	Install Generator Set at Landfill (Phase V)	Auxiliary Power	Phase V. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate Pumping Station)	Flood	Existing	Polk County	Waste & Recycling	$45,000	HMGP	12-18 Months
Polk County	Polk County	Install Generator Set at Landfill (Phase VI)	Auxiliary Power	Phase VI. Install a Generator Set. Pumping leachate out of the landfill for disposal at a wastewater treatment plant. Extended periods without electricity increases the risk of leachate leaking into the groundwater and causing contamination. (Disposal Facility Leachate	Flood	roposed (2020	Polk County	Waste & Recycling	$45,000	HMGP	12-18 Months
Polk County	Polk County	Keen Park Road Drainage Project	Drainage	Area experienced flooding in yards and roads. Project will re-establish drainage ditches Keen Park	Flood	Both	Polk County	Roads & Drainage	$50,000	HMGP, Property Tax	12-18 Months
Polk County	Polk County	Keith Lane Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$560,000	HMGP, Property Tax	12-18 Months
Polk County	Polk County	Lake Parker Regional Drainage System Phase IV	Drainage	Provide slope stabilization to prevent further erosion of drainage system.	Flood	Existing	Polk County	Roads & Drainage	$720,000	HMGP, Property Tax	12-18 Months
Polk County	Polk County	Moss Road/Jones Road Drainage Ditch	Drainage	Area experienced flooding in yards and roads. Project will re-establish drainage ditches. Moss	Flood	Both	Polk County	Roads & Drainage	$50,000	HMGP, Property Tax	12-18 Months
Polk County	Polk County	Oakland Rd N Drainage Improvements	Drainage	Area experienced flooding in yards and roads. Project will establish drainage system along roadway. Oakland Road North	Flood	Both	Polk County	Roads & Drainage	$200,000	HMGP, Property Tax	12-18 Months
Polk County	Polk County	Rolling Oaks Drainage Improvements	Drainage	Improve existing drainage system to prevent flooding of streets, property and homes	Flood	Existing	Polk County	Roads & Drainage	$800,000	HMGP, Property Tax	12-18 Months

Annual LMS Compliance

- Annual compliance accepted by FDEM January 31, 2021



STATE OF FLORIDA
DIVISION OF EMERGENCY MANAGEMENT

Ron DeSantis
Governor

Jared Moskowitz
Director

January 31, 2021

Paul Womble, Director
Polk County Emergency Management
1890 Jim Keene Boulevard
Winter Haven, Florida 33880

Re: Florida Administrative Code 27P-22 Compliance

Dear Director Womble,

The Florida Division of Emergency Management's Mitigation Planning Unit received your updated 27P-22.004 information for the 2020 calendar year. After reviewing the information received, it has been determined that your update is complete, and your Local Mitigation Strategy complies with F.A.C. 27P-22.004.

If you have any questions regarding this matter, or if our office can be of any further assistance, please contact your LMS Liaison Dan Curcio at Daniel.Curcio@em.myflorida.com or 850-815-4504.

Respectfully,

Miles E. Anderson

Miles E. Anderson,
Bureau Chief, Mitigation
State Hazard Mitigation Officer

MEA/dc

DIVISION HEADQUARTERS
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100

Telephone: 850-815-4000
www.FloridaDisaster.org

STATE LOGISTICS RESPONSE CENTER
2702 Directors Row
Orlando, FL 32809-5631

Next LMS Meeting

- Annual meetings changed to semi-annual meetings
- Next meeting July or August

Questions?

Meeting ID	Topic	Start Time	End Time
89926665279	Annual LMS Meeting	2/9/2021 8:21	2/9/2021 9:12

Name (Original Name)	User Email	Join Time	Leave Time
Cole Edwards (Kalli Edwards)		2/9/2021 8:21	2/9/2021 9:12
Jay Robinson		2/9/2021 8:40	2/9/2021 9:12
Emergency Management Zoom	em2_zoom@polk-county.net	2/9/2021 8:41	2/9/2021 9:12
18635345044		2/9/2021 8:41	2/9/2021 9:12
emwillab		2/9/2021 8:48	2/9/2021 9:12
mich.geas		2/9/2021 8:52	2/9/2021 9:12
Paul Womble	paulwomble@polk-county.net	2/9/2021 8:53	2/9/2021 9:12
Jay		2/9/2021 8:53	2/9/2021 9:12
Greg Becker Polk EM		2/9/2021 8:53	2/9/2021 9:12
Pamela Luce	pam.luce@polk-fl.net	2/9/2021 8:55	2/9/2021 9:12
Michelle Shiver	michelleshiver@polk-county.net	2/9/2021 8:55	2/9/2021 9:12
Rick Parnell (Fire Rescue)	ps_software@polk-county.net	2/9/2021 8:55	2/9/2021 9:12
etrail		2/9/2021 8:55	2/9/2021 9:12
Rebecca Howard		2/9/2021 8:56	2/9/2021 9:12
18634219974		2/9/2021 8:56	2/9/2021 9:12
Thomas Mulvaney	mulvaneyt@townoflakehamilton.com	2/9/2021 8:56	2/9/2021 9:12
Curtis Knowles		2/9/2021 8:57	2/9/2021 9:12
SShealey		2/9/2021 8:58	2/9/2021 9:12
Benjamin Dunn (Ryan Wiggins)	virtualinspections@polk-county.net	2/9/2021 8:58	2/9/2021 9:12
Jay Jarvis		2/9/2021 8:58	2/9/2021 9:12
18635346000		2/9/2021 8:58	2/9/2021 9:12
brile		2/9/2021 8:58	2/9/2021 9:12
mich.orto		2/9/2021 8:58	2/9/2021 9:12
lasmi		2/9/2021 8:59	2/9/2021 9:12
18638346795		2/9/2021 8:59	2/9/2021 9:12
Sara Irvine		2/9/2021 8:59	2/9/2021 9:12
Bryan Finder	finder.bryan@gmail.com	2/9/2021 9:00	2/9/2021 9:12
Mark J. Bennett		2/9/2021 9:00	2/9/2021 9:12
jkeene		2/9/2021 9:00	2/9/2021 9:12
Diana		2/9/2021 9:01	2/9/2021 9:12
HND Zoom	hnd_zoom@polk-county.net	2/9/2021 9:02	2/9/2021 9:11
richard.alderman		2/9/2021 9:02	2/9/2021 9:12
Steven Hunnicutt		2/9/2021 9:05	2/9/2021 9:12
18636357832		2/9/2021 9:06	2/9/2021 9:12
Joe		2/9/2021 9:07	2/9/2021 9:12
jdias		2/9/2021 9:09	2/9/2021 9:12
15612226885		2/9/2021 9:12	2/9/2021 9:12
Clifton Smith	csmith@mydavenport.org	2/9/2021 9:12	2/9/2021 9:12

User Email	Duration (M	Participants
EM2_Zoom	52	38

Duration (M	Guest
52	Yes
32	Yes
31	No
31	Yes
24	Yes
20	Yes
19	Yes
19	Yes
19	Yes
18	Yes
17	Yes
17	No
17	Yes
16	Yes
16	Yes
16	Yes
15	Yes
15	Yes
14	No
14	Yes
14	Yes
14	Yes
14	Yes
13	Yes
13	Yes
13	Yes
13	Yes
12	Yes
12	Yes
11	Yes
10	No
10	Yes
7	Yes
6	Yes
5	Yes
3	Yes
1	Yes
1	Yes

From:	Kaplan, Jerri
To:	Melissa Glogowski; Amee" Bailey; Andrea Salcedo; Angela Usher; Art Bodenheimer; Becker, Greg; Billie Segree; Billy Abernathy; Bobbie Henley; Bond, Todd; Brandow, Jennifer; Bryan Riley; Candace Barnes; Cheryl Stallard; Cliff Smith; Clifton Bernard; Cole Edwards; Corcoran, Brian; Curtis Knowles; Dana Kelly; dandreu@polk.edu; David Knowles; Deric Feacher; Dunn, Benjamin; Ed Trail; Gease, Michael; Gibson, Tim; Harrison Eiland; Howard, Rebecca; Jamal Muhieddine; James Keene; James Slaton; Jan Bagnall; Jarvis, Jay; Jay Robinson; Jennifer Codo-Salisbury; John Dickson; John Wasmund; Joseph Carbone; Joseph Jenkins; Joyce Dias; JT Torrance; Kaplan, Jerri; kcallihan@mydavenport.org; Laurie Smith; Linda King; Maricela Arteaga; Marisa Barmby; Mark Bennett; Matt Bernal; Michael Teague; Michael Williams; Nicole McDowell; Orton, Michelle; Pam Luce; Parnell, Rick; Richard Alderman; Roger Griffiths; Ron Borchers; Sara Irvine; "Scott Finley"; Shiver, Michelle; Sims, Michele; Steve Thompson (steve.thompson@redcross.org); Steven Hunnicutt; Steven Lawson; Steven Shealey; Tandra Davis; Timothy Allen; Tom Earnharth; Tom Mulvaney; Weech, Robert; West, Tamara; Womble, Paul
Cc:	Faurote, Apryl
Subject:	LMS Meeting
Start:	Tuesday, July 27, 2021 9:00:00 AM
End:	Tuesday, July 27, 2021 10:00:00 AM
Location:	Zoom
Attachments:	00 Polk County Mitigation Action Plan 2020 .xlsx 01 Mitigation Action Submittal Form 2020.docx LMS Working Group Representation.docx image001.jpg

---

Good afternoon!

Our next LMS meeting will be held via Zoom on Tuesday, July 27, from 9 am to 10 am (meeting information below). Tentative agenda includes status of LMS resolution adoptions, trainings, and a guest speaker.

Attached is the current Mitigation Action Plan (project list) for you to review for your agency or municipality. If there are any potential grant-funded projects you would like added to the project list, please fill out the attached Mitigation Action Submittal Form and submit any changes (deletions or additions) to me by July 21, 2021.

The Working Group membership list is also attached. If there are any changes needed to the list for your agency or municipality, please email me with the requested changes. Please have these changes to me by July 21.

Please let me know if you have any questions.

Emergency Management Zoom is inviting you to a scheduled Zoom meeting.

Topic: LMS Meeting

Time: Jul 27, 2021 09:00 AM Eastern Time (US and Canada)

Join Zoom Meeting

https://us02web.zoom.us/j/85666580961?pwd=WDEwZlVpSDZYdkxYaGRyOHBPVk1iZz09

Meeting ID: 856 6658 0961

Passcode: 467586

One tap mobile

+13017158592,,85666580961# US (Washington DC)

+13126266799,,85666580961# US (Chicago)

Dial by your location

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

+1 646 558 8656 US (New York)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

+1 669 900 6833 US (San Jose)

Meeting ID: 856 6658 0961

Join by SIP

85666580961@zoomcrc.com <mailto:85666580961@zoomcrc.com>

Join by H.323

162.255.37.11 (US West)

162.255.36.11 (US East)

115.114.131.7 (India Mumbai)

115.114.115.7 (India Hyderabad)

213.19.144.110 (Amsterdam Netherlands)

213.244.140.110 (Germany)

103.122.166.55 (Australia Sydney)

103.122.167.55 (Australia Melbourne)

149.137.40.110 (Singapore)

64.211.144.160 (Brazil)

69.174.57.160 (Canada Toronto)

65.39.152.160 (Canada Vancouver)

207.226.132.110 (Japan Tokyo)

149.137.24.110 (Japan Osaka)

Meeting ID: 856 6658 0961

Passcode: 467586

Jerri Kaplan, FPEM

Planner

Polk County Emergency Management

1890 Jim Keene Blvd.

Winter Haven, FL 33880

Office: 863-298-7033

jerrikaplan@polk-county.net <mailto:jerrikaplan@polk-county.net>

Like Us - facebook.com/polkcountyem

Follow us on Twitter @PolkEmergency

Polk County Local Mitigation Strategy (LMS)

JULY 27, 2021

Agenda

- LMS Resolutions
- Mitigation Training
- HMGP Overview
- CRS Presentation by Brian Corcoran

LMS Resolutions

Agency/Municipality	Resolution Adopted
Auburndale	Yes
Bartow	Yes
BoCC	Yes
Davenport	Yes
Dundee	Yes
Eagle Lake	Yes
Fort Meade	Yes
Frostproof	Yes
Haines City	Yes
Highland Park	Yes

Agency/Municipality	Resolution Adopted
Hillcrest Heights	Yes
Lake Alfred	Yes
Lake Hamilton	Yes
Lake Region Lakes Water Mgmt. District	Yes
Lake Wales	Yes
Lakeland	Yes
Mulberry	Yes
Polk City	Yes
Winter Haven	Yes
School Board	Yes

Mitigation Training

- G393 Mitigation for Emergency Managers
  - October 12-14, 2021 (8:30 – 5:00 daily)
  - 3 day course held at EOC
  - The workshop provides activities and exercises that build the participants' abilities to:
    - Create long-term strategies for disaster-resistant communities
    - Identify local mitigation opportunities
    - Select mitigation solutions to hazard risk problems
    - Find resources to carry out mitigation activities in a post-disaster environment.
  - Must apply through SERT Trac

HMGP Overview

- FDEM releasing quarterly reports of HMGP activities awarded by FEMA
- Report includes statuses of projects previously closed, currently active, and pending award for that given quarter
- This is to help with local monitoring and administrative purposes, and possible inspiration for new mitigation projects

Disaster Number	Project Number	Suffix	Subgrantee	Project Title	Type	Project Status	Date Initially Approved	Project Date Closed	Federal Share Obligated	Fed Share Grantee Admin Amt	Fed Share Subgrantee Admin Amt	Subrecipient Management Costs Obligated Amount	Total Obligated Amount	Non Federal Share
1609	0003	R	Coral Springs	CITY OF CORAL SPRINGS, BROWARD COUNTY, PUBLIC SAFETY BUILDING, WIND RETROFIT	205.8: Retrofitting Public Structures - Wind	Closed	7/18/2007	12/15/2010	$1,247,250.00	$6,375.00	$27,630.00	$0.00	$1,281,255.00	$415,750.00
1609	0004	R	Titusville	CITY OF TITUSVILLE, BREVARD COUNTY, EOC - WIND RETROFIT	205.8: Retrofitting Public Structures - Wind	Closed	6/28/2007	9/11/2009	$123,505.00	$639.00	$4,293.00	$0.00	$128,437.00	$41,168.00
1609	0005	R	Pompano Beach	CITY OF POMPANO BEACH, BROWARD COUNTY, EMMA LOU OLSON CIVIC CTR - WIND	205.8: Retrofitting Public Structures - Wind	Closed	5/23/2007	12/22/2009	$94,113.00	$488.00	$3,510.00	$0.00	$98,111.00	$31,371.00
1609	0006	R	Lake Worth	CITY OF LAKE WORTH, PALM BEACH COUNTY, LAKE WORTH PUBLIC LIBRARY , WIND RETROFIT	205.8: Retrofitting Public Structures - Wind	Closed	5/24/2007	1/20/2010	$27,609.00	$144.00	$1,104.00	$0.00	$28,857.00	$9,203.00
1609	0007	R	Lake Worth	CITY OF LAKE WORTH, PALM BEACH COUNTY, CITY HALL ANNEX, WIND RETROFIT	205.8: Retrofitting Public Structures - Wind	Closed	10/9/2007	5/12/2011	$40,014.00	$204.00	$1,067.00	$0.00	$41,285.00	$13,338.00
1609	0008	R	CITY OF FORT LAUDERDALE	CITY OF FORT LAUDERDALE, BROWARD COUNTY, CITY HALL, WIND RETROFIT	205.8: Retrofitting Public Structures - Wind	Closed		1/24/2013	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

CRS Presentation by Brian Corcoran

Next LMS Meeting – January 2022

Questions?

Name (Original Name)	User Email	Join Time
Emergency Management Zoom	em_zoom@polk-county.net	1/11/2022 8:30
Josh Larsen	jlarsen@townofdundee.com	1/11/2022 8:30
GroupSeries		1/11/2022 8:40
Cole Edwards	cole.edwards@lakelandgov.net	1/11/2022 8:41
Thomas Murphy Jr.	tmurphy@hainescity.com	1/11/2022 8:43
Kristin Lentz	kristin.lentz@em.myflorida.com	1/11/2022 8:44
Drew Neubrand (Thomas Murphy Jr.)	tmurphy@hainescity.com	1/11/2022 8:50
Michelle Orton	michelleorton@polk-county.net	1/11/2022 8:50
Apryl Faurote	aprylfaurote@polk-county.net	1/11/2022 8:51
sara irvine	sara@townoflakehamilton.com	1/11/2022 8:51
Niki Stone	kellysrevival@gmail.com	1/11/2022 8:51
Josh McLemore	joshua.mclemore@polk-fl.net	1/11/2022 8:52
BILLY ABERNATHY	billyabernathy@polk-county.net	1/11/2022 8:53
Curtis Knowles	cknowles@cfrpc.org	1/11/2022 8:53
Steven Shealey	sshealey@pennoni.com	1/11/2022 8:55
Christina Adams	cadams@mydavenport.org	1/11/2022 8:55
Bryan Riley	bryan.riley@lakelandgov.net	1/11/2022 8:56
Jay Culver	culverjr@webber.edu	1/11/2022 8:57
Michael Williams	michael.williams@lakelandgov.net	1/11/2022 8:58
Michele Sims	michelesims@polk-county.net	1/11/2022 8:58
Thomas Mulvaney	mulvaneyt@townoflakehamilton.com	1/11/2022 8:59
Christia Johnson	christiajohnson@polk-county.net	1/11/2022 9:00
Don Caro	carodd@webber.edu	1/11/2022 9:01
Rick Parnell	rickparnell@polk-county.net	1/11/2022 9:01
Jay Jarvis	jayjarvis@polk-county.net	1/11/2022 9:01
Thomas Mulvaney	mulvaneyt@townoflakehamilton.com	1/11/2022 9:01
Mark Bennett	mbennett@lakewalesfl.gov	1/11/2022 9:02
Clifton Bernard	cbernard@townofdundee.com	1/11/2022 9:03
Laurie Smith	laurie.smith@lakelandgov.net	1/11/2022 9:03
Maria Sutherland	msutherland@cityoffortmeade.com	1/11/2022 9:07
sara irvine	sara@townoflakehamilton.com	1/11/2022 9:25
Amee Bailey	abailey@mylakealfred.com	1/11/2022 9:55

Attended in person at EOC
Jerri Kaplan
Paul Womble
Ray Walsh
Rebecca Howard

Leave Time	Duration (M	Guest
1/11/2022 9:57	88	No
1/11/2022 9:57	88	Yes
1/11/2022 9:57	77	Yes
1/11/2022 9:57	77	Yes
1/11/2022 9:57	74	Yes
1/11/2022 9:57	73	Yes
1/11/2022 9:57	67	Yes
1/11/2022 9:57	67	Yes
1/11/2022 9:57	67	Yes
1/11/2022 9:24	34	Yes
1/11/2022 9:57	66	Yes
1/11/2022 9:57	65	Yes
1/11/2022 9:57	65	Yes
1/11/2022 9:57	64	Yes
1/11/2022 9:52	58	Yes
1/11/2022 9:57	62	Yes
1/11/2022 9:57	61	Yes
1/11/2022 9:57	61	Yes
1/11/2022 9:55	57	Yes
1/11/2022 9:57	60	No
1/11/2022 9:01	3	Yes
1/11/2022 9:57	58	Yes
1/11/2022 9:57	57	Yes
1/11/2022 9:57	57	No
1/11/2022 9:40	40	Yes
1/11/2022 9:53	52	Yes
1/11/2022 9:57	55	Yes
1/11/2022 9:57	55	Yes
1/11/2022 9:57	55	Yes
1/11/2022 9:57	51	Yes
1/11/2022 9:57	33	Yes
1/11/2022 9:57	2	Yes

Mitigation Resources

Polk County LMSWG Meeting

Florida Division of Emergency Management
Mitigation Bureau Planning Unit
January 11, 2022

What is mitigation?

Action taken to reduce or eliminate long-term risk to people and property.

On average,

$1 spent on **HAZARD MITIGATION**

provides the **NATION** approximately **$6** **IN FUTURE BENEFITS**

Source: National Institute of Building Sciences, 2017 Mitigation Saves Interim Report

What do we do?

Floodplain Management

Planning

Grants

FLOODPLAIN MANAGEMENT

National Flood Insurance Program (NFIP)

Community Rating System (CRS)

Flood Ordinance Review

Community Assistance Visits

FEMA Risk MAP Outreach

NATIONAL FLOOD INSURANCE PROGRAM

A federally-subsidized flood damage insurance program administered by FEMA.

467 communities participate in FL (98%), representing nearly 35% of all policies nationwide

COMMUNITY RATING SYSTEM

Rewards community and State activities that go beyond the minimum NFIP requirements by offering flood insurance premium discounts.

$204 million in savings in 251 communities, 52% of NFIP communities

FLOOD ORDINANCE REVIEW

Ordinance reviews assist communities in adopting local ordinances that meet the minimum standards of the NFIP and coordinate with the FL Building Code

98% of communities have adopted or are in the process

STATE COORDINATING OFFICE REGIONAL ENGAGEMENT – COMMUNITY ASSISTANCE VISITS

Streamlining the CAV process to visit communities more often (every 3 years vs. 5+ years) to interact with floodplain administrators and verify compliance. These visits include floodplain tours and meetings to discuss community-specific floodplain and compliance concerns.

FEMA RISK MAP OUTREACH

Collaboration with local, state, federal, and private partners to identify flood risk and promote informed planning and development practices by providing data, building partnerships, and supporting long-term hazard mitigation planning.

FDEM participated in 10 Risk MAP meetings throughout 2021

Coordination between Risk MAP and LMS

Flood risk products help to meet plan requirements:

1. Provides valuable information for flood extent and location through depth grids, as well as impacts/ vulnerability
2. Useful in determining differences in jurisdictional risk
3. Comparing to previous maps can help determine new at-risk areas

PLANNING

State Mitigation Planning
Local Mitigation Planning
Outreach

MITIGATION PLANNING

State Mitigation Strategy

- State Hazard Mitigation Plan (SHMP)
- Enhanced status (including additional 5% HMGP funding)
- Mitigate FL Statewide Interagency Workgroup

Local Mitigation Strategy

- County Local Mitigation Strategy (LMS) Plans
- LMS Work Groups (established by F.A.C. 27P-22)
- LMS Project Lists

SHMP

Enacted under Disaster Mitigation Act of 2000 under Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act

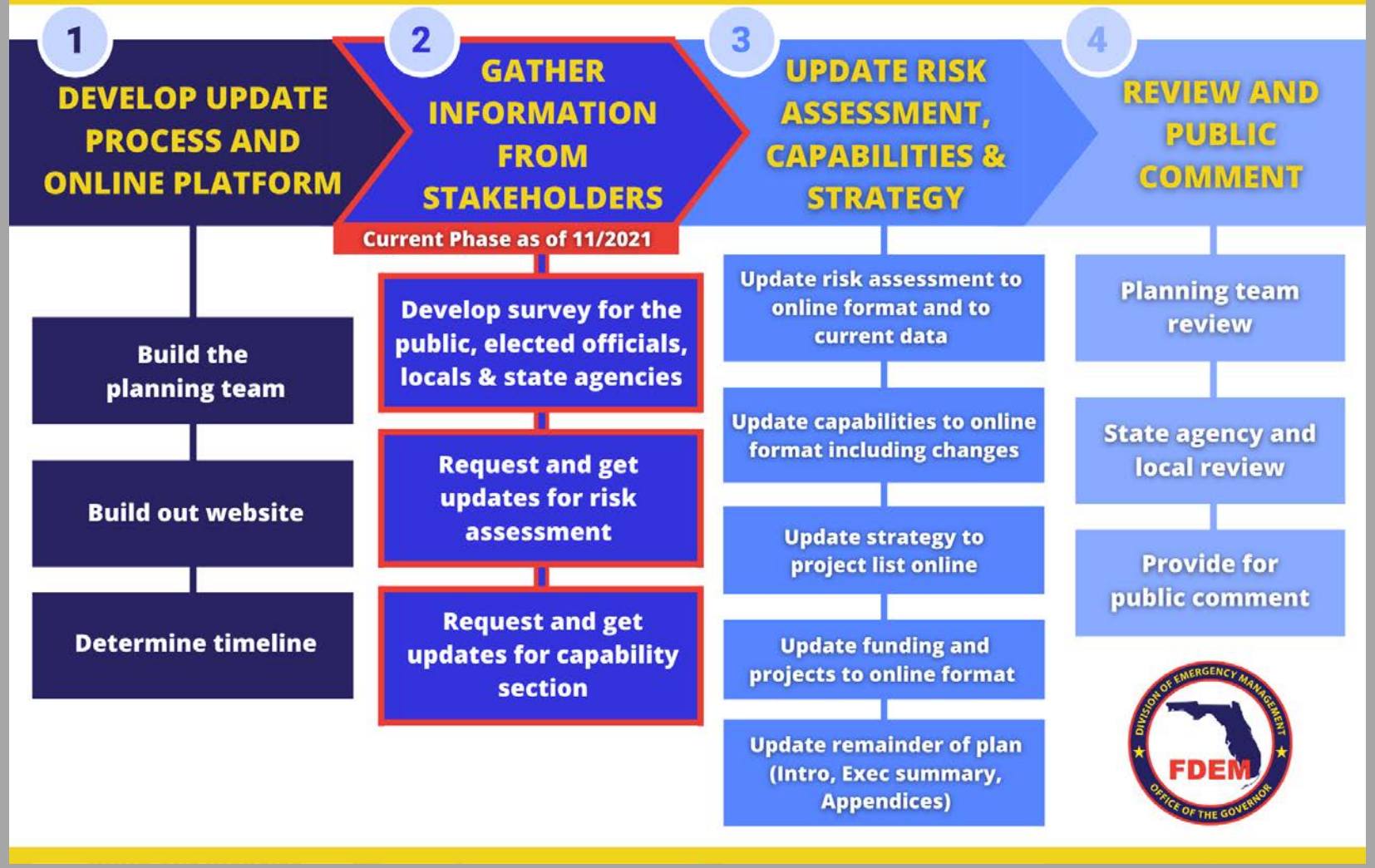
FL STATE HAZARD MITIGATION PLAN IS 1 OF 15 ENHANCED PLANS (AS OF 9/2021).

ENHANCED STATUS

Achieved through developing a comprehensive mitigation program and ability to manage increased funding

HAS PROVIDED AN ADDITIONAL $298 MILLION TO HMGP IN FLORIDA SINCE 2007

STATE HAZARD MITIGATION PLAN
UPDATE PROCESS



To participate, please take our Stakeholder Survey at https://www.surveymonkey.com/r/FLSHMP2023

MITIGATE FL

Natural Hazards Interagency Workgroup required by Florida Statute 252.3655

PARTNERS INCLUDE: FEDERAL, STATE, LOCAL, NONPROFIT, PRIVATE, AND PUBLIC SECTORS

USACE SILVER JACKETS PROGRAM

Interagency team dedicated to developing and implementing solutions to flood risk management problems.

Past & Ongoing Projects:

- Resilience Guidebooks for Rural Inland Counties, Highlands and Columbia Counties (2020)
- H&H Study in Bay County (2021)
- Coastal Resilience Workshop (2022)
- Immokalee Watershed Plan (2022)

LMS WORKING GROUP

Established in F.A.C. 27P-22

- MEETS AT LEAST ANNUALLY
- COORDINATES ALL MITIGATION ACTIVITIES IN THE COUNTY
- DEVELOPS AND MAINTAINS THE LMS PLAN
- IDENTIFIES, PRIORITIZES, AND ENDORSES MITIGATION PROJECTS

COUNTY LMS PLAN

Required by 44 CFR Part 201

- PROVIDES DOCUMENTATION OF STRATEGY - INCLUDING GOALS, OBJECTIVES, AND PROJECTS
- INCLUDES A JURISDICTIONAL RISK ASSESSMENT
- SHOULD BE REVISED ANNUALLY, WITH A MAJOR UPDATE AND RE-APPROVAL REQUIRED EVERY 5 YEARS

LMS PROJECT LIST

Established in F.A.C. 27P-22

- COMPRISED OF PROJECTS FOCUSED ON RISKS IDENTIFIED IN THE LMS PLAN
- PRIORITIZED USING METHOD IDENTIFIED IN THE LMS PLAN
- CONTINUALLY UPDATED BASED ON PROJECT COMPLETION OR DELETION, FUNDING AVAILABILITY, AND EVOLVING GOALS

GRANTS

Program Administration by States (PAS)
Hazard Mitigation Grant Program (HMGP)
Building Resilient Infrastructure and Communities (BRIC)
Floodplain Mitigation Assistance (FMA)
Hurricane Loss Mitigation Program (HLMP)

PROGRAM ADMINISTRATION BY STATES (PAS)

Gives states increased control and oversight to implement FEMA's Hazard Mitigation Grant Program (HMGP). Florida is the only state in the nation with all allowable delegations!

GRANT REVIEW

FDEM reviews and approves applications on behalf of FEMA

GRANT MANAGEMENT

FL successfully manages the project and financial aspects of the program

PLANNING

FL reviews and approves LMS plans on behalf of FEMA

HAZARD MITIGATION GRANT PROGRAM (HMGP)

Federal, post-disaster grant authorized by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

GOAL: Assist in implementing long-term hazard mitigation measures following a major disaster declaration.

PERIOD OF PERFORMANCE

3 years

TYPE & COST SHARE

Cost reimbursement grant
75% federal / 25% non-federal

ALLOCATION

20% of federal disaster assistance for a disaster

FL allocates using a 3-tier system (established by F.A.C. 27P-22), providing to impacted counties first

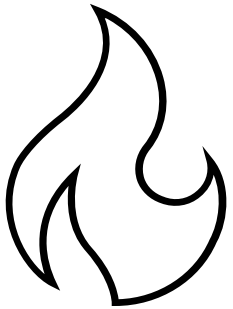
ELIGIBLE APPLICANTS

States, local governments, and private non-profits

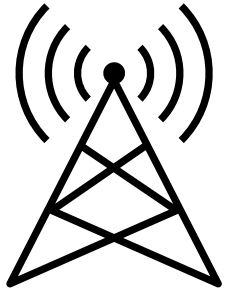
ELIGIBLE PROJECT ACTIVITIES – HMGP

Elevations
Acquisitions
Dry Floodproofing
Flood Risk Reduction

Structural Retrofitting
Infrastructure Retrofitting
Mitigation Reconstruction
Safe Room



Wildfire Mitigation



Critical Facility Generators
Power & Communication
System Retrofits

Mitigation Planning
Management Costs

HMGP APPLICATION PROCESS

NOFA Released

- Applicant development workshop or webinar
- LMS Working Groups submit priority list to FDEM

Application Deadline

- State conducts project reviews for planning requirements, eligibility, feasibility, and environmental compliance

State Submittal to FEMA

- State submits eligible projects to FEMA for final approval and potential funding consideration

FEMA Approval & Award

- Upon FEMA approval, the State begins the project/grant management process
  - ➢Contract process, perform project in accordance with SOW and milestone schedule, manage project/funds received, submit quarterly reports

BUILDING RESILIENT INFRASTRUCTURE & COMMUNITIES (BRIC)

Federal, non-disaster grant authorized by the Stafford Act (42 USC 5133) and 2 CFR Part 200.

GUIDING PRINCIPLES:

- Capability- and capacity-building
- Encourage and enable innovation
- Promote partnerships
- Enable large projects
- Maintain flexibility
- Provide consistency

PERIOD OF PERFORMANCE

3 years

TYPE & COST SHARE

Cost reimbursement grant
75% federal / 25% non-federal

ALLOCATION

Annual appropriation, funding amount varies

States receive guaranteed set-aside allocation

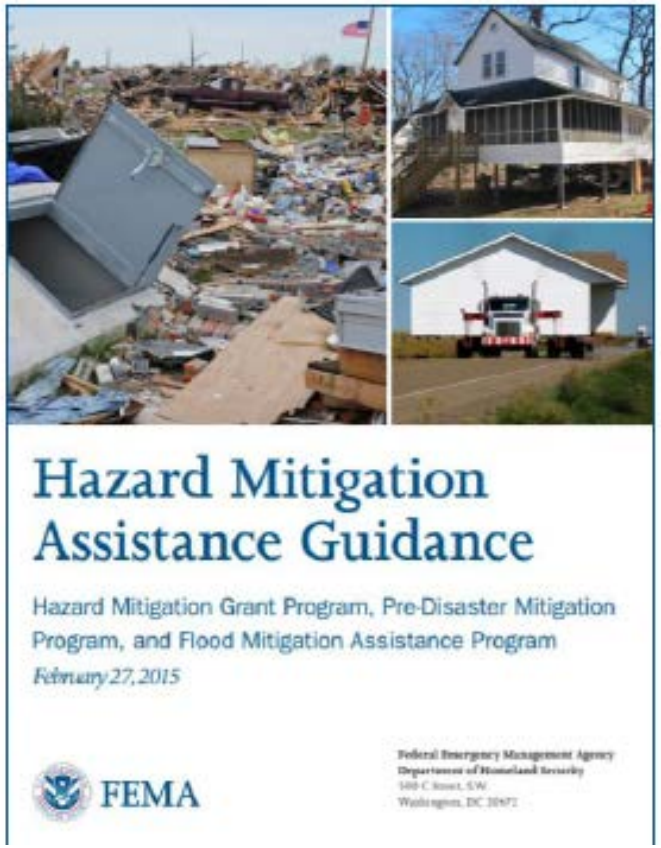
Remaining funding is nationally competitive

ELIGIBLE APPLICANTS

States, local governments
**Non-profit organizations, individuals, & businesses can apply through local gov.*

ELIGIBLE PROJECT ACTIVITIES – BRIC

Eligible Activities are Still Eligible



Expanded Eligibility

Additional Activities for Wildfire & Wind Implementation

Project Scoping Building Code Projects

FLOOD MITIGATION ASSISTANCE (FMA)

Federal, non-disaster grant authorized by the National Flood Insurance Act (42 USC 4104c) and 2 CFR Part 200.

GOAL: Reduce or eliminate claims under the NFIP by reducing or eliminating risk of repetitive flood damage to insured buildings and structures.

TYPE & COST SHARE

3-year period of performance;

Cost reimbursement grant;

Community flood projects:
75% federal / 25% non-federal
Repetitive Loss (RL) projects:
90% federal / 10% non-federal
Severe RL projects:
100% federal

ALLOCATION

Annual appropriation by Congress

Nationally competitive

ELIGIBLE APPLICANTS

States, local governments, and private non-profits

ELIGIBLE PROJECT ACTIVITIES – FMA

Elevations
Acquisitions
Dry Floodproofing
Flood Risk Reduction

Structural Retrofitting
Infrastructure Retrofitting
Mitigation Reconstruction

Mitigation Planning
Management Costs

NON-DISASTER APPLICATION PROCESS

FEMA NOFO Released

- Typically in August
- State distributes NOFOs and guidance memo

State Application Deadline

- Typically in November
- State reviews for eligibility, feasibility, and environmental compliance

FEMA Application Deadline

- Typically in late January of the following year
- State submits eligible projects to FEMA

FEMA Review & Award

- FEMA reviews applications and may request additional information
- State assists in RFI process
- Upon FEMA award notification, State issues contracts with Sub-guarantees

HURRICANE LOSS MITIGATION PROGRAM (HLMP)

State, non-disaster grant authorized by Florida Statute 215.558(1).

GOAL: Improve flood and wind resilience of residences and community buildings.

PERIOD OF PERFORMANCE

Typically 2 years

TYPE & COST SHARE

Cost reimbursement grant
100% State funded; no local match required

ALLOCATION

HLMP: $3.5 million annually

Other Annual Allocations:
Hurricane Public Shelter Retrofit Program: $3 million
TCC Mobile Home Tie Down Program: $2.8 million
FIU International Hurricane Research Center: $700,000

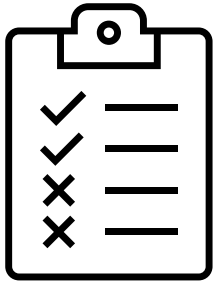
ELIGIBLE APPLICANTS

Counties, cities, and non-profit organizations

ELIGIBLE PROJECT ACTIVITIES – HLMP

Wind Retrofits
Construction or modification to increase a structure's sustainability

Flood Retrofits



Mitigation Inspections

MITIGATION ACTION PORTFOLIO

The Mitigation Action Portfolio was created to introduce stakeholders to the BRIC program and provide a snapshot of eligible hazard mitigation activities. A wide array of mitigation projects are displayed in this interactive tool.

Source: FEMA Mitigation Action Portfolio

RESOURCES

HMGP

- https://www.fema.gov/hazard-mitigation-grant-program
- https://floridadisaster.org/dem/mitigation/hazard-mitigation-grant-program/

BRIC

- Program Support Materials: https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/resources
- FEMA Mitigation Action Portfolio: https://www.fema.gov/sites/default/files/2020-08/fema_mitigation-action-portfolio-support-document_08-01-2020_0.pdf
- FY21 NOFO (BRIC/FMA): https://www.fema.gov/grants/mitigation/fy2021-nofo#

FMA

- https://www.fema.gov/flood-mitigation-assistance-grant-program
- https://floridadisaster.org/dem/mitigation/flood-mitigation-assistance-program/

HLMP

- https://floridadisaster.org/dem/mitigation/hurricane-loss-mitigation-program/

CONTACT INFORMATION

Planning

R3/4/5 LMS Liaison: Kristin Lentz
Kristin.Lentz@em.myflorida.com
R2/6/7 LMS Liaison: Ian Ohlin
Ian.Ohlin@em.myflorida.com

Floodplain Management

Unit Manager: Conn Cole
Conn.Cole@em.myflorida.com
Insurance Specialist: Barbara Cartwright
Barbara.Cartwright@em.myflorida.com

HMGP

Program Administrator: Kathleen Marshall
Kathleen.Marshall@em.myflorida.com
Program Specialist: Jared Jaworski
Jared.Jaworski@em.myflorida.com

Non-Disaster Grants

Unit Manager: Susan Harris-Council
Susan.Harris-Council@em.myflorida.com

HLMP

Program Manager: Daniel Gardea
Daniel.Gardea@em.myflorida.com

LMS Meeting
January 11, 2022

LMSWG List
Jerri Kaplan reiterated the importance of ensuring the membership list was accurate. Please let her know when there are staff changes.

Annual FDEM Update
Jerri explained the annual update was submitted to FDEM. The update includes the current project list and working group membership.

Project List
If you plan to apply for any type of mitigation grant, you must have the project on the project list and request a letter of support from Emergency Management. There will be deadlines for when a letter of support can be requested. Any projects that need to be added to the list must fill out the Project Submittal form.

Fort Meade has added four projects: Water plant generator, City Hall generator, Water well generator, and Sheriff's substation generator.

Davenport has added a Stormwater Master Plan project.

HMGP-COVID Projects
Fort Meade is applying for the four projects added above. Estimated total project costs are $304,500 and estimated federal share is $228,375.

Davenport is applying for the Stormwater Master Plan, wind retrofit for city admin building, generator for command center, and CDS/replacement of damaged inlets. Estimated total project costs are $625,000 and estimated federal share is $468,750.

FDEM Mitigation Presentation
FDEM Mitigation presented virtually on mitigation resources, including grants and their eligible activities.

Polk County Government Florida
6d ·

Polk County's planners will hold the next local mitigation strategy meeting at the Polk County Emergency Operating Center (1890 Jim Keene Blvd, Winter Haven, FL 33880). The meeting is open to the public and will begin at 9 a.m. on Nov. 16, 2022.

The Polk County Local Mitigation Strategy was last updated in 2020 and is the county's plan on ways to avoid or lessen the impact of various disasters. Anyone who would like to help reduce the impact of disasters to Polk County, or w... **See more**

1

Like Comment

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
November 16, 2022

Affiliation	Name	Department and/or Title	Address	Email	Signature
American Red Cross	Steve Thompson	Disaster Program Manager	6011 US 27 N., Sebring	Steve.thompson@redcross.org	
Baycare	Timothy Allen	Healthcare EM Coordinator	200 Ave F NE, Winter Haven	Timothy.allen@baycare.org	
CFRPC	Curtis Knowles	Program Manager	555 E. Church Street, Bartow	cknowles@cfrpc.org	
City of Auburndale		Fire Inspector	100 Ariana Ave., Auburndale		
City of Auburndale	John Dickson	Public Works Director	915 Charles Avenue Auburndale	jdickson@auburndalefl.com	
City of Auburndale	Steven Lawson	Sanitation	915 Charles Avenue Auburndale	slawson@auburndalefl.com	
City of Bartow	Jay Robinson	Fire Department Chief	450 N. Wilson Avenue Bartow	jrobinson.fire@cityofbartow.net	
City of Davenport	Bill Nolen	Building Official		bnolen@mydavenport.org	
City of Davenport	Christina Adams	Planning Technician	1 South Allapaha Avenue, Davenport	cadams@mydavenport.org	
City of Davenport	~~Steven Hunnicutt~~ Rosenid Roecker	Fire Department	112 W Palmetto St Davenport	~~shunnicutt@mydavenport.org~~ rserrano@mydavenport.org	
City of Eagle Lake	Tom Ernharth	~~Engineer~~ City manager	75 N. 7th Street Eagle Lake	ternharth@eaglelake-fla.com	Steven Sheely
City of Fort Meade	Harrison Eiland	Fire Department Chief	8 West Broadway, Fort Meade, FL 33841	reiland@cityoffortmeade.com	
City of Fort Meade	Jan Bagnall	City Manager	8 West Broadway, Fort Meade, FL 33841	jbagnall@cityoffortmeade.com	
City of Fort Meade	Maria Sutherland	Assistant City Manager	8 West Broadway, Fort Meade, FL 33841	MSutherland@cityoffortmeade.com	
City of Frostproof	Josh Turner	Public Works		JTurner@cityoffrostproof.com	
City of Frostproof	Nicole McDowell	City Manager	111 W. First Street Frostproof	nmcdowell@cityoffrostproof.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
November 16, 2022

Affiliation	Name	Department and/or Title	Address	Email	Signature
City of Haines City	James Keen Clifton Bernard	Public Works Director Transportation Supt	620 E. Main Street Haines City	jkeene@hainescity.com Clifton.bernard@hainescity.com	
City of Lake Alfred	Amee' Bailey	Community Development Director	120 E. Pomelo Street Lake Alfred	abailey@mylakealfred.com	
City of Lake Alfred	Art Bodenheimer	Police Department Chief	120 E. Pomelo Street Lake Alfred	abodenheimer@mylakealfred.com	
City of Lake Wales	James Slaton	City Manager	201 W. Central Avenue, Lake Wales	jslaton@lakewalesfl.gov	
City of Lake Wales	Joanna Abernathy	Deputy City Manager	201 W. Central Avenue, Lake Wales	jabernathy@lakewalesfl.gov	
City of Lake Wales	Joe Jenkins	Fire Department Chief	201 W. Central Avenue Lake Wales	jjenkins@lakewalesfl.gov	
City of Lake Wales	Mark J. Bennett	Development Services Director	201 W. Central Avenue Lake Wales	mbennett@lakewalesfl.gov	
City of Lakeland	Bryan Riley	Risk	1140 E Parker St., Lakeland 33801	Bryan.riley@lakelandgov.net	
City of Lakeland	Cole Edwards	Lakes and Stormwater Eng. & Floodplain Coord.	407 Fairway Avenue Lakeland	cole.edwards@lakelandgov.net	
City of Lakeland	Jamal Muhieddine	Lakeland Electric	228 S. Massachusetts Ave., Lakeland	jamal.muhieddine@lakelandelectric.com	
City of Lakeland	Joyce Dias	Risk Manager	228 S. Massachusetts Ave., Lakeland	Joyce.dias@lakelandgov.net	
City of Lakeland	Laurie Smith	Lakes and Stormwater Manager	407 Fairway Avenue Lakeland	laurie.smith@lakelandgov.net	
City of Lakeland	Matt Bernal	Risk/Safety	520 N. Lake Parker Avenue, Lakeland	Matthew.bernal@lakelandgov.net	
City of Lakeland	Michael Williams	Interim Emergency Manager		Michael.Williams@lakelandgov.net	
City of Mulberry	Billie Segree	Code Enforcement Officer	104 S. Church Ave Mulberry	bsegree@cityofmulberryfl.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
November 16, 2022

Affiliation	Name	Department and/or Title	Address	Email	Signature
City of Mulberry	John Wasmund	Finance Director	104 S. Church Ave Mulberry	jwasmund@cityofmulberryfl.com	
City of Mulberry	Ron Borchers			rborchers@cityofmulberryfl.com	
City of Polk City	Jennifer Codo-Salisbury	CFRPC designee/Planning Director	555 E. Church Street, Bartow	jcodosalisbury@cfrpc.org	
City of Winter Haven	Joseph Emery	~~Deputy~~ Fire Chief	301 AVE G SW WH, FL 33880	jemery@mywinterhaven.com	
City of Winter Haven	Willie Nabong	Assistant City Engineer / Floodplain Administrator	490 Third Street NW Winter Haven, FL 33881	wnabong@mywinterhaven.com	
FL Department of Health	Jenn Brandow	Health Promotions & Preparedness Planner	1290 Golf View Avenue Bartow	jennifer.brandow@flhealth.gov	
Florida Division of Emergency Management	Jeremy O'Dell	Recovery		jeremy.odell@em.myflorida.com	
Golden Lakes Community Dev.	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
Lake Region Lakes Mgmt. District	Roger Griffiths	Ex Director	804 Ave X SW, Winter Haven	Rdg1744@gmail.com	
Peace River Center	Candace Barnes	COO	1239 E. Main Street, Bartow	cbarnes@peacerivercenter.org	
Polk County		Floodplain Tech	330 W. Church Street, Bartow		
Polk County		Land Development	330 W. Church Street, Bartow		
Polk County	Apryl Faurote	Volunteer ~~Polk~~ EF Services Coordinator	1290 Golfview Avenue Bartow	aprylfaurote@polk-county.net	
Polk County	Benjamin Dunn James Schnell	Planning and Development, Building Dir.	330 W. Church Street Bartow	benjamindunn@polk-county.net jamesschnell@polk-county.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
November 16, 2022

Affiliation	Name	Department and/or Title	Address	Email	Signature
Polk County	Billy Abernathy	Emergency Management EOC Coordinator	1890 Jim Keene Blvd Winter Haven	billyabernathy@polk-county.net	
Polk County	Brian Corcoran	Land Development / Floodplain Manager	330 W. Church Street Bartow	briancorcoran@polk-county.net	
Polk County	Christia Johnson	Budget Director	330 W. Church Street, Bartow	christiajohnson@polk-county.net	
Polk County	Greg Becker	EM Program Manager	1890 Jim Keene Blvd., Winter Haven	gregbecker@polk-county.net	
Polk County	Hezedean Smith	Fire Chief	1295 Brice Blvd., Bartow	hezedeansmith@polk-county.net	
Polk County	Jana Nickles	Special Needs Coordinator	1890 Jim Keene Blvd Winter Haven	jananickles@polk-county.net	
Polk County	Jay Jarvis	Transportation Director	330 W. Church Street Bartow	jayjarvis@polk-county.net	
Polk County	Jerri Kaplan	EM Planner	1890 Jim Keene Blvd Winter Haven	jerrikaplan@polk-county.net	JKaplan
Polk County	Michele Sims	Procurement Manager	330 W. Church Street Bartow	michelesims@polk-county.net	
Polk County	Michelle Shiver	RSVP Polk	1290 Golfview Avenue Bartow	michelleshiver@polk-county.net	
Polk County	Paul Womble	Emergency Management Director	1890 Jim Keene Blvd Winter Haven	paulwomble@polk-county.net	
Polk County	Rick Parnell	Assistant Fire Chief	1295 Brice Blvd., Bartow	rickparnell@polk-county.net	
Polk County	Tamara West	Housing and Neighborhood Dev.	1290 Golfview Avenue	tamarawest@polk-county.net	
Polk County	Tim Gibson Tabitha Biehl	Park and Natural Resources, Fiscal Mgr.	4177 Ben Durrance Road, Bartow	timgibson@polk-county.net tabithabiehl@polk-county.net	
Polk County	Todd Bond	Deputy County Manager Support Services	330 W. Church Street Bartow	toddbond@polk-county.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
November 16, 2022

Affiliation	Name	Department and/or Title	Address	Email	Signature
Polk County School Board	Angela Usher			Angela.usher@polk-fl.net	
Polk County School Board	Josh McLemore Director	Facilities Planning ~~Senior Coordinator~~	1915 S. Floral Avenue Bartow	Josh.mclemore@polk-fl.net	
Polk County School Board	Linda King	Director of Risk Management	1915 S. Floral Avenue Bartow	Linda.king@polk-fl.net	
Polk State College		Administration	3425 Winter Lake Road, Lakeland		
Resident	Dana Kelly	Resident	1786 Rocky Pointe Dr., Lakeland	Kellyd8955@hotmail.com	
Town of Dundee		Public Services Director	202 East Main Street, Dundee		
Town of Dundee	Joseph Carbone	Fire Department Chief	202 East Main Street, Dundee	dundeeflfire@hotmail.com	
Town of Dundee	Melissa Glogowski	Executive Admin. Assistant	202 East Main Street, Dundee	mglogowski@townofdundee.com	
Town of Dundee	Tandra Davis	Town Manager	202 East Main Street, Dundee	tdavis@townofdundee.com	
Town of Hillcrest Heights	Marisa M. Barmby	CFRPC designee / Senior Planner	555 E. Church Street, Bartow	mbarmby@cfrpc.org	
Town of Lake Hamilton		Town Clerk	100 Smith Avenue Lake Hamilton		
Town of Lake Hamilton	Michael Teague	Police Department Chief	100 Smith Avenue Lake Hamilton	teaguem@townoflakehamilton.com	
Village of Highland Park	Jennifer Codo-Salisbury	CFRPC designee / Planning Director	555 E. Church Street, Bartow	jcodosalisbury@cfrpc.org	
Webber International University	Jay Culver	Vice President of Student Life	1201 N. Scenic Highway, Babson Park	CulverJR@webber.edu	
Public	Stacey Phiffer	resident	1121 Pine Ave Frost proof FL. 33843	staceyphiffer@gmail.com	

Polk County Local Mitigation Strategy (LMS)

NOVEMBER 16, 2022

Agenda

- Introductions
- LMSWG Membership List
- Projects
- HMGP

Introductions

LMSWG Member List

Updated Project List

- Fort Meade
  - ❑ Water plant generator
  - ❑ City Hall generator
  - ❑ Water well generator
  - ❑ Sheriff's Substation generator
- Davenport
  - ❑ Stormwater Master Plan
- Webber International University
  - ❑ Campus Flooding Mitigation Project
  - ❑ WWTP generator

Hazard Mitigation Grant Program (HMGP)

Hazard Mitigation Grant Program (HMGP) - FDEM

Questions?

LMS Meeting
November 16, 2022

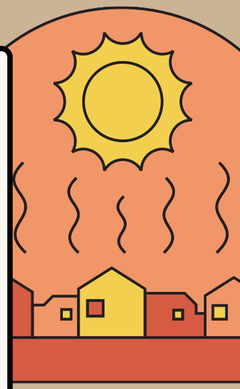
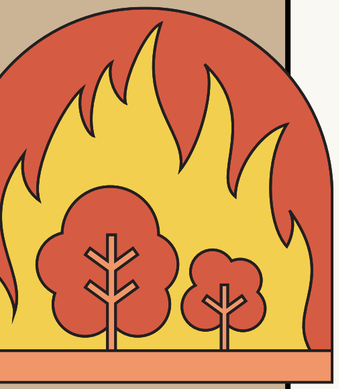
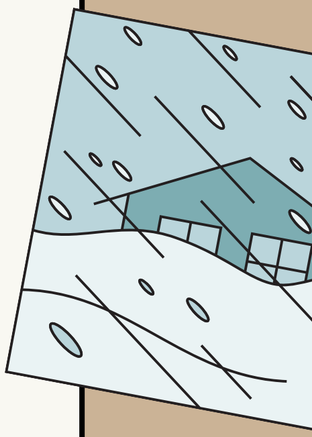
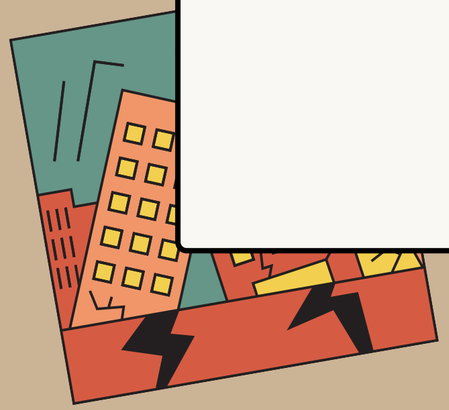
LMSWG List
Jerri Kaplan reiterated the importance of ensuring the membership list was accurate. Please let her know when there are staff changes.

Project List
If you plan to apply for any type of mitigation grant, you must have the project on the project list and request a letter of support from Emergency Management. There will be deadlines for when a letter of support can be requested. Any projects that need to be added to the list must fill out the Project Submittal form.

HMGP

- Angie Speir and Kristin Lentz virtually attended the meeting to discuss HMGP.
- Angie is Polk's new LMS contact.
- 75% Federal / 25% non-federal cost share
- Recommended to over submit projects for when Tier 2 comes about
- Residents or acquisition projects must be applied for through the local city or county
- New construction is not eligible under HMGP except for:
    - Safe rooms
    - Code Plus- example: build a new fire station, which you have funding for but want to add additional hardening such as stronger windows
    - Mitigation reconstruction
    - WWTP Relocation
- Takes about 36 months from when FEMA awards the project to the closeout
- Every project submitted must be included on the LMSWG project list. An updated list will be requested by FDEM.
- Each project needs a signed endorsement letter but one letter with all projects being applied for and prioritized can be submitted
- Only digital submissions required through the FDEM portal.



Polk County

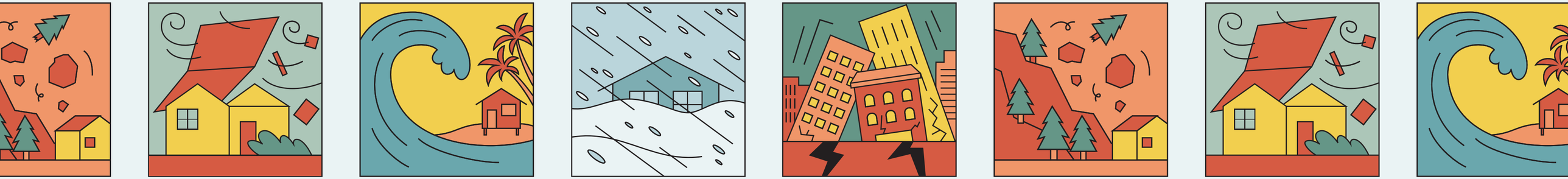
LOCAL MITIGATION STRATEGY

WORKING GROUP

August 25, 2023

AGENDA

- LMSWG Membership List
- Projects
- HMGP Ian



LMSWG MEMBER LIST

Please email Jerri Kaplan at jerrikaplan@polk-county.net any changes to the LMS Working Group list.

UPDATED PROJECT LIST

Fort Meade	Fort Meade	John Hopkins All Children's Hospital	Lake Hamilton
• Effluent Pump 3 Repair • 143 manhole rehab • Inflow manhole guard installation • Stormwater feasibility study	• Stormwater Retention Area - NW Langford Ave • Watershed Mgmt. Plan - Hendry Ave.	Critical facility retrofit (exterior doors and windows)	• Hwy 27 lift station generator • Mary Jayne neighborhood generator

UPDATED PROJECT LIST

Webber International University

Generators for:

- Conference center
- Babson Center/Dining Hall
- IT Dept.
- Learning Commons

Winter Haven

- Lake Elbert permanent pump upgrade

Eagle Lake

Generators for:

- Green Acres Water Plant Lift Station
- Lift Station #2
- Life Station #5
- City Hall

Lake Wales

- City Hall hardening
- City Hall generator

HMGP - Hurricane Ian

Project Tracking Spreadsheet

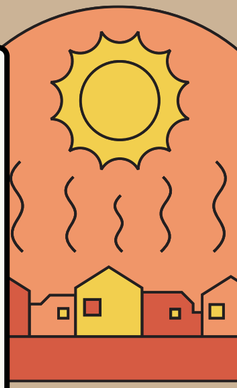
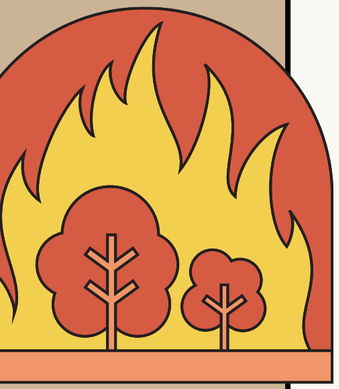
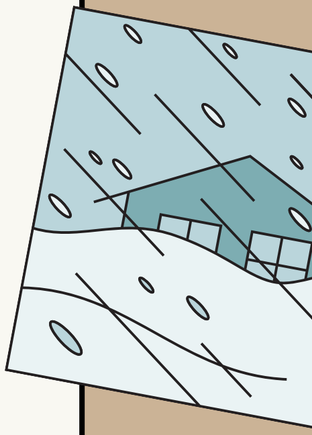
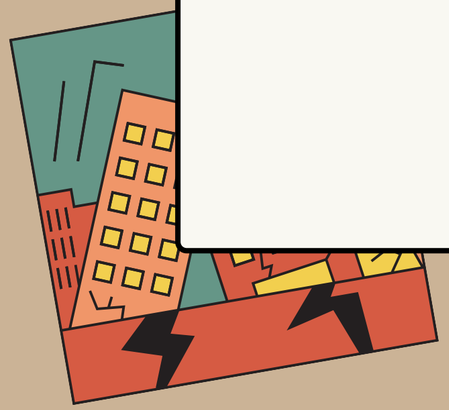
Polk County Allocation

15,881,523.81

Rank	Applicant	Project Name	Estimated Total Project Cost	Estimated Federal Share	Estimated Local Share
	Fort Meade	City Hall generator	$78,500.00	$58,875.00	$19,625.00
	Fort Meade	Effluent Pump 3 Repair	$15,500.00	$11,625.00	$3,875.00
	Fort Meade	Retrofit and reducing infiltration of 143 manholes	$1,251,000.00	$938,250.00	$312,750.00
	Fort Meade	Sheriff Substation generator	$57,500.00	$43,125.00	$14,375.00
	Fort Meade	SS Inflow Manhole Guard Installation	$78,486.00	$58,864.50	$19,621.50
	Fort Meade	Stormwater Feasibility Study - 4th & 5th Street	$150,000.00	$112,500.00	$37,500.00
	Fort Meade	Stormwater retention area - NW Langford Avenue	$1,761,900.00	$1,321,425.00	$440,475.00
	Fort Meade	Water plant generator	$111,000.00	$83,250.00	$27,750.00
	Fort Meade	Water well generator	$57,500.00	$43,125.00	$14,375.00
	Fort Meade	Watershed Management Plan - Hendry Avenue	$1,499,165.00	$1,124,373.75	$374,791.25
	Johns Hopkins All Children's Hospital	Critical Facility Wind/Flood Retrofit	$4,204,765.00	$3,153,573.75	$1,051,191.25
	Lake Hamilton	Generator - Hwy 27 Lift Station	$168,750.00	$126,562.50	$42,187.50
	Lake Hamilton	Generator - Mary Jayne Heights Neighborhood	$156,250.00	$117,187.50	$39,062.50
	Webber International University	Campus Drainage	$415,000.00	$311,250.00	$103,750.00
	Webber International University	Generator for Babson Center/Dining Hall (Campus Shelter)	$123,637.00	$92,727.75	$30,909.25
	Webber International University	Generator for IT Department	$51,344.00	$38,508.00	$12,836.00
	Webber International University	Generator for Learning Commons (Campus Shelter)	$65,561.00	$49,170.75	$16,390.25
	Webber International University	Waste Water Generator	$65,000.00	$48,750.00	$16,250.00
	Webber International University	Yentes Center (Campus Shelter) Generator	$70,000.00	$52,500.00	$17,500.00
	Winter Haven	Lake Elbert Permanent Pump Upgrade	$200,000.00	$150,000.00	$50,000.00
	Eagle Lake	Green Acres Water Plant Lift Station Generator	$225,000.00	$168,750.00	$56,250.00
	Eagle Lake	Lift Station #2 generator	$275,000.00	$206,250.00	$68,750.00
	Eagle Lake	Lift Station #5 generator	$275,000.00	$206,250.00	$68,750.00
	Eagle Lake	City Hall generator	$250,000.00	$187,500.00	$62,500.00
	Lake Wales	City Hall Hardening	$369,130.50	$276,847.88	$92,282.63
	Lake Wales	City Hall generator	$145,975.00	$109,481.25	$36,493.75
	Polk County Board of County Commissioners	Acquisition of land for flood water storage	$7,500,000.00	$5,625,000.00	$1,875,000.00
			19,620,963.50	**14,715,722.63**	**4,905,240.88**
			Remaining Federal Share	**1,165,801.19**	

OPEN FLOOR



QUESTIONS?

From:	Kaplan, Jerri
To:	Amee" Bailey; Anderson, Scott; Andrea Salcedo; Art Bodenheimer; Becker, Greg; Biehl, Tabitha; Bill Nolen; Billie Segree; Billy Abernathy; Bobby Williams; Brandow, Jennifer; Brian Updike; Bryan Riley; Candace Barnes; Cheryl Stallard; Clifton Bernard; Cole Edwards; Curtis Knowles; Dana Kelly; Dunn, Benjamin; Faurote, Apryl; Gibson, Tim; Harrison Eiland; Huff, Jennifer; Jamal Muhieddine; James Keene; James Slaton; Jan Bagnall; Jarvis, Jay; Jay Culver; Jay Robinson; Jeremy O"Dell; John Dickson; John Wasmund; Joseph Carbone; Joseph Emery; Joseph Jenkins; Josh Turner; Joyce Dias; Larry Blackwelder; Mary Dimitroff; Melissa Hilligoss; Patricia Jackson; Smith, Hezedean; Christina Adams; Dustin Everitt; kcallihan@mydavenport.org; Larry Green; Laurie Smith; Linda King; Lorraine Peterson; Maria Sutherland; Maricela Arteaga; Matt Bernal; McLemore, Joshua; Melissa Glogowski; Michael Teague; Michael Williams; Nicole McDowell; Parnell, Rick; Roger Griffiths; Ron Borchers; Schnell, James; Shanti Smith-Copeland; Shiver, Michelle; Sims, Michele; Steve Thompson (steve.thompson@redcross.org); Steven Hunnicutt; Steven Lawson; Steven Shealey; Tandra Davis; Timothy Allen; Tom Earnharth; Willie Nabong; Womble, Paul
Subject:	Polk County LMS Meeting
Start:	Friday, August 25, 2023 9:00:00 AM
End:	Friday, August 25, 2023 9:30:00 AM
Location:	Virtual - Registration Required for meeting information
Attachments:	image001.jpg

Good afternoon.

The next LMS meeting is being held virtually, Friday, August 25 at 9 am. Please register in advance for Friday's LMS meeting. Once you have registered, you will receive a calendar invite from Zoom with the meeting information.

Link to register: https://us02web.zoom.us/meeting/register/tZwuce6rpzwjE9ZnZD92mRdXWOiuUFo_jH8x

Meeting Agenda: LMS Project Updates, HMGP Ian Applications, Open Floor

Please let me know if you have any questions.

Thank you.

Jerri Kaplan, FPEM

Planner

Polk County Emergency Management

1890 Jim Keene Blvd.

Winter Haven, FL 33880

Office: 863-298-7033

jerrikaplan@polk-county.net <mailto:jerrikaplan@polk-county.net>

Like Us - facebook.com/polkcountyem

Follow us on Twitter @PolkEmergency

Local Mitigation Strategy

Working Group Meeting

January 22, 2025 | 9:30 - 11:30 a.m.

Polk County Emergency Operations Center

1890 Jim Keene Blvd., Winter Haven, FL 33880

Help reduce the impact of disasters to Polk County

polkcountylms.org

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
JANUARY 22, 2025

AGENDA

1. Welcome and Introductions
2. Approval of Minutes
3. Old Business
    a. Community Profiles
    b. Policies and Regulations
    c. Agency/Jurisdictional History of Hazards
    d. Status of Current Project List (Completed, Deferred, Deleted)
    e. Outreach Efforts
4. New Business

Next Working Group Meeting – February 19, 2025, at 9:30 am at Polk EOC

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
American Red Cross	Kris Abel	Disaster Program Manager	147 Avenue A NW, Winter Haven	kristin.abel@redcross.org	
American Red Cross	Tina Sweeten	Executive Director	147 Avenue A NW, Winter Haven	Tinora.sweeten@redcross.org	
BayCare	Timothy Allen	Healthcare EM Coordinator	200 Ave F NE, Winter Haven	Timothy.allen@baycare.org	
Bridgewater CDD	Richard McGrath	District Manager	4530 Eagle Falls Place, Tampa	rmcgrath@gms-tampa.com	
CFRPC	Curtis Knowles	EM and Community Projects Director	555 E. Church Street, Bartow	cknowles@cfrpc.org	
CFRPC	Jerri Sackett	EM Projects Senior Planner	555 E. Church Street, Bartow	jsackett@cfrpc.org	J Sackett
CFRPC	Marisa Barmby	Program Manager – Planning and Research	555 E. Church Street, Bartow	mbarmby@cfrpc.org	
Charles Cove CDD/Lakeside Landings CDD	Lynn Mullins	District Manager	3501 Quadrangle Blvd, Orlando FL 32817	mullinsl@pfm.com	
City Center CDD	David McInnes	District Manager	250 International Parkway, Lake Mary FL	Ext. 193	
City of Auburndale	John Dickson	Public Works Director	915 Charles Avenue Auburndale	jdickson@auburndalefl.com	
City of Auburndale	Caleb Gabany	Sanitation	915 Charles Avenue Auburndale	cgabany@auburndalefl.com	
City of Bartow	Jay Robinson	Fire Department Chief	450 N. Wilson Avenue Bartow	jrobinson.fire@cityofbartow.net	
City of Bartow	Sara Jones	Grant Administrator	450 N. Wilson Ave, Bartow	Salbert.pw@cityofbartow.net	
City of Davenport	Thomas Murphy Jr.	Fire Operations	226 W. 4th Street, Davenport	tmurphy@mydavenport.org	
City of Eagle Lake	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
City of Eagle Lake	Tom Ernharth	City Manager	75 N. 7th Street Eagle Lake	ternharth@eaglelake-fla.com	

CFRPC April DaSilva Prog. Coord. adasilva@cfrpc.org

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Fort Meade	Matthew Zahara	Fire Department Chief	8 West Broadway, Fort Meade, FL 33841	mzahara@cityoffortmeade.com	
City of Fort Meade	Edward Dean	City Manager	8 West Broadway, Fort Meade, FL 33841	edean@citoffortmeade.com	
City of Fort Meade	Amy Wheeler	Assistant City Manager	8 West Broadway, Fort Meade, FL 33841	awheeler@cityoffortmeade.com	Amy Wheeler
City of Fort Meade	Melissa Cannon	Deputy City Clerk	8 West Broadway, Fort Meade, FL 33841	mcannon@cityoffortmeade.com	
City of Fort Meade	Veronica Hairston	Chief Operations Officer	8 West Broadway, Fort Meade, FL 33841	vhairston@cityoffortmeade.com	
City of Frostproof	Josh Turner	Public Works	111 W. First Street Frostproof	JTurner@cityoffrostproof.com	
City of Frostproof	Nicole McDowell	City Manager	111 W. First Street Frostproof	nmcdowell@cityoffrostproof.com	
City of Haines City	Lamar Cliett	Deputy Public Works Director	300 North 5th Street, Haines City	lamar.cliett@hainescity.com	
City of Haines City	James Keene	Public Services Administrator	620 E. Main Street Haines City	james.keene@hainescity.com	
City of Lake Alfred	Community Development Department		120 E. Pomelo Street Lake Alfred	comdev@mylakealfred.com	
City of Lake Alfred	Art Bodenheimer	Police Department Chief	120 E. Pomelo Street Lake Alfred	abodenheimer@mylakealfred.com	
City of Lake Alfred	Ryan Leavengood	City Manager	120 E. Pomelo Street Lake Alfred	rleavengood@mylakealfred.com	
City of Lake Wales	Shannon Hancock	Growth Management Executive Assistant	201 W. Central Avenue Lake Wales	shancock@lakewalesfl.gov	
City of Lake Wales	Dale Hampton	Investigations Commander	133 E. Tillman Avenue, Lake Wales	dhampton@lakewalesfl.gov	
City of Lake Wales	Emmanuel Figueroa	Police Department	133 E. Tillman Avenue, Lake Wales	efigueroa@lakewalesfl.gov	

POLK COUNTY

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Lake Wales	James Slaton	City Manager	201 W. Central Avenue, Lake Wales	jslaton@lakewalesfl.gov	
City of Lake Wales	Joe Jenkins	Fire Department Chief	201 W. Central Avenue Lake Wales	jjenkins@lakewalesfl.gov	
City of Lake Wales	Sara Irvine	Special Projects Administrator	2010 W. Central Avenue, Lake Wales	sirvine@lakewalesfl.gov	
City of Lakeland	Anne Marie Locascio	Claims Specialist Risk Management	Lakeland	annmarie.locascio@lakelandgov.net	
City of Lakeland	Michael Lewis	Captain Investigative Services Division	Lakeland	michael.lewis@lakelandgov.net	
City of Lakeland	Cole Edwards Floodplain Admin.	Director of Engineering and Metering	Lakeland	Cole.edwards@lakelandgov.net	
City of Lakeland	Matthew Lyons	Executive Planner	Lakeland	Matthew.kyons@lakelandgov.net	
City of Lakeland	Chuck Barmby	Planning and Transportation Manager	Lakeland	charles.barmby@lakelandgov.net	
City of Mulberry	Billie Segree	Code Enforcement Officer	104 S. Church Ave Mulberry	bsegree@cityofmulberryfl.com	
City of Mulberry	John Wasmund	Finance Director	104 S. Church Ave Mulberry	jwasmund@cityofmulberryfl.com	
City of Mulberry	Ron Borchers	Planning & Development Director	104 S. Church Ave Mulberry	rborchers@cityofmulberryfl.com	
Polk City	Patricia Jackson	City Manager	123 Broadway Blvd SE, Polk City	Patricia.jackson@mypolkcity.org	
City of Winter Haven	Ahmad Abdeljawad	Assistant City Engineer	451 Third St. NW, Winter Haven	aabdeljawad@mywinterhaven.com	
City of Winter Haven	G.D Nabong	City Engineer	451 Third St. NW, Winter Haven	gdstar@yahoo.com	
City of Winter Haven	Dustin Everitt	Natural Resources Division Manager	451 Third St. NW, Winter Haven	deveritt@mywinterhaven.com	

POLK COUNTY

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Winter Haven	Jeff Crouse	Engineering Designer	451 Third St. NW, Winter Haven	jcrouse@mywinterhaven.com	
City of Winter Haven	Mark Bombard	Assistant Director of Utilities	451 Third St. NW, Winter Haven	mbombard@mywinterhaven.com	
City of Winter Haven	Joseph Emery	Fire Chief	301 Ave G SW, Winter Haven	jemery@mywinterhaven.com	
FL Department of Health	Scott Sjoblom	Assistant CHD Director	1290 Golf View Avenue Bartow	Scott.Sjoblom@flhealth.gov	
Florida Department of Environmental Protection	Jasson Drinkard	Professional Responder	13051 N. Telecom Parkway, Temple Terrace, FL 33637	Jasson.Drinkard@FloridaDEP.gov	
Florida Division of Emergency Management	Jeremy O'Dell	Recovery		jeremy.odell@em.myflorida.com	
Florida Division of Emergency Management	Antonio Miranda Zapata	Recovery		Antonio.zapata@em.myflorida.com	
Florida Forest Service	Pete Lewis	Forest Area Supervisor for Eastern Polk County		Peter.Lewis@fdacs.gov	
Florida Forest Service	Todd Chlanda	Wildfire Mitigation Specialist	5745 S. Florida Avenue, Lakeland	William.Chlanda@fdacs.gov	
Florida Forest Service	Vic Memmoli	Forest Area Supervisor for Western Polk County		Victor.Memmoli@fdacs.gov	
Golden Lakes Community Dev.	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
Golden Lakes Community Dev.	Maurice Formaz		401 Third Street SW, Winter Haven	mformaz@pennoni.com	
John Hopkins All Children's Hospital	Larry Green	Director of Safety	3310 Lakeland Hills Blvd., Lakeland	Lgreen52@jhmi.edu	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
John Hopkins All Children's Hospital	Patricia White		3310 Lakeland Hills Blvd, Lakeland	Patricia.white@iparametrics.com	
John Hopkins All Children's Hospital	Shanti Smith-Copeland	Director of Emergency Management	3310 Lakeland Hills Blvd., Lakeland	Shanti.smith-copeland@iparametrics.com	
Harmony on Lake Eloise CDD/Hawthorne Mill North CDD	Craig Wrathell	District Manager	2300 Glades Rd, Boca Raton, FL 33431	info@harmonyonlakeeloisecdd.net info@hawthornemillnorthcdd.net	
Health and Human Services	Marcia Andersen	Social Service Director	2135 Marshall Edwards Drive, Bartow	marciaandersen@polk-county.net	Marcia Andersen
Health and Human Services	Jennifer Cooper	Housing and Neighborhood Manager	1290 Gulfview Blvd, Bartow	jennifercooper@polk-county.net	Jennifer Cooper
Highland Meadows CDD/Holly Hill Rd East CDD/North Blvd CDD/Poinciana West CDD	Tricia Adams	District Manager	219 E. Livingston Street, Orlando FL 32801	tadams@gmscfl.com	
Lake Ashton CDD	Jill Burns	District Manager	4141 Ashton Club Drive, Lake Wales	jburns@gmsfl.com	
Lake Ashton II CDD	Jason Greenwood	District Manager	6052 Pebble Beach Blvd, Winter Haven	jgreenwood@gm-tampa.com	
Lakeside Preserve CDD	Jane Gaarlandt	District Manager	3501 Quadrangle Blvd, Orlando	gaarlandtj@pfm.com	
Lake Region Lakes Mgmt. District	Roger Griffiths	Ex Director	804 Ave X SW, Winter Haven	Rdg1744@gmail.com	
Peace River Center	Candace Barnes	COO	1239 E. Main Street, Bartow	cbarnes@peacerivercenter.org	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
Polk County	Apryl Faurote	Volunteer Services Coordinator	1290 Golfview Avenue Bartow	aprylfaurote@polk-county.net	
Polk County	Benjamin Dunn	Planning and Development, Building Dir.	330 W. Church Street Bartow	benjamindunn@polk-county.net	
Polk County	Billy Abernathy	Emergency Management EOC Coordinator	1890 Jim Keene Blvd Winter Haven	billyabernathy@polk-county.net	
Polk County	Richard Benton	Land Development / Floodplain Manager	330 W. Church Street Bartow	richardkbenton@polk-county.net	
Polk County	Christia Johnson	Budget Director	330 W. Church Street, Bartow	christiajohnson@polk-county.net	
Polk County	Brian Thurston	EM Program Manager	1890 Jim Keene Blvd., Winter Haven	brianthurston@polk-county.net	
Polk County	James Schnell	Building Division	330 W. Church Street, Bartow	jamesschnell@polk-county.net	
Polk County	Jana Nickles	Special Needs Coordinator	1890 Jim Keene Blvd Winter Haven	jananickles@polk-county.net	
Polk County	Jay Jarvis	Transportation Director	330 W. Church Street Bartow	jayjarvis@polk-county.net	
Polk County	Brian Nadler	Deputy Chief	1295 Brice Blvd., Bartow	briannadler@polk-county.net	
Polk County	Jeff Foley	Communications	330 W. Church Street, Bartow	jefffoley@polk-county.net	
Polk County	Darius Livingston	Battalion Chief	1295 Brice Blvd., Bartow	dariuslivingston@polk-county.net	
Polk County	Ben Cassista	Assistant Fire Chief	1295 Brice Blvd., Bartow	bencassista@polk-county.net	
Polk County	Katie Hollenbeck	EM Planner	1890 Jim Keene Blvd Winter Haven	kathrynhollenbeck@polk-county.net	
Polk County	Michele Sims	Procurement Manager	330 W. Church Street Bartow	michelesims@polk-county.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
Polk County	Michelle Shiver	RSVP Polk	1290 Golfview Avenue Bartow	michelleshiver@polk-county.net	
Polk County	Paul Womble	Emergency Management Director	1890 Jim Keene Blvd Winter Haven	paulwomble@polk-county.net	
Polk County	Richard Benton	Floodplain Manager	330 W. Church Street, Bartow	richardkbenton@polk-county.net	
Polk County	Shawn Smith	Assistant Fire Chief	330 W. Church Street, Bartow	shawnsmith@polk-county.net	
Polk County	Scott Anderson	Floodplain Tech	330 W. Church Street, Bartow	scottanderson@polk-county.net	
Polk County	Tabitha Biehl	Parks and Natural Resources	4177 Ben Durrance Road, Bartow	tabithabiehl@polk-county.net	
Polk County	Gaye Sharpe	Park and Natural Resources, Fiscal Mgr.	4177 Ben Durrance Road, Bartow	gayesharpe@polk-county.net	
Polk County	Glenda Rogers	Lead Management & Budget Analyst	330. W Church Street, Bartow	glendarogers@polk-county.net	
Polk County School Board	Josh McLemore	Facilities Planning Director	1915 S. Floral Avenue Bartow	Joshua.mclemore@polk-fl.net	
Polk County School Board	Linda King	Director of Risk Management	1915 S. Floral Avenue Bartow	Linda.king@polk-fl.net	
Reserve at Van Oaks CDD/Silverlake CDD/Springs at Lake Alfred CDD/Stuart Crossing CDD	Kristen Suit	District Manager	1049 Oak Vly Dr. Auburndale	suitk@whhassociates.com	
Solterra Resort CDD	Barry Jeskewich	District Manager	250 International Parkway, Lake Mary	Ext. 398	
The Freedom Tour	Bobby Williams	President	108 1st Eloise Street, Winter Haven	bobbyw@thefreedomtour.org	
Town of Dundee	Joseph Carbone	Fire Department Chief	202 East Main Street, Dundee	jcarbone@townofdundee.com	

POLK COUNTY

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
Town of Dundee	Lorraine Peterson	Planner	202 East Main Street, Dundee	lpeterson@townofdundee.com	
Town of Dundee	Tandra Davis	Town Manager	202 East Main Street, Dundee	tdavis@townofdundee.com	
Town of Dundee	Vermalyn Williams	Code Enforcement Director	202 East Main Street, Dundee	vwilliams@townofdundee.com	
Town of Hillcrest Heights	Larry Blackwelder	Town Clerk	151 N. Scenic Hwy, Hillcrest Heights	townofhillcrestheights@netzero.com	
Town of Lake Hamilton	Patrick Henry	Water Utility Director	100 Smith Avenue Lake Hamilton	henryp@townoflakehamilton.com	
Town of Lake Hamilton	Brittney Sandoval	Town Administrator	100 Smith Avenue Lake Hamilton	brittney@townoflakehamilton.com	
Town of Lake Hamilton	Cathy Sumner	Water Department Administrative Assistant	100 Smith Avenue Lake Hamilton	csumner@townoflakehamilton.com	
United Way Central Florida	June May	Director of Community Resources	5605 US-98, Lakeland, FL 33812	June.may@uwcf.org	
Village of Highland Park	Ric Busbee	City Manager	1650 Highland Park Drive North, Lake Wales	citymanager@highlandpark-fl.org	
Webber International University	Ryan Reis	Director of Annual Fund and Alumni Affairs	1201 N. Scenic Highway, Babson Park	Reisrj2@webber.edu	
Webber International University	Kenneth Reaves	Campus President	1201 N. Scenic Highway, Babson Park	reaveskm@webber.edu	
Westridge CDD	Brian Mendes	District Manager	8529 South Park Circle Orlando	bmendes@rizzetta.com	
Westview South CDD	Andrew Kantarzhi	District Manager	2300 Glades Rd, Boca Raton	kantarzhia@whhassociates.com	
On Deck Restoration	Scott Lineback		3702 Century Blvd #1, Lakeland, FL 33811	scott@ondeckrestoration.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
On Deck Restoration	Shaun Prather		3702 Century Blvd #1, Lakeland, FL 33811	shaun@ondeckrestoration.com	

LMS WORKING GROUP MEETING

****IF YOUR NAME IS NOT LISTED ON THE SIGNATURE LIST, PLEASE ADD IT HERE!**

Date: January 22, 2025
Time: 9:30AM-11:30AM

NAME	AGENCY	EMAIL	Signature
[redacted]	[redacted]	[redacted]	[redacted]
April Faucett	Volunteer Polk	aprylfaucett@polk-county.net	April Faucett
Ryan Wiggins	Polk County	Ryan.Wiggins@polk-county.net	Ryan Wiggins
Caleb Gaberny	City of Auburndale	cgaberny@auburndale.org	
Michelle Shiver	RSAP		
~~Ryan Reis~~	~~Webber~~	~~reisrj2@webber.edu~~	~~[redacted]~~
Devon Moore	City of Winter Haven	dmoore@mywinterhaven.com	
Olivia Usik	City of Winter Haven	ohusik@mywinterhaven.com	
Anna Marie LoCascio	City of Lakeland	annmarie.locascio@lakelandgov.net	
Christina Adams	Iceberg Home Services	christinaa@icebergcooling.com	
Nicole Masters	SFWMD	nmasters@sfwmd.gov	
Doug Cockerham	PC EM	dougcockerham@[redacted]	
Amy Wheeler	Fort Meade	awheeler@cityoffortmeade.com	

LMS Working Group Meeting

Polk County 2025 LMS Update

January 22, 2025

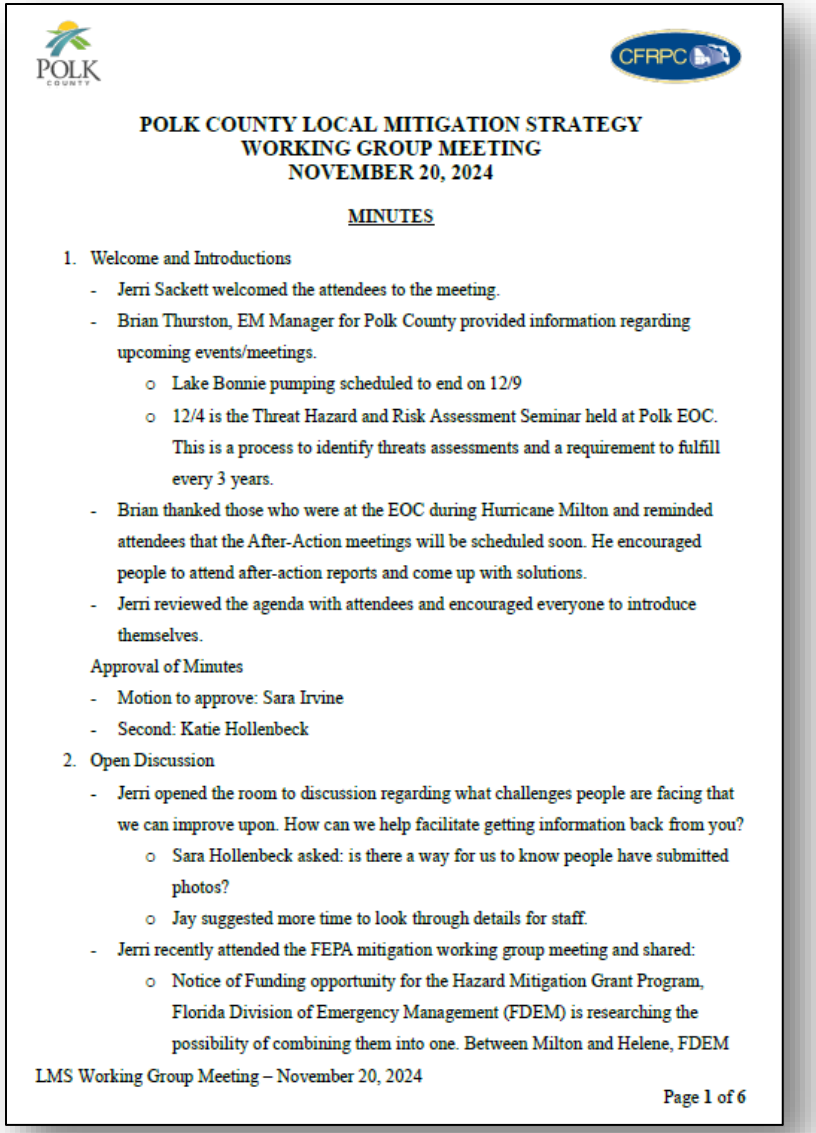
Agenda

1. Welcome and Introductions
2. Approval of Minutes
3. Old Business
   a) Community Profiles
   b) Policies & Regulations
   c) Agency/Jurisdictional History of Hazards
   d) Status of Current Project List (Completed, Deferred, Deleted)
   e) Survey Responses
4. New Business
   a) Draft Discussion

Introductions

Meeting Minutes

Review and approve
November 20, 2024 Minutes



POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
NOVEMBER 20, 2024

MINUTES

1. Welcome and Introductions
   - Jerri Sackett welcomed the attendees to the meeting.
   - Brian Thurston, EM Manager for Polk County provided information regarding upcoming events/meetings.
     - Lake Bonnie pumping scheduled to end on 12/9
     - 12/4 is the Threat Hazard and Risk Assessment Seminar held at Polk EOC. This is a process to identify threats assessments and a requirement to fulfill every 3 years.
   - Brian thanked those who were at the EOC during Hurricane Milton and reminded attendees that the After-Action meetings will be scheduled soon. He encouraged people to attend after-action reports and come up with solutions.
   - Jerri reviewed the agenda with attendees and encouraged everyone to introduce themselves.

   Approval of Minutes
   - Motion to approve: Sara Irvine
   - Second: Katie Hollenbeck
2. Open Discussion
   - Jerri opened the room to discussion regarding what challenges people are facing that we can improve upon. How can we help facilitate getting information back from you?
     - Sara Hollenbeck asked: is there a way for us to know people have submitted photos?
     - Jay suggested more time to look through details for staff.
   - Jerri recently attended the FEPA mitigation working group meeting and shared:
     - Notice of Funding opportunity for the Hazard Mitigation Grant Program, Florida Division of Emergency Management (FDEM) is researching the possibility of combining them into one. Between Milton and Helene, FDEM

Old Business – Community Profiles

Old Business – Status of Current Projects

Examples for deferred projects: ongoing project, working on plans, awaiting funding, funding not available, contracted for HMGP funding.

Examples for deleted projects: project is not cost effective, no record of project, not applicable for meeting standards.

Examples for completed projects: project completed in 2020. If at all possible, include the year a project was completed.

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existi	Responsible Agency	Responsible Departme	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	County Public Safety Departments (Fire, EMS, E-911, etc)	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual		
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	Polk County	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual		
Auburndale	Auburndale	Alberta Street Drainage Improvement	Drainage	Relieves flooding and drainage problem at major intersection on Alberta St	Flood	Both	Auburndale	Public Works	$500,000	HMGP, FMA	12-18 Months		
Auburndale	Auburndale	Highway 92, Lakeshore and Beach Lift Station Generator Project	Infrastructure	Highway 92, Lakeshore and Beach Lift Station Generator Project	All	Both	City of Auburndale	Public Works	$189,995	HMGP	12-18 Months		
Bartow	Bartow	Fiber Smart Grid Pilot Project	New Infrastructure, Critical Facilities	Develop and Implement Smart Grid Pilot Project	All	New	Bartow	Public Works	$2,500,000	General Fund	24-36 Months		

Old Business – Outreach

- 27 online responses received
- 18 online photos received
- 4 completed public engagement activities:
  - Polk County Comp Plan Workshop
  - Great American Teach-In
  - Circle B
  - EPAC

Old Business – Survey Responses

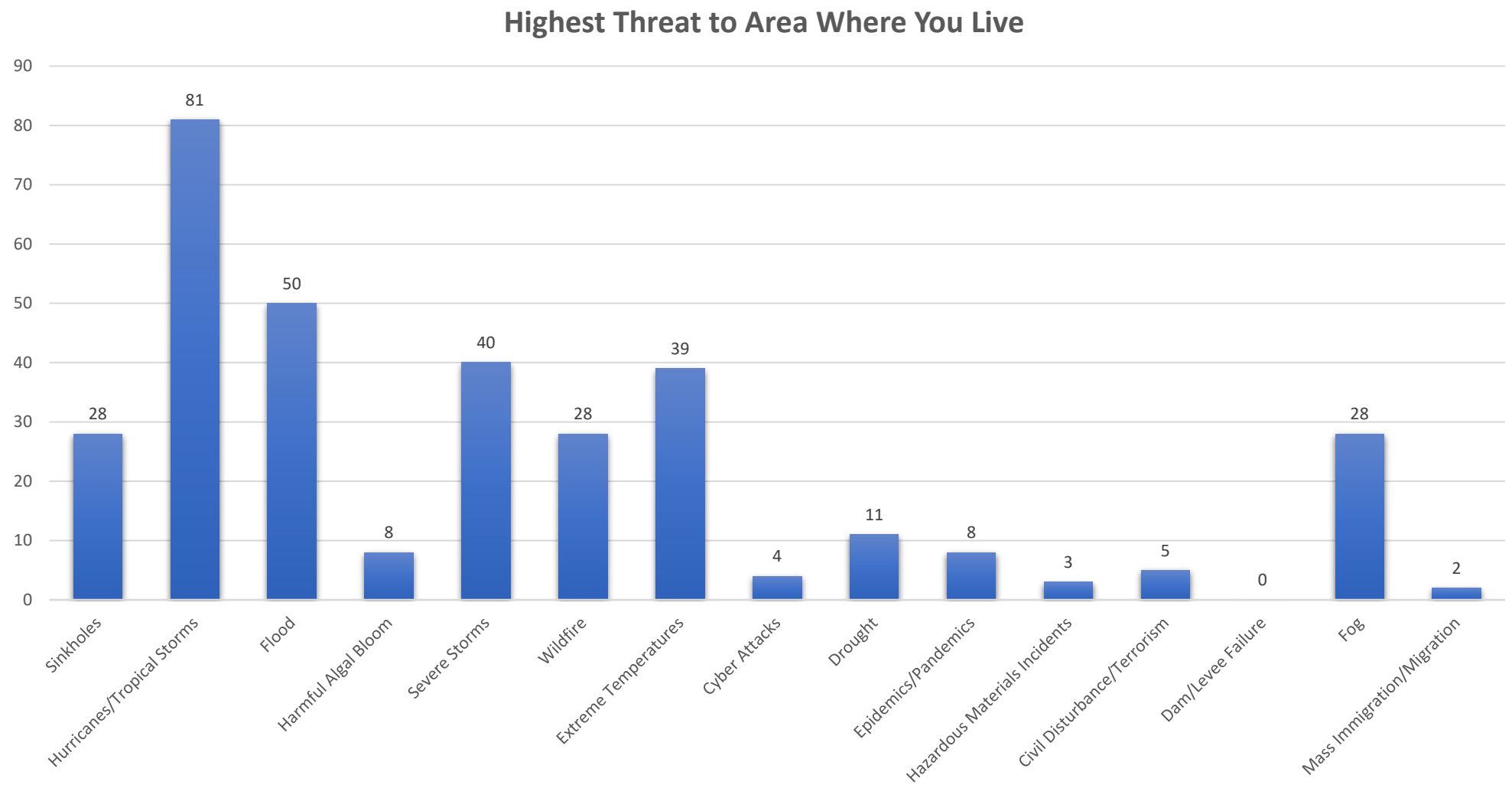
How Long have you Lived in Polk County?		
Less than One Year	4	5%
One Year to Five Years	13	17%
Five Years to Ten Years	9	12%
Ten Years to Twenty Years	7	9%
More than Twenty Years	43	57%
TOTAL	76	100%

Over the Past Several Years, the Weather has Been:		
Much Worse then Usual	10	13%
Somewhat Worse than Usual	36	47%
About the Same	27	36%
Somewhat Better than Ususal	1	1%
Much Better than Usual	0	0%
Don't Know	2	3%
TOTAL	76	100%

How well Prepared do You Feel your Community, City, County is for a Natural Disaster?		
Very Prepared	26	35%
Somewhat Prepared	40	53%
Not Very Prepared	8	11%
Not Sure	1	1%
TOTAL	75	100%

How Concerned are You about Your Community being Impacted?		
Extremely Concerned	23	30%
Somewhat Concerned	42	55%
Not Concerned	6	8%
Depends on the Hazard	5	6%
Don't Know	1	1%
TOTAL	77	100%

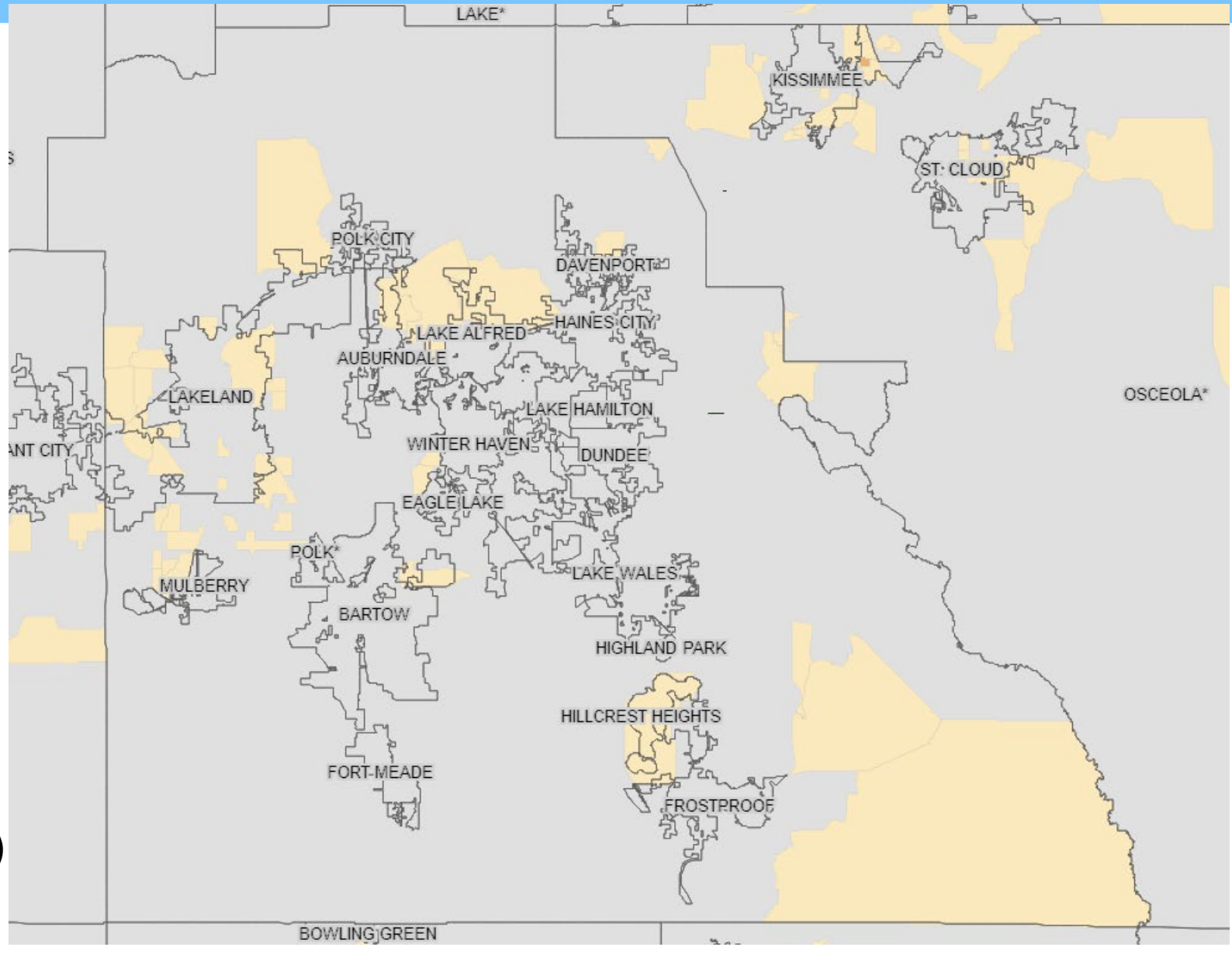
Old Business – Survey Responses



4. New Business – LMS Draft Discussion

Needed Information

Repetitive Loss Information for each jurisdiction



FEMA NFIP Repetitive Loss Overview (Feb. 2024)

Needed Information

NFIP Information

-Who is Responsible

Floodplain Manager at jurisdiction or the County?

Other?

Needed Information

Capabilities to Support LMS

-The plan must describe how the existing authorities, policies, programs, funding, and resources of each participant are available to support the mitigation strategy. This must include a discussion of the existing building codes and land use and development ordinances or regulations. Capabilities may be described in a table or narrative.

-*Discuss Gaps and Lack of Capability*

CRS Subcommittee

No Subcommittee Meeting Today.

Must Submit Repetitive Loss Information

Submit information to include in the LMS by COB Thursday, January 30.

Contacts

Polk County Emergency Management
Brian Thurston
863-298-7000
brianthurston@polk-county.net

Central Florida Regional Planning Council
Jerri Sackett
863-534-7130, ext. 103
jsackett@cfrpc.org

Questions

Next LMS Working Group Meeting:
February 19 at 9:30 am

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
JANUARY 22, 2025

MINUTES

1. Welcome and Introductions
   - ❖ Paul welcomed attendees to the meeting and reviewed the remaining timeline of the project and how important it is to get information from organizations/municipalities that have not provided the needed data. He reminded attendees that there is a lot of resiliency and mitigation funds coming into the state that will make future projects available, provided the LMS is completed. He also discussed that there is some CRS work for the floodplain managers. He is hearing that the state is being more selective than they previously have so as much information/data as possible is helpful.
   - ❖ Attendees introduced themselves.
2. Approval of Minutes
   - ❖ Motion: Art Bodenheimer, Lake Hamilton
   - ❖ Second: Jana Nichols, Polk County EM
3. Old Business
   a) Community Profiles
      - ✓ Jerri encouraged all attendees to review her recent email and include any changes if needed, if no changes apply Jerri asked that agencies please reply with "no changes".
      - ✓ As of this meeting; Bartow, Mulberry and Polk County are outstanding.

   b) Policies and Regulations

   c) Agency/Jurisdictional History of Hazards

   d) Status of Current Project List (Completed, Deferred, Deleted)
      - ✓ Current projects need to be designated as "Deferred", "Deleted" or "Completed"; individual agencies need to designate those projects. Jerri reviewed some of the outstanding projects with those in attendance:
        - City of Bartow clarified that Jerri should designate all projects as "deleted". Jerri reminded Bartow staff that they will need to submit a new

project. Bartow staff asked to add a category to include a contact person so that tracking is possible.

- Lake Alfred staff will need to review with current City Manager.
- Lakeland staff was able to update several projects including some that are still a work in progress.

✓ CFRPC staff clarified that these updates and their data are needed by February 14, 2025.

- Polk County staff were able to clarify the designation of several projects. Staff will also need to make sure a representative from "Utilities" is on the project roster. Paul will reach out to outstanding departments for data.
- School board representatives were not in attendance. Jerri was encouraged to reach out to Josh and cc Rob Davis
- Winter Haven representatives were able to designate several outstanding projects. Devin Moore, from Natural Resources, can get some data and will follow up on projects related to drainage and public works.
- Johns Hopkins representatives were not in attendance

✓ Jerri will take the updated information and move that data over to the 2025 project list.

4. Outreach Efforts
   - ❖ Jerri shared the information received from the recent outreach efforts.
   - ❖ CFRPC staff will be conducting more outreach during the spring. Attendees were encouraged to let CFRPC know when they have events planned.
5. New Business
   - ❖ Marisa reviewed the needed data for the LMS project including:
     - ✓ repetitive loss (information for each jurisdiction, by structures and amounts)
     - ✓ Who is responsible for the NFIP? Do you have your own floodplain administrator at each jurisdiction or the county or other? Include positions and not names.
       - Jerri will follow up with the crosswalk language and the comments from the state.

- ✓ Capabilities to support the LMS. The language says, “describe how the existing authorities, policies, programs, funding and resources of each participant are available to support the mitigation strategy.” Marisa addressed that smaller jurisdictions might be able to reference that they may not have enough staff, etc., to address these strategies.
  - Attendees asked if it would be helpful to do a questionnaire, so everyone is answering the same question and addressing this specific question?
- ✓ The data Marisa discussed is required to be included in the LMS and is needed by COB Thursday January 30.

Next Working Group Meeting – February 19, 2025, at 9:30 am at Polk EOC

Polk County Local Mitigation Strategy (LMS)

JANUARY 18, 2024

Agenda

- LMSWG Membership List
- Projects
- Plan Update
- EM Updates

LMSWG Member List

Project List

Plan Update - 2025

EM Updates

- Annual 27P form to be submitted to FDEM this week
- Staffing changes

Questions?

Meeting ID	Topic	Start Time	End Time
86372018753	LMS Working Group Meeting	1/18/2024 9:47	1/18/2024 10:13

Name (Original Name)	User Email	Join Time	Leave Time
Emergency Management Zoon	em_zoom@polk-county.net	1/18/2024 9:47	1/18/2024 10:13
Lorraine Peterson	lpeterson@townofdundee.com	1/18/2024 9:47	1/18/2024 10:13
Dustin Everitt	deveritt@mywinterhaven.com	1/18/2024 9:47	1/18/2024 10:11
Marie Wise	mliessewise@gmail.com	1/18/2024 9:50	1/18/2024 10:11
Brian Franza	bfranza@jud10.flcourts.org	1/18/2024 9:50	1/18/2024 10:11
Jessie Boyer	jessie.boyer@iparametrics.com	1/18/2024 9:51	1/18/2024 10:12
Amee Bailey	abailey@mylakealfred.com	1/18/2024 9:51	1/18/2024 10:13
Greg Becker	gregbecker@polk-county.net	1/18/2024 9:53	1/18/2024 10:13
Nicolle Masters	nmasters@sfwmd.gov	1/18/2024 9:55	1/18/2024 10:11
Caleb Gabany	cgabany@auburndalefl.com	1/18/2024 9:55	1/18/2024 10:11
Melissa Glogowski	mglogowski@townofdundee.com	1/18/2024 9:55	1/18/2024 10:13
Richard Benton	richardkbenton@polk-county.net	1/18/2024 9:55	1/18/2024 10:13
Larry Green	lgreen52@jhmi.edu	1/18/2024 9:56	1/18/2024 10:11
18634213328		1/18/2024 9:56	1/18/2024 10:11
Hezedean Smith	hezedeansmith@polk-county.net	1/18/2024 9:57	1/18/2024 10:13
Todd Chlanda	william.chlanda@fdacs.gov	1/18/2024 9:57	1/18/2024 10:12
Nelson Vega	nelson.vega@hainescity.com	1/18/2024 9:57	1/18/2024 10:11
Amy Wright	awright@jud10.flcourts.org	1/18/2024 9:57	1/18/2024 10:13
Holden Wright	holdenwright@polk-county.net	1/18/2024 9:57	1/18/2024 10:11
Marisa Barmby	mbarmby@cfrpc.org	1/18/2024 9:58	1/18/2024 10:11
17199371465		1/18/2024 9:59	1/18/2024 10:11
Joshua McLemore	joshua.mclemore@polk-fl.net	1/18/2024 9:59	1/18/2024 10:13
Victor Memmoli	victor.memmoli@fdacs.gov	1/18/2024 9:59	1/18/2024 10:13
Cole Edwards	cole.edwards@lakelandgov.net	1/18/2024 9:59	1/18/2024 10:01
Kris Abel	kristin.abel@redcross.org	1/18/2024 9:59	1/18/2024 10:11
Sara Irvine	sirvine@lakewalesfl.gov	1/18/2024 10:00	1/18/2024 10:13
Cole Edwards	cole.edwards@lakelandgov.net	1/18/2024 10:01	1/18/2024 10:13
Maria Sutherland	msutherland@cityoffortmeade.cor	1/18/2024 10:01	1/18/2024 10:13
Gina Vought	gina.vought@iparametrics.com	1/18/2024 10:02	1/18/2024 10:13
Steven Shealey	sshealey@pennoni.com	1/18/2024 10:02	1/18/2024 10:13
Apryl Faurote	aprylfaurote@polk-county.net	1/18/2024 10:02	1/18/2024 10:13
Shawn Smith	shawnsmith@polk-county.net	1/18/2024 10:03	1/18/2024 10:13

User Email	Duration (Minutes	Participants
EM_Zoom@polk-county.net	27	32

Duration (Minutes)	Guest	In Waiting Room
27	No	No
27	Yes	No
25	Yes	No
22	Yes	No
22	Yes	No
22	Yes	No
22	Yes	No
20	Yes	No
17	Yes	No
17	Yes	No
18	Yes	No
18	Yes	No
16	Yes	No
15	Yes	No
17	Yes	No
15	Yes	No
15	Yes	No
16	Yes	No
14	Yes	No
14	Yes	No
13	Yes	No
14	Yes	No
14	Yes	No
2	Yes	No
12	Yes	No
14	Yes	No
13	Yes	No
12	Yes	No
12	Yes	No
12	Yes	No
11	Yes	No
10	Yes	No

Polk County Emergency Management
February 17 at 10:00 AM ·

We would love for you to be a part of Polk County's Local Mitigation Strategy Plan! To participate, attend a meeting from 9:30 to 11:30 a.m. on Wednesday, Feb. 19, 2025, at the Polk County Emergency Operations Center. This is a chance to make your voice heard. The Local Mitigation Plan is intended to reduce the vulnerability of citizens, critical facilities, infrastructure, private property, and the natural environment within Polk County.

3 3

Write a comment...

LMS Working Group Meeting

Polk County 2025 LMS Update

February 19, 2025

Agenda

1. Welcome and Introductions

2. Old Business – Outstanding Items

3. New Business – LMS Draft Discussion: Data and Analysis

Introductions

Old Business – Outstanding Items

If you haven't already done so, please submit . . .

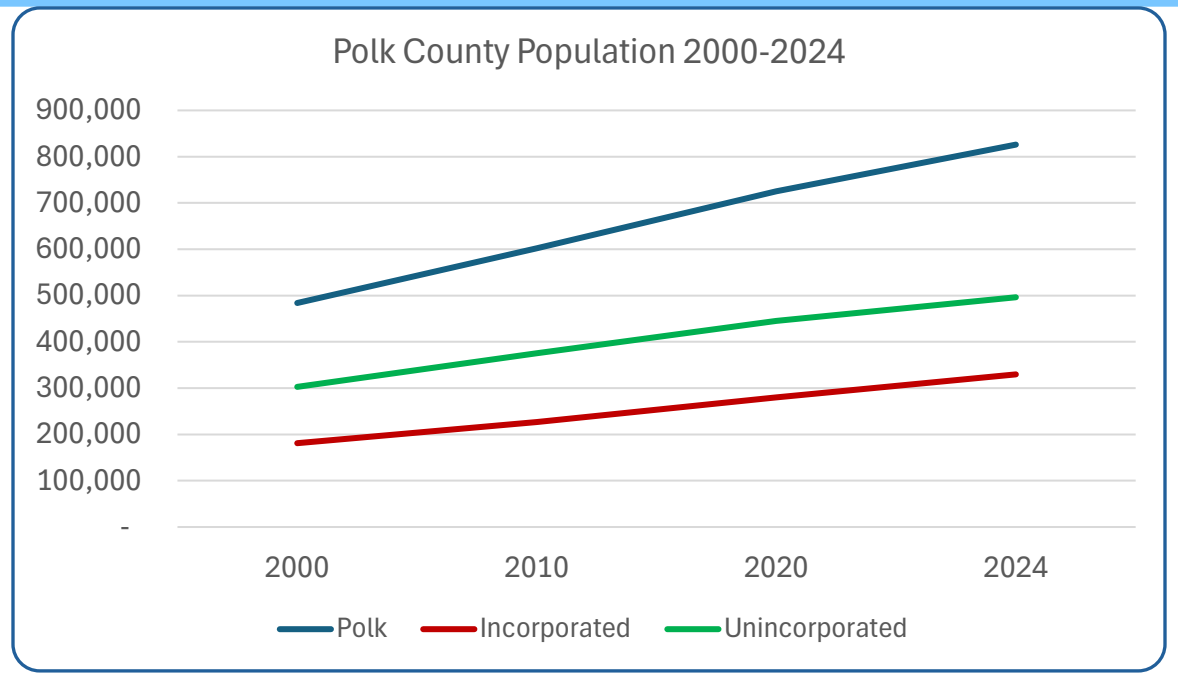
a) Community Profiles
b) Policies & Regulations
c) Agency/Jurisdictional History of Hazards
d) Status of Current Project List (Completed, Deferred, Deleted)

e) Who is Responsible for NFIP – need position title

New Business – LMS Draft Discussion

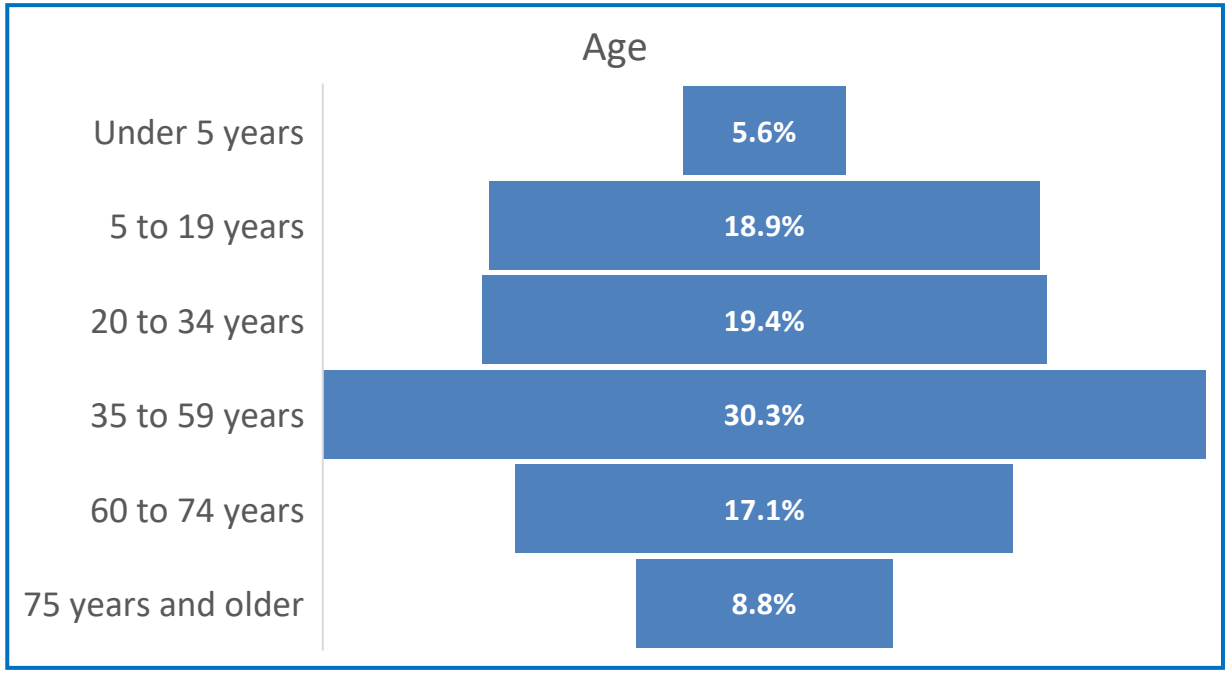
Data and Analysis

Demographic Information

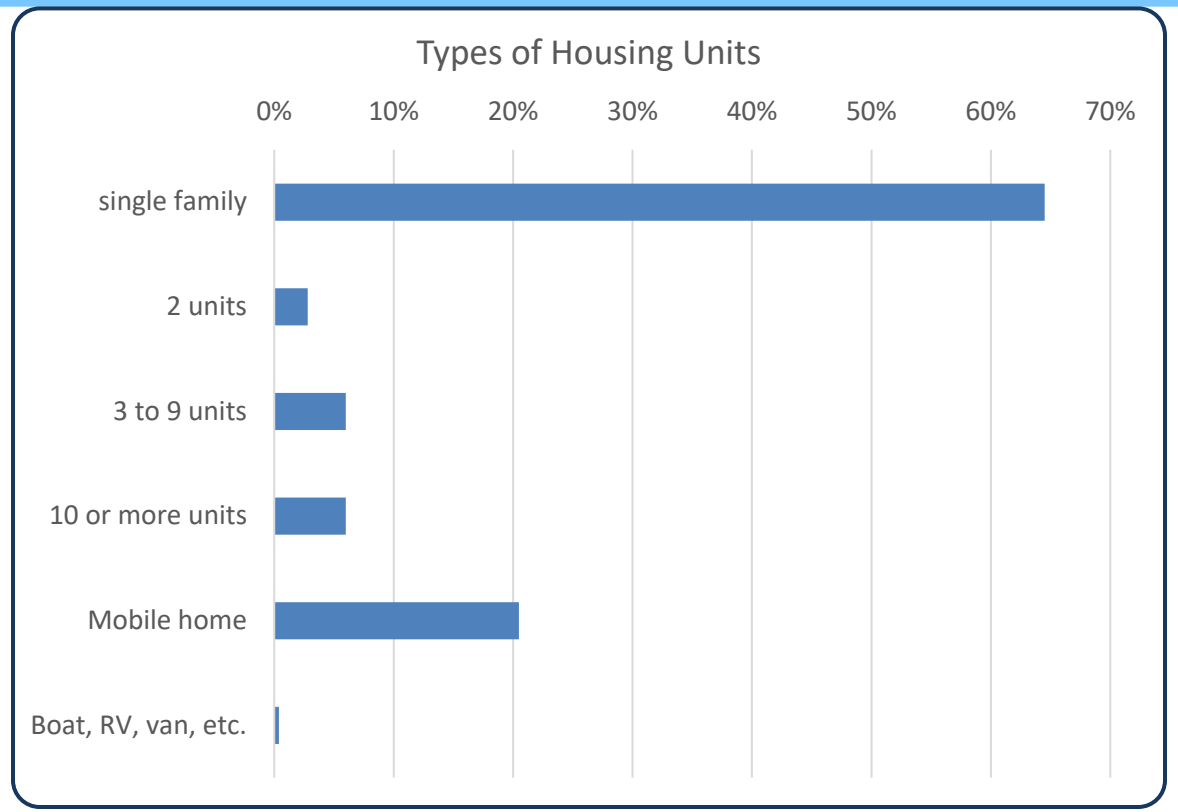


Median Age = 39.8

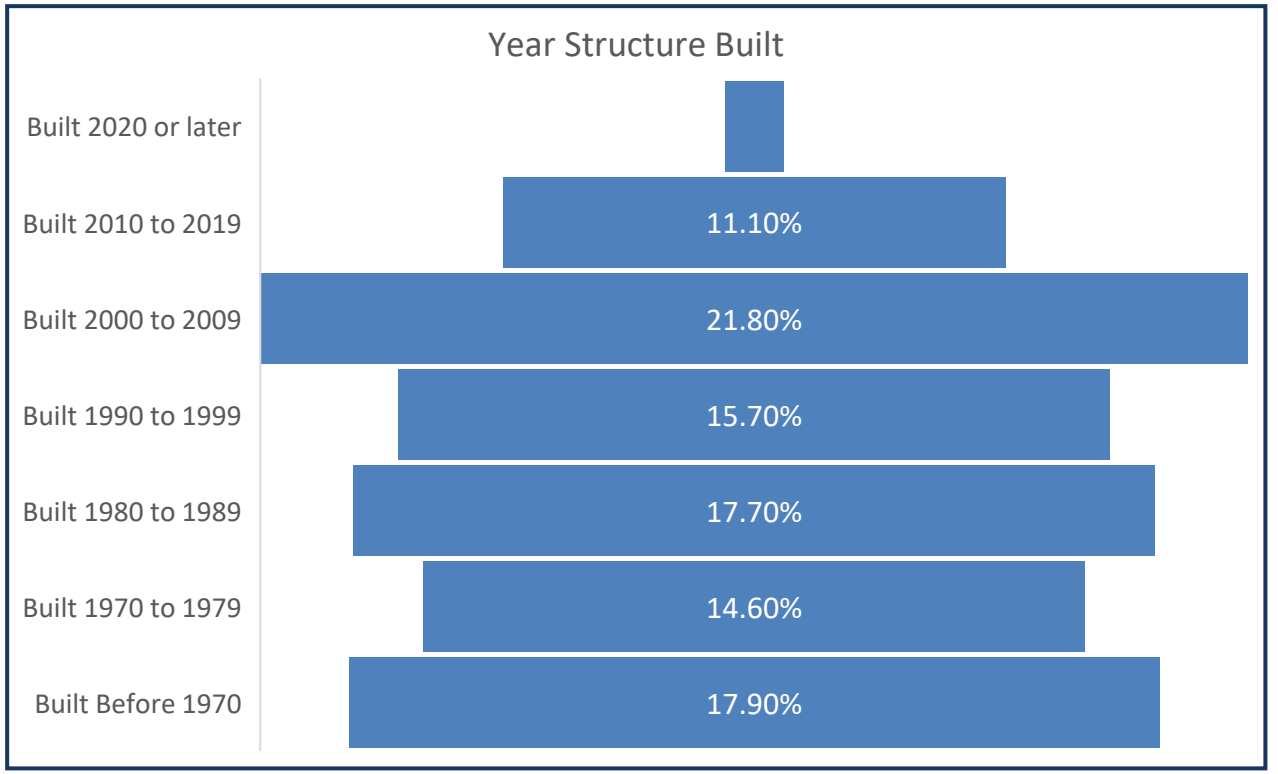
Persons Below Poverty Level = 13.0%



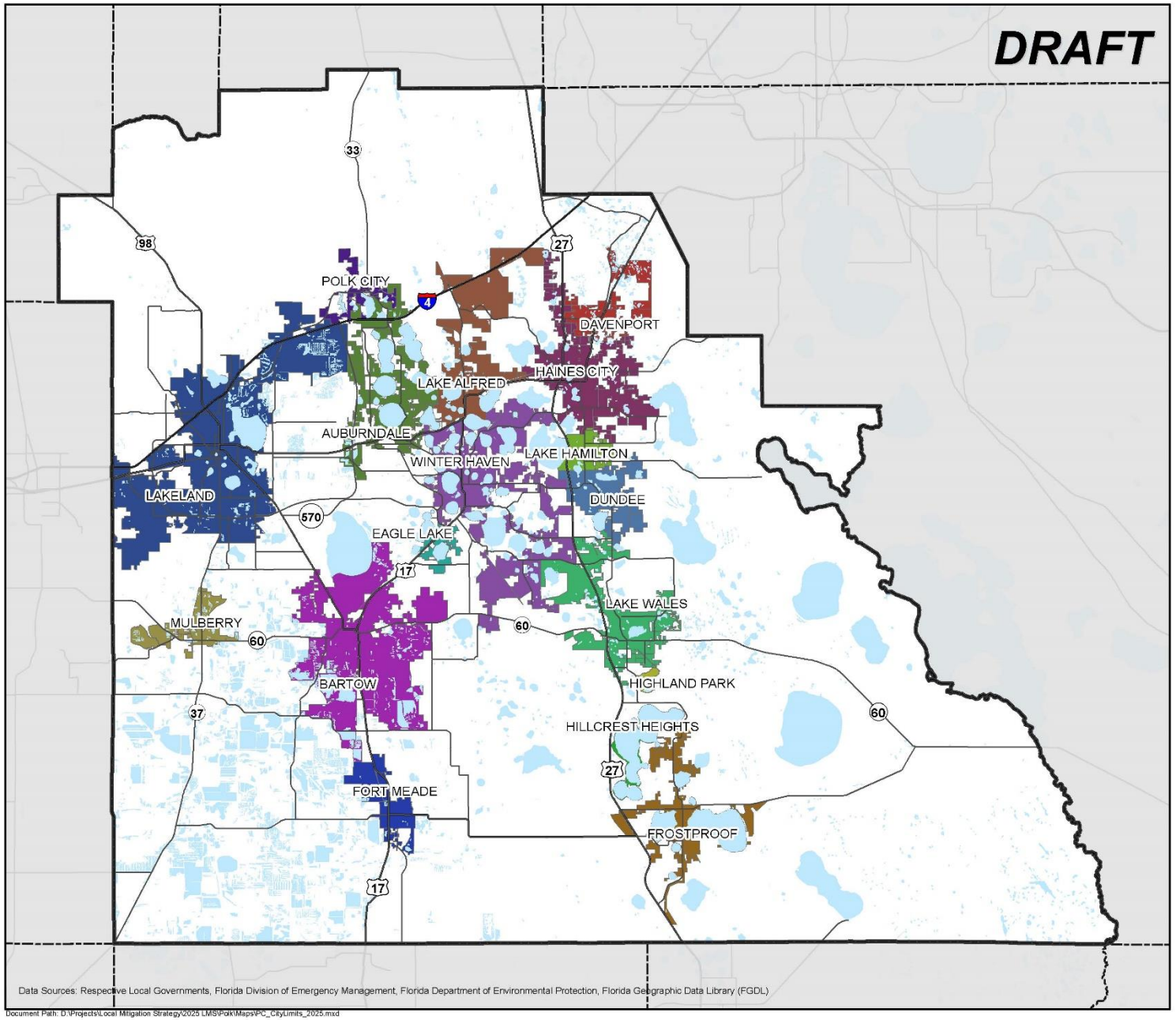
Demographic Information



32.5% Over 50 Years Old



POLK COUNTY - LOCAL MITIGATION STRATEGY
City Limits



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_CityLimits_2025.mxd

Legend

- Polk County
- Water Bodies

Municipalities

- Auburndale
- Bartow
- Davenport
- Dundee
- Eagle Lake
- Fort Meade
- Frostproof
- Haines City
- Highlands Park
- Hillcrest Heights
- Lake Alfred
- Lake Hamilton
- Lake Wales
- Lakeland
- Mulberry
- Polk City
- Winter Haven

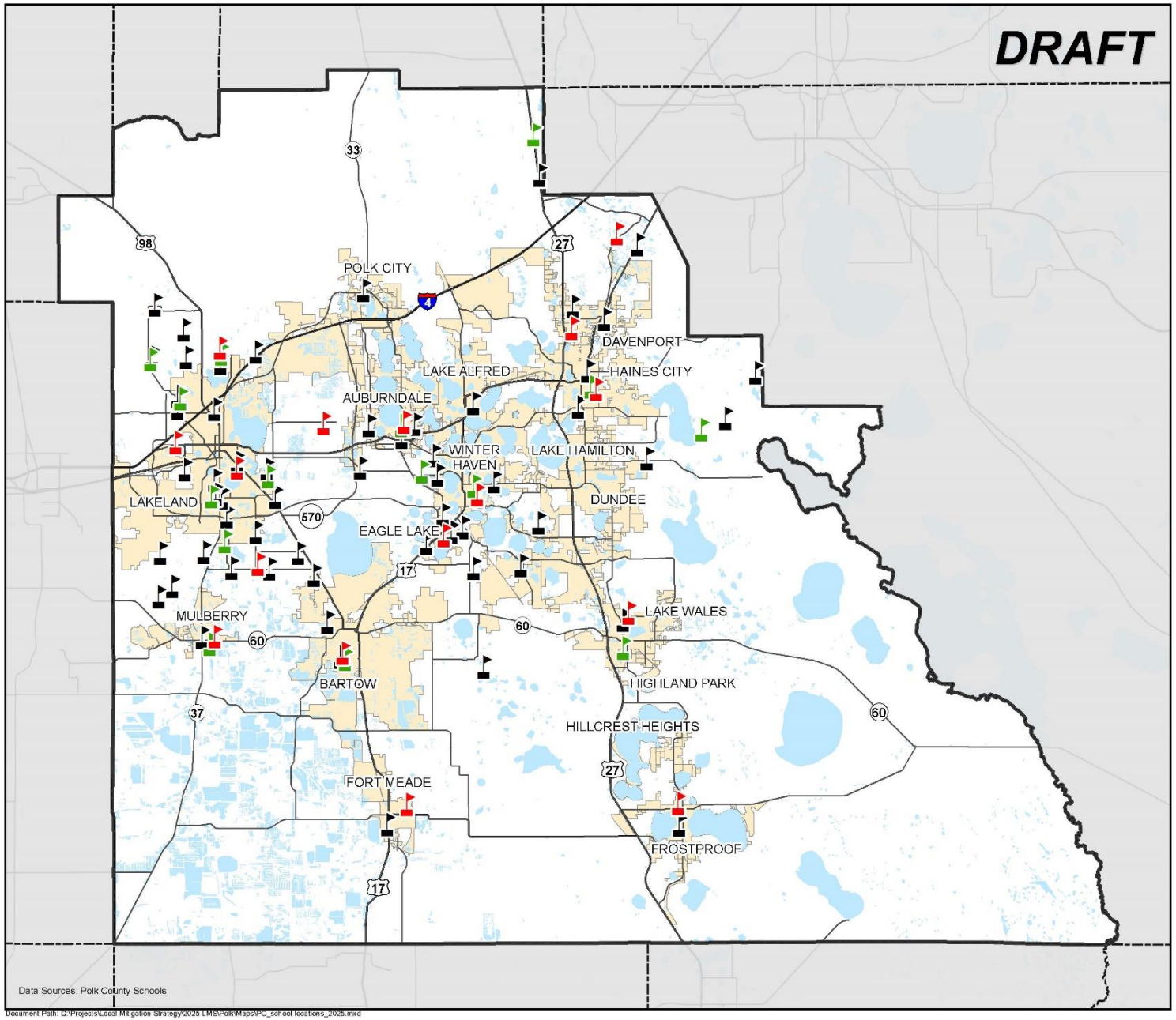
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Public School Locations



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_school-locations_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Public Schools

- Elementary School
- Middle School
- High School

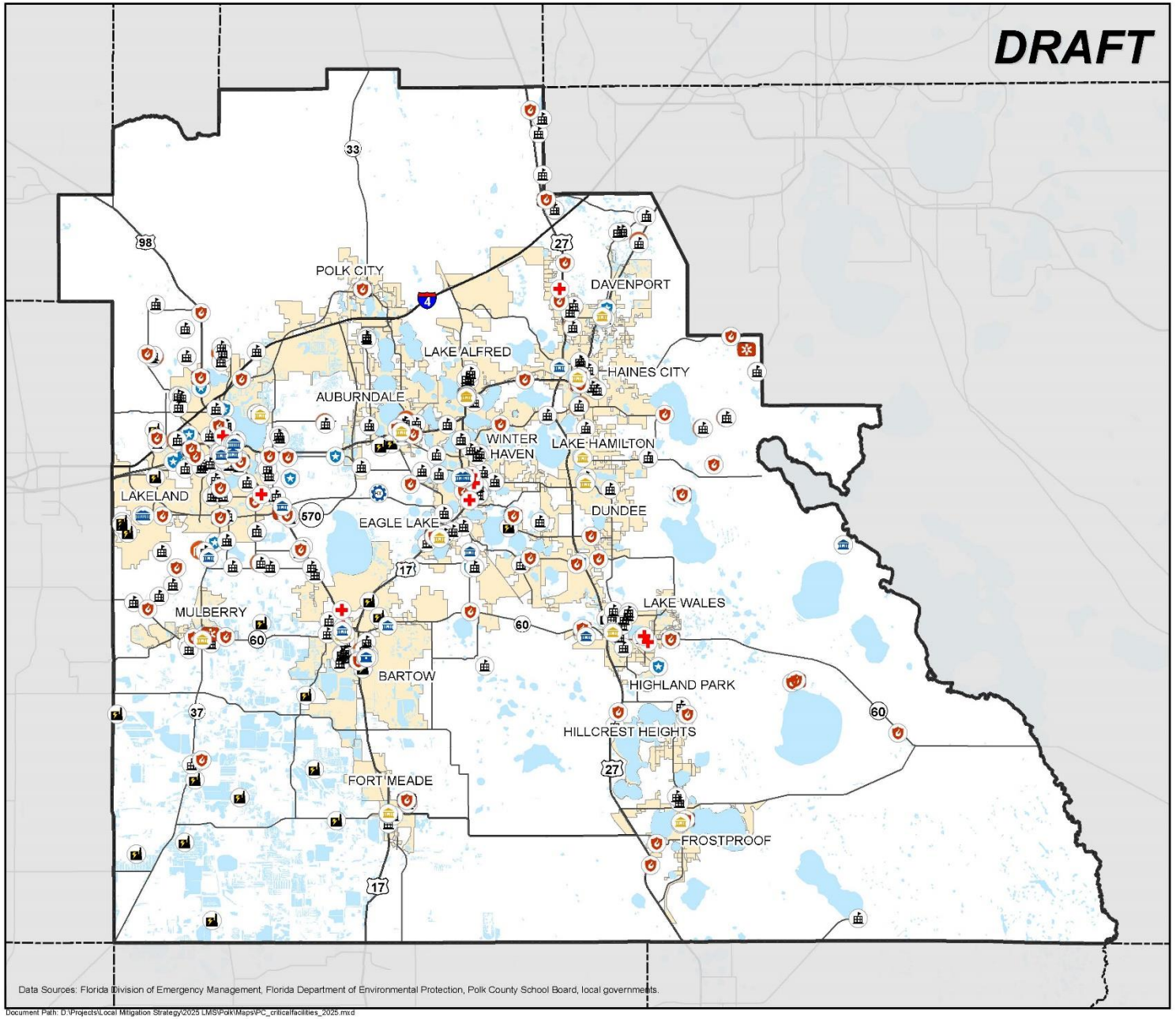
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Critical Facilities



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_criticalfacilities_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

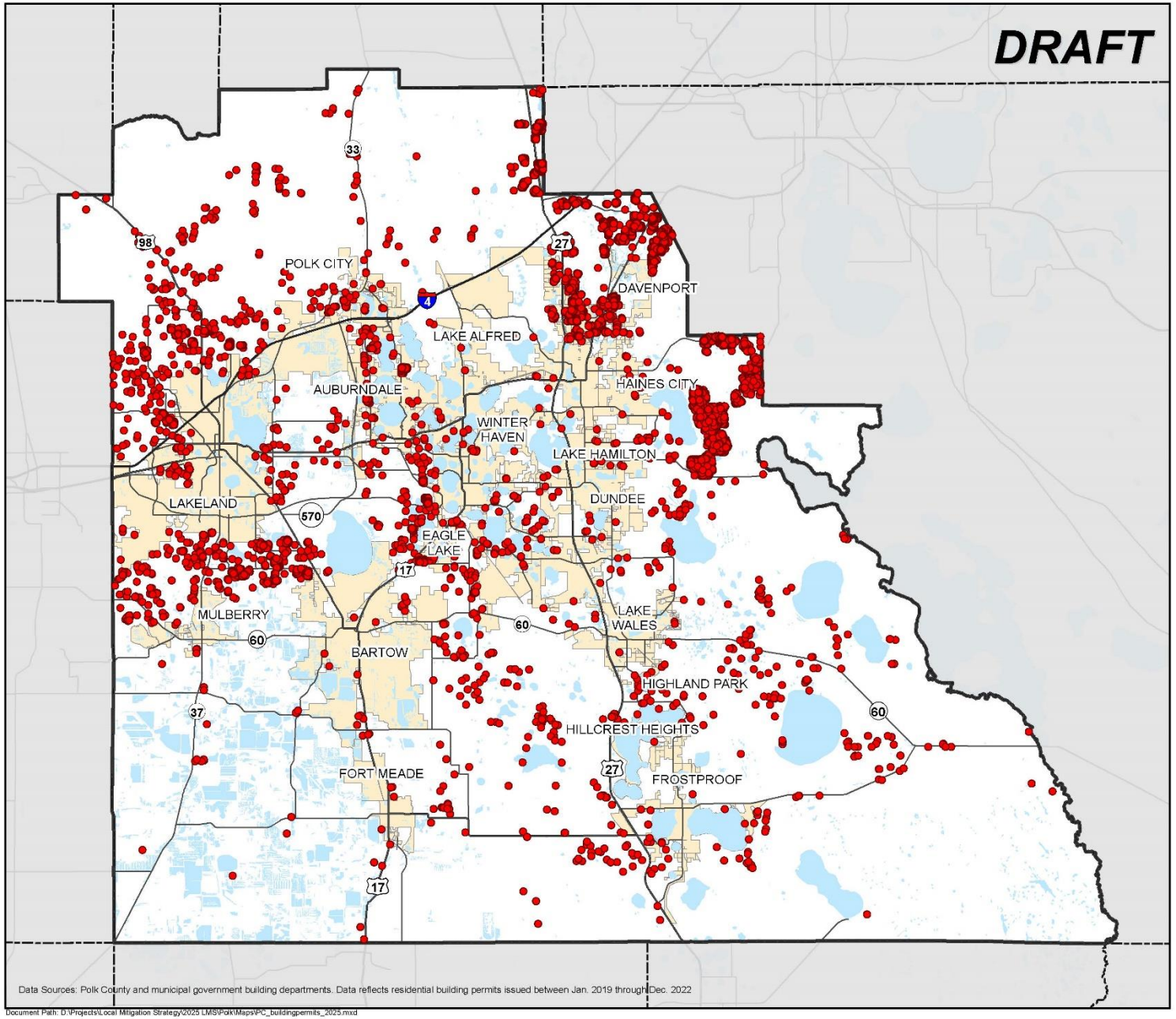
Critical Facilities

- State Government Facility
- Local Government Facility
- EOC
- Law Enforcement
- Fire Station
- EMS
- Hospital/Medical Clinic
- Public School
- Shelter
- Power Plant

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Residential Building Permits (2019 - 2022)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_buildingpermits_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Building Permits

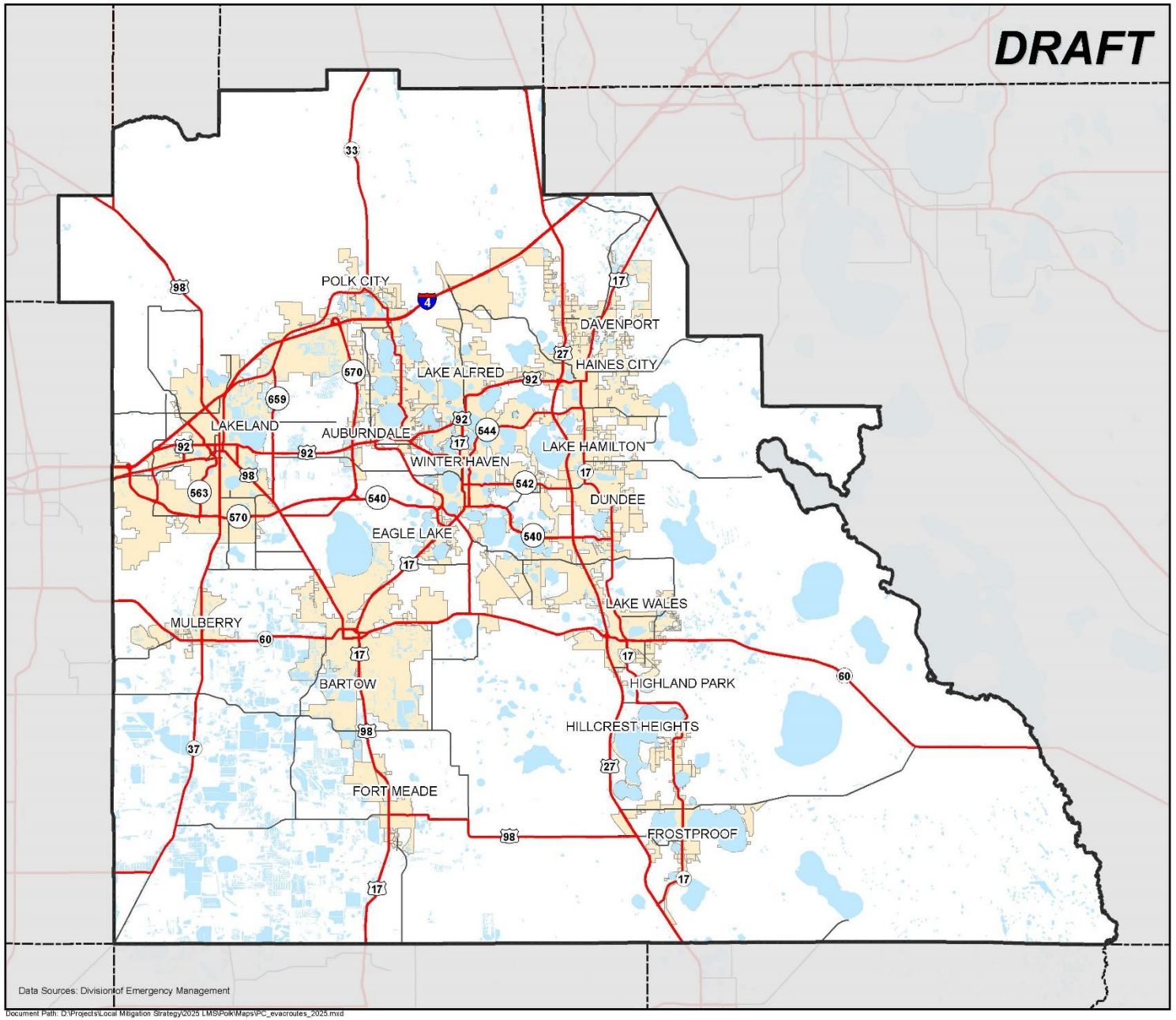
- Residential Building Permits

Disclosure:
This GIS Map is a public resource of general information. Polk County BoCC makes no warranty, representation or guarantee as to the content, sequence, accuracy, timeliness or completeness of any of the database information provided herein. The reader should not rely on the data provided herein for any reason. Polk County explicitly disclaims any representations and warranties , including, without limitation, the implied warranties of merchantability and fitness for a particular purpose. Polk County shall assume no liability for: 1) Any errors, omissions, or inaccuracies in the information provided regardless of how caused; or 2) Any decision made or action taken or not taken by any person in reliance upon any information or data furnished hereunder.

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Evacuation Routes



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_evacroutes_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Evacuation Routes

- Roadways

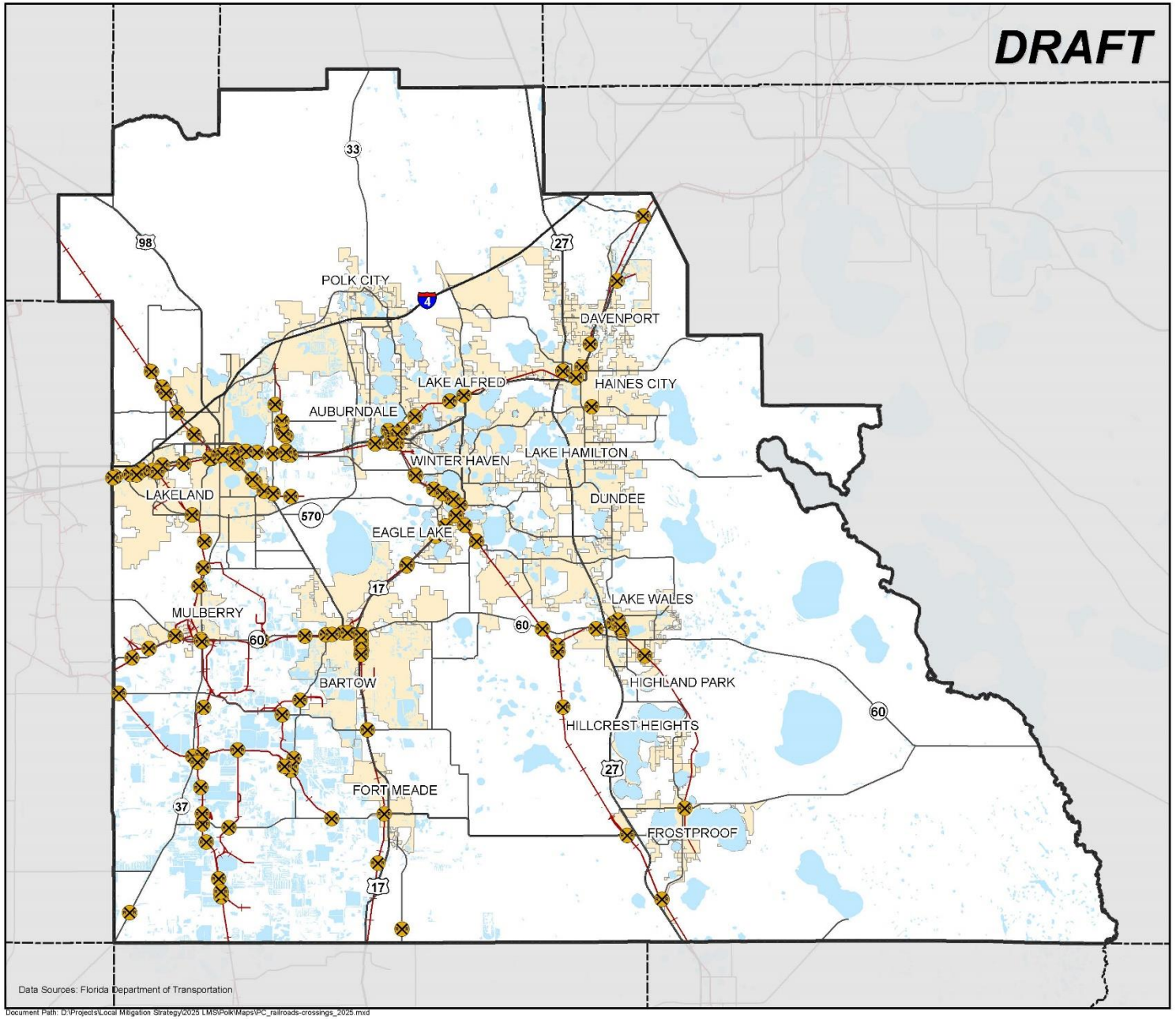
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Railroad Lines and Railroad Crossings



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_railroads-crossings_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

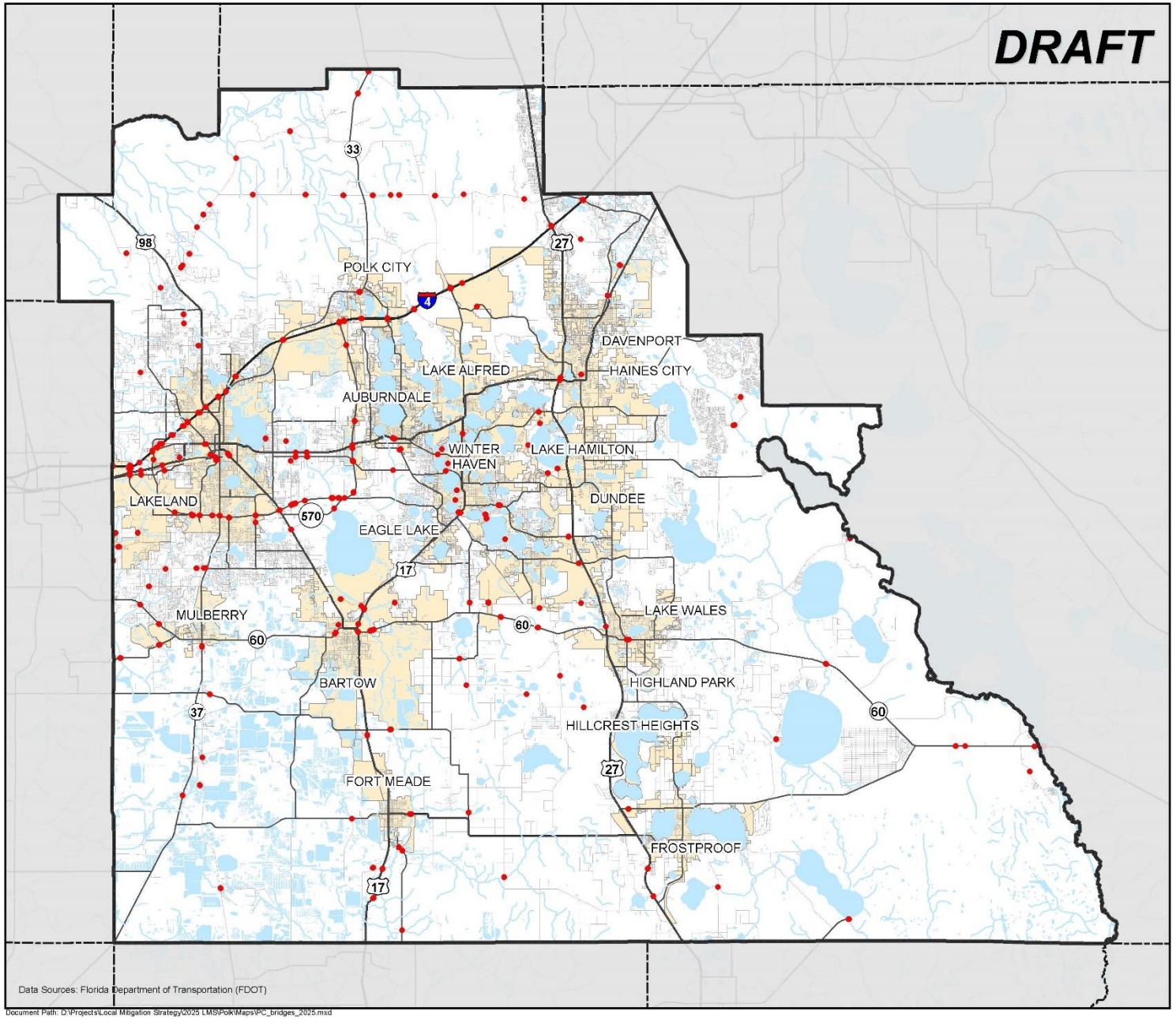
Railroad Facilities

- Railroad Lines
- Railroad Crossings

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Bridges



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_bridges_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Bridges

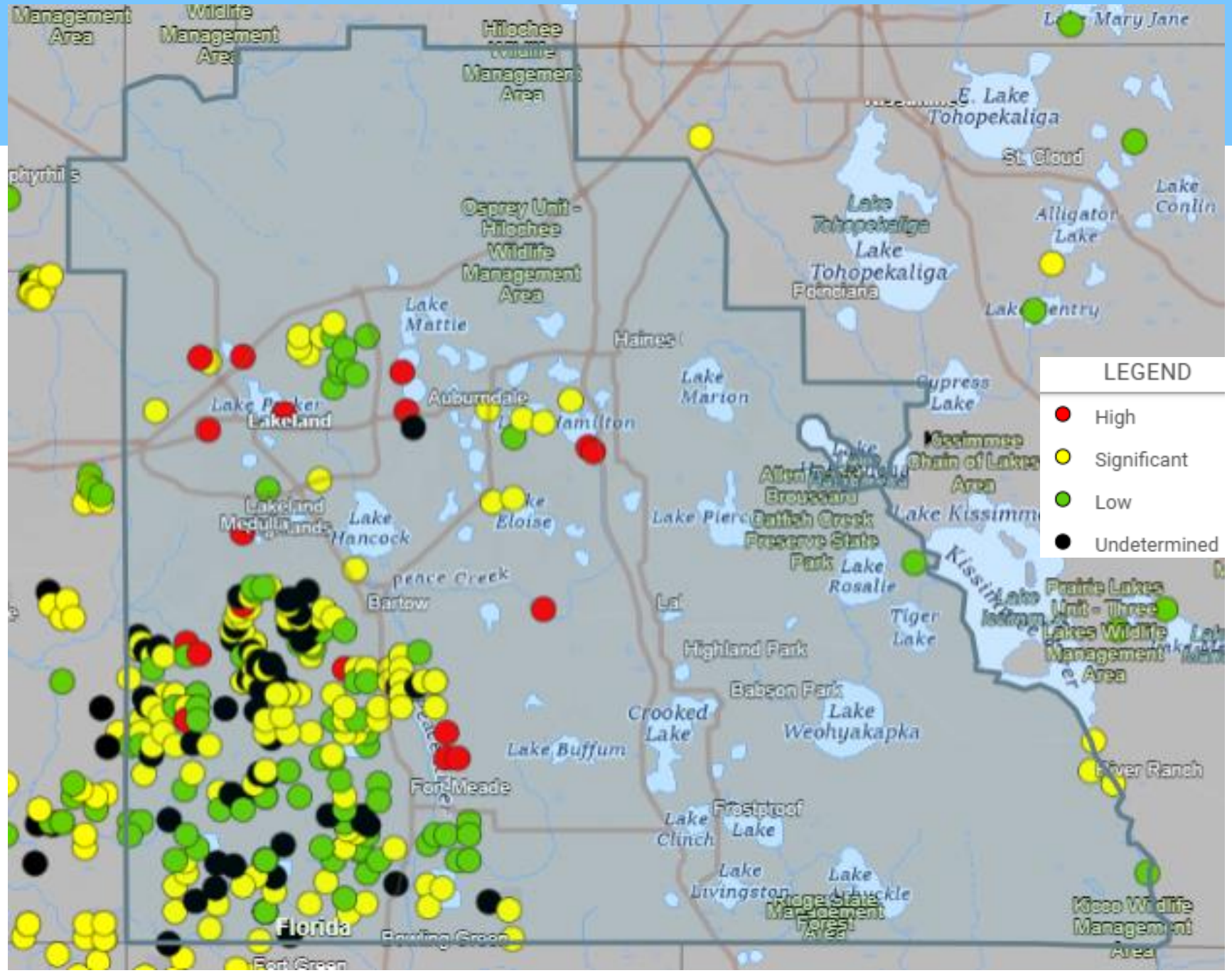
- bridge

POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

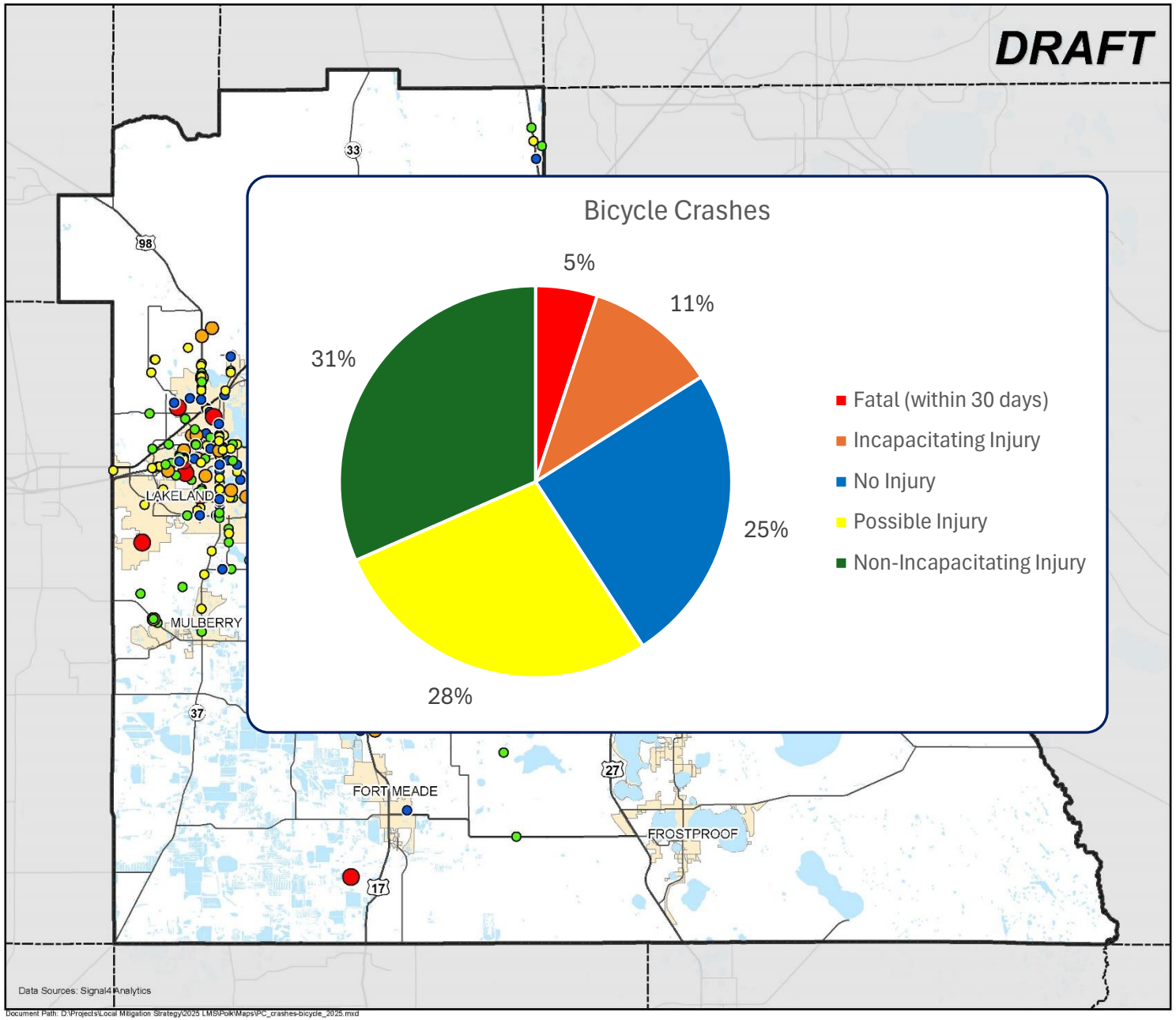
N
W E
S

0 4 8
Miles



326 Dams
52 years Average Dam Age
16% high Hazard Potential

POLK COUNTY - LOCAL MITIGATION STRATEGY
Bicycle Crashes (5 Year Period)



Legend

- Polk County
- Municipalities
- Water Bodies

Bicycle Crashes - Crash Severity

- No Injury
- Possible Injury
- Non-Incapacitating Injury
- Incapacitating Injury
- Fatal (within 30 days)

Note:
Florida Traffic Safety Dashboard - S4Analytics Data covers a 5 Year Period from 10/25/2020 to 10/25/2024.

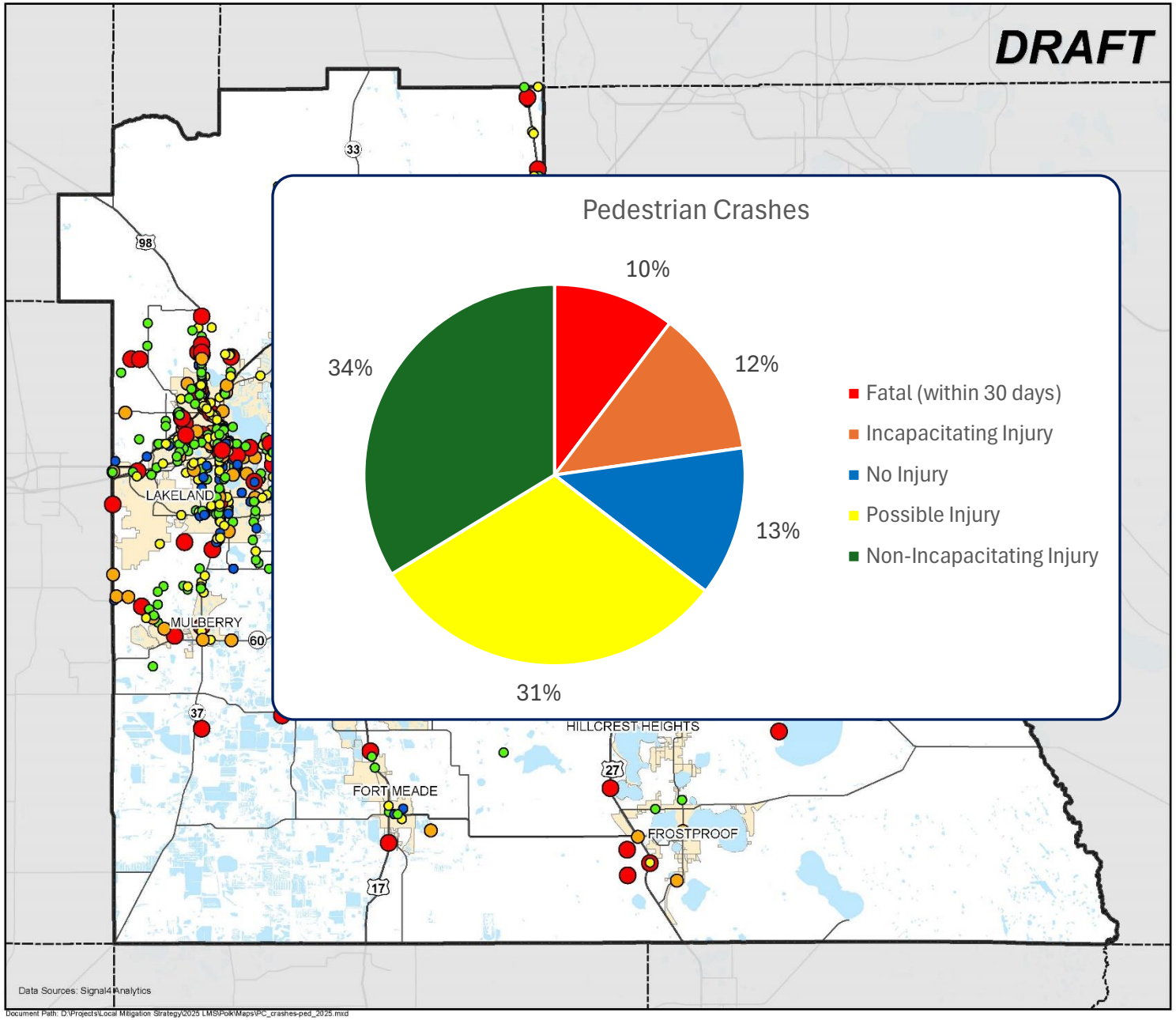
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Pedstrian Crashes (5 Year Period)



Legend

- Polk County
- Municipalities
- Water Bodies

Pedestrian Crashes - Crash Severity

- No Injury
- Possible Injury
- Non-Incapacitating Injury
- Incapacitating Injury
- Fatal (within 30 days)

Note:
Florida Traffic Safety Dashboard - S4Analytics Data covers a 5 Year Period from 10/25/2020 to 10/25/2024.

POLK COUNTY EMERGENCY MANAGEMENT

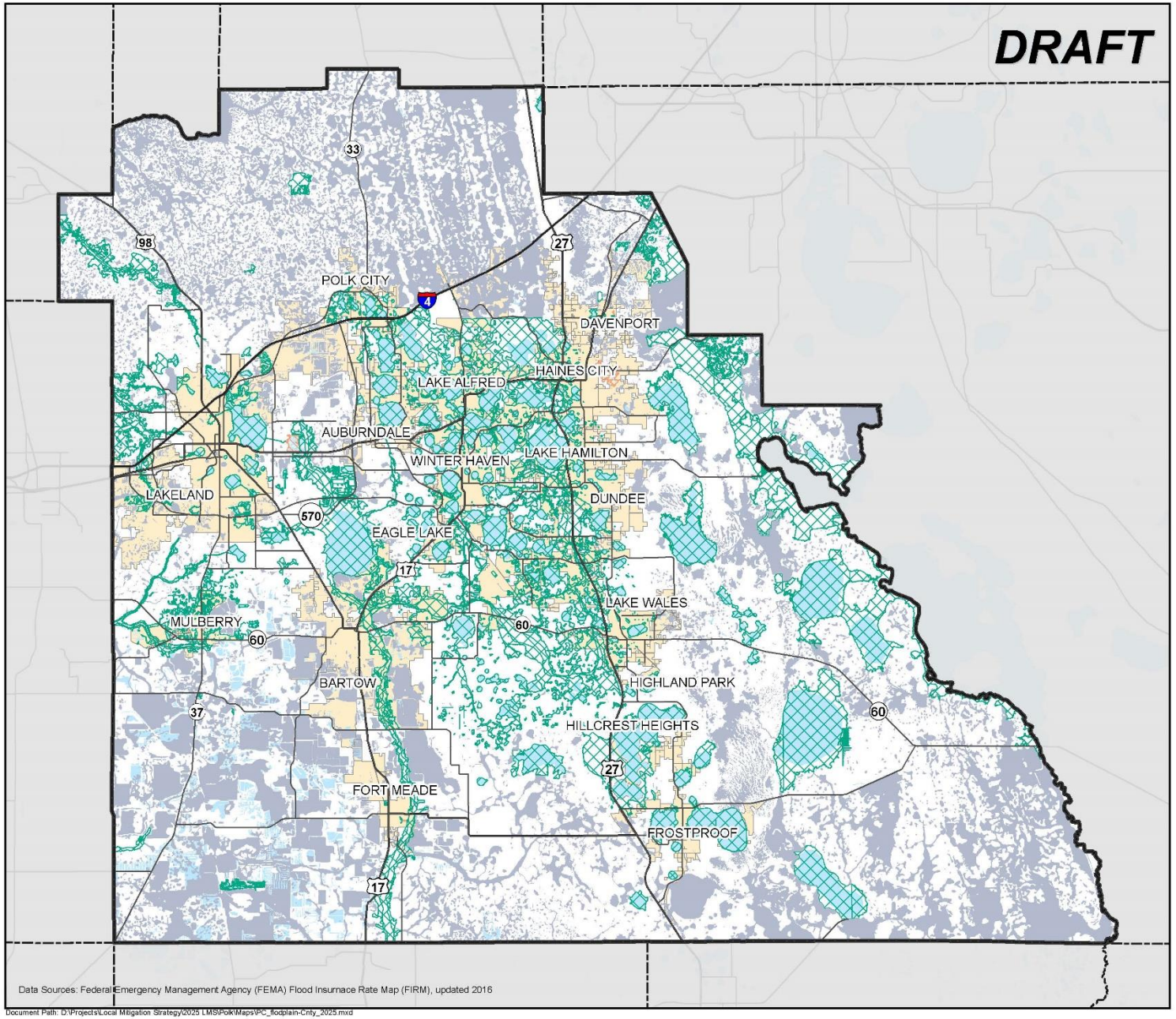
POLK COUNTY

N
W E
S

0 4 8
Miles

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_crashes-ped_2025.mxd

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_flodplain-Cnty_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

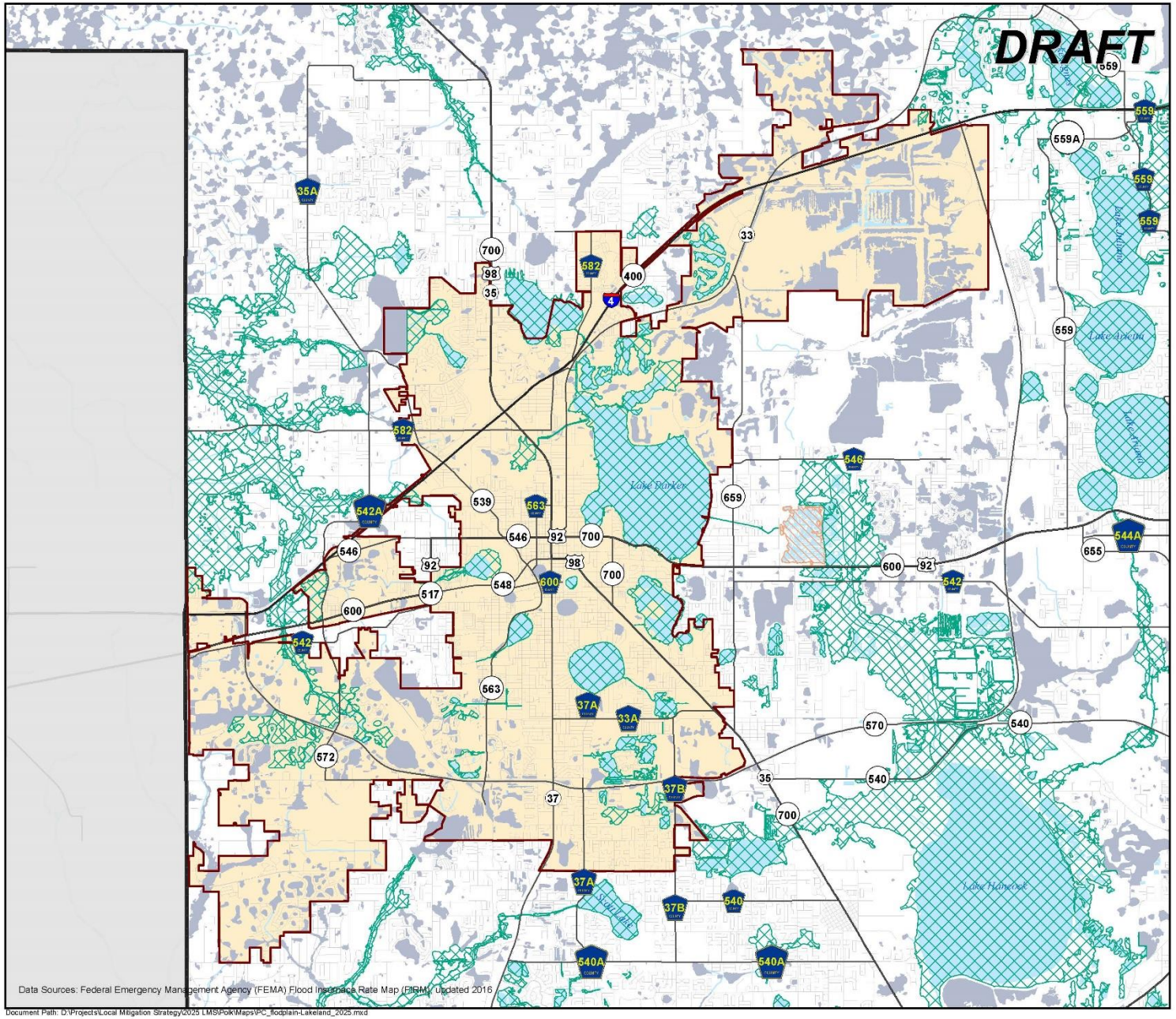
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Lakeland



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-Lakeland_2025.mxd

Legend

- Polk County
- City of Lakeland
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

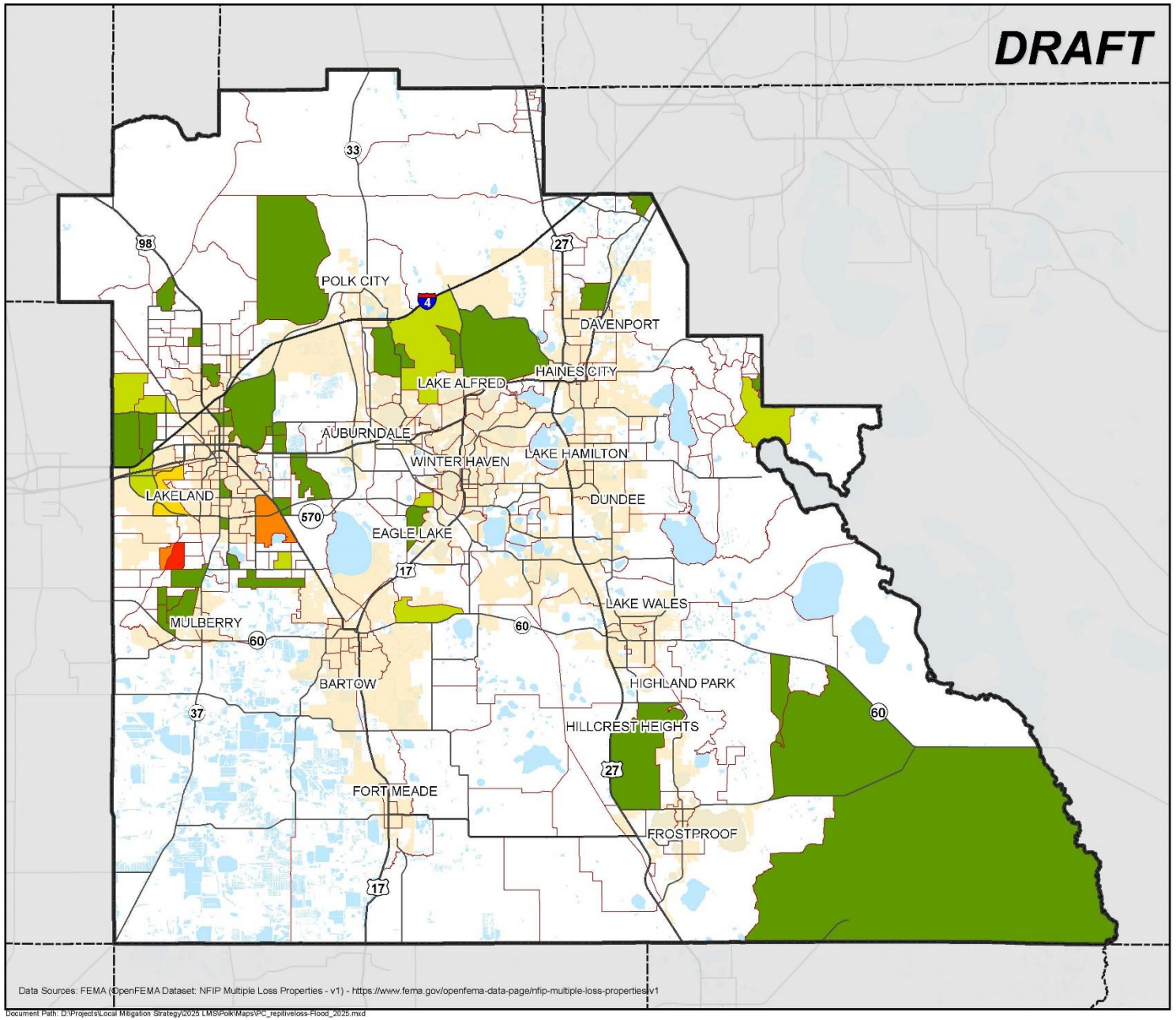
N
W E
S

0 1½ 3
Miles

TABLE VI-11o:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – LAKELAND

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	5,251	30,058,173	101,140,697
Residential	4,189	976,281,217	1,478,093,739
Commercial/Industrial	6,432	1,331,406,573	2,027,922,280
Government/Institutional	12,166	817,824,930	1,019,670,575
Miscellaneous	1,850	-	6,686,911
Total	**29,888**	**3,155,570,893**	**4,633,514,202**

POLK COUNTY - LOCAL MITIGATION STRATEGY
Repetitive Loss Properties - Total Losses (by Census Block Groups)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_repitiveloss-Flood_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Repetitive Loss Properties by Census Block Groups (represents # of Total Losses)

- =<1
- 2
- 3
- 4
- 5
- 7

Note:
This dataset provides information on structures that have had multiple National Flood Insurance (NFIP) claims across the history of the program. The data shown here represents NFIP-insured structures that have experienced totl losses.

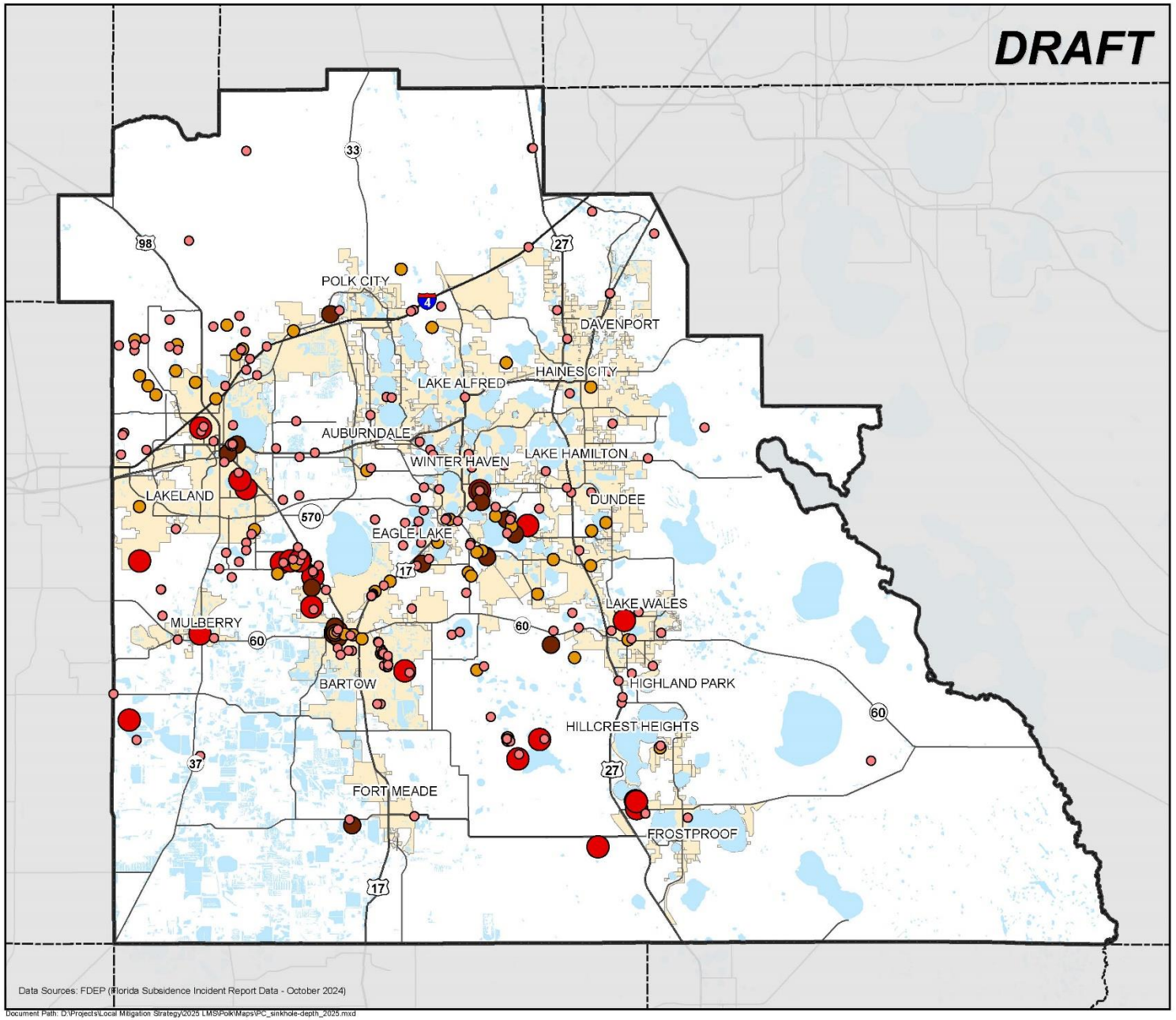
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Sinkhole Depths (1954 - 2024)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_sinkhole-depth_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

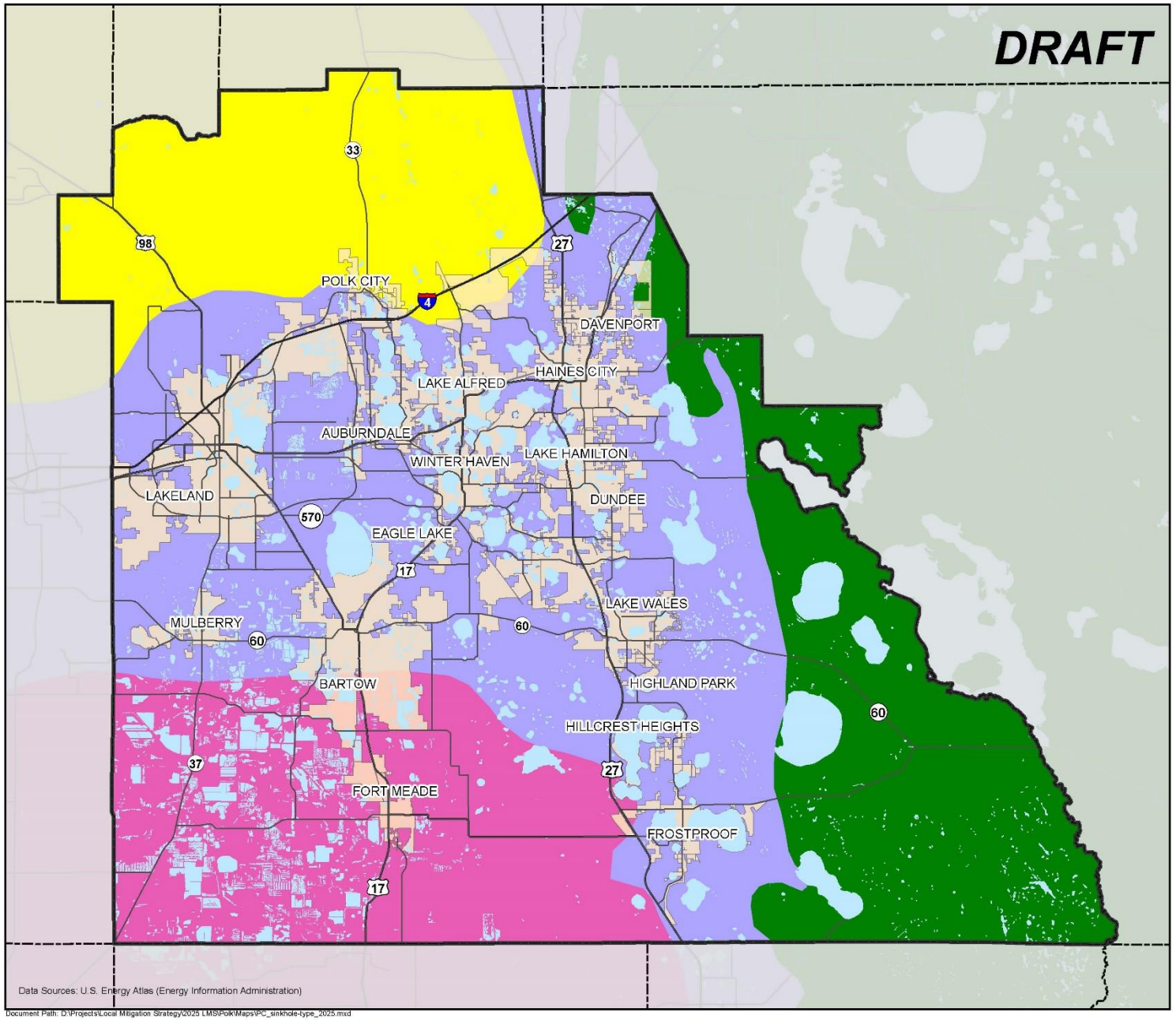
Sinkhole Depths

- < 10 feet
- 10 - 30 feet
- 30 - 50 feet
- 50 - 200 feet

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Sinkhole Area Types



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_sinkhole-type_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Florida Sinkhole Types

- Area I
- Area II
- Area III
- Area IV

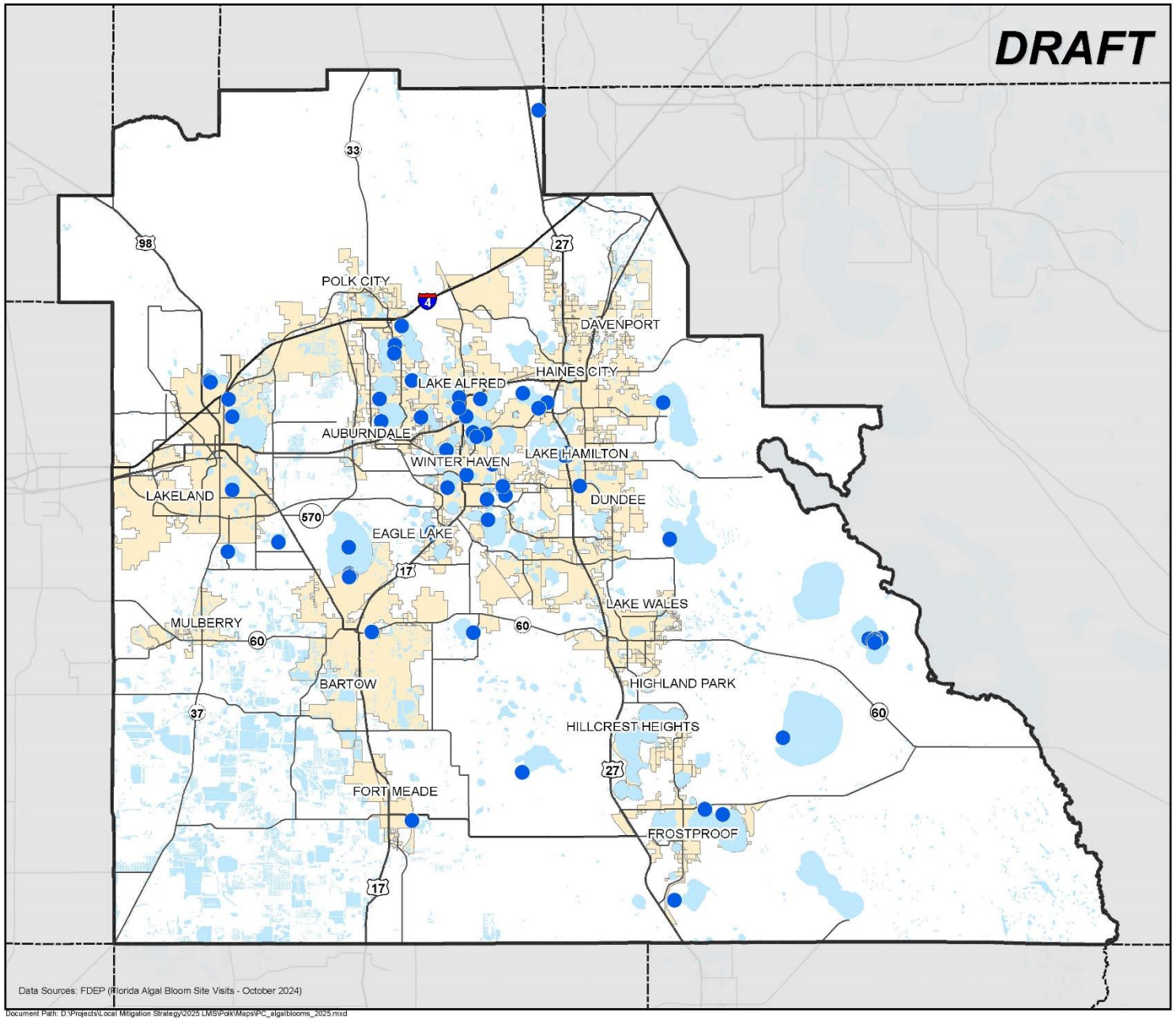
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Florida Algal Bloom Sites (2022 - 2024)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_algalblooms_2025.mxd

Legend

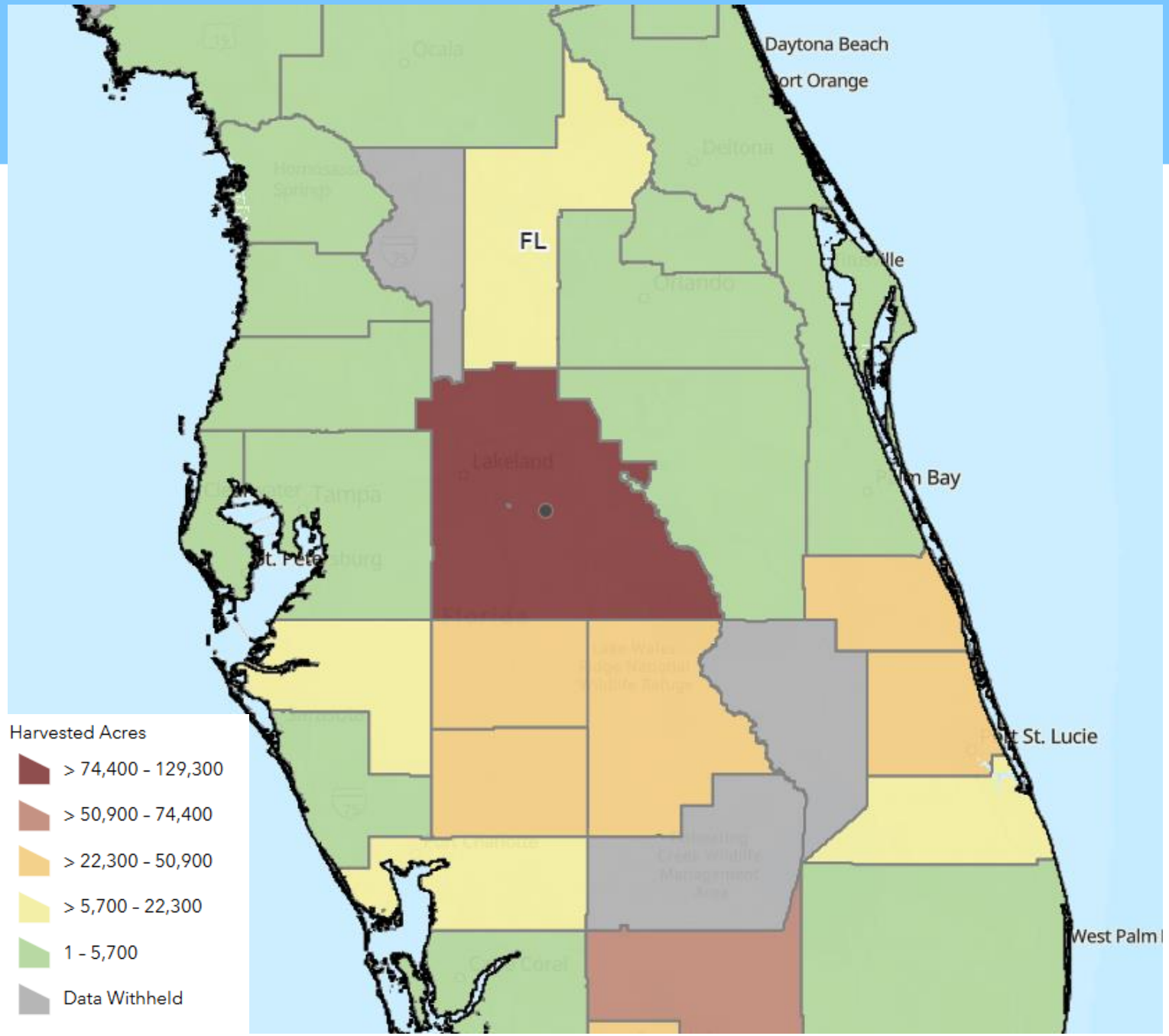
- Polk County
- Municipalities
- Water Bodies

Algal Blooms

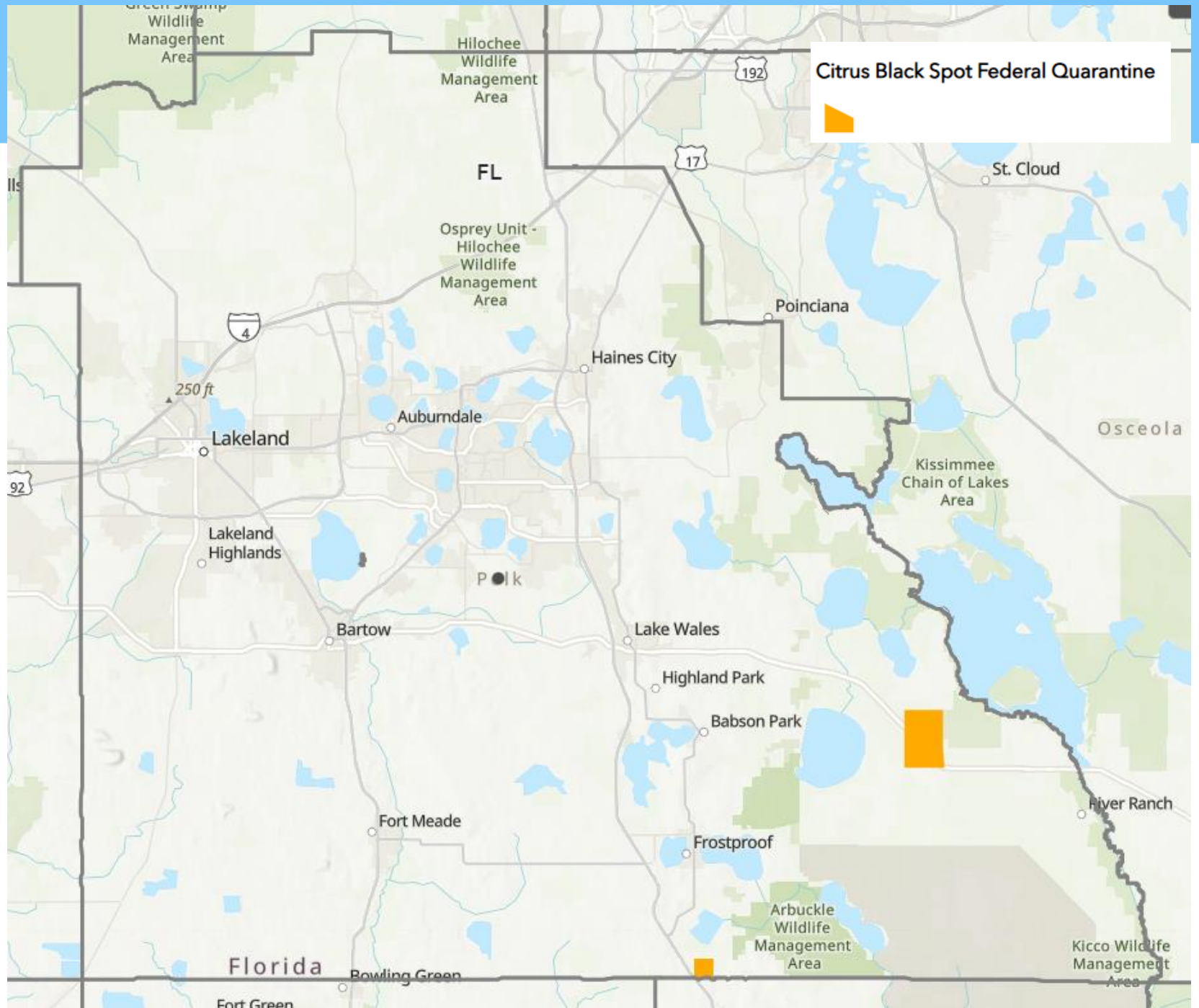
- Florida Algal Bloom Sites

N
W E
S

0 4 8
Miles



Citrus Production



Federal Quarantines

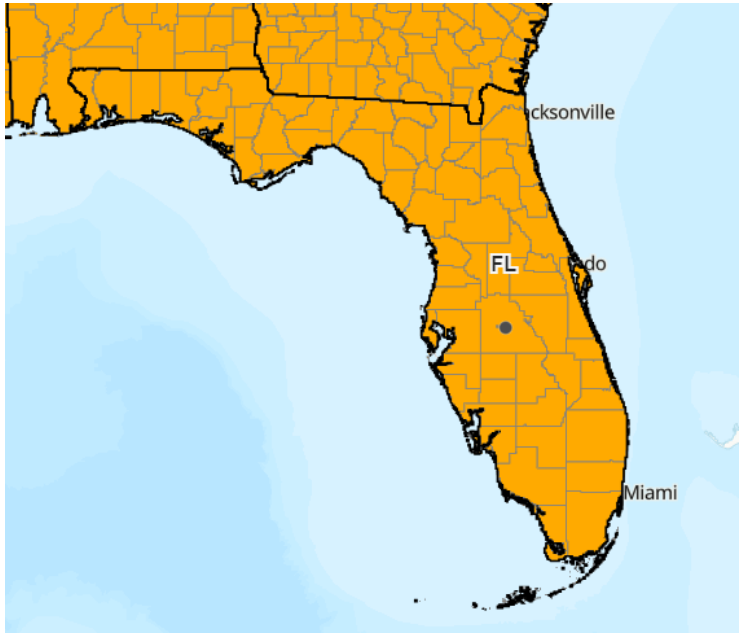
Entire County and State Under:

-Asian Citrus Psyllid

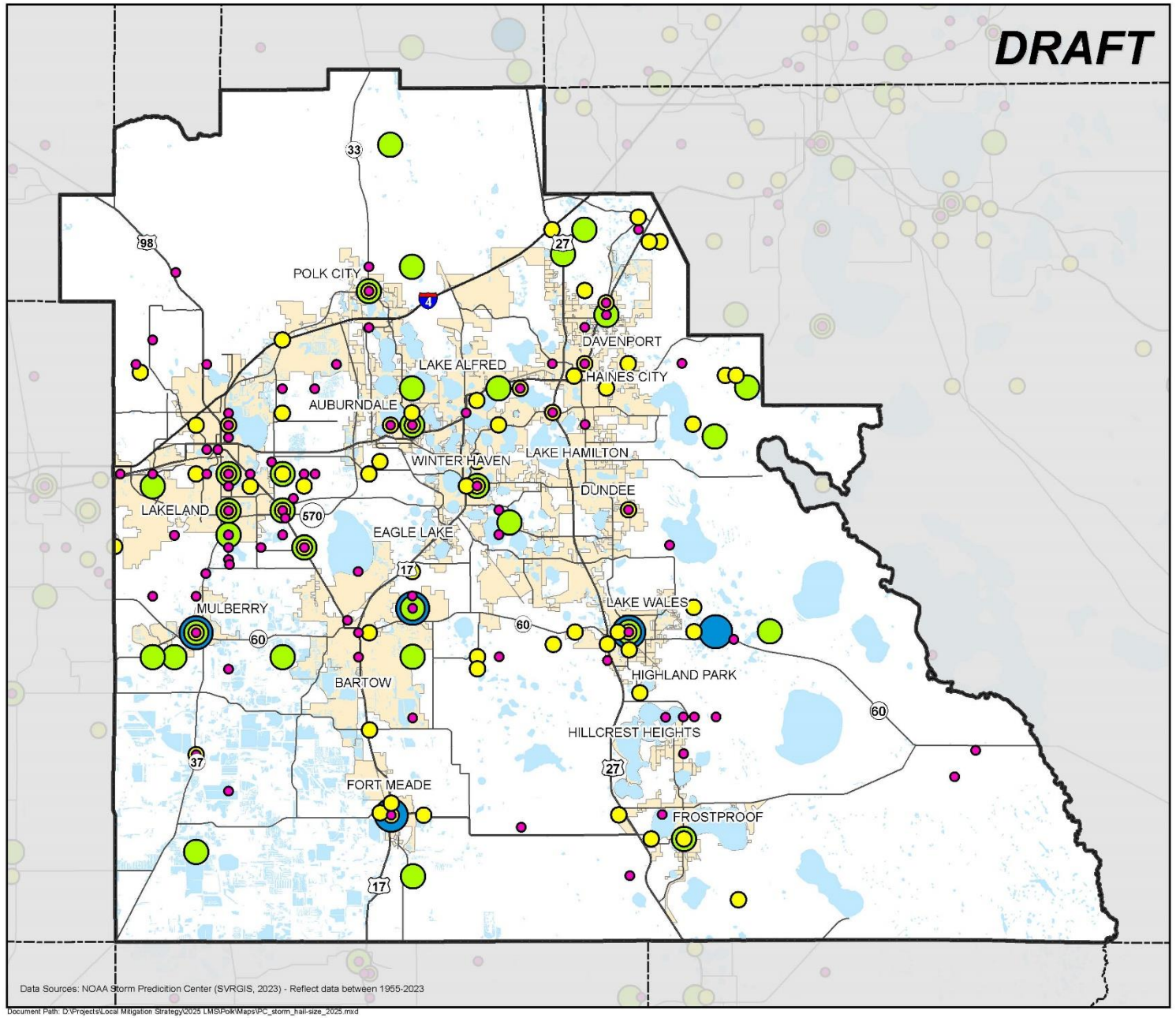
-Citrus Canker

-Citrus Greening

-Sweet Orange Scab



POLK COUNTY - LOCAL MITIGATION STRATEGY
Severe Thunderstorms - Hail (1960 - 2023)



Legend

- Polk County
- Municipalities
- Water Bodies

Hail Size (inches)

- 0.75 - 0.88
- 0.88 - 1.25
- 1.25 - 2.00
- 2.00 - 4.50

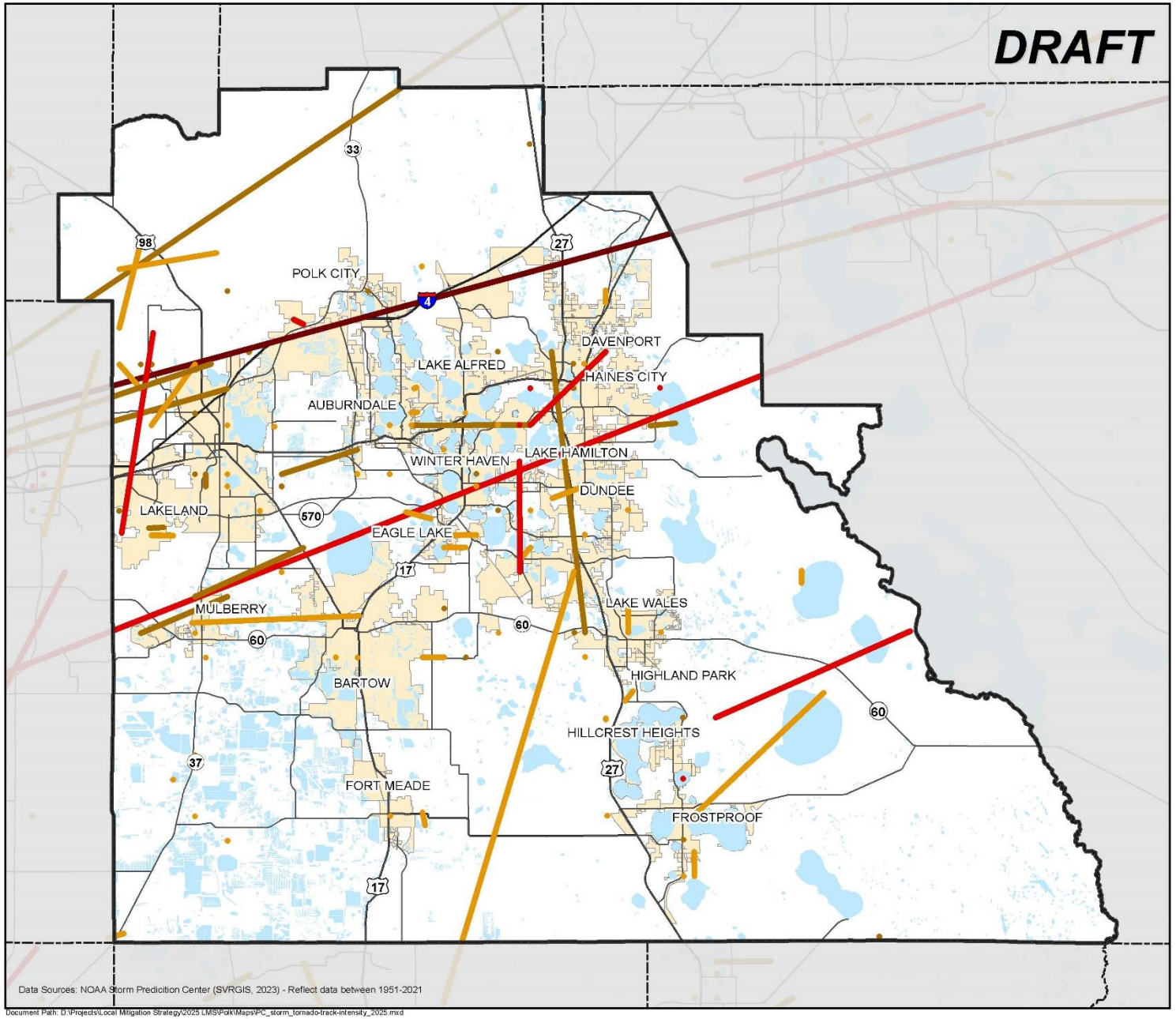
Disclosure:
This GIS Map is a public resource of general information. Polk County BoCC makes no warranty, representation or guarantee as to the content, sequence, accuracy, timeliness or completeness of any of the database information provided herein. The reader should not rely on the data provided herein for any reason. Polk County explicitly disclaims any representations and warranties , including, without limitation, the implied warranties of merchantability and fitness for a particular purpose. Polk County shall assume no liability for: 1) Any errors, omissions, or inaccuracies in the information provided regardless of how caused; or 2) Any decision made or action taken or not taken by any person in reliance upon any information or data furnished hereunder.

N W E S

0 4 8
Miles

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_hail-size_2025.mxd

POLK COUNTY - LOCAL MITIGATION STRATEGY
Tornado Tracks by Intensity (1951 - 2021)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_tornado-track-intensity_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Tornado - Fujita (F-Scale)

- F0 (>73 MPH)
- F1 (73 - 112 MPH)
- F2 (113 - 157 MPH)
- F4 (207 - 260 MPH)

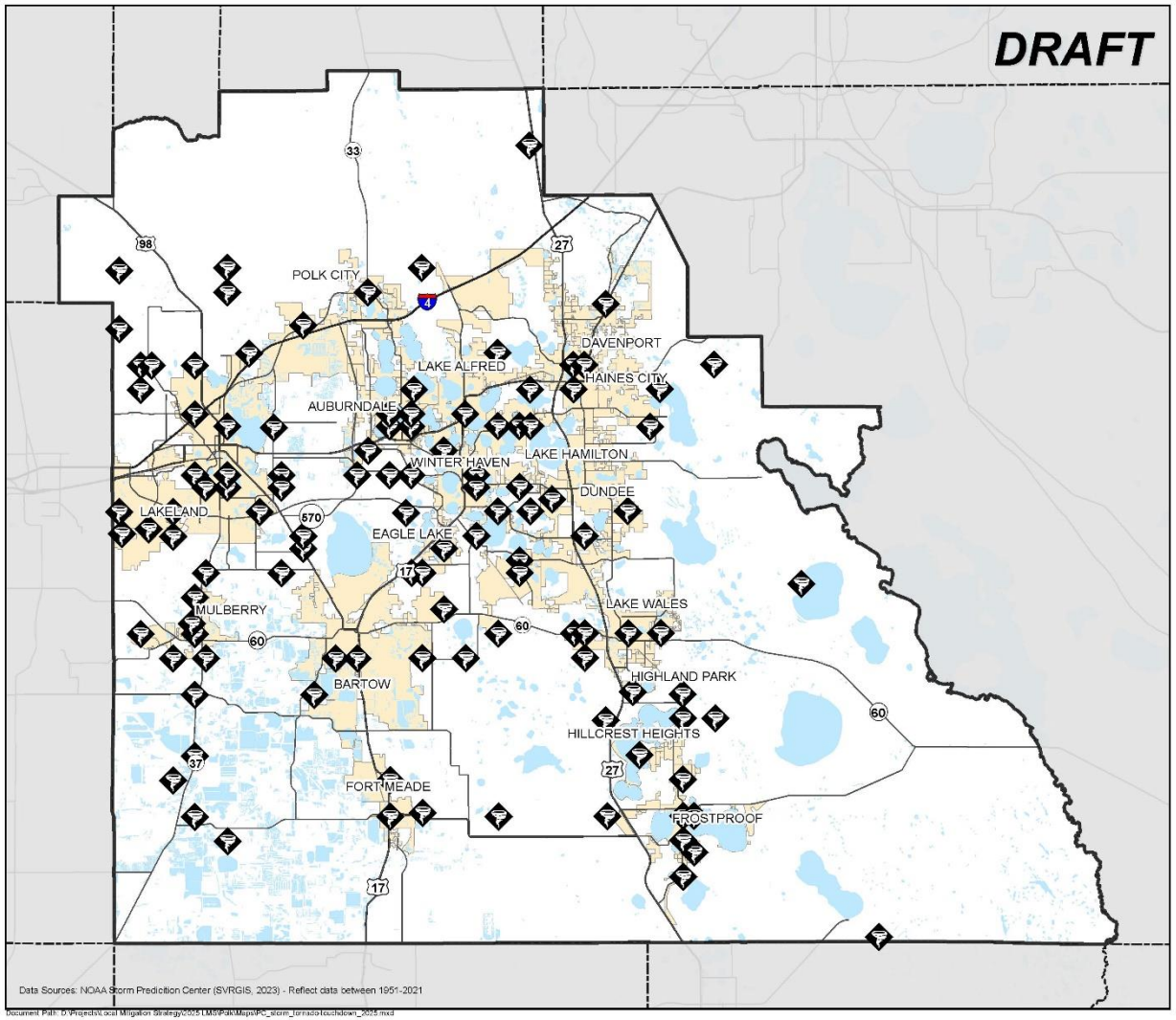
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Tornado Touchdowns (1951 - 2021)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\PolkMaps\PC_storm_tornado-touchdown_2025.mxd

Legend

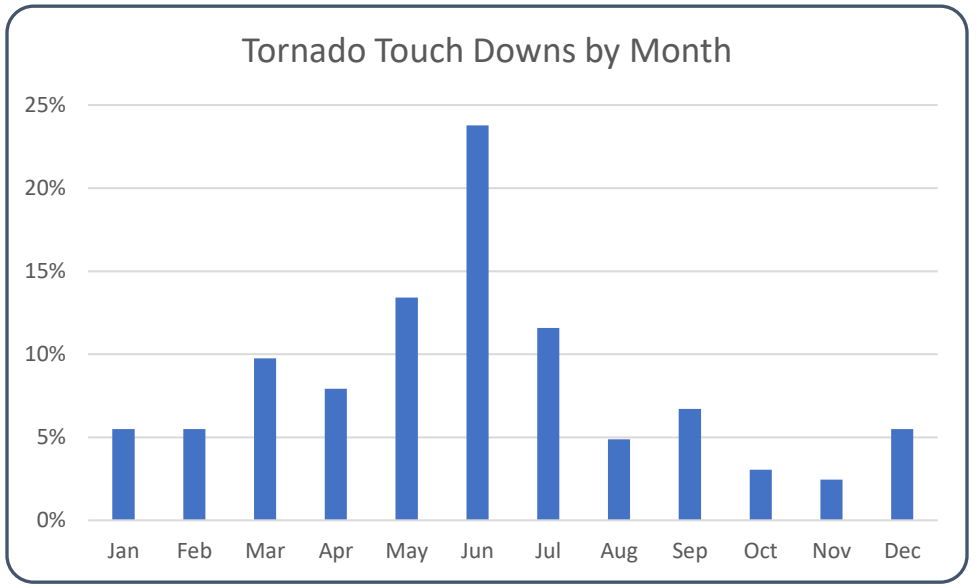
- Polk County
- Municipalities
- Water Bodies

Tornado Event

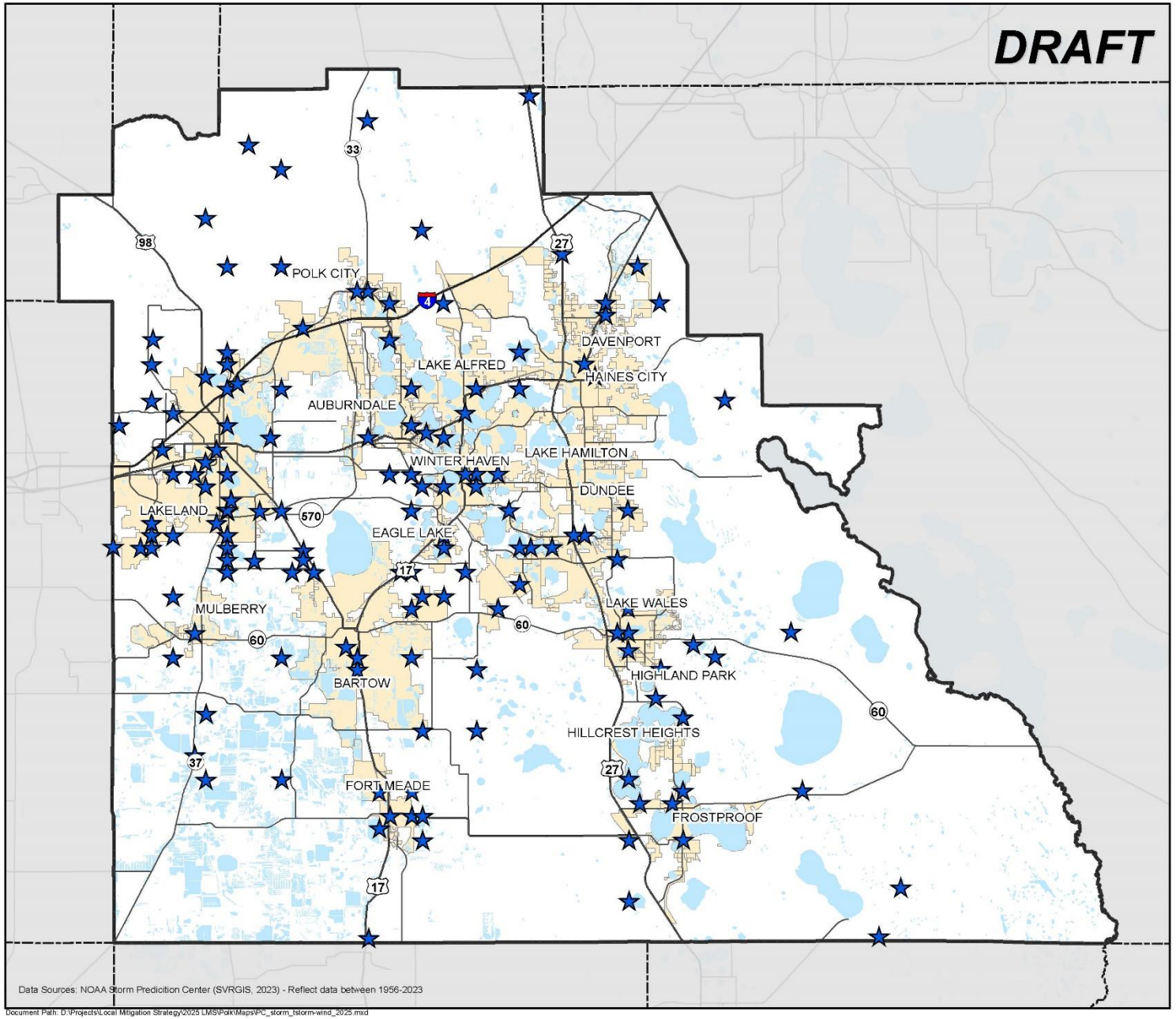
- Touchdown Location

N W E S

0 4 8
Miles



POLK COUNTY - LOCAL MITIGATION STRATEGY
Severe Thunderstorms - Wind (1956 - 2023)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_tstorm-wind_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Severe Thunderstorms - Wind

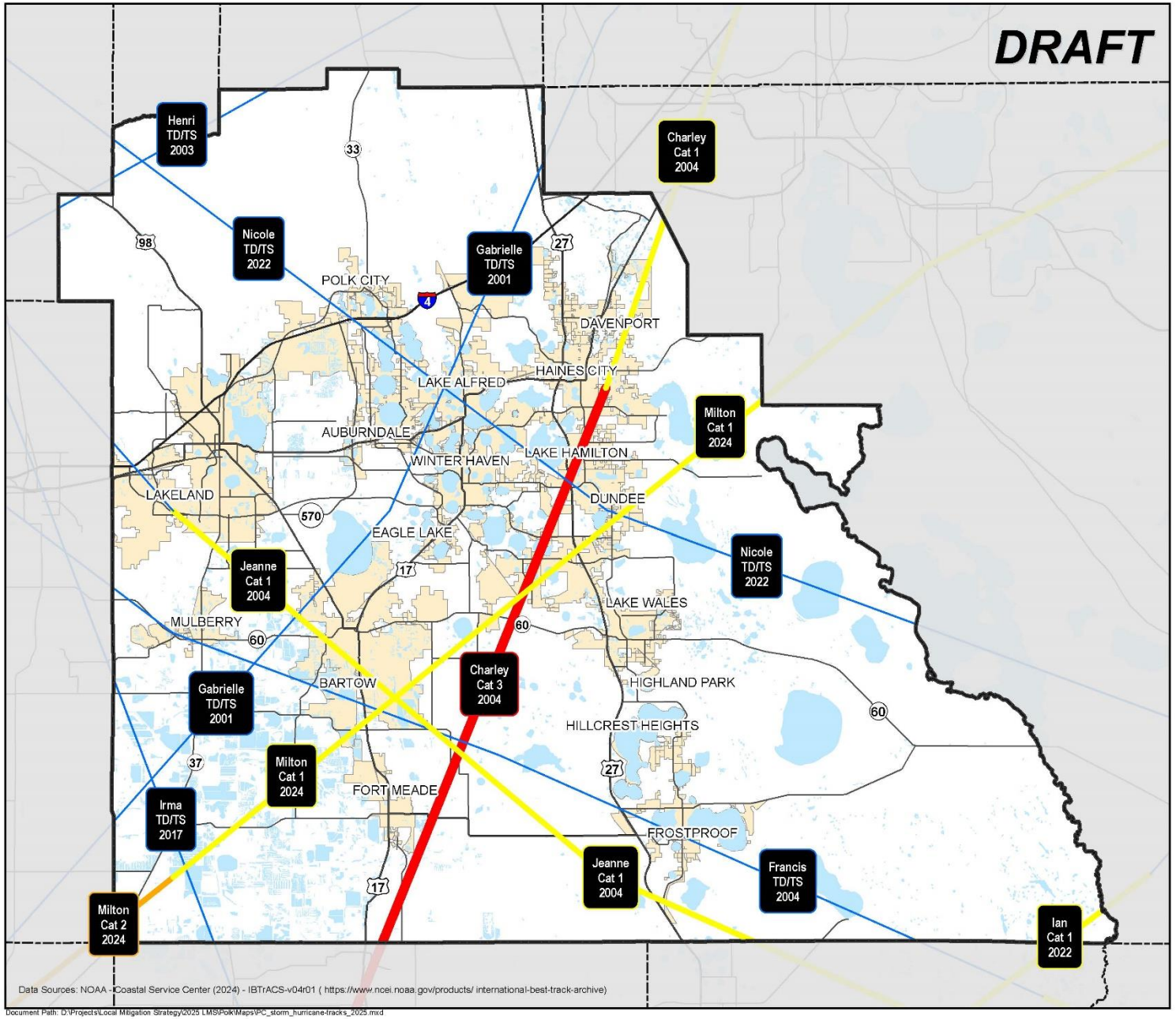
- Wind Locations

N W E S

0 4 8

Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Tropical Cyclone (Hurricane) Tracks (2000-2024)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_hurricane-tracks_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Tropical Cyclone Tracks (2000-2024)

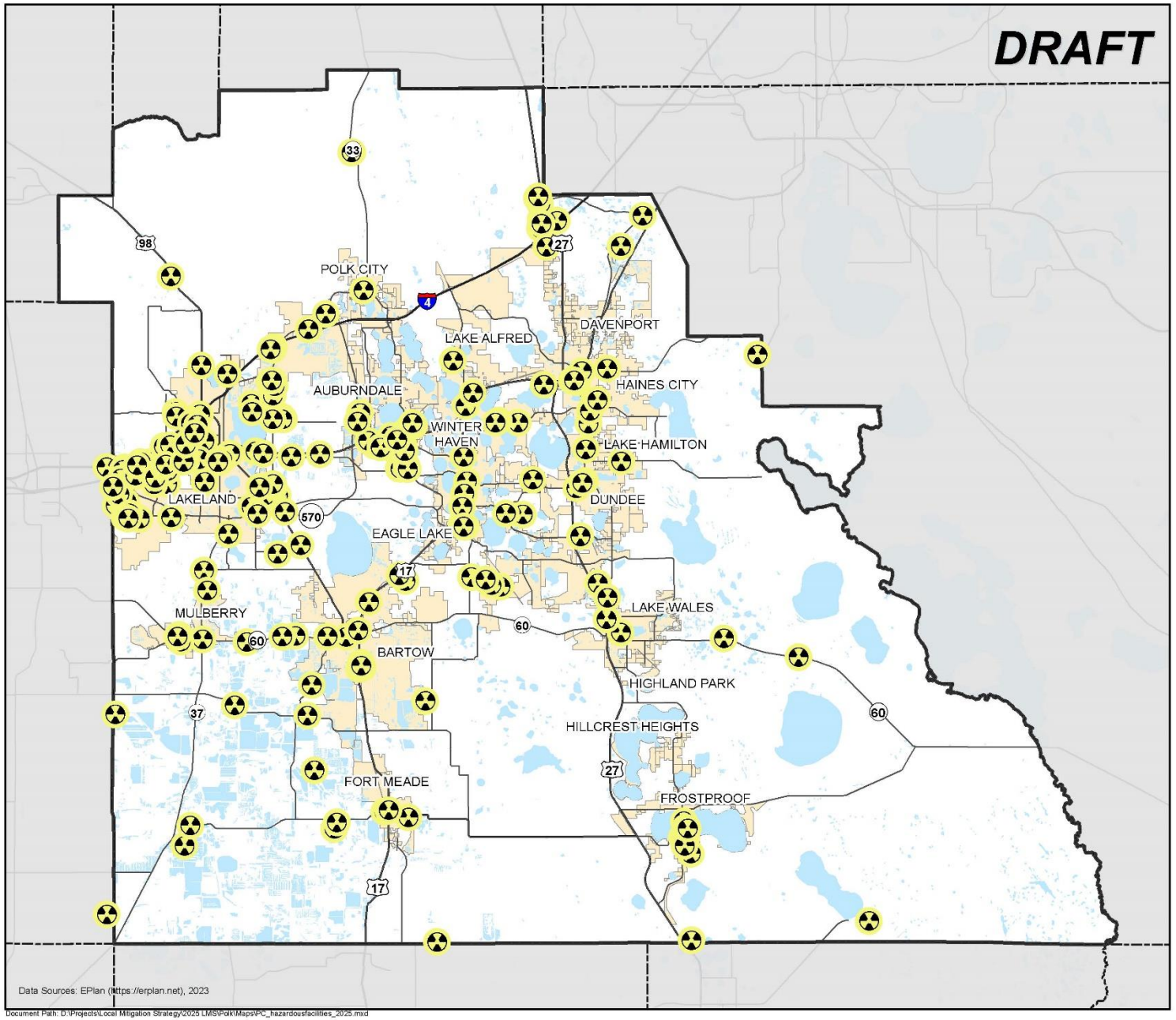
- Tropical Depressions & Storms (<74 mph)
- Category 1 (75-95 mph)
- Category 2 (96-110 mph)
- Category 3 (111-129 mph)

N W E S

0 4 8

Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Harzardous Facilities



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_hazardousfacilities_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Hazardous Facilities

- Facility

Disclosure:
This GIS Map is a public resource of general information. Polk County BoCC makes no warranty, representation or guarantee as to the content, sequence, accuracy, timeliness or completeness of any of the database information provided herein. The reader should not rely on the data provided herein for any reason. Polk County explicitly disclaims any representations and warranties , including, without limitation, the implied warranties of merchantability and fitness for a particular purpose. Polk County shall assume no liability for: 1) Any errors, omissions, or inaccuracies in the information provided regardless of how caused; or 2) Any decision made or action taken or not taken by any person in reliance upon any information or data furnished hereunder.

N
W E
S

0 4 8
Miles

Contacts

Polk County Emergency Management
Brian Thurston
863-298-7000
brianthurston@polk-county.net

Central Florida Regional Planning Council
Jerri Sackett
863-534-7130, ext. 103
jsackett@cfrpc.org

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
American Red Cross	Kris Abel	Disaster Program Manager	147 Avenue A NW, Winter Haven	kristin.abel@redcross.org	
American Red Cross	Tina Sweeten	Executive Director	147 Avenue A NW, Winter Haven	Tinora.sweeten@redcross.org	
BayCare	Timothy Allen	Healthcare EM Coordinator	200 Ave F NE, Winter Haven	Timothy.allen@baycare.org	
Bridgewater CDD	Richard McGrath	District Manager	4530 Eagle Falls Place, Tampa	rmcgrath@gms-tampa.com	
CFRPC	Curtis Knowles	EM and Community Projects Director	555 E. Church Street, Bartow	cknowles@cfrpc.org	
CFRPC	Jerri Sackett	EM Projects Senior Planner	555 E. Church Street, Bartow	jsackett@cfrpc.org	
CFRPC	April Dasilva	Program Coordinator	555 E. Church Street, Bartow	Adasilva@cfrpc.org	
CFRPC	Marisa Barmby	Program Manager – Planning and Research	555 E. Church Street, Bartow	mbarmby@cfrpc.org	
Charles Cove CDD/Lakeside Landings CDD	Lynn Mullins	District Manager	3501 Quadrangle Blvd, Orlando FL 32817	mullinsl@pfm.com	
City Center CDD	David McInnes	District Manager	250 International Parkway, Lake Mary FL	Ext. 193	
City of Auburndale	John Dickson	Public Works Director	915 Charles Avenue Auburndale	jdickson@auburndalefl.com	
City of Auburndale	Caleb Gabany	~~Sanitation~~	915 Charles Avenue Auburndale	cgabany@auburndalefl.com	
City of Bartow	Jay Robinson	Fire Department Chief	450 N. Wilson Avenue Bartow	jrobinson.fire@cityofbartow.net	
City of Bartow	Sara Jones	Grant Administrator	450 N. Wilson Ave, Bartow	Salbert.pw@cityofbartow.net	
City of Davenport	Thomas Murphy Jr.	Fire Operations	226 W. 4th Street, Davenport	tmurphy@mydavenport.org	
City of Eagle Lake	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Eagle Lake	Tom Ernharth	City Manager	75 N. 7th Street Eagle Lake	ternharth@eaglelake-fla.com	
City of Fort Meade	Matthew Zahara	Fire Department Chief	8 West Broadway, Fort Meade, FL 33841	mzahara@cityoffortmeade.com	
City of Fort Meade	Edward Dean	City Manager	8 West Broadway, Fort Meade, FL 33841	edean@citoffortmeade.com	
City of Fort Meade	Amy Wheeler	Assistant City Manager	8 West Broadway, Fort Meade, FL 33841	awheeler@cityoffortmeade.com	
City of Fort Meade	Melissa Cannon	Deputy City Clerk	8 West Broadway, Fort Meade, FL 33841	mcannon@cityoffortmeade.com	
City of Fort Meade	Veronica Hairston	Chief Operations Officer	8 West Broadway, Fort Meade, FL 33841	vhairston@cityoffortmeade.com	
City of Frostproof	Josh Turner	Public Works	111 W. First Street Frostproof	JTurner@cityoffrostproof.com	
City of Frostproof	Nicole McDowell	City Manager	111 W. First Street Frostproof	nmcdowell@cityoffrostproof.com	
City of Haines City	Lamar Cliett	Deputy Public Works Director	300 North 5th Street, Haines City	lamar.cliett@hainescity.com	
City of Haines City	James Keene	Public Services Administrator	620 E. Main Street Haines City	james.keene@hainescity.com	
City of Lake Alfred	Community Development Department		120 E. Pomelo Street Lake Alfred	comdev@mylakealfred.com	
City of Lake Alfred	Art Bodenheimer	Police Department Chief	120 E. Pomelo Street Lake Alfred	abodenheimer@mylakealfred.com	
City of Lake Alfred	Ryan Leavengood	City Manager	120 E. Pomelo Street Lake Alfred	rleavengood@mylakealfred.com	
City of Lake Wales	Shannon Hancock	Growth Management Executive Assistant	201 W. Central Avenue Lake Wales	shancock@lakewalesfl.gov	
City of Lake Wales	Dale Hampton	Investigations Commander	133 E. Tillman Avenue, Lake Wales	dhampton@lakewalesfl.gov	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Lake Wales	Emmanuel Figueroa	Police Department	133 E. Tillman Avenue, Lake Wales	efigueroa@lakewalesfl.gov	
City of Lake Wales	James Slaton	City Manager	201 W. Central Avenue, Lake Wales	jslaton@lakewalesfl.gov	
City of Lake Wales	Joe Jenkins	Fire Department Chief	201 W. Central Avenue Lake Wales	jjenkins@lakewalesfl.gov	
City of Lake Wales	Sara Irvine	Special Projects Administrator	2010 W. Central Avenue, Lake Wales	sirvine@lakewalesfl.gov	
City of Lakeland	Anne Marie Locascio	Claims Specialist Risk Management	Lakeland	annmarie.locascio@lakelandgov.net	
City of Lakeland	Michael Lewis	Captain Investigative Services Division	Lakeland	michael.lewis@lakelandgov.net	
City of Lakeland	Cole Edwards	Floodplain Administration	Lakeland	Cole.edwards@lakelandgov.net	
City of Lakeland	Matthew Lyons	Executive Planner	Lakeland	Matthew.kyons@lakelandgov.net	
City of Lakeland	Chuck Barmby	Planning and Transportation Manager	Lakeland	charles.barmby@lakelandgov.net	
City of Mulberry	Billie Segree	Code Enforcement Officer	104 S. Church Ave Mulberry	bsegree@cityofmulberryfl.com	
City of Mulberry	John Wasmund	Finance Director	104 S. Church Ave Mulberry	jwasmund@cityofmulberryfl.com	
City of Mulberry	Ron Borchers	Planning & Development Director	104 S. Church Ave Mulberry	rborchers@cityofmulberryfl.com	
Polk City	Patricia Jackson	City Manager	123 Broadway Blvd SE, Polk City	Patricia.jackson@mypolkcity.org	
City of Winter Haven	Ahmad Abdeljawad	Assistant City Engineer	451 Third St. NW, Winter Haven	aabdeljawad@mywinterhaven.com	
City of Winter Haven	G.D Nabong	City Engineer	451 Third St. NW, Winter Haven	gdstar@yahoo.com	

POLK COUNTY

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Winter Haven	Devon Moore	Senior Environmental Scientist	451 Third St. NW, Winter Haven	dmoore@mywinterhaven.com	
City of Winter Haven	Dustin Everitt	Natural Resources Division Manager	451 Third St. NW, Winter Haven	deveritt@mywinterhaven.com	
City of Winter Haven	Jeff Crouse	Engineering Designer	451 Third St. NW, Winter Haven	jcrouse@mywinterhaven.com	
City of Winter Haven	Mark Bombard	Assistant Director of Utilities	451 Third St. NW, Winter Haven	mbombard@mywinterhaven.com	
City of Winter Haven	Joseph Emery	Fire Chief	301 Ave G SW, Winter Haven	jemery@mywinterhaven.com	
FL Department of Health	Scott Sjoblom	Assistant CHD Director	1290 Golf View Avenue Bartow	Scott.Sjoblom@flhealth.gov	
Florida Department of Environmental Protection	Jasson Drinkard	Professional Responder	13051 N. Telecom Parkway, Temple Terrace, FL 33637	Jasson.Drinkard@FloridaDEP.gov	
Florida Division of Emergency Management	Jeremy O'Dell	Recovery		jeremy.odell@em.myflorida.com	
Florida Division of Emergency Management	Antonio Miranda Zapata	Recovery		Antonio.zapata@em.myflorida.com	
Florida Division of Emergency Management	Cristian Rivera	Mitigation		Cristian.rivera@em.myflorida.com	
Florida Forest Service	Pete Lewis	Forest Area Supervisor for Eastern Polk County		Peter.Lewis@fdacs.gov	
Florida Forest Service	Todd Chlanda	Wildfire Mitigation Specialist	5745 S. Florida Avenue, Lakeland	William.Chlanda@fdacs.gov	
Florida Forest Service	Vic Memmoli	Forest Area Supervisor for Western Polk County		Victor.Memmoli@fdacs.gov	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
Golden Lakes Community Dev.	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
Golden Lakes Community Dev.	Maurice Formaz		401 Third Street SW, Winter Haven	mformaz@pennoni.com	
John Hopkins All Children's Hospital	Larry Green	Director of Safety	3310 Lakeland Hills Blvd., Lakeland	Lgreen52@jhmi.edu	
John Hopkins All Children's Hospital	Patricia White		3310 Lakeland Hills Blvd, Lakeland	Patricia.white@iparametrics.com	
John Hopkins All Children's Hospital	Shanti Smith-Copeland	Director of Emergency Management	3310 Lakeland Hills Blvd., Lakeland	Shanti.smith-copeland@iparametrics.com	
Harmony on Lake Eloise CDD/Hawthorne Mill North CDD	Craig Wrathell	District Manager	2300 Glades Rd, Boca Raton, FL 33431	info@harmonyonlakeeloisecdd.net info@hawthornemillnorthcdd.net	
Health and Human Services	Marcia Andersen	Social Service Director	2135 Marshall Edwards Drive, Bartow	marciaandersen@polk-county.net	
Health and Human Services	Jennifer Cooper	Housing and Neighborhood Manager	1290 Gulfview Blvd, Bartow	jennifercooper@polk-county.net	
Highland Meadows CDD/Holly Hill Rd East CDD/North Blvd CDD/Poinciana West CDD	Tricia Adams	District Manager	219 E. Livingston Street, Orlando FL 32801	tadams@gmscfl.com	
Lake Ashton CDD	Jill Burns	District Manager	4141 Ashton Club Drive, Lake Wales	jburns@gmsfl.com	
Lake Ashton II CDD	Jason Greenwood	District Manager	6052 Pebble Beach Blvd, Winter Haven	jgreenwood@gm-tampa.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
Lakeside Preserve CDD	Jane Gaarlandt	District Manager	3501 Quadrangle Blvd, Orlando	gaarlandtj@pfm.com	
Lake Region Lakes Mgmt. District	Roger Griffiths	Ex Director	804 Ave X SW, Winter Haven	Rdg1744@gmail.com	
Peace River Center	Candace Barnes	COO	1239 E. Main Street, Bartow	cbarnes@peacerivercenter.org	
Polk County	Apryl Faurote	Volunteer Services Coordinator	1290 Golfview Avenue Bartow	aprylfaurote@polk-county.net	
Polk County	Benjamin Dunn	Planning and Development, Building Dir.	330 W. Church Street Bartow	benjamindunn@polk-county.net	
Polk County	Billy Abernathy	Emergency Management EOC Coordinator	1890 Jim Keene Blvd Winter Haven	billyabernathy@polk-county.net	
Polk County	Richard Benton	Land Development / Floodplain Manager	330 W. Church Street Bartow	richardkbenton@polk-county.net	
Polk County	Christia Johnson	Budget Director	330 W. Church Street, Bartow	christiajohnson@polk-county.net	
Polk County	Brian Thurston	EM Program Manager	1890 Jim Keene Blvd., Winter Haven	brianthurston@polk-county.net	
Polk County	James Schnell	Building Division	330 W. Church Street, Bartow	jamesschnell@polk-county.net	
Polk County	Jana Nickles	Special Needs Coordinator	1890 Jim Keene Blvd Winter Haven	jananickles@polk-county.net	
Polk County	Doug Cockerham	Emergency Management Coordinator	1890 Jim Keene Blvd Winter Haven	dougcockerham@polk-county.net	
Polk County	Jay Jarvis	Transportation Director	330 W. Church Street Bartow	jayjarvis@polk-county.net	
Polk County	Brian Nadler	Deputy Chief	1295 Brice Blvd., Bartow	briannadler@polk-county.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
Polk County	Jeff Foley	Communications	330 W. Church Street, Bartow	jefffoley@polk-county.net	
Polk County	Darius Livingston	Battalion Chief	1295 Brice Blvd., Bartow	dariuslivingston@polk-county.net	
Polk County	Ben Cassista	Assistant Fire Chief	1295 Brice Blvd., Bartow	bencassista@polk-county.net	
Polk County	Katie Hollenbeck	EM Planner	1890 Jim Keene Blvd Winter Haven	kathrynhollenbeck@polk-county.net	
Polk County	Michele Sims	Procurement Manager	330 W. Church Street Bartow	michelesims@polk-county.net	
Polk County	Michelle Shiver	RSVP Polk	1290 Golfview Avenue Bartow	michelleshiver@polk-county.net	
Polk County	Paul Womble	Emergency Management Director	1890 Jim Keene Blvd Winter Haven	paulwomble@polk-county.net	
Polk County	Richard Benton	Floodplain Manager	330 W. Church Street, Bartow	richardkbenton@polk-county.net	
Polk County	Shawn Smith	Assistant Fire Chief	330 W. Church Street, Bartow	shawnsmith@polk-county.net	
Polk County	Scott Anderson	Floodplain Tech	330 W. Church Street, Bartow	scottanderson@polk-county.net	
Polk County	Tabitha Biehl	Parks and Natural Resources	4177 Ben Durrance Road, Bartow	tabithabiehl@polk-county.net	
Polk County	Gaye Sharpe	Park and Natural Resources, Fiscal Mgr.	4177 Ben Durrance Road, Bartow	gayesharpe@polk-county.net	
Polk County	Glenda Rogers	Lead Management & Budget Analyst	330. W Church Street, Bartow	glendarogers@polk-county.net	
Polk County	Ryan Wiggins	Building Director	330 West Church Street Bartow Florida 33830 United States	ryanwiggins@polk-county.net	
Polk County School Board	Josh McLemore	Facilities Planning Director	1915 S. Floral Avenue Bartow	Joshua.mclemore@polk-fl.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
Polk County School Board	Linda King	Director of Risk Management	1915 S. Floral Avenue Bartow	Linda.king@polk-fl.net	
Reserve at Van Oaks CDD/Silverlake CDD/Springs at Lake Alfred CDD/Stuart Crossing CDD	Kristen Suit	District Manager	1049 Oak Vly Dr. Auburndale	suitk@whhassociates.com	
Solterra Resort CDD	Barry Jeskewich	District Manager	250 International Parkway, Lake Mary	Ext. 398	
The Freedom Tour	Bobby Williams	President	108 1st Eloise Street, Winter Haven	bobbyw@thefreedomtour.org	
Town of Dundee	Joseph Carbone	Fire Department Chief	202 East Main Street, Dundee	jcarbone@townofdundee.com	
Town of Dundee	Lorraine Peterson	Planner	202 East Main Street, Dundee	lpeterson@townofdundee.com	
Town of Dundee	Tandra Davis	Town Manager	202 East Main Street, Dundee	tdavis@townofdundee.com	
Town of Dundee	Vermalyn Williams	Code Enforcement Director	202 East Main Street, Dundee	vwilliams@townofdundee.com	
Town of Hillcrest Heights	Larry Blackwelder	Town Clerk	151 N. Scenic Hwy, Hillcrest Heights	townofhillcrestheights@netzero.com	
Town of Lake Hamilton	Patrick Henry	Water Utility Director	100 Smith Avenue Lake Hamilton	henryp@townoflakehamilton.com	
Town of Lake Hamilton	Brittney Sandoval	Town Administrator	100 Smith Avenue Lake Hamilton	brittney@townoflakehamilton.com	
Town of Lake Hamilton	Cathy Sumner	Water Department Administrative Assistant	100 Smith Avenue Lake Hamilton	csumner@townoflakehamilton.com	
United Way Central Florida	June May	Director of Community Resources	5605 US-98, Lakeland, FL 33812	June.may@uwcf.org	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
Village of Highland Park	Ric Busbee	City Manager	1650 Highland Park Drive North, Lake Wales	citymanager@highlandpark-fl.org	
Webber International University	Ryan Reis	Director of Annual Fund and Alumni Affairs	1201 N. Scenic Highway, Babson Park	Reisrj2@webber.edu	
Webber International University	Kenneth Reaves	Campus President	1201 N. Scenic Highway, Babson Park	reaveskm@webber.edu	
Westridge CDD	Brian Mendes	District Manager	8529 South Park Circle Orlando	bmendes@rizzetta.com	
Westview South CDD	Andrew Kantarzhi	District Manager	2300 Glades Rd, Boca Raton	kantarzhia@whhassociates.com	
On Deck Restoration	Scott Lineback		3702 Century Blvd #1, Lakeland, FL 33811	scott@ondeckrestoration.com	
On Deck Restoration	Shaun Prather		3702 Century Blvd #1, Lakeland, FL 33811	shaun@ondeckrestoration.com	
polk county utilities	Holden Wright	PM	121 Jim Keene Blvd, Winter Haven, FL 33880	holdenwright@polk-county.net	
City of Mulberry	Billy Abernathy	Polk EM	1890 Jim Keene		
	Jenn Garcia	City Clerk		JGarcia@CityofMulberryFL.com	

Local Mitigation Strategy Working Group Meeting

**Only add your name here if not already on the sign in sheet!!

Date: February 19, 2025

Time: 9:30AM-11:30AM

NAME	AGENCY	EMAIL	Signature
MALE V. [illegible]	Polk County	[illegible]	
Ryan Wiggins	Polk County	RyanWiggins@Polk-County.net	
Doug Cockerham	PCEM	on file	

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
FEBRUARY 19, 2025

MINUTES

1. Welcome and Introductions
   - ❖ Paul welcomed attendees to the meeting.
     - ✓ Paul shared that the notice of funding available for Hurricane Milton was recently publicized and there are funds available for mitigation projects. Applications will be due in May.
     - ✓ Paul also shared that the Elevate Florida program was recently announced. This is hazardous mitigation funds for raising elevation of residential homes. There have been some applications already. Requests are made by individuals and require a 25% match by the homeowner.
     - ✓ Marisa thanked attendees for coming to the meetings and for their input on this project.
   - ❖ Attendees introduced themselves.
2. Old Business
   - ❖ Outstanding Items
     - ✓ Marisa reminded the group that there are still some jurisdictions that need community profiles, policies & regulations data, agency/jurisdictional history of hazards, status of current projects, and for some to define who is responsible for NFIP (need position title). Marisa asked attendees to please make sure Jerri has that data, which may be emailed directly to her.
3. New Business
   - ❖ LMS Draft Discussion: Data and Analysis
     - ✓ Marisa reviewed the demographic information and what data is included, such as population growth, median age and the statistics of persons below poverty level, as well as information regarding Polk County's housing stock and the year the structure was built.

- ✓ Maps were reviewed to show the purpose of their inclusion in the LMS including.
- ✓ CFRPC will also include information regarding the 326 dams in the county which average in age at 52 years.
- ✓ Marisa reviewed the data associated with bicycle and pedestrian crash maps and the hazards posed from that information. She also reviewed the importance of the FIRM maps that were included for each jurisdiction in the LMS.
- ✓ Marisa shared that the data pending from the FEMA to the County regarding the repetitive loss properties will contain a comment that Polk County is waiting to receive that data.
- ✓ Agal blooms is the newly added category, received from DEP.
- ✓ Impacts to citrus production and the two Florida federal quarantine areas was shared.
- ✓ Hazardous facilities will also be included which can range from facilities with florescent lights to wastewater facilities and more.

❖ It is possible that we may need to meet before the next meeting scheduled in June to review the comments.

❖ Marisa is hopeful to submit a draft in March and anticipates having comments back by the next meeting.

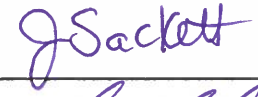
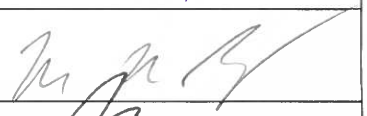
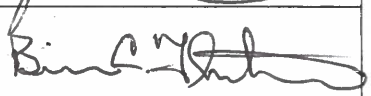
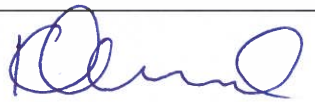
Next Working Group Meeting – June 4, 2025

Polk County Local Mitigation Strategy Update

July 10, 2024 Agenda

1. Project Introduction
2. Information Needed from PCEM:
    a. For all meetings since June 17, 2020
        i. Meeting sign in sheets
        ii. Minutes
        iii. Presentations
        iv. Agendas
        v. Public notices (social media posts)
        vi. Attendance table
    b. Working Group Membership list
    c. Project list
3. Questions for PCEM:
    a. Who is the LMS Chair and Co-Chair?
    b. Working Group Management
        i. Who will send out calendar invites, agenda packages, reminders, etc. for the meetings?
        ii. How far in advance do meeting agendas and packets need to be sent?
    c. CRS Subcommittee
    d. Send out letters to jurisdictions for notification
    e. Public notices/social media postings/flyers
        i. Creation and approval process
        ii. Where to post and share
    f. Is a meeting with Polk Division planners needed to explain the significance of the plan and the need for their input?
    g. Plan layout style
        i. Base Plan, Appendices
        ii. Maps
    h. Editing process
4. LMS Timeline
    a. Meeting locations

Polk County LMS Meeting
July 10, 2024

Name	Affiliation	Email	Signature
Jerri Sackett	CFRPC	jsackett@cfrpc.org	
Curtis Knowles	CFRPC	cknowles@cfrpc.org	
Marisa Barmby	CFRPC	mbarmby@cfrpc.org	
Paul Womble	Polk County EM	paulwomble@polk-county.net	
Brian Thurston	Polk County EM	brianthurston@polk-county.net	
Katie Hollenbeck	Polk County EM	kathrynhollenbeck@polk-county.net	

Polk County Local Mitigation Strategy Meeting
Initial Kick Off with Emergency Management
July 10, 2024

Attendees:
CFRPC – Curtis Knowles, Jerri Sackett, Marissa Barmby
PCEM – Paul Womble, Brian Thurston, Katie Hollenbeck

Notes

- Discussed needed information for the update. Polk will be gathering the documentation requested and sending it to CFRPC's Google Drive.
- Brian will be the LMS Chair and Katie the Co-Chair.
- Brian and Katie will send out calendar invites, agenda packages, reminders, etc.
    - 2 weeks prior to the LMSWG meeting, the agenda needs to be emailed to them for review.
    - 1 week prior to the LMSWG meeting the agenda and packet will be sent to the working group
- CRS subcommittee will continue with this LMS update.
- Paul will be sending out letters to the jurisdictions to notify them of the LMS update.
- Paul will be discussing public notices, social media postings, flyers, and website/story map with Communications division.
- Marisa will email the overall information that will be needed from each jurisdiction that Paul can include in the letters to the jurisdictions.
- Brian and Katie agreed upon the recommended change of moving the hazards and information to the front of the plan and the regulations and other documentation towards the end as appendices.
- The updated maps will keep the 2020 style.
- Brian and Katie will make edits on paper copies and email those to Jerri for changes to be made.
- Curtis will research who is expected to adopt the LMS and attend the meetings in order to apply for funding (cities, school districts, tribes, etc).
- Paul requested for language to be added to the LMS plan requiring HMGP recipients to report status updates at each LMS meeting.
- Brian will reach out to the Tribe in Lakeland about participating and attending the LMSWG meetings.

POLK COUNTY
2025 UPDATE OF THE
POLK COUNTY LOCAL MITIGATION STRATEGY
NOTICE OF WORKING GROUP MEETING

Polk County will hold a Local Mitigation Strategy Working Group Meeting on **Wednesday, August 14, 2024, at 9:30 AM**, at the Polk County Emergency Operations Center, 1890 Jim Keene Boulevard, Winter Haven, Florida 33880. The County is in the process of preparing a 5-Year Update to the Polk County Local Mitigation Strategy (LMS). The 5-Year Update to the LMS will: reflect changes in development, progress in local mitigation efforts, and changes in priorities that have occurred since the last adoption; develop a comprehensive risk analysis that can be used as the risk analysis for other emergency planning documents; provide analysis of critical facilities; and review and propose amendments, if necessary, to the Evaluation and Prioritization Process. Projects identified in an approved Local Mitigation Plan are eligible for federal hazard mitigation grants.

Polk County Emergency Management is requesting the participation of members of the public as well as community and business leaders to help update the County's Local Mitigation Strategy. All of the LMS Working Group meetings are open to the public for either full-time membership or casual participation

For additional information, please contact Brian Thurston, Emergency Management Program Manager, Polk County Emergency Management at (863) 298-7000, brianthurston@polk-county.net.

In compliance with the Americans with Disabilities Act (ADA), anyone who needs a special accommodation to participate in this meeting should notify Polk County 863-298-7000 at least 48 hours in advance of the scheduled meeting.

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
AUGUST 14, 2024

AGENDA

1. Welcome and Introductions
2. Mandatory Attendance and Participation – *action item*
3. LMS Document Overview and Update Process – *information item*
4. LMS Mitigation Goals and Objectives – *action item*
5. Review of Hazards for Analysis - *action item*
6. Follow-up Items
    a. Community Survey and Community Input Ideas
    b. Homework for LMS Participating Partners – *due September 18, 2024*

Next Working Group Meeting – September 18, 2024, at 9:30 am at Polk EOC

2. Mandatory Attendance and Participation

SUMMARY:

Participation in the planning process for the update of the Local Mitigation Strategy as well as attendance in the LMS Working Group meetings are a requirement. The Proposed Working Group meeting schedule for the LMS update is attached.

Per Florida Division of Emergency Management's LMS Update Manual, the LMS must list the participating jurisdictions and special districts (e.g., cities, counties, school boards, hospitals, airport authorities) seeking approval and clarify what is required of the participating jurisdictions. At a minimum, each is expected to take part in the planning process and to have a mitigation action addressing hazards that could affect the jurisdiction.

Any jurisdiction that ceases participation in the LMS process will no longer be eligible for federal hazard mitigation assistance.

RECOMMENDED ACTION:

Add participation requirement within the Polk LMS.

WORKING GROUP MEETING SCHEDULE

LMS Working Group Meetings are 9:30 am – 11:30 am
Location: Polk County EOC, 1890 Jim Keene Blvd., Winter Haven, FL 33880

LMSWG Meeting #1: August 14, 2024

LMSWG Meeting #2: September 18, 2024

LMSWG Meeting #3: November 20, 2024

LMSWG Meeting #4: January 22, 2025

LMSWG Meeting #5: February 19, 2025

LMSWG Meeting #6: June 4, 2025

3. LMS Overview and Update Process

SUMMARY:

A local mitigation plan is the physical representation of a jurisdiction's commitment to reduce risks from natural, technological, and human-caused disasters. Polk County's 2020 Local Mitigation Strategy was adopted on August 4, 2020. Per the Florida Division of Emergency Management Eighteen Month Expiration Notification letter, the Polk County LMS will expire on **September 1, 2025**. To meet approval requirements, the draft of the 2025 Local Mitigation Strategy must be submitted to the State for review by **March 2025**. The finalized plan will be submitted for review and adoption by the Polk County Board of County Commissioners, which will occur by August 2025, followed by required adoption by each municipality in the County.

Mitigation projects on the LMS Prioritized Project List (PPL) may be eligible for funding under a variety of programs, such as the Pre-Disaster Mitigation (PDM) Program, Public Assistance (PA), Flood Mitigation Assistance (FMA) Program, and Hazard Mitigation Grant Program (HMGP). The project list is updated at least once a year in anticipation of funding opportunities. Adoption of the LMS is an eligibility requirement for various hazard mitigation grant programs. Participation in the LMS Working Group meetings is an additional eligibility requirement. If jurisdictions are not participating in the update process and the annual meetings, eligibility for funding may be withheld.

The Polk County Local Mitigation Strategy (LMS) Working Group is coordinated by Polk County Emergency Management. The Working Group is comprised of county, municipal, private sector, and community partners, including the general public, that prepare and promote local strategies and projects to reduce long-term risks to life and property from disasters. The resulting pre- and post-disaster mitigation strategies and projects are supported by a variety of state and federal programs and funding sources.

RECOMMENDED ACTION:

None.

4. LMS Mitigation Goals and Objectives

SUMMARY:

As part of the LMS update, the Working Group must review and approve the mitigation goals and objectives to be included in the updated LMS. The goals and associated objectives serve to guide the Working Group's work and focus the efforts and resources to reduce hazard related losses and damages in the future. The Working Group needs to review the goals and objectives to ensure they address the current conditions and priorities in the County. In addition to the goals and objectives adopted in the 2020 Polk County LMS plan, the adopted goals and objectives from the 2023 Enhanced State Mitigation Plan are included. The Working Group will be asked to review the goals and objectives and recommend any changes for the LMS update.

RECOMMENDED ACTION:

Update and approve Mitigation Goals and Objectives.

2020 LMS Adopted Mitigation Goals and Objectives

TABLE VII-1: POLK COUNTY MITIGATION GOALS AND OBJECTIVES	
GOAL 1:	**REDUCE THE LOSS OF LIFE, PROPERTY, AND WELFARE OF THE PUBLIC FROM THE EFFECTS OF NATURAL AND HUMAN CAUSED HAZARDS FROM ALL SOURCES, BUT ESPECIALLY HURRICANES, TORNADOES, FLOODING, OTHER SEVERE WEATHER EVENTS, CYBER ATTACKS, AND OTHER HUMAN CAUSED EVENTS.**
Objective 1.1:	Encourage the protection of cultural, economic, and natural resources from potential natural and human caused hazards.
Objective 1.2:	Continue to develop the capacity to mitigate, prepare, respond, and recover from all hazards.
Objective 1.3:	Efficiently manage all local disasters.
Objective 1.4:	Reduce the cost of disaster response and recovery.
Objective 1.5:	Ensure new development and redevelopment complies with all applicable Federal, State, and local regulations.
IMPLEMENTATION STRATEGIES	
1a.	Continue to engage additional local community stakeholders to participate in the LMS Working Group meetings.
1b.	Track mitigation projects by flood basin to see past, current, and future projects and compare to flooding data.
1c.	Continue to work to provide sufficient shelter space to satisfy in-County demand.
1d.	Maintain and improve existing drainage systems to regulate management of storm water runoff.
1e.	Protect the function of natural drainage features and surficial aquifer recharge areas.
1f.	Protect and preserve wetlands, floodplains, and riverine systems to reduce the County's exposure to hazardous incidents including flooding and work to maintain economic, aesthetic, and recreational values.
1g.	Integrate mitigation into existing structures during regular maintenance and replacement cycles.
GOAL 2:	**MAINTAIN A HIGH STATE OF PREPAREDNESS/COORDINATION TO MITIGATE AND RESPOND TO DISASTERS THROUGH PLANNING, EDUCATION, AND COORDINATION.**
Objective 2.1:	Optimize the effective use of all available resources by establishing public/private partnerships and encouraging intergovernmental coordination and cooperation.
Objective 2.2:	Prevent and/or minimize losses from disaster events through education and regulation.

TABLE VII-1: POLK COUNTY MITIGATION GOALS AND OBJECTIVES	
Objective 2.3:	Continue dissemination of flood information to the public, non-profit, and private sector.
Objective 2.4:	Support programs under the Emergency Planning and Community Right-To-Know Act.
Objective 2.5:	Promote awareness and preparedness through the distribution of information on hazards and measures to mitigate them.
Objective 2.6:	Increase the level of coordination of mitigation management concerns, plans, and activities at the municipal, County, State, and Federal levels of governments in relation to all hazards.
Objective 2.7:	Educate the private sector about mitigation concepts and opportunities.
Objective 2.8:	Coordinate effective partnerships between County and local jurisdictions for floodplain management and stormwater drainage.
Objective 2.9:	Work with government, nonprofit, and private sector entities to identify and implement opportunities for the incorporation of mitigation concepts and information into outreach efforts.
Objective 2.10:	Inform and educate the public, nonprofit, and private sector about potential hazards and property protection measures.
Objective 2.11:	Inform and educate the public, nonprofit, and private sector about the first response to disasters to promote better disaster preparation.
Objective 2.12:	Strengthen continuity planning for local government, businesses, and community partners to avoid significant disruptions of services.
IMPLEMENTATION STRATEGIES	
2a.	Utilize a widespread program of general information, media coverage, and participatory involvement to enhance public mitigation and engagement.
2b.	Educate departments and agencies to ensure continuity of operations and a full integration of mitigation management functions.
2c.	Provide information and education on new and emerging mitigation methods and products for new and retrofitting construction.
2d.	Coordinate with the Certified Emergency Response Team (CERT) across the County.
2e.	Host mitigation workshops to educate stakeholders and community members.
2f.	Promote mitigation measures county-wide through outreach and education.
GOAL 3:	**SUPPORT MITIGATION INITIATIVES AND POLICIES THAT PROTECT THE COUNTY'S CULTURE, COMMERCE, ECONOMY, TOURISM, RESIDENCES, TRANSPORTATION SYSTEMS, RECREATION, AND NATURAL RESOURCES.**
Objective 3.1:	Support land acquisition programs that reduce or eliminate potential future losses due to natural or human caused hazards or repetitive loss and that are compatible with the protection of natural or cultural resources.
Objective 3.2:	Continue to identify potentially vulnerable areas and support smart growth and development in Polk County.

TABLE VII-1: POLK COUNTY MITIGATION GOALS AND OBJECTIVES	
Objective 3.3:	Support restoration and conservation of natural resources wherever possible.
Objective 3.4:	Seek mitigation opportunities that reduce economic losses and promote responsible growth.
Objective 3.5:	Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure.
IMPLEMENTATION STRATEGIES	
3a.	Retrofit existing County and local facilities to withstand hazard impacts.
3b.	Participate in activities that will further the County and local government's ability to plan for and mitigate the impacts of future vulnerability.
3c.	Adopt policies that provide development standards to promote resiliency and reduce risk.
3d.	Adopt building codes leading to building design criteria based on site-specific evolving and future risk.
3e.	Identify mitigation projects that reduce risk to vulnerable populations that are at greater risk from hazards.
3f.	Maintain or improve critical evacuation routes.
3g.	Prioritize and retrofit existing critical facilities and infrastructure through capital improvement expenditures.
3h.	Perform risk assessments for hazards, including cyber security.
3i.	Continue to invite and work with critical facility stakeholders.
3j.	Identify and track mitigation measures for existing critical facilities.
3k.	Assess alternate facilities as identified in continuity of operations plans to determine if the sites are appropriately mitigated.
3l.	Advocate property acquisition or retrofitting for repetitive loss properties.
3m.	Assist and encourage new economic development and post-disaster redevelopment through the encouragement of public-private partnerships, economic diversification, and development.
GOAL 4:	**PROMOTE AND SUPPORT THE COMMUNITY RATING SYSTEM (CRS) FOR ALL COMMUNITIES IN POLK COUNTY.**
Objective 4.1:	Incorporate measures into the LMS to help obtain uniform credit for all CRS Communities.
Objective 4.2:	Identify and track projects in the LMS to demonstrate the role of mitigation measures in reducing flood risk.

TABLE VII-1: POLK COUNTY MITIGATION GOALS AND OBJECTIVES	
Objective 4.3:	Provide outreach and educational opportunities for the public, nonprofit, and private sector regarding flooding risks and the CRS Program.
Objective 4.4:	Advocate property acquisition or retrofitting for repetitive loss properties.
IMPLEMENTATION STRATEGIES	
4a.	Identify repetitive and severe repetitive loss areas.
4b.	Identify projects that will mitigate flood risk in repetitive loss areas.

2023 Enhanced State Hazard Mitigation Plan

5. Review of Hazards

SUMMARY:

As part of the LMS update, the Working Group must review and approve the hazards to be analyzed in the in the updated LMS. The Hazard Identification section reviews a wide range of hazards, identifies those that could potentially impact the county, and provides information about how the identified hazards specifically impact the county and participating jurisdictions. The 2020 LMS included both natural and man-made hazards.

Staff will present information on the currently identified hazards and potential amendments to the hazard list for the 2025 LMS Update. Working Group Members are requested to provide input on potential hazards to be added to the LMS.

The Working Group will be asked to review the list of hazards and recommend any changes for the LMS update.

RECOMMENDED ACTION:

Update and approve hazards to be analyzed and integrated into the updated plan.

2020 LMS Identified Hazards and determination of Further Analysis

TABLE 4-1: INITIALLY IDENTIFIED HAZARDS AND DETERMINATION OF FURTHER ANALYSIS		
Hazard	**Further Analysis Required**	**No Further Analysis Required**
ATMOSPHERIC HAZARDS		
Extreme Temperatures	X	
Fog	X	
Hurricanes /Tropical Storms	X	
Severe Storms and Tornadoes (Hail, Lightning, and Thunderstorms)	X	
Winter Storms		X
GEOLOGIC HAZARDS		
Earthquake		X
Landslides		X
Subsidence and Sinkholes	X	
Tsunami		X
HYDROLOGIC HAZARDS		
Coastal and Riverine Erosion		X
Drought	X	
Flood	X	
Storm Surge		X
OTHER NATURAL HAZARDS		
Climate Change	X	
Sea Level Rise		X
Wildfire	X	
MAN-MADE HAZARDS		
Civil Disturbance/Terrorism		X
Cyber Attacks	X	
Dam/Levee Failure	X	
Epidemics	X	
Hazardous Material Incidents	X	
Mass Immigration/Migration		X
Nuclear/Radiological		X
Transportation Incident	X	

State of Florida 2023 Hazard Mitigation Plan Identified Hazards

Natural Hazards:

- Flood
- Tropical Cyclones
- Wildfire
- Severe Thunderstorm
- Sinkholes
- Extreme Heat
- Erosion
- Winter Weather
- Drought
- Earthquake
- Tsunami

Human Caused and Technological Hazards:

- Hazardous Materials Incident
- Transportation Incident
- Agricultural Disruption
- Human Health Incident
    - Human health can be threatened by biological hazards which turn into biological incidents. There are several examples throughout this profile that cause biological incidents. A biological incident can refer to many different types of incidents, involving bacteria, viruses, or toxins, all of which can be harmful or deadly to humans and animals. These various bacteria, viruses and toxins are referred to as biological agents.
- Cyber Incident
    - Cyber incidents are becoming more common and more costly in our society. Because of this, Cyber Incidents will be profiled as a hazard to the state of Florida. The word "cyber" refers to anything that contains, is connected to, or controlled by computers and computer networks.
- Harmful Algal Bloom
- Domestic Security Incident
    - Domestic security incidents that happen throughout Florida and this profile is going to cover mass shootings, school shootings, and terrorism. However, terrorism will be our main topic throughout this profile.
- Mass Migration
- Civil Disturbance
    - According to FEMA, civil disturbance, sometimes referred to as civil unrest, is an activity such as a demonstration, riot, or strike that disrupts a community and requires intervention to maintain public safety.
- Dam Failure

- Space Weather
    - Space weather is a broad term used to describe atmospheric events that have the potential to adversely affect conditions on Earth. Space Weather events are caused by the interaction of Earth with emissions from the Sun. There are two causes of space weather events, coronal mass ejections (CMEs) and solar flares, which are different incidents that occur on the Sun. CMEs and solar flares can cause three different types of space weather events on Earth: Geomagnetic Storms, Solar Radiation Storms, Radio Blackouts.
- Radiological Incident

6a. Follow-up – Community Survey and Community Input Ideas

SUMMARY:

Part of the LMS update process includes obtaining public involvement and input. The Working Group will be asked to provide information on potential opportunities for public involvement during the update process.

RECOMMENDED ACTION:

Discussion of public involvement and input. As events are scheduled, please submit the information to the contact below.

Submit potential public involvement events to:
Jerri Sackett
Email: jsackett@cfrpc.org

6b. Follow-up: Homework – due September 18, 2024

SUMMARY:

Staff will distribute the Community Profiles and Policies and Regulations pertaining to each jurisdiction and participant from the existing LMS document. Each jurisdiction and participant will need to update the information and return it by September 18, 2024.

RECOMMENDED ACTION:

Submit the updated Community Profiles and Jurisdiction and Regulations by September 18, 2024, to the contact below. If there are no changes, please email the contact below.

Submit updated Community Profiles and Jurisdiction Policies and Regulations to:
Jerri Sackett
Email: jsackett@cfrpc.org

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
August 12, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
American Red Cross	Kris Abel	Disaster Program Manager	147 Avenue A NW, Winter Haven	kristin.abel@redcross.org	
BayCare	Timothy Allen	Healthcare EM Coordinator	200 Ave F NE, Winter Haven	Timothy.allen@baycare.org	
CFRPC	Curtis Knowles	EM and Community Projects Director	555 E. Church Street, Bartow	cknowles@cfrpc.org	
CFRPC	Jerri Sackett	EM Projects Senior Planner	555 E. Church Street, Bartow	jsackett@cfrpc.org	
CFRPC	Marisa Barmby	Program Manager – Planning and Research	555 E. Church Street, Bartow	mbarmby@cfrpc.org	
City of Auburndale	John Dickson	Public Works Director	915 Charles Avenue Auburndale	jdickson@auburndalefl.com	
City of Auburndale	Caleb Gabany	Sanitation	915 Charles Avenue Auburndale	cgabany@auburndalefl.com	
City of Bartow	Jay Robinson	Fire Department Chief	450 N. Wilson Avenue Bartow	jrobinson.fire@cityofbartow.net	
City of Bartow	Sara Jones	Grant Administrator	450 N. Wilson Ave, Bartow	Salbert.pw@cityofbartow.net	
City of Davenport	~~Bill Nolen~~ THOMAS MURPHY JR	~~Building Official~~ FIRE OPERATIONS	226 W. 4th Street, Davenport	bnolen@mydavenport.org	
City of Eagle Lake	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
City of Eagle Lake	Tom Ernharth	City Manager	75 N. 7th Street Eagle Lake	ternharth@eaglelake-fla.com	
City of Fort Meade	Matthew Zahara	Fire Department Chief	8 West Broadway, Fort Meade, FL 33841	mzahara@cityoffortmeade.com	
City of Fort Meade	Edward Dean	City Manager	8 West Broadway, Fort Meade, FL 33841	edean@citoffortmeade.com	
City of Fort Meade	Melissa Cannon	Deputy City Clerk	8 West Broadway, Fort Meade, FL 33841	mcannon@cityoffortmeade.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
August 12, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
City of Fort Meade	Veronica Hairston	Chief Operations Officer	8 West Broadway, Fort Meade, FL 33841	vhairston@cityoffortmeade.com	
City of Frostproof	Josh Turner	Public Works	111 W. First Street Frostproof	JTurner@cityoffrostproof.com	
City of Frostproof	Nicole McDowell	City Manager	111 W. First Street Frostproof	nmcdowell@cityoffrostproof.com	
City of Haines City	Lamar Cliett	Deputy Public Works Director	300 North 5th Street, Haines City	lamar.cliett@hainescity.com	
City of Haines City	James Keene	Public Services Administrator	620 E. Main Street Haines City	james.keene@hainescity.com	
City of Lake Alfred	Community Development Department		120 E. Pomelo Street Lake Alfred	comdev@mylakealfred.com	
City of Lake Alfred	Art Bodenheimer	Police Department Chief	120 E. Pomelo Street Lake Alfred	abodenheimer@mylakealfred.com	
City of Lake Wales	Shannon Hancock	Growth Management Executive Assistant	201 W. Central Avenue Lake Wales	shancock@lakewalesfl.gov	
City of Lake Wales	Dale Hampton	Investigations Commander	133 E. Tillman Avenue, Lake Wales	DHAMPTON@lakewalesfl.gov	
City of Lake Wales	Emmanuel Figueroa	Police Department	133 E. Tillman Avenue, Lake Wales	efigueroa@lakewalesfl.gov	
City of Lake Wales	James Slaton	City Manager	201 W. Central Avenue, Lake Wales	jslaton@lakewalesfl.gov	
City of Lake Wales	Joe Jenkins	Fire Department Chief	201 W. Central Avenue Lake Wales	jjenkins@lakewalesfl.gov	
City of Lake Wales	Sara Irvine	Special Projects Administrator	2010 W. Central Avenue, Lake Wales	sirvine@lakewalesfl.gov	
City of Lakeland	Anne Marie Locascio	Claims Specialist Risk Management	Lakeland	annmarie.locascio@lakelandgov.net	
City of Lakeland	Michael Lewis	Captain Investigative Services Division	Lakeland	michael.lewis@lakelandgov.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
August 12, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
City of Mulberry	Billie Segree	Code Enforcement Officer	104 S. Church Ave Mulberry	bsegree@cityofmulberryfl.com	
City of Mulberry	John Wasmund	Finance Director	104 S. Church Ave Mulberry	jwasmund@cityofmulberryfl.com	
City of Mulberry	Ron Borchers	Planning & Development Director	104 S. Church Ave Mulberry	rborchers@cityofmulberryfl.com	
Polk City	Patricia Jackson	City Manager		Patricia.jackson@mypolkcity.org	
City of Winter Haven	Dustin Everitt	Natural Resources Division Manager	451 Third St. NW, Winter Haven	deveritt@mywinterhaven.com	
City of Winter Haven	Mark Bombard	Assistant Director of Utilities	451 Third St. NW, Winter Haven	mbombard@mywinterhaven.com	
City of Winter Haven	Joseph Emery	Fire Chief	301 Ave G SW, Winter Haven	jemery@mywinterhaven.com	
FL Department of Health	Scott Sjoblom	Assistant CHD Director	1290 Golf View Avenue Bartow	Scott.Sjoblom@flhealth.gov	
Florida Division of Emergency Management	Jeremy O'Dell	Recovery		jeremy.odell@em.myflorida.com	
Florida Division of Emergency Management	Mitchell Budihas	Mitigation		Mitchell.budihas@em.myflorida.com	
Florida Division of Emergency Management	Antonio	Recovery		Antonio.zapata@em.myflorida.com	
Florida Forest Service	Pete Lewis	Forest Area Supervisor for Eastern Polk County		Peter.Lewis@fdacs.gov	
Florida Forest Service	Todd Chlanda	Wildfire Mitigation Specialist	5745 S. Florida Avenue, Lakeland	William.Chlanda@fdacs.gov	
Florida Forest Service	Vic Memmoli	Forest Area Supervisor for Western Polk County		Victor.Memmoli@fdacs.gov	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
August 14, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Golden Lakes Community Dev.	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
John Hopkins All Children's Hospital	Larry Green	Director of Safety	3310 Lakeland Hills Blvd., Lakeland	Lgreen52@jhmi.edu	
John Hopkins All Children's Hospital	Shanti Smith-Copeland	Director of Emergency Management	3310 Lakeland Hills Blvd., Lakeland	Shanti.smith-copeland@iparametrics.com	
Health and Human Services	Marcia Andersen	Social Service Director	2135 Marshall Edwards Drive, Bartow	marciaandersen@polk-county.net	
Health and Human Services	Jennifer Cooper	Housing and Neighborhood Manager	1290 Gulfview Blvd, Bartow	jennifercooper@polk-county.net	Jennifer Cooper
Lake Region Lakes Mgmt. District	Roger Griffiths	Ex Director	804 Ave X SW, Winter Haven	Rdg1744@gmail.com	
Peace River Center	Candace Barnes	COO	1239 E. Main Street, Bartow	cbarnes@peacerivercenter.org	
Polk County	Apryl Faurote	Volunteer Services Coordinator	1290 Golfview Avenue Bartow	aprylfaurote@polk-county.net	Apryl Faurote
Polk County	Benjamin Dunn	Planning and Development, Building Dir.	330 W. Church Street Bartow	benjamindunn@polk-county.net	
Polk County	Billy Abernathy	Emergency Management EOC Coordinator	1890 Jim Keene Blvd Winter Haven	billyabernathy@polk-county.net	
Polk County	Richard Benton	Land Development / Floodplain Manager	330 W. Church Street Bartow	richardkbenton@polk-county.net	
Polk County	Christia Johnson	Budget Director	330 W. Church Street, Bartow	christiajohnson@polk-county.net	
Polk County	Brian Thurston	EM Program Manager	1890 Jim Keene Blvd., Winter Haven	brianthurston@polk-county.net	
Polk County	Hezedean Smith	Fire Chief	1295 Brice Blvd., Bartow	hezedeansmith@polk-county.net	

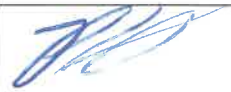
POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
August 14, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Polk County	James Schnell	Building Division	330 W. Church Street, Bartow	jamesschnell@polk-county.net	
Polk County	Jana Nickles	Special Needs Coordinator	1890 Jim Keene Blvd Winter Haven	jananickles@polk-county.net	
Polk County	Jay Jarvis	Transportation Director	330 W. Church Street Bartow	jayjarvis@polk-county.net	
Polk County	Brian Nadler	Deputy Chief	1295 Brice Blvd., Bartow	briannadler@polk-county.net	
Polk County	Katie Hollenbeck	EM Planner	1890 Jim Keene Blvd Winter Haven	kathrynhollenbeck@polk-county.net	
Polk County	Michele Sims	Procurement Manager	330 W. Church Street Bartow	michelesims@polk-county.net	
Polk County	Michelle Shiver	RSVP Polk	1290 Golfview Avenue Bartow	michelleshiver@polk-county.net	
Polk County	Paul Womble	Emergency Management Director	1890 Jim Keene Blvd Winter Haven	paulwomble@polk-county.net	
Polk County	Richard Benton	Floodplain Manager	330 W. Church Street, Bartow	richardkbenton@polk-county.net	
Polk County	Shawn Smith	Assistant Fire Chief	330 W. Church Street, Bartow	shawnsmith@polk-county.net	
Polk County	Scott Anderson	Floodplain Tech	330 W. Church Street, Bartow	scottanderson@polk-county.net	
Polk County	Tabitha Biehl	Parks and Natural Resources	4177 Ben Durrance Road, Bartow	tabithabiehl@polk-county.net	
~~Polk County~~	~~Tamara West~~	~~Housing and Neighborhood Dev.~~	~~1290 Golfview Avenue~~	~~tamarawest@polk-county.net~~	
Polk County	Gaye Sharpe	Park and Natural Resources, Fiscal Mgr.	4177 Ben Durrance Road, Bartow	gayesharpe@polk-county.net	
Polk County	Todd Bond	Deputy County Manager Support Services	330 W. Church Street Bartow	toddbond@polk-county.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
August 14, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Polk County	Glenda Roger	Lead Management & Budget Analyst	330. W Church Street, Bartow	glendarogers@polk-county.net	
Polk County School Board	Josh McLemore	Facilities Planning Director	1915 S. Floral Avenue Bartow	Joshua.mclemore@polk-fl.net	
Polk County School Board	Linda King	Director of Risk Management	1915 S. Floral Avenue Bartow	Linda.king@polk-fl.net	
Resident		Resident			
The Freedom Tour	Bobby Williams	President	108 1st Eloise Street, Winter Haven	bobbyw@thefreedomtour.org	
Town of Dundee	Joseph Carbone	Fire Department Chief	202 East Main Street, Dundee	jcarbone@townofdundee.com	
Town of Dundee	Lorraine Peterson	Planner	202 East Main Street, Dundee	lpeterson@townofdundee.com	
~~Town of Dundee~~ Town of Dundee	~~Melissa Glogowski~~ Vermalyn Williams	~~Executive Admin. Assistant~~ Code	~~202 East Main Street, Dundee~~	~~mglogowski@townofdundee.com~~	
Town of Dundee	Tandra Davis	Town Manager	202 East Main Street, Dundee	tdavis@townofdundee.com	
Town of Hillcrest Heights	Larry Blackwelder	Town Clerk		townofhillcrestheights@netzero.com	
Town of Lake Hamilton	Patrick Henry	Water Utility Director	100 Smith Avenue Lake Hamilton	henryp@townoflakehamilton.com	
Town of Lake Hamilton	Michael Teague	Police Department Chief	100 Smith Avenue Lake Hamilton	teaguem@townoflakehamilton.com	
Town of Lake Hamilton	Cathy Sumner	Water Department Administrative Assistant	100 Smith Avenue Lake Hamilton	csumner@townoflakehamilton.com	
Village of Highland Park	Ric Busbee	City Manager	1650 Highland Park Drive North, Lake Wales	citymanager@highlandpark-fl.org	
Webber International University	Jay Culver	Vice President of Student Life	1201 N. Scenic Highway, Babson Park	CulverJR@webber.edu	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
August 12, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Webber International University	Ryan Reis	Director of Annual Fund and Alumni Affairs	1201 N. Scenic Highway, Babson Park	Reisrj2@webber.edu	

If name is not on list Add here

Local Mitigation Strategy Working Group Meeting #1

Date: 08/14/2024
Time: 09:30am-11:30am

NAME	AGENCY	EMAIL	Signature
Darius Livingston	Polk County Fire Rescue	darius livingston@polk-county.net	
Ben Cassista	Polk County Fire Rescue	ben cassista@polk-county.net	
Scott Lineback	Ondeck Restoration	Scott@OndeckRestoration.com	
Shawn Prather	ondeck Restoration	Shawn@ondeckRestor	
Kenneth Reaves	Webber International Univ.	REAVESKM@webber.edu	
THOMAS MURPHY JR. DAVENPORT FD	TMURPHY@MYDAVENPORT.org		
Billy Abernathy	Polk County EM	billyabernathy@polk-county.net	
Tabitha Biehl	Polk County	tabitha biehl@polk-county.net	
Paul Wamble	Polk EM	paul wamble@polk-county.net	

Local Mitigation Strategy Working Group Meeting #1

Date: 08/14/2024
Time: 09:30am-11:30am

NAME	AGENCY	EMAIL	Signature
Joshua Mcbmore	Polk Schools	joshua.mcbmore@polk-fl.net	[signature]
MARISA BARMBY	CFRPC	mbarmby@cfrpc.org	[signature]
Jody Roman	City of Bartow	ON FILE	[signature]
Sarah Jones	City of Bartow	on file	[signature]
Apryl Fawcett	Volunteer Polk	on file	[signature]
Michelle Shivel	RSVP Polk	on file	[signature]

LMS Working Group Meeting

Polk County 2025 LMS Update

August 14, 2024

Agenda

- Introductions
- Mandatory Attendance and Participation
- LMS Document Overview and Update Process
- Plan Structure
- Review of Hazards for Analysis
- LMS Mitigation Goals and Objectives
- Mitigation Action Plan
- New Federal Flood Risk Management Standard (FFRMS)
- Polk County Vulnerability Assessment
- Follow-up Items:
  - Community Survey, Community Photo Submission, LMS Website
  - Homework - *Due September 18, 2024*

Introductions

- Name
- Agency
- LMS Experience
- Mitigation Grants Your Agency Was Awarded in the Past

Mandatory Attendance and Participation

- Attendance and participation is required for all participating jurisdictions and special districts (cities, school board, hospitals, certain private nonprofits, etc.)
- Any jurisdiction or special district that ceases participation in the LMS **will no longer be eligible** for federal hazard mitigation assistance
- Required to review and provide updates throughout the process

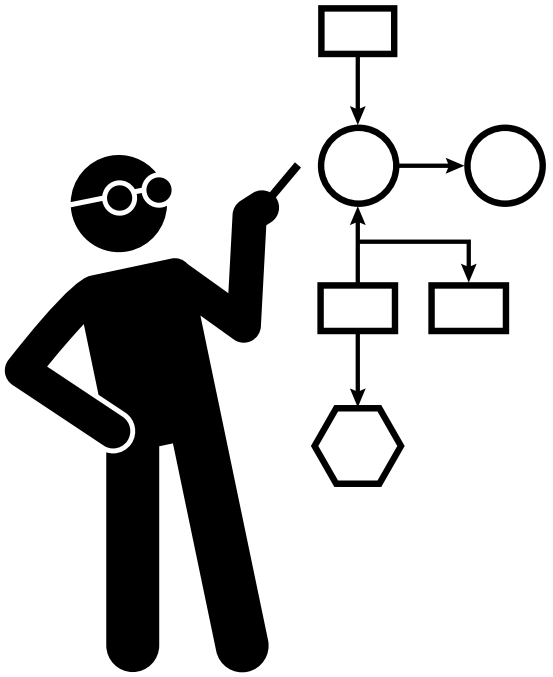
Mandatory Attendance and Participation

- Adoption
  - Jurisdictions must adopt the finalized LMS
  - *Other agencies must provide a letter of support of the LMS **(NEW)**
- Additional agency involvement
  - This would include any school boards/districts, universities, hospitals, improvement districts, etc.
  - Private Non-Profits are dependent on a couple of things when it comes to adopting, and more importantly their project if they choose to apply for any FEMA HMA grant funding
  - Eligible subapplicants for HMGP include local governments, state agencies, and certain private non-profits (PNPs). Eligible subapplicants may submit a subapplication on behalf of non-eligible applicants (individuals/residents, businesses, non-eligible non-profits

LMS Document Overview & Update Process

- A local mitigation plan is the written representation of a jurisdiction's commitment to reduce risks from hazards
- Adopted September 2021
- Expires September 2025
- Initial draft due to FDEM March 2025
- Multiple LMS Working Group meetings
- Goals and objectives address hazard vulnerabilities with all participants
- Mitigation activities address all goals & objectives and hazard vulnerabilities with all participants
- CRS Subcommittee

Plan Structure



Current Plan Structure

I. Introduction
II. What's New
III. Planning Process, Evaluation, Maintenance
IV. Community Profile
V. Hazard Identification & Analysis
VI. Hazard Vulnerability & Risk Assessment
VII. Mitigation Plan
VIII. LMS Adoption
IX. Resources
X. Appendices

Review of Hazards for Analysis

- Hazard Analysis
  - Identification of hazards
  - Previous occurrences
  - Probability of occurring again
- Risk Assessment
  - Vulnerability to population, buildings, critical facilities, economy
- Mitigation Action Plan
  - Projects to address identified hazards for all participating partners

Review of Hazards for Analysis

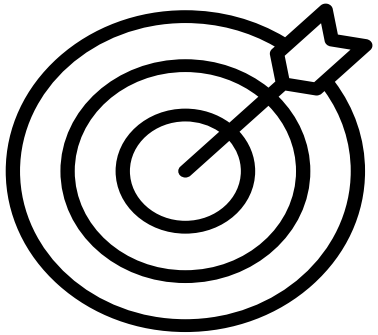
- Atmospheric Hazards
- Geologic Hazards
- Hydrologic Hazards
- Other Natural Hazards
- Human Caused and Technological Hazards

Review of Hazards for Analysis

- **Recommend adoption as is** by the LMS Working Group
- **Recommend adoption as proposed**
- **Recommend adoption with changes** by the LMS Working Group

LMS Goals and Objectives

- Must address the hazard vulnerabilities
- Must address all LMS participants
- Project list must address all the goals
- Current LMS has 4 goals, 26 objectives, 28 implementation strategies
- FDEM State Hazard Mitigation Plan has 5 goals, 22 objectives



LMS Goals and Objectives – Goal 1

Goal 1:	Reduce the Loss of Life, Property, and Welfare of the Public from the Effects of Natural and Human Caused Hazards from all Sources, but Especially Hurricanes, Tornadoes, Flooding, Other Severe Weather Events, Cyber Attacks, and Other Human Caused Events.
Objective 1.1:	Encourage the protection of cultural, economic, and natural resources from potential natural and human caused hazards.
Objective 1.2:	Continue to develop the capacity to mitigate, prepare, respond, and recover from all hazards.
Objective 1.3:	Efficiently manage all local disasters.
Objective 1.4:	Reduce the cost of disaster response and recovery.
Objective 1.5:	Ensure new development and redevelopment complies with all applicable Federal, State, and local regulations.

Implementation Strategies	
1a.	Continue to engage additional local community stakeholders to participate in the LMS Working Group meetings.
1b.	Track mitigation projects by flood basin to see past, current, and future projects and compare to flooding data.
1c.	Continue to work to provide sufficient shelter space to satisfy in-County demand.
1d.	Maintain and improve existing drainage systems to regulate management of storm water runoff.
1e.	Protect the function of natural drainage features and surficial aquifer recharge areas.
1f.	Protect and preserve wetlands, floodplains, and riverine systems to reduce the County's exposure to hazardous incidents including flooding and work to maintain economic, aesthetic, and recreational values.
1g.	Integrate mitigation into existing structures during regular maintenance and replacement cycles.

LMS Goals and Objectives – Goal 2

GOAL 2:	MAINTAIN A HIGH STATE OF PREPAREDNESS/COORDINATION TO MITIGATE AND RESPOND TO DISASTERS THROUGH PLANNING, EDUCATION, AND COORDINATION.
Objective 2.1:	Optimize the effective use of all available resources by establishing public/private partnerships and encouraging intergovernmental coordination and cooperation.
Objective 2.2:	Prevent and/or minimize losses from disaster events through education and regulation.
Objective 2.3:	Continue dissemination of flood information to the public, non-profit, and private sector.
Objective 2.4:	Support programs under the Emergency Planning and Community Right-To-Know Act.
Objective 2.5:	Promote awareness and preparedness through the distribution of information on hazards and measures to mitigate them.
Objective 2.6:	Increase the level of coordination of mitigation management concerns, plans, and activities at the municipal, County, State, and Federal levels of governments in relation to all hazards.
Objective 2.7:	Educate the private sector about mitigation concepts and opportunities.
Objective 2.8:	Coordinate effective partnerships between County and local jurisdictions for floodplain management and stormwater drainage.
Objective 2.9:	Work with government, nonprofit, and private sector entities to identify and implement opportunities for the incorporation of mitigation concepts and information into outreach efforts.
Objective 2.10:	Inform and educate the public, nonprofit, and private sector about potential hazards and property protection measures.
Objective 2.11:	Inform and educate the public, nonprofit, and private sector about the first response to disasters to promote better disaster preparation.
Objective 2.12:	Strengthen continuity planning for local government, businesses, and community partners to avoid significant disruptions of services.

IMPLEMENTATION STRATEGIES	
2a.	Utilize a widespread program of general information, media coverage, and participatory involvement to enhance public mitigation and engagement.
2b.	Educate departments and agencies to ensure continuity of operations and a full integration of mitigation management functions.
2c.	Provide information and education on new and emerging mitigation methods and products for new and retrofitting construction.
2d.	Coordinate with the Certified Emergency Response Team (CERT) across the County.
2e.	Host mitigation workshops to educate stakeholders and community members.
2f.	Promote mitigation measures county-wide through outreach and education.

LMS Goals and Objectives – Goal 3

GOAL 3:	**SUPPORT MITIGATION INITIATIVES AND POLICIES THAT PROTECT THE COUNTY'S CULTURE, COMMERCE, ECONOMY, TOURISM, RESIDENCES, TRANSPORTATION SYSTEMS, RECREATION, AND NATURAL RESOURCES.**
Objective 3.1:	Support land acquisition programs that reduce or eliminate potential future losses due to natural or human caused hazards or repetitive loss and that are compatible with the protection of natural or cultural resources.
Objective 3.2:	Continue to identify potentially vulnerable areas and support smart growth and development in Polk County.
Objective 3.3:	Support restoration and conservation of natural resources wherever possible.
Objective 3.4:	Seek mitigation opportunities that reduce economic losses and promote responsible growth.
Objective 3.5:	Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure.

IMPLEMENTATION STRATEGIES	
3a.	Retrofit existing County and local facilities to withstand hazard impacts.
3b.	Participate in activities that will further the County and local government's ability to plan for and mitigate the impacts of future vulnerability.
3c.	Adopt policies that provide development standards to promote resiliency and reduce risk.
3d.	Adopt building codes leading to building design criteria based on site-specific evolving and future risk.
3e.	Identify mitigation projects that reduce risk to vulnerable populations that are at greater risk from hazards.
3f.	Maintain or improve critical evacuation routes.
3g.	Prioritize and retrofit existing critical facilities and infrastructure through capital improvement expenditures.
3h.	Perform risk assessments for hazards, including cyber security.
3i.	Continue to invite and work with critical facility stakeholders.
3j.	Identify and track mitigation measures for existing critical facilities.
3k.	Assess alternate facilities as identified in continuity of operations plans to determine if the sites are appropriately mitigated.
3l.	Advocate property acquisition or retrofitting for repetitive loss properties.
3m.	Assist and encourage new economic development and post-disaster redevelopment through the encouragement of public-private partnerships, economic diversification, and development.

LMS Goals and Objectives – Goal 4

GOAL 4:	**PROMOTE AND SUPPORT THE COMMUNITY RATING SYSTEM (CRS) FOR ALL COMMUNITIES IN POLK COUNTY.**
Objective 4.1:	Incorporate measures into the LMS to help obtain uniform credit for all CRS Communities.
Objective 4.2:	Identify and track projects in the LMS to demonstrate the role of mitigation measures in reducing flood risk.
Objective 4.3:	Provide outreach and educational opportunities for the public, nonprofit, and private sector regarding flooding risks and the CRS Program.
Objective 4.4:	Advocate property acquisition or retrofitting for repetitive loss properties.
IMPLEMENTATION STRATEGIES	
4a.	Identify repetitive and severe repetitive loss areas.
4b.	Identify projects that will mitigate flood risk in repetitive loss areas.

LMS Goals and Objectives – Adoption

- **Recommend adoption as is** by the LMS Working Group
- **Recommend adoption with changes** by the LMS Working Group

Mitigation Action Plan

Jurisdiction Benefitt	Jurisdiction (Location of Projec	Project Name	Project Type	Description	Hazard Mitigate	Address New Existi	Responsible Agen	Responsible Departm	Estimated Cost	Possible Funding Source(s	Time to Complete
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social media, and other outreach mechanisms	All	Both	County Public Safety Departments (Fire, EMS, E-911, etc)	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social media, and other outreach mechanisms	All	Both	Polk County	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual
Auburndale	Auburndale	Alberta Street Drainage Improvement	Drainage	Relieves flooding and drainage problem at major intersection on Alberta St	Flood	Both	Auburndale	Public Works	$500,000	HMGP, FMA	12-18 Months
Auburndale	Auburndale	Highway 92, Lakeshore and Beach Lift Station Generator Project	Infrastructure	Highway 92, Lakeshore and Beach Lift Station Generator Project	All	Both	City of Auburndale	Public Works	$189,995	HMGP	12-18 Months
Bartow	Bartow	Fiber Smart Grid Pilot Project	New Infrastructure, Critical Facilities	Develop and Implement Smart Grid Pilot Project	All	New	Bartow	Public Works	$2,500,000	General Fund	24-36 Months
Bartow	Bartow	Fire Station #1	New Building, Critical Facilities	Construct New Fire Station to improve response time and serve new population	Fire, Flood	New	Bartow	Fire Department	$2,799,999	Fire Assessment Fee, General Fund	24-36 Months
Bartow	Bartow	Relocate Fire Station #0	New Building, Critical Facilities	Relocate Fire Station #1 to improve response time and serve new population	Fire, Flood	Both	Bartow	Fire Department	$3,499,999	Fire Assessment Fee, General Fund	24-36 Months
Davenport	Davenport	City Wide	Drainage	CDS Cleaning/Replacement of damaged inlets	Flood	Existing	Davenport	Public Works	$25,000	Stormwater	Annual
Davenport	Davenport	Critical Facility Wind Retrofit	Critical Facilities	Wind Retrofit to City Admin Building that houses Fire, Police and Public Works operations.	Wind	Existing	Davenport	Public Works	$225,000	HMGP	9-12 Months
Davenport	Davenport	Generator for command center	Critical Facilities	Generator for comand center	Storm	Existing	Davenport	Public Works	$75,000	FEMA-Grants	4-6 months
Davenport	Davenport	New Devlopment	Water Star Energy	Water Conservation incentives to Developers for using equipment. Incentives presented by SWFMD.	Water	New	Davenport	Building	$0	Water Management	Annual
Davenport	Davenport	Stormwater Master Plan	Drainage, Infrastructure	Ability to address areas prone to flooding now and into the future	Flood	Both	Davenport	Utilities	$300,000	HMGP	12 months
Davenport	Davenport	Streets/Wind	Bucket Truck	Purchase a bucket truck for storm damage/storm	Wiind	New	Davenport	Streets	$245,000	FEMA-Grants	12-18 months
Daveport	Davenport	City Hall/Building Department	Back-up Power	Installation of a Generator to run Ciy Hall, Commission Chamber, and Building Department	Wind/Storm	New	Davenport	Public Works	$75,000	FEMA-Grants	4-6 months
Dundee	Dundee	Dundee Center St Drainage Imp	Drainage	Dundee Center St Drainage Imp	Flood	Both	Dundee	Public Works	$562,500	HMGP	12-18 Months
Dundee	Dundee	Dundee Community Center Auxilary Power	Infrastructure	Dundee Community Center Auxilary Power	All	Both	Dundee	Public Works	$56,650	HMGP	12-18 Months
Dundee	Dundee	Dundee Community Center Protective Measures	Infrastructure	Dundee Community Center Protective Measures	All	Both	Dundee	Public Works	$36,942	HMGP	12-18 Months
Dundee	Dundee	Dundee Drainage Assessment/Improvements	Drainage	Dundee Drainage Assessment/Improvements	Flood	Both	Dundee	Public Works	$93,750	HMGP	12-18 Months
Dundee	Dundee	Dundee Economy Lift Station	Infrastructure	Dundee Economy Lift Station	All	Both	Dundee	Public Works	$125,000	HMGP	12-18 Months
Dundee	Dundee	Dundee Fire Dept Protective Measures	Infrastructure	Dundee Fire Dept Protective Measures	All	Both	Dundee	Public Works	$27,800	HMGP	12-18 Months
Dundee	Dundee	Dundee Fire Dept Wind Retrofit	Infrastructure	Dundee Fire Dept Wind Retrofit	All	Both	Dundee	Public Works	$37,500	HMGP	12-18 Months
Dundee	Dundee	Dundee Fl Ave MLK Drainage Imp	Drainage	Dundee Fl Ave MLK Drainage Imp	Flood	Both	Dundee	Public Works	$562,500	HMGP	12-18 Months
Dundee	Dundee	Dundee Lk Menzie Lk Marie Restroom PM	Infrastructure	Dundee Lk Menzie Lk Marie Restroom PM	All	Both	Dundee	Public Works	$9,120	HMGP	12-18 Months
Dundee	Dundee	Dundee Ridgewood Area Drainage Imp	Drainage	Dundee Ridgewood Area Drainage Imp	Flood	Both	Dundee	Public Works	$245,625	HMGP	12-18 Months
Dundee	Dundee	Dundee Riner WTF Safe Room	Infrastructure	Dundee Riner WTF Safe Room	All	Both	Dundee	Public Works	$19,375	HMGP	12-18 Months
Eagle Lake	Eagle Lake	Eagle Lake Green Acres Water Plant Lift Station generator	Critical Facilities, Infrastructure	Generator for Green Acres Water Plant Lift Station	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager	$225,000	HMGP, City Utility Funds	12-18 Months
Eagle Lake	Eagle Lake	Eagle Lake Green Lift Station #2 generator	Critical Facilities, Infrastructure	Generator for Lift Station #2	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager	$275,000	HMGP, City Utility Funds	12-18 Months
Eagle Lake	Eagle Lake	Eagle Lake Lift Station #5 generator	Critical Facilities, Infrastructure	Generator for Lift Station #5	Power Outages / Hurricanes / Tropical Storms	both	Eagle Lake	City Manager	$275,000	HMGP, City Utility Funds	12-18 Months

New Federal Flood Risk Mgmt. Standard (FFRMS)

- Effective September 9, 2024
- Purpose is to improve resilience of FEMA-funded actions against current and future flood risk to ensure they serve their purpose for as long as intended
- Job aid can be found online (scan QR code)
- Federal Flood Standard Support Tool (Beta Version)
  - https://floodstandard.climate.gov/
    - Address example: 2505 E Wabash St, Bartow

Polk County Vulnerability Assessment

Assessment of potential impacts on a community due to any of the following conditions:

- Flooding from storm events
- Rainfall-induced flooding
- Compound flooding

Planning tool used to increase community resilience

- Predicts depth of water from flooding
- Analyzes potential physical impacts on different types of assets
- Projects potential impacts on different demographic groups
- Serves as basis for building resilience

Polk County Vulnerability Assessment

Vulnerability Assessment Tasks

ACQUIRE BACKGROUND DATA

EXPOSURE ANALYSIS

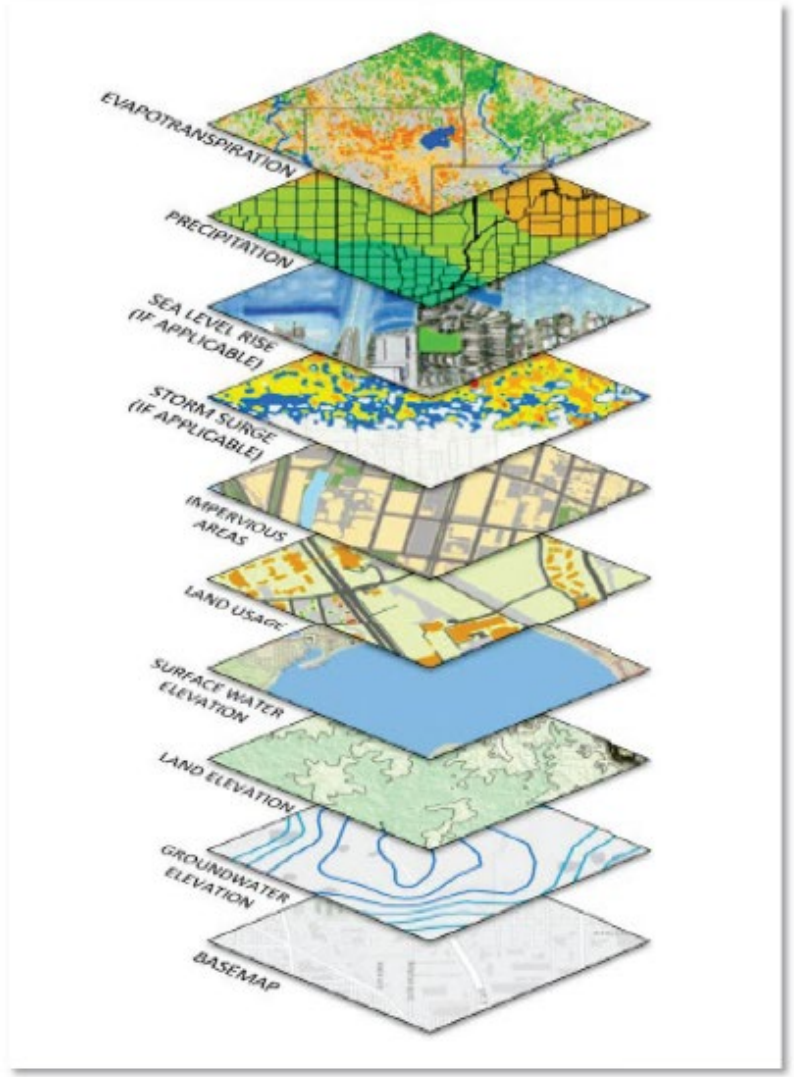
ANALYZE WATER DEPTH

SENSITIVITY ANALYSIS

EVALUATE FLOODING IMPACTS ON CRITICAL ASSETS

FINAL VULNERABILITY ASSESSMENT REPORT, MAPS, AND TABLES

Polk County Vulnerability Assessment



Example Input Data Schematic for Flood Simulation Models (Esri, 2020; FDEP, 2017; HPRCC, 2022; Jean-Paul Rodrigue, 2015; NOAA, 2022; NOAA, 2018; USGS 2021; USGS, 2018)

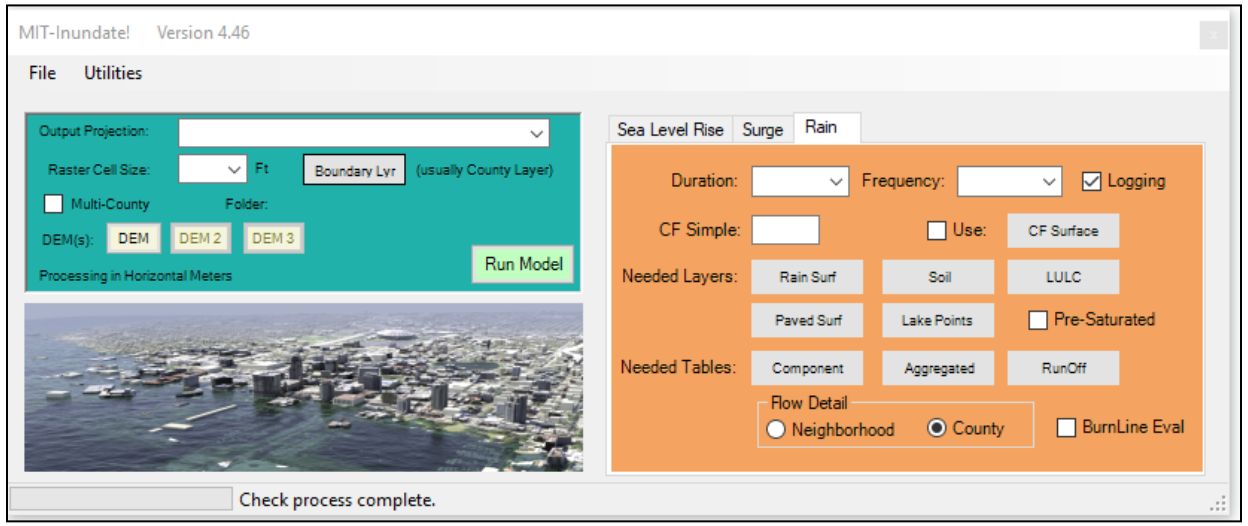
Acquire Background Data

Three Major Categories:

- Critical / Regionally Significant Assets
- Topographic Data
- Flood Scenario-Related Data

Polk County Vulnerability Assessment

Flood Modeling Process: Inundate! Tool



This tool combines 2 types of hydrologic modeling:

- Flow model used to produce the inundation in the associated watershed catchments.
- Ponding, which is based solely on water gathering and filling depressions with no flow involved.

- Planning and Spatial Analysis framework for identification and delineation of areas potentially exposed to the impacts of extreme rainfall, at scales relevant for statewide, regional, and local agencies.

- Not a framework for site-level design, engineering, and construction

Polk County Vulnerability Assessment

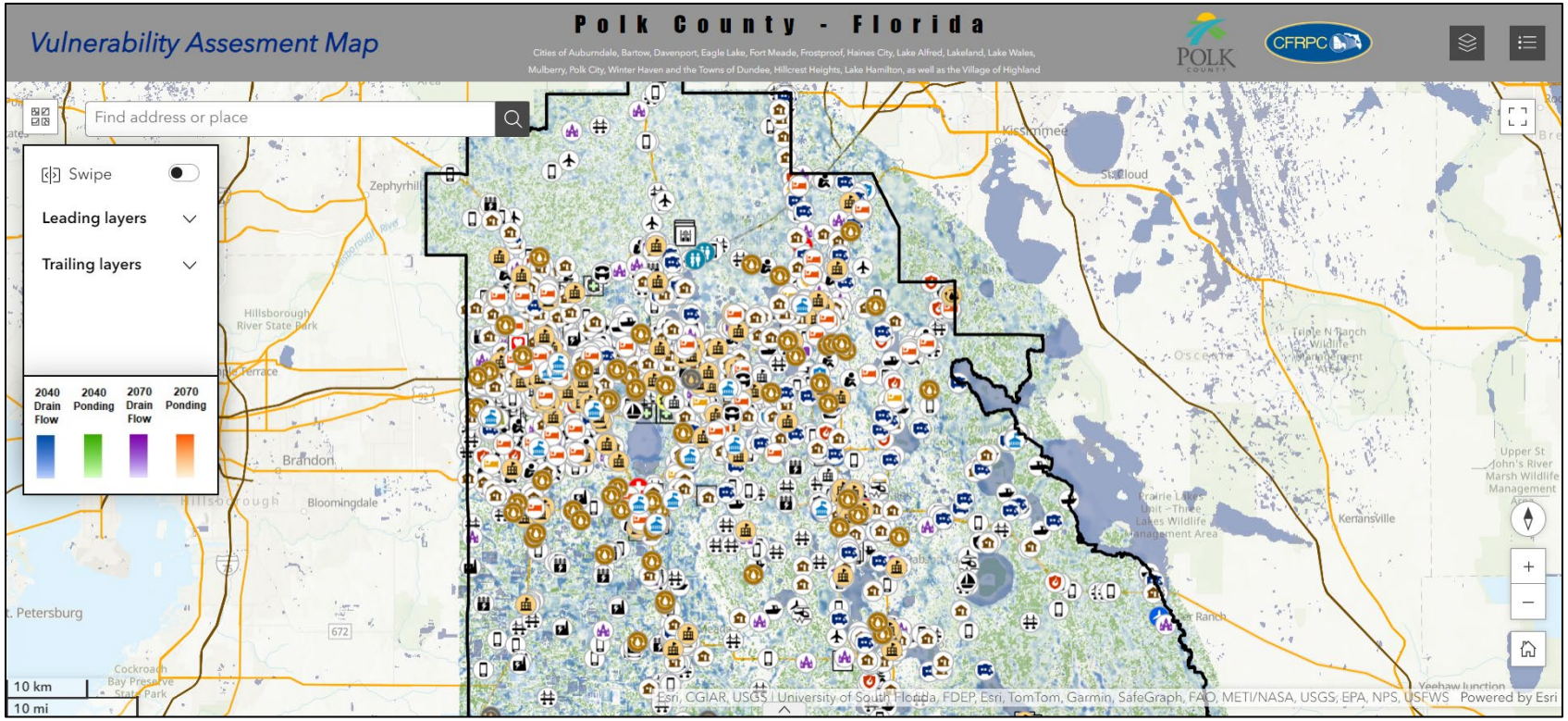
Stakeholder Committee

- Public safety
- Transportation
- Utilities
- Building & Housing
- Community & Economic Development
- Education
- Environment
- Planning
- Parks, Recreation & Cultural Resources
- Human & Social Services
- Local Elected Officials
- Community Leaders or Champions
- Researchers & Scientists
- State and Federal Governments, NGO’s

Polk County Vulnerability Assessment

Polk County Vulnerability Assessment Viewer

https://experience.arcgis.com/experience/a6e99ed8857e469494f0c13ff2cab3a3



Community Survey, Photo Submission, & Website

- Community Surveys and Photo Submissions
- Website is pending and will be ready by the September 18 meeting

Homework

- Community Profiles
- Policies and Regulations

Due Date: September 18

SECTION IV: COMMUNITY PROFILE

Auburndale

The City of Auburndale, located in north central Polk County, is the fifth-largest city in population according to the most recent estimates for the County's 17 municipalities. The city is situated mostly south of the Green Swamp Area of Critical State Concern and lies between Lakeland and Winter Haven. US 92 traverses east and west through the southern part of the city, while Interstate 4 runs east and west through the north part of the city.

Auburndale's historical development centered along, and radiated from, the railroad line that runs through the city's downtown area. The city has preserved the downtown core area as a vibrant focal point for retail and services, city administrative offices, the civic center, a park, and recreation facilities. Two areas of industrial land use concentrated along the railroad on the east and west sides of downtown. Auburndale High School, Stambaugh Middle School, and Auburndale Central Elementary School are located on the periphery of the downtown core.

The oldest residential areas in Auburndale are located contiguous to the downtown area on four sides. As Auburndale developed, the residential land use pattern formed in a ring around Lake Ariana, north and west of downtown. More recent residential growth is occurring in annexed areas further north, east and west of SR 559, up to CR 559A. Lot sizes typically become larger, and density lower, as distance from the core area increases.

Auburndale and Polk County have established a Joint Planning Area (JPA) geographically based on the city's Utility Service Area. The JPA establishes Polk County's intention to render land use approvals that are consistent with the Auburndale's future land uses and vision of the future. The JPA facilitates the integration of properties in the Auburndale Utility Service Area as people annex them into the city. Planned land uses include Tourism Commercial Centers that support the sports complex and the Interstate 4 Corridor Gateway to the city. In addition, the JPA will support the Florida Polytechnic University and the developing technology corridor along Interstate 4. (Auburndale Evaluation and Appraisal Report)

TABLE III-1:
POLK COUNTY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Objective 2.123-G Local Mitigation Strategy	Polk County shall coordinate future land use designations to eliminate or reduce inconsistencies with the goals, objectives, and recommendations of the adopted Local Mitigation Strategy.
Policy 2.123-G1	The County, through the implementation of its land development regulation, will ensure that development approvals are consistent with the objectives and policies of the Local Mitigation Strategy. If the site is such that all beneficial use of the property is precluded due to the hazard identification/determination, then the County will consider purchasing the property for preservation purposes through the use of moneys from environmental lands preservation programs, grants or other similar sources of funding.
Land Development Code – Section 630 Flood Hazard Management and Flood Plain Protection	
Purpose and Intent	The flood hazard areas of Polk County are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare. These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages.

Contacts

Polk County Emergency Management
Brian Thurston
863-298-7000
brianthurston@polk-county.net

Central Florida Regional Planning Council
Jerri Sackett
863-534-7130, ext. 103
jsackett@cfrpc.org

Questions

Next Meeting:
September 18 at 9:30 am

Polk County LMS Working Group
LMS Update Meeting
August 14, 2024

- Jerri Sackett opened the meeting.
- Paul Womble opened with background overview of what the LMS is and who it involves. Paul will give at least two meetings before communicating with the City Managers the necessity of attending and participating.
- Brian Thurston - Chair of the Polk LMS, EM Program Manager
- Jerri Sackett began the presentation.

INTRODUCTIONS AND EXPERIENCE – Jerri Sackett

- Ben Cassista, Polk County Fire Rescue has received funding in the past for hardening some of the fire stations and for generators.
- Dr. Hezedean Smith, Polk County Fire Rescue Fire Chief
- Darius Livingston, Polk County Fire Rescue Battalion Chief of Planning and Research
- Brian, Polk County Fire Rescue Deputy Chief of Planning and Research – new to the LMS
- Jay Robinson, Bartow Fire Department Chief – no grants received
- Sara Vones, Bartow – new to the LMS
- Art, Lake Alfred Police Department – involved many years with the LMS. Has received generator grants but unsure if that was through the LMS.
- Scott Linebach, On Deck Restorations - no grants received.
- Shaun Prather, On Deck Restorations
- Apryl Faurote, Volunteer Polk - no grants received and little experience with the LMS
- Michelle Shiver, RSVP Polk – has been involved in the LMS
- James Schnell, Polk Building Division – no LMS experience
- Katie Hollenbeck, Polk EM – no LMS experience. Has been here for 5 months.
- Jana Nickles, Polk EM – no LMS experience
- Brian Thurston, Polk EM – minimal experience with LMS
- Jay Jarvis – did receive mitigation grants through FEMA after 2004 hurricanes, submitted for three and awarded one project
- Thomas Murphy Jr., Davenport Fire – limited experience with a different agency
- Jennifer Cooper, Housing Neighborhood – no LMS experience
- Mark Bombard, Winter Haven Water Dept Director – familiar with the LMS with a previous agency and received mitigation grants for flooding and emergency generators.
- Anne Marie Locascio, Risk Management City of Lakeland – no experience with the LMS
- Sara Irvin, City of Lake Wales – has received one grant for a generator
- Ryan Reis, Webber International University – some experience with the LMS. Has two pending mitigation grants for a generator and to mitigate campus flooding
- Kenneth Reaves, Webber International University – some experience with the LMS
- Melissa Cannon, Fort Meade – no LMS experience
- Veronica Hairston, Fort Meade – no LMS experience

- Lorraine Peterson, Dundee – no LMS experience
- Vermalyn William, Dundee Code Enforcement – no LMS experience
- Josh McLemore, Polk County School Board - has three grants with the State appropriations
- Marisa Barmby, Central Florida Regional Planning Council – this is the third LMS update she is assisting Polk with
- Curtis Knowles, Central Florida Regional Planning Council – have participated for years in the LMS
- Michael Lewis, Lakeland
- Caleb Gabany, Auburndale – first time participating in the LMS and believes they received a grant for generators for lift stations
- Lamar Cliett, Haines City Public Works – no LMS experience
- Tabitha Biehl, Polk Parks – Has a current grant for Hurricane Ian and the scope/proposal will be extended at the request of the State to include design and construction
- Michelle Sims, Polk Procurement – no LMS experience but has assisted in the procurement process for the grants awarded the county
- Dustin Everitt, Winter Haven Natural Resources – currently have mitigation grant for a pump on Lake Elbert
- Emmanual Figueroa, Lake Wales Police Department – no LMS experience

ATTENDANCE AND PARTICIPATION - Jerri Sackett

- Two meetings per year, minimum participation and attendance require one meeting a year
- New this round - letter of support for the LMS will be needed if not a municipality adopting the LMS by resolution
    - Katie and Brian will get the adoption letters/resolutions to send to the State post LMS approval
- A template resolution will be provided in the LMS

LMS DOCUMENT OVERVIEW AND UPDATE PROCESS - Jerri Sackett

- A few were familiar with the Community Rating System (CRS). Floodplain managers with Lakeland, Lake Alfred, Winter Haven, and Polk County will be asked for input into the LMS. A separate meeting will be held with them after the regular LMS Working Group meeting in September. Please ensure those floodplain managers attend the next meeting.

PLAN STRUCTURE - Marisa Barmby

- Restructuring the existing document
    - Jurisdiction's codes will be put into the Appendix

REVIEW OF HAZARDS FOR ANALYSIS – Marisa Barmby

- List of hazards review
- Remove Climate Change
- Epidemics changed to Epidemics/Pandemics
- Harmful Algal Blooms
    - Marisa Barmby recommended adding it to the hazard list but as no further analysis needed
    - Jerri Sackett estimated four articles found regarding harmful algal blooms in the Ledger
    - Tabitha Biehl says the State has a dashboard that shows the toxic levels for every county, including Polk. It is also new requirements state that DOH is required to post toxic levels for every lake. She recommends adding it as an existing hazard.
- Space Weather added under the no further analysis needed
- Brian Thurston, LMS Working Group Chair motions to accept the changes as presented with the change to Algal Bloom
    - Seconded by Sara Irvine
    - Motion PASSED

LMS GOALS AND OBJECTIVES – Marisa Barmby

- Marisa reviewed the goals
- Motion made to leave the goals and objectives as is by Art Bodenheimer
    - Seconded by Jay Jarvis
    - Motion PASSED

MITIGATION ACTION PLAN – Jerri Sackett

- Each jurisdiction must have a mitigation action to address each hazard in the Mitigation Project Spreadsheet
    - Projects remaining on the list need to have the cost of the project reviewed and updated if needed.
- Josh McLemore questioned how often this list is amended
    - Jerri Sackett responded that it is at least once a year when the Florida Division of Emergency Management requires the project list and working group list to be submitted.
- Jerri Sackett explained the project list is a living document, and changes can be made at anytime

NEW FFRMS – Jerri Sackett

- The QR code takes you to the job aid regarding the new changes coming forward next month
- Jerri Sackett showed the beta version of the website to the LMS Working Group
    - Question asked if the report provided any costs or estimates of damages
        - Jerri Sackett responded that it did not.

POLK VULNERABILITY ASSESSMENT – Curtis Knowles

- Curtis Knowles discussed the Polk County Vulnerability Assessment, including showing Polk's public viewer of the data.
    - Question asked if it was possible to download jurisdiction critical facilities to review for accuracy
        - Curtis Knowles responded that was not possible but if they contact Curtis or Jerri, the list can be emailed to them

COMMUNITY SURVEY – Jerri Sackett

- Let us know if there is a community event that we can attend and interact with the public
- Requested the attendees share the flyers for the community survey and the request for photos in their highly trafficked areas such as libraries and utilizes and also share the information on social media

HOMEWORK – Marisa Barmby

- Homework is due September 18
- Community Profiles
    - Emailed out and paper copies available
- Policies and Regulations
    - Provide any changes to the policies and regulations that involve mitigation, including the specific locations of the policies and regulations

FINAL THOUGHTS

- Tabitha Biehl – What is everyone doing for the cost benefit analysis in which estimated damages are needed?
    - Josh McLemore – The School Board insurance adjustors do it for them
    - James Schnell – All the cities are using the same damage assessment dashboard but it doesn't link to the property appraiser for estimated damages
    - Polk Emergency Management collects the total damage assessments and estimated damage costs and submits them to the state.
- Please ensure, if you are the primary person attending these meetings that you notify Katie with Emergency Management so you are added to the LMS Working Group list.
- Next meeting is September 18, 2024 at 9:30 am at the EOC.

Local Mitigation Strategy

Working Group Meeting

September 18, 2024 | 9:30 - 11:30 a.m.

Polk County Emergency Operations Center

1890 Jim Keene Blvd., Winter Haven, FL 33880

Help reduce the impact of disasters to Polk County

polkcountylms.org

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
SEPTEMBER 18, 2024

AGENDA

1. Welcome and Introductions
2. Mandatory Attendance and Participation
3. Old Business
    a. Community Survey and Community Input Ideas
    b. Updated Community Profiles, Policies and Regulations
4. New Business
    a. LMS Planning Process, Evaluation, and Maintenance Update – *action item*
        i. Multijurisdictional Participation – *action item*
        ii. LMS Subgroups – *action item*
        iii. Participation Requirements – *action item*
        iv. Adoption of LMS – *action item*
    b. Project List
        i. Review Current Project List – *information item*
        ii. New Project Submittal Process – *action item*
        iii. STAPLEE – *action item*
5. Homework
    a. LMS Project Updates – *due November 20, 2024*
    b. Updates to Hazard Profiles – *due November 20, 2024*

Next Working Group Meeting – November 20, 2024, at 9:30 am at Polk EOC

2. Mandatory Attendance and Participation

SUMMARY:

Participation in the planning process for the update of the Local Mitigation Strategy as well as attendance in the LMS Working Group meetings are a requirement. The Proposed Working Group meeting schedule for the LMS update is attached.

Per Florida Division of Emergency Management's LMS Update Manual, the LMS must list the participating jurisdictions and special districts (e.g., cities, counties, school boards, hospitals, airport authorities) seeking approval and clarify what is required of the participating jurisdictions. At a minimum, each is expected to take part in the planning process and to have a mitigation action addressing hazards that could affect the jurisdiction.

Any jurisdiction that ceases participation in the LMS process will no longer be eligible for federal hazard mitigation assistance.

RECOMMENDED ACTION:

None.

WORKING GROUP MEETING SCHEDULE
LMS Working Group Meetings are 9:30 am – 11:30 am
Location: Polk County EOC, 1890 Jim Keene Blvd., Winter Haven, FL 33880

~~LMSWG Meeting #1: August 14, 2024~~

LMSWG Meeting #2: September 18, 2024

LMSWG Meeting #3: November 20, 2024

LMSWG Meeting #4: January 22, 2025

LMSWG Meeting #5: February 19, 2025

LMSWG Meeting #6: June 4, 2025

3a. Old Business – Community Survey and Community Input Ideas

SUMMARY:

As of September 10, 2024, 8 photos have been submitted and 11 surveys completed. Very few community events have been submitted to the Central Florida Regional Planning Council to consider for public involvement opportunities.

RECOMMENDED ACTION:

Please continue to post and share the survey and photo submission links. As events are scheduled, please submit the information to the contact below.

Submit potential public involvement events to:
Jerri Sackett
Email: jsackett@cfrpc.org

3b. Old Business – Updated Community Profiles, Policies, and Regulations

SUMMARY:

As of September 10, 2024, information has only been received from the following municipalities:

- Davenport
- Lake Wales

RECOMMENDED ACTION:

Submit the updated Community Profiles and Jurisdiction and Regulations as soon as possible to the contact below. If there are no changes, please email the contact below.

Submit updated Community Profiles and Jurisdiction Policies and Regulations to:
Jerri Sackett
Email: jsackett@cfrpc.org

4ai. New Business – Multijurisdictional Participation

SUMMARY:

Review the Multi-Jurisdictional Participation.

Recommendation to add the inclusion of participating agencies from the last 2020 update in addition to the municipalities. This would include moving the Polk County Public Schools to the participating agency section.

Multi-Jurisdictional Participation

The LMS includes one county, its unincorporated areas, 17 municipalities, and the Polk County Public Schools. To satisfy multi-jurisdictional participation requirements, FEMA requires the County and jurisdictions perform the following tasks:

- Participate in mitigation planning workshops;
- Provide data for the Hazard Analysis and Risk Assessment, as needed;
- Identify completed mitigation projects, if applicable; and
- Adopt the LMS.

Each of the jurisdictions listed below contributed to the planning process and are seeking approval of the LMS. The following jurisdictions may adopt the LMS.

- Polk County
- Polk County Public Schools
- City of Auburndale
- City of Bartow
- City of Davenport
- Town of Dundee
- City of Eagle Lake
- City of Fort Meade
- City of Frostproof
- City of Haines City
- Village of Highland Park
- Town of Hillcrest Heights
- City of Lake Alfred
- Town of Lake Hamilton
- City of Lake Wales
- City of Lakeland
- City of Mulberry
- City of Polk City
- City of Winter Haven

RECOMMENDED ACTION:

Approve recommendation of adding participating agencies to this section.

4bii. New Business – LMS Subgroups

SUMMARY:

Review the LMS Subgroups' section of the LMS.

LMS Subgroups

The LMS process established and utilized a Goals and Objectives Subgroup and a Community Rating System Subgroup.

Goals and Objectives Subgroup

The LMS Working Group established a Goals and Objectives Subgroup for the 2020 LMS update to review and update the Goals and Objectives of the LMS. This subgroup prepared recommended amendments to the LMS goals and objectives. The LMS Working Group reviewed and voted to adopt the recommended Goals and Objectives from the Goals and Objectives Subgroup. While this is not a standing subgroup, the LMS Working Group may reinstate it if necessary.

Community Rating System (CRS) Subgroup

Comprised of representatives of the County's CRS Communities, this subgroup meets semi-annually to discuss issues regarding CRS updates, to collaborate on best practices for assisting jurisdictions to achieve a higher rate class and therefore an increase in the flood insurance discount rate for its citizens, and to share information regarding CRS-related training. This group collaborates with other local governments, local business leaders, and members of the public on a full range of Outreach Projects Strategy (OPS) initiatives to promote CRS participation. This subgroup reviews the floodplain management portions of the LMS and all initiatives relating to the CRS to ensure the information is current.

RECOMMENDED ACTION:

Approve recommendation to leave the subgroups as-is.

4biii. New Business – Participation Requirements

SUMMARY:

Review the Participation Requirements in the LMS. Recommendation to add the following:

- Municipalities/agencies who receive mitigation grant funding will be required to provide updates on the status of their projects at each LMS meeting
- Include agencies must submit a letter of support of the LMS to be eligible for the funding programs
- Include language that would remove a non-participating municipality/agency from the LMS Working Group. Discussion needed on specific verbiage.

Participation Requirements

Since the LMS Working Group writes the LMS using input from all stakeholders, it is important to make sure there is representation from the entire Polk County community. Each stakeholder has different participation requirements and the LMS Working Group encourages all stakeholders to participate in the process.

Jurisdictions

County, municipal, and government agency participation is critical to the success of the LMS. To retain LMS voting rights, qualify for Federal mitigation assistance consideration, and otherwise remain a member in good standing, FEMA requires all jurisdictions to conform to the following standards:

- Participation of the representative or alternate in the semi-annual LMS Working Group meetings; or participation in a majority of the LMS subgroup meetings; and
- Have an officially executed resolution adopting the revised LMS on file with the County. A jurisdiction must have an officially adopted resolution to be eligible for Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance Program (FMAP), and Pre-Disaster Mitigation (PDM) funding programs.

The LMS Coordinator will notify all jurisdictions of meetings via email at least one week in advance and will provide meeting summaries thereafter.

Non-Governmental Organizations (NGO), Other Governmental Entities, and Stakeholders

The LMS Working Group encourages participation by non-governmental organizations (NGO), other governmental entities, and stakeholders. To qualify for LMS grant sponsorship, NGOs, and other governmental entities must:

- Have a duly executed letter of commitment to the LMS on file with the County; and
- Actively participate in and support LMS activities.

The Public and Private Sector

Broad community support, including ongoing public and private sector involvement, is important to the success of the LMS. While participation by private organizations and the public is voluntary, the LMS Working Group, through the LMS Coordinator, seeks, invites, monitors, and fully documents the attendance, comments, contributions, and support from private organizations and the public. To promote the opportunity for broad participation, the LMS Coordinator posts notices and agendas for general meetings of the LMS through press releases, social media, postings on County and municipal websites, announcements in the County and municipal newsletters and calendars, and e-mail to past participants. According to the County's Communication Division, social media reaches the most people in Polk County. The LMS Coordinator actively solicits new LMS members by reaching out to private sector and nonprofit organizations to encourage participation.

RECOMMENDED ACTION:

Update and approve changes to the participation requirements as discussed.

4biv. New Business – Adoption of LMS

SUMMARY:

Review the Adoption of LMS section. Recommendation to include the requirement of agencies to have a letter supporting the LMS on file and include a sample letter in the plan.

Adoption of LMS

Jurisdictions wishing to participate in and share in the benefits of the LMS must complete and file a fully-executed resolution which conforms to the adoption standards established and amended by the Polk County Board of County Commissioners and the LMS Working Group. Section VIII includes a sample resolution and Appendix H includes the adoption resolutions of the jurisdictions.

RECOMMENDED ACTION:

Update and approve changes to the adoption of the LMS.

4bi. New Business – Review Current Project List

SUMMARY:

Please review the Current Project List (separate document) for your municipality or agency. Ensure all information is up-to-date and accurate. If a project is to be deferred (remain on the list), has been completed, or is to be deleted, a reason must be given.

Examples for deferred projects: ongoing project, working on plans, awaiting funding, funding not available, contracted for HMGP funding

Examples for deleted projects: project is not cost effective, no record of project, not applicable for meeting standards

Examples for completed projects: project completed in 2020. If at all possible, include the year a project was completed.

Changes to hazards approved previously:

- Climate change removed from list
- Harmful algal blooms added
- Space weather added but with no further analysis needed

RECOMMENDED ACTION:

Review and update the status of projects for your municipality/agency on the Project List.

Review the updated hazards and ensure your municipality/agency has a project for each hazard that affects your area.

4bii. New Business – New Project Submittal Process

SUMMARY:

Review the Hazard Mitigation New Project/Program Worksheet. This document is required for any projects to be added to the LMS Working Group Project List for Hazard Mitigation Grant Funding. It is recommended to add other projects to the list to demonstrate utilizing other funding opportunities.

Recommended changes to the form:

- Update Applicant Information
    - Responsible Agency (instead of Employer)
    - Add Responsible Department
- Add Hazards Mitigated
- Update Timeliness to match LMS Project List
    - Less than twelve months to complete or implement
    - Twelve months to twenty-four months to complete or implement
    - Twenty-four months to thirty-six months to complete or implement
    - More than thirty-six months to complete or implement

Recommended changes to the process:

- Add verbiage that projects may be added outside of potential hazard mitigation grant funding to demonstrate utilizing other fund opportunities to complete projects. These projects will not require completion and submission of the Hazard Mitigation new Project/Program Worksheet to the LMS Working Group.

RECOMMENDED ACTION:

Update and approve changes to the new project submittal process and form.

4biii. New Business – STAPLEE

SUMMARY:

Review the STAPLEE Action Evaluation Table and information.

RECOMMENDED ACTION:

Discussion of continuing to use the STAPLEE Action Evaluation for prioritizing LMS projects.

5a. Homework – LMS Project Updates – due November 20, 2024

SUMMARY:

Please review the Current Project List (separate document) for your municipality or agency. Ensure all information is up-to-date and accurate. If a project is to be deferred (remain on the list), has been completed, or is to be deleted, a reason must be given.

Examples for deferred projects: ongoing project, working on plans, awaiting funding, funding not available, contracted for HMGP funding

Examples for deleted projects: project is not cost effective, no record of project, not applicable for meeting standards

Examples for completed projects: project completed in 2020. If at all possible, include the year a project was completed.

Changes to hazards approved previously:

- Climate change removed from list
- Harmful algal blooms added
- Space weather added but with no further analysis needed

If a new project is to be submitted for potential hazard mitigation grant funding, the New Project Submittal Form needs to be completed and submitted.

RECOMMENDED ACTION:

Submit the updated LMS Project List and any new project forms by November 20, 2024 to the contact below.

Submit LMS Project updates and New Project Submittal forms to:
Jerri Sackett
Email: jsackett@cfrpc.org

5b. Homework –Updates to Hazard Profiles – due November 20, 2024

SUMMARY:

Staff will distribute the Hazard Profiles to each jurisdiction and participant from the existing LMS document. Each jurisdiction and participant will need to update the information and return it by October 2, 2024.

RECOMMENDED ACTION:

Submit hazards that have impacted or greatly affected your jurisdiction or agency. Information should include dates, event or incident name, locations affected or impacted, and photos if available, by November 20, 2024, to the contact below. If there are no changes, please send an email stating so for tracking purposes.

Submit updated Hazard Profiles to:
Jerri Sackett
Email: jsackett@cfrpc.org

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
SEPTEMBER 18, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
American Red Cross	Kris Abel	Disaster Program Manager	147 Avenue A NW, Winter Haven	kristin.abel@redcross.org	
American Red Cross	Tina Sweeten	Executive Director	147 Avenue A NW, Winter Haven	Tinora.sweeten@redcross.org	
BayCare	Timothy Allen	Healthcare EM Coordinator	200 Ave F NE, Winter Haven	Timothy.allen@baycare.org	
CFRPC	Curtis Knowles	EM and Community Projects Director	555 E. Church Street, Bartow	cknowles@cfrpc.org	
CFRPC	Jerri Sackett	EM Projects Senior Planner	555 E. Church Street, Bartow	jsackett@cfrpc.org	
CFRPC	Marisa Barmby	Program Manager – Planning and Research	555 E. Church Street, Bartow	mbarmby@cfrpc.org	
City of Auburndale	John Dickson	Public Works Director	915 Charles Avenue Auburndale	jdickson@auburndalefl.com	
City of Auburndale	Caleb Gabany	Sanitation	915 Charles Avenue Auburndale	cgabany@auburndalefl.com	
City of Bartow	Jay Robinson	Fire Department Chief	450 N. Wilson Avenue Bartow	jrobinson.fire@cityofbartow.net	
City of Bartow	Sara Jones	Grant Administrator	450 N. Wilson Ave, Bartow	Salbert.pw@cityofbartow.net	
City of Davenport	Thomas Murphy Jr.	Fire Operations	226 W. 4th Street, Davenport	tmurphy@mydavenport.org	
City of Eagle Lake	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com wsweikert@pennoni.com	
City of Eagle Lake	Tom Ernharth	City Manager	75 N. 7th Street Eagle Lake	ternharth@eaglelake-fla.com	
City of Fort Meade	Matthew Zahara	Fire Department Chief	8 West Broadway, Fort Meade, FL 33841	mzahara@cityoffortmeade.com	
City of Fort Meade	Edward Dean Amy Wheeler	City Manager Asst. City Manager	8 West Broadway, Fort Meade, FL 33841	edean@citoffortmeade.com awheeler@cityoffortmeade.com	Amy Wheeler
City of Fort Meade	Melissa Cannon	Deputy City Clerk	8 West Broadway, Fort Meade, FL 33841	mcannon@cityoffortmeade.com	Melissa Cannon

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
SEPTEMBER 18, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
City of Fort Meade	Veronica Hairston	Chief Operations Officer	8 West Broadway, Fort Meade, FL 33841	vhairston@cityoffortmeade.com	
City of Frostproof	Josh Turner	Public Works	111 W. First Street Frostproof	JTurner@cityoffrostproof.com	
City of Frostproof	Nicole McDowell	City Manager	111 W. First Street Frostproof	nmcdowell@cityoffrostproof.com	
City of Haines City	Lamar Cliett	Deputy Public Works Director	300 North 5th Street, Haines City	lamar.cliett@hainescity.com	
City of Haines City	James Keene	Public Services Administrator	620 E. Main Street Haines City	james.keene@hainescity.com	
City of Lake Alfred	Community Development Department		120 E. Pomelo Street Lake Alfred	comdev@mylakealfred.com	
City of Lake Alfred	Art Bodenheimer	Police Department Chief	120 E. Pomelo Street Lake Alfred	abodenheimer@mylakealfred.com	
City of Lake Alfred	Ryan Leavengood	City Manager	120 E. Pomelo Street Lake Alfred	rleavengood@mylakealfred.com	
City of Lake Wales	Shannon Hancock	Growth Management Executive Assistant	201 W. Central Avenue Lake Wales	shancock@lakewalesfl.gov	
City of Lake Wales	Dale Hampton	Investigations Commander	133 E. Tillman Avenue, Lake Wales	DHAMPTON@lakewalesfl.gov	
City of Lake Wales	Emmanuel Figueroa	Police Department	133 E. Tillman Avenue, Lake Wales	efigueroa@lakewalesfl.gov	
City of Lake Wales	James Slaton	City Manager	201 W. Central Avenue, Lake Wales	jslaton@lakewalesfl.gov	
City of Lake Wales	Joe Jenkins	Fire Department Chief	201 W. Central Avenue Lake Wales	jjenkins@lakewalesfl.gov	
City of Lake Wales	Sara Irvine	Special Projects Administrator	2010 W. Central Avenue, Lake Wales	sirvine@lakewalesfl.gov	
City of Lakeland	Anne Marie Locascio	Claims Specialist Risk Management	Lakeland	annmarie.locascio@lakelandgov.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
SEPTEMBER 18, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
City of Lakeland	Michael Lewis	Captain Investigative Services Division	Lakeland	michael.lewis@lakelandgov.net	
City of Lakeland	Cole Edwards	Director of Engineering and Metering	Lakeland	~~rheavenrood@mylakeallred.com~~ Cole.edwards@lakelandgov.net	
City of Lakeland	Matthew Lyons	Executive Planner	Lakeland	Matthew.kyons@lakelandgov.net	
City of Lakeland	Chuck Barmby	Planning and Transportation Manager	Lakeland	charles.barmby@lakelandgov.net	
City of Mulberry	Billie Segree	Code Enforcement Officer	104 S. Church Ave Mulberry	bsegree@cityofmulberryfl.com	
City of Mulberry	John Wasmund	Finance Director	104 S. Church Ave Mulberry	jwasmund@cityofmulberryfl.com	
City of Mulberry	Ron Borchers	Planning & Development Director	104 S. Church Ave Mulberry	rborchers@cityofmulberryfl.com	
Polk City	Patricia Jackson	City Manager		Patricia.jackson@mypolkcity.org	
City of Winter Haven	Dustin Everitt	Natural Resources Division Manager	451 Third St. NW, Winter Haven	deveritt@mywinterhaven.com	
City of Winter Haven	Jeff Crouse	Engineering Designer	451 Third St. NW, Winter Haven	jcrouse@mywinterhaven.com	
City of Winter Haven	Mark Bombard	Assistant Director of Utilities	451 Third St. NW, Winter Haven	mbombard@mywinterhaven.com	
City of Winter Haven	Joseph Emery	Fire Chief	301 Ave G SW, Winter Haven	jemery@mywinterhaven.com	
FL Department of Health	Scott Sjoblom	Assistant CHD Director	1290 Golf View Avenue Bartow	Scott.Sjoblom@flhealth.gov	
Florida Department of Environmental Protection	Jasson Drinkard	Professional Responder	13051 N. Telecom Parkway, Temple Terrace, FL 33637	Jasson.Drinkard@FloridaDEP.gov	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
SEPTEMBER 18, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Florida Division of Emergency Management	Jeremy O'Dell	Recovery		jeremy.odell@em.myflorida.com	
Florida Division of Emergency Management	Mitchell Budihas	Mitigation		Mitchell.budihas@em.myflorida.com	
Florida Division of Emergency Management	Antonio Miranda Zapata	Recovery		Antonio.zapata@em.myflorida.com	
Florida Division of Emergency Management	Cristian Rivera	Mitigation		Cristian.rivera@em.myflorida.com	
Florida Forest Service	Pete Lewis	Forest Area Supervisor for Eastern Polk County		Peter.Lewis@fdacs.gov	
Florida Forest Service	Todd Chlanda	Wildfire Mitigation Specialist	5745 S. Florida Avenue, Lakeland	William.Chlanda@fdacs.gov	
Florida Forest Service	Vic Memmoli	Forest Area Supervisor for Western Polk County		Victor.Memmoli@fdacs.gov	
Golden Lakes Community Dev.	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
John Hopkins All Children's Hospital	Larry Green	Director of Safety	3310 Lakeland Hills Blvd., Lakeland	Lgreen52@jhmi.edu	
John Hopkins All Children's Hospital	Shanti Smith-Copeland	Director of Emergency Management	3310 Lakeland Hills Blvd., Lakeland	Shanti.smith-copeland@iparametrics.com	
Health and Human Services	Marcia Andersen	Social Service Director	2135 Marshall Edwards Drive, Bartow	marciaandersen@polk-county.net	
Health and Human Services	Jennifer Cooper	Housing and Neighborhood Manager	1290 Gulfview Blvd, Bartow	jennifercooper@polk-county.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
SEPTEMBER 18, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Lake Region Lakes Mgmt. District	Roger Griffiths	Ex Director	804 Ave X SW, Winter Haven	Rdg1744@gmail.com	
Peace River Center	Candace Barnes	COO	1239 E. Main Street, Bartow	cbarnes@peacerivercenter.org	
Polk County	Apryl Faurote	Volunteer Services Coordinator	1290 Golfview Avenue Bartow	aprylfaurote@polk-county.net	
Polk County	Benjamin Dunn	Planning and Development, Building Dir.	330 W. Church Street Bartow	benjamindunn@polk-county.net	
Polk County	Billy Abernathy	Emergency Management EOC Coordinator	1890 Jim Keene Blvd Winter Haven	billyabernathy@polk-county.net	
Polk County	Richard Benton	Land Development / Floodplain Manager	330 W. Church Street Bartow	richardkbenton@polk-county.net	
Polk County	Christia Johnson	Budget Director	330 W. Church Street, Bartow	christiajohnson@polk-county.net	
Polk County	Brian Thurston	EM Program Manager	1890 Jim Keene Blvd., Winter Haven	brianthurston@polk-county.net	
Polk County	Hezedean Smith	Fire Chief	1295 Brice Blvd., Bartow	hezedeansmith@polk-county.net	
Polk County	James Schnell	Building Division	330 W. Church Street, Bartow	jamesschnell@polk-county.net	
Polk County	Jana Nickles	Special Needs Coordinator	1890 Jim Keene Blvd Winter Haven	jananickles@polk-county.net	
Polk County	Jay Jarvis	Transportation Director	330 W. Church Street Bartow	jayjarvis@polk-county.net	
Polk County	Brian Nadler	Deputy Chief	1295 Brice Blvd., Bartow	briannadler@polk-county.net	
Polk County	Darius Livingston	Battalion Chief	1295 Brice Blvd., Bartow	dariuslivingston@polk-county.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
SEPTEMBER 18, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Polk County	Ben Cassista	Assistant Fire Chief	1295 Brice Blvd., Bartow	bencassista@polk-county.net	
Polk County	Katie Hollenbeck	EM Planner	1890 Jim Keene Blvd Winter Haven	kathrynhollenbeck@polk-county.net	
Polk County	Michele Sims	Procurement Manager	330 W. Church Street Bartow	michelesims@polk-county.net	
Polk County	Michelle Shiver	RSVP Polk	1290 Golfview Avenue Bartow	michelleshiver@polk-county.net	
Polk County	Paul Womble	Emergency Management Director	1890 Jim Keene Blvd Winter Haven	paulwomble@polk-county.net	
Polk County	Richard Benton	Floodplain Manager	330 W. Church Street, Bartow	richardkbenton@polk-county.net	
Polk County	Shawn Smith	Assistant Fire Chief	330 W. Church Street, Bartow	shawnsmith@polk-county.net	
Polk County	Scott Anderson	Floodplain Tech	330 W. Church Street, Bartow	scottanderson@polk-county.net	
Polk County	Tabitha Biehl	Parks and Natural Resources	4177 Ben Durrance Road, Bartow	tabithabiehl@polk-county.net	
Polk County	Gaye Sharpe	Park and Natural Resources, Fiscal Mgr.	4177 Ben Durrance Road, Bartow	gayesharpe@polk-county.net	
Polk County	Todd Bond	Deputy County Manager Support Services	330 W. Church Street Bartow	toddbond@polk-county.net	
Polk County	Glenda Rogers	Lead Management & Budget Analyst	330. W Church Street, Bartow	glendarogers@polk-county.net	
Polk County School Board	Josh McLemore	Facilities Planning Director	1915 S. Floral Avenue Bartow	Joshua.mclemore@polk-fl.net	
Polk County School Board	Linda King	Director of Risk Management	1915 S. Floral Avenue Bartow	Linda.king@polk-fl.net	
United Way Central Florida	June May	Director of Community Resources	5605 US-98, Lakeland, FL 33812	June.may@uwcf.org	
The Freedom Tour	Bobby Williams	President	108 1st Eloise Street, Winter Haven	bobbyw@thefreedomtour.org	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
SEPTEMBER 18, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Town of Dundee	Joseph Carbone	Fire Department Chief	202 East Main Street, Dundee	jcarbone@townofdundee.com	
Town of Dundee	Lorraine Peterson	Planner	202 East Main Street, Dundee	lpeterson@townofdundee.com	
Town of Dundee	Tandra Davis	Town Manager	202 East Main Street, Dundee	tdavis@townofdundee.com	
Town of Dundee	Vermalyn Williams	Code Enforcement Director	202 East Main Street, Dundee	vwilliams@townofdundee.com	
Town of Hillcrest Heights	Larry Blackwelder	Town Clerk		townofhillcrestheights@netzero.com	
Town of Lake Hamilton	Patrick Henry	Water Utility Director	100 Smith Avenue Lake Hamilton	henryp@townoflakehamilton.com	
Town of Lake Hamilton	Brittney Sandoval	Town Administrator	100 Smith Avenue Lake Hamilton	brittney@townoflakehamilton.com	
Town of Lake Hamilton	Cathy Sumner	Water Department Administrative Assistant	100 Smith Avenue Lake Hamilton	csumner@townoflakehamilton.com	
Village of Highland Park	Ric Busbee	City Manager	1650 Highland Park Drive North, Lake Wales	citymanager@highlandpark-fl.org	
Webber International University	Jay Culver	Vice President of Student Life	1201 N. Scenic Highway, Babson Park	CulverJR@webber.edu	
Webber International University	Ryan Reis	Director of Annual Fund and Alumni Affairs	1201 N. Scenic Highway, Babson Park	Reisrj2@webber.edu	
Webber International University	Kenneth Reaves	Campus President	1201 N. Scenic Highway, Babson Park	reaveskm@webber.edu	
On Deck Restoration	Scott Lineback		3702 Century Blvd #1, Lakeland, FL 33811	scott@ondeckrestoration.com	
On Deck Restoration	Shaun Prather		3702 Century Blvd #1, Lakeland, FL 33811	shaun@ondeckrestoration.com	

LMS Working Group Meeting #2

****IF YOUR NAME IS NOT ON THE SIGNATURE LIST, PLEASE ADD YOURSELF HERE!**

Date: September 18, 2024

Time: 09:30am - 11:30am

NAME	AGENCY	EMAIL	Signature
Jeff Foley	BoCC	cm f.lc	
Glenda Rogers	Bocc	glendaRogers@Polk-County.net	
Jassen Dunkel	DEP		
Pat White	John Hopkins ACH	patricia.white@parametrics.com	Pat White
MAUREEN FOEMAN	Golden Lakes	MFoeman@Pcmani.com	
Caleb Gebeny	Auburndale	cgebeny@auburndalefl.com	
Ahmad Abdeljawad	winter Haven	aabdeljawad@mywinterhaven.com	
G.D. Nabong	City of Winter Haven	gdnstar@yahoo.com	
Bobby Williams	the Freedom Tour	bobbyw@thefreedomtour.org	
Lamar Cliett	City of Haines City	-	
Vernalyn Williams	Town of Dundee	vwilliams@townofdundee.com	

LMS Working Group Meeting

Polk County 2025 LMS Update

September 18, 2024

Agenda

- Introductions
- Mandatory Attendance and Participation
- Community Survey and Community Input Ideas
- Updated Community Profiles, Policies and Regulations
- LMS Planning Process, Evaluation, Maintenance Update
  - Multijurisdictional Participation
  - LMS Subgroups
  - Participation Requirements
  - Adoption of LMS
- Project List
  - Review Current Project List
  - New Project Submittal Process
  - STAPLEE
- Homework

Introductions

- Name
- Agency

Mandatory Attendance and Participation

- Attendance and participation is required for all participating jurisdictions and special districts (cities, school board, hospitals, certain private nonprofits, etc.)
- Any jurisdiction or special district that ceases participation in the LMS **will no longer be eligible** for federal hazard mitigation assistance
- Required to review and provide updates throughout the process

Community Survey, Photo Submission, & Website

- Community Surveys and Photo Submissions
- Website is live: https://polkcountylms.org/

8 Responses Received

12 Responses Received

Community Profiles, Policies and Regulations

Responses/Communication From:

Davenport

Lake Wales

Auburndale

Bartow

Lakeland

Haines City

Submit your Community Profiles, Polices and Regulations ASAP!

If no changes, please send an email stating so to Jerri.

Multijurisdictional Participation

Multi-Jurisdictional Participation

The LMS includes one county, its unincorporated areas, 17 municipalities, and the Polk County Public Schools. To satisfy multi-jurisdictional participation requirements, FEMA requires the County and jurisdictions perform the following tasks:

- Participate in mitigation planning workshops;
- Provide data for the Hazard Analysis and Risk Assessment, as needed;
- Identify completed mitigation projects, if applicable; and
- Adopt the LMS.

Each of the jurisdictions listed below contributed to the planning process and are seeking approval of the LMS. The following jurisdictions may adopt the LMS.

- Polk County
- Polk County Public Schools
- City of Auburndale
- City of Bartow
- City of Davenport
- Town of Dundee
- City of Eagle Lake
- City of Fort Meade
- City of Frostproof
- City of Haines City
- Village of Highland Park
- Town of Hillcrest Heights
- City of Lake Alfred
- Town of Lake Hamilton
- City of Lake Wales
- City of Lakeland
- City of Mulberry
- City of Polk City
- City of Winter Haven

Add *Participating Agency* section and list participating agencies. This will assist in later identifying agencies who need to submit a *Letter of Support*.

LMS Subgroups

Recommendation:
No changes to subgroups.
Update Goals and Objectives Subgroup to meet as needed.

LMS Subgroups

The LMS process established and utilized a Goals and Objectives Subgroup and a Community Rating System Subgroup.

Goals and Objectives Subgroup

The LMS Working Group established a Goals and Objectives Subgroup for the 2020 LMS update to review and update the Goals and Objectives of the LMS. This subgroup prepared recommended amendments to the LMS goals and objectives. The LMS Working Group reviewed and voted to adopt the recommended Goals and Objectives from the Goals and Objectives Subgroup. While this is not a standing subgroup, the LMS Working Group may reinstate it if necessary.

Community Rating System (CRS) Subgroup

Comprised of representatives of the County's CRS Communities, this subgroup meets semi-annually to discuss issues regarding CRS updates, to collaborate on best practices for assisting jurisdictions to achieve a higher rate class and therefore an increase in the flood insurance discount rate for its citizens, and to share information regarding CRS-related training. This group collaborates with other local governments, local business leaders, and members of the public on a full range of Outreach Projects Strategy (OPS) initiatives to promote CRS participation. This subgroup reviews the floodplain management portions of the LMS and all initiatives relating to the CRS to ensure the information is current.

Participation Requirements

Participation Requirements

Since the LMS Working Group writes the LMS using input from all stakeholders, it is important to make sure there is representation from the entire Polk County community. Each stakeholder has different participation requirements and the LMS Working Group encourages all stakeholders to participate in the process.

Jurisdictions

County, municipal, and government agency participation is critical to the success of the LMS. To retain LMS voting rights, qualify for Federal mitigation assistance consideration, and otherwise remain a member in good standing, FEMA requires all jurisdictions to conform to the following standards:

- Participation of the representative or alternate in the semi-annual LMS Working Group meetings; or participation in a majority of the LMS subgroup meetings; and
- Have an officially executed resolution adopting the revised LMS on file with the County. A jurisdiction must have an officially adopted resolution to be eligible for Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance Program (FMAP), and Pre-Disaster Mitigation (PDM) funding programs.

The LMS Coordinator will notify all jurisdictions of meetings via email at least one week in advance and will provide meeting summaries thereafter.

Non-Governmental Organizations (NGO), Other Governmental Entities, and Stakeholders

The LMS Working Group encourages participation by non-governmental organizations (NGO), other governmental entities, and stakeholders. To qualify for LMS grant sponsorship, NGOs, and other governmental entities must:

- Have a duly executed letter of commitment to the LMS on file with the County; and
- Actively participate in and support LMS activities.

The Public and Private Sector

Broad community support, including ongoing public and private sector involvement, is important to the success of the LMS. While participation by private organizations and the public is voluntary, the LMS Working Group, through the LMS Coordinator, seeks, invites, monitors, and fully documents the attendance, comments, contributions, and support from private organizations and the public. To promote the opportunity for broad participation, the LMS Coordinator posts notices and agendas for general meetings of the LMS through press releases, social media, postings on County and municipal websites, announcements in the County and municipal newsletters and calendars, and e-mail to past participants. According to the County's Communication Division, social media reaches the most people in Polk County. The LMS Coordinator actively solicits new LMS members by reaching out to private sector and nonprofit organizations to encourage participation.

Recommendation:

- Municipalities/agencies who receive mitigation grant funding will be required to provide updates on the status of their projects at each LMS meeting
- Have a letter of support to the LMS on file with the County
- Include language that would remove a non-participating municipality/agency from the LMS Working Group. Discussion needed on specific verbiage.

Adoption of LMS

Adoption of LMS

Jurisdictions wishing to participate in and share in the benefits of the LMS must complete and file a fully-executed resolution which conforms to the adoption standards established and amended by the Polk County Board of County Commissioners and the LMS Working Group. Section VIII includes a sample resolution and Appendix H includes the adoption resolutions of the jurisdictions.

Recommendation:

Include the requirement of participating agencies to have a letter of support to the LMS on file with the County

Review Current Project List

Please review the Current Project List (separate document) for your municipality or agency. Ensure all information is up-to-date and accurate. If a project is to be deferred (remain on the list), has been completed, or is to be deleted, a reason must be given.

Examples for deferred projects: ongoing project, working on plans, awaiting funding, funding not available, contracted for HMGP funding.

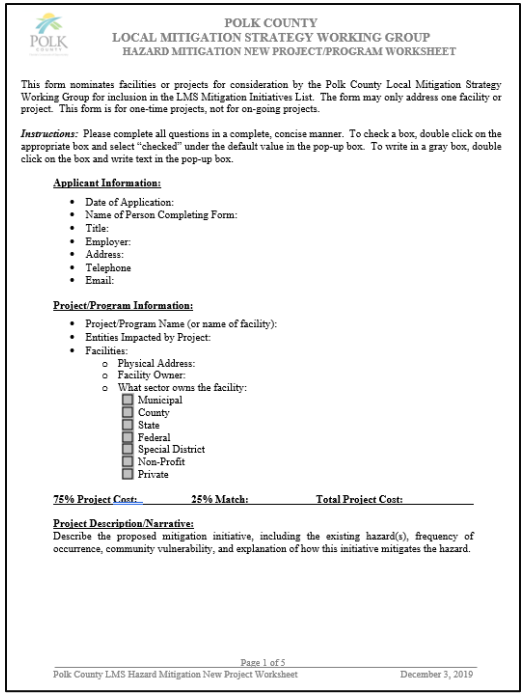
Examples for deleted projects: project is not cost effective, no record of project, not applicable for meeting standards.

Examples for completed projects: project completed in 2020. If at all possible, include the year a project was completed.

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existi	Responsible Agency	Responsible Departme	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	County Public Safety Departments (Fire, EMS, E-911, etc)	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual		
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	Polk County	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual		
Auburndale	Auburndale	Alberta Street Drainage Improvement	Drainage	Relieves flooding and drainage problem at major intersection on Alberta St	Flood	Both	Auburndale	Public Works	$500,000	HMGP, FMA	12-18 Months		
Auburndale	Auburndale	Highway 92, Lakeshore and Beach Lift Station Generator Project	Infrastructure	Highway 92, Lakeshore and Beach Lift Station Generator Project	All	Both	City of Auburndale	Public Works	$189,995	HMGP	12-18 Months		
Bartow	Bartow	Fiber Smart Grid Pilot Project	New Infrastructure, Critical Facilities	Develop and Implement Smart Grid Pilot Project	All	New	Bartow	Public Works	$2,500,000	General Fund	24-36 Months		

New Project Submittal Process

Review the Hazard Mitigation New Project/Program Worksheet. This document is required for any projects to be added to the LMS Working Group Project List for Hazard Mitigation Grant Funding. It is recommended to add other projects to the list to demonstrate utilizing other funding opportunities.



POLK COUNTY
LOCAL MITIGATION STRATEGY WORKING GROUP
HAZARD MITIGATION NEW PROJECT/PROGRAM WORKSHEET

This form nominates facilities or projects for consideration by the Polk County Local Mitigation Strategy Working Group for inclusion in the LMS Mitigation Initiatives List. The form may only address one facility or project. This form is for one-time projects, not for on-going projects.

Instructions: Please complete all questions in a complete, concise manner. To check a box, double click on the appropriate box and select "checked" under the default value in the pop-up box. To write in a gray box, double click on the box and write text in the pop-up box.

Applicant Information:

- Date of Application:
- Name of Person Completing Form:
- Title:
- Employer:
- Address:
- Telephone
- Email:

Project/Program Information:

- Project/Program Name (or name of facility):
- Entities Impacted by Project:
- Facilities:
  - Physical Address:
  - Facility Owner:
  - What sector owns the facility:
    - ☐ Municipal
    - ☐ County
    - ☐ State
    - ☐ Federal
    - ☐ Special District
    - ☐ Non-Profit
    - ☐ Private

75% Project Cost: **25% Match:** **Total Project Cost:**

Project Description/Narrative:
Describe the proposed mitigation initiative, including the existing hazard(s), frequency of occurrence, community vulnerability, and explanation of how this initiative mitigates the hazard.

Page 1 of 5
Polk County LMS Hazard Mitigation New Project Worksheet December 3, 2019

Recommended changes to the form:

- Update Applicant Information
  - Responsible Agency (instead of Employer)
  - Add Responsible Department
- Add Hazards Mitigated
- Update Timeliness to match LMS Project List
  - Less than twelve months to complete or implement
  - Twelve months to twenty-four months to complete or implement
  - Twenty-four months to thirty-six months to complete or implement
  - More than thirty-six months to complete or implement

Recommended changes to the process:

- Add verbiage that projects may be added outside of potential hazard mitigation grant funding to demonstrate utilizing other fund opportunities to complete projects. These projects will not require completion and submission of the Hazard Mitigation new Project/Program Worksheet to the LMS Working Group.

STAPLEE Form

STAPLEE ACTION EVALUATION TABLE

STAPLEE Criteria Considerations

1=Favorable 0=Neutral -1=Less Favorable

Multiply by number in parenthesis

			S (Social)			T (Technical)					A (Administrative)			P (Political)			L (Legal)					E (Economic)				E (Environmental)			
Category	Entity	Project Description	Community Acceptance	Effect of Segment of Population	Effect of Community (2)	Technically Feasible (3)	Long-term Solution	Expertise Required & Available (2)	Reasonable Timeframe	Secondary Impacts	Capability to Implement	Funding Allocated	Community Provide Maintenance (3)	Politically Acceptable	Local Champion	Public Support	Authority to Implement (2)	Comply with Environmental Regulations (3)	Legal Side Effects/Taking	HOA Bylaws/Deed Restrictions	Potential Legal Challenge	Reasonable Cost (2)	Burden on Economy	Contributes to Economic Goals (2)	Additional Jobs (2)	Impact Floodplain/Wetland (3)	Natural Environment	Environmental Regulatory Approvals (2)	Utility and Transportation Systems

Homework

Due Date: November 20

- LMS Project Updates
  - Mark projects for your jurisdiction as deferred, completed, or deleted and the reason why.
  - Begin considering new projects to be added to the list
  - Review the New Project Submittal Form (updated form to be emailed) in preparation for submitting new projects
- Hazard Profiles
  - Review the updated hazards list and submit specific incidents that have occurred to your jurisdiction or agency.
  - Submit hazards that have impacted or greatly affected your jurisdiction or agency since 2020. Information should include dates, event or incident name, locations affected or impacted, and photos if available

Contacts

Polk County Emergency Management
Brian Thurston
863-298-7000
brianthurston@polk-county.net

Central Florida Regional Planning Council
Jerri Sackett
863-534-7130, ext. 103
jsackett@cfrpc.org

Questions

CRS Subcommittee meeting in 10 minutes in the conference room.

Next LMS Working Group Meeting: November 20 at 9:30 am

Polk County LMS Working Group
LMS Update Meeting
September 18, 2024

- Jerri Sackett and Brian Thurston opened the meeting.

Requirements for LMSWG Attendance and Participation

- Attendance and participation required.
- Any jurisdiction or special district that ceases to participate will no longer be eligible for federal hazard mitigation assistance.

Surveys and Website

- Eight responses for disaster/incident photos and twelve responses received for the survey.
- Please continue to share the survey with others.
- The Polk County LMS website is live and can be found at https://www.polkcountylms.org

Community Profiles, Policies, and Regulations

- Only 6 of the 17 jurisdictions have provided responses.
- Provide responses to Jerri, whether you have changes or not.
- It was requested for the regulations to be resent to the LMS Working Group.

Multijurisdictional Participation

- Staff proposed adding a *Participating Agency* section and list the participating agencies which will assist in identifying agencies who need to submit a letter of support.
    - Examples of participating agencies include the School Board, Universities, and John Hopkins
- Working Group supported the recommendation of adding the section.

LMS Subgroups

- The LMS Subgroups include a Goals and Objectives Subgroup and a CRS Subgroup. Staff proposed the Goals and Objectives Subgroup language be updated to reflect they will meet as needed since they did not meet for this LMS Update cycle.
- Working Group agreed to update Goals and Objectives Subgroup to meet as needed.
- No other changes to this section.

Participation Requirements

- Working Group participation requirements discussed.
- Working Group agreed to continue with two meetings per calendar year.
- Working Group agreed that those receiving funding will be required to update the status of their projects at each LMS meeting.

Adoption of LMS

- Working Group discussion on the adoption section.
- Working Group agreed to include the requirement of participating agencies having a Letter of Support to the LMS on file.
- After the Florida Division of Emergency Management and FEMA approve the updated LMS, the BoCC will adopt the LMS and then other agencies or cities will need to provide the letter of support or resolution.

Review Current Project list

- Current project list discussed.
- Paul requested everyone update the status of these projects. He gave an example of Polk County Fire working continuing to work on projects from Hurricane Irma in 2017.
- Homework will be to review the project list and update each project to be deferred, completed, or deleted and a reason why. These two columns will be highlighted in yellow on the spreadsheet.
- Discussion on ensuring the project spreadsheet and Project form match. Both will be updated to match.
- Discussion on sharing the project list on a SharePoint system and creating an online project submittal form. Polk County Emergency Management will discuss the possibility with IT.

New Project Submittal Process

- Discussion of the current New Project/Program Worksheet which is required for any projects to be added to the list that may use mitigation grants.
- The Worksheet will be updated to better match the project spreadsheet:
    - *Timeliness* changed to *Time to Complete*
    - Project timelines will be consistent between the spreadsheet and the worksheet.
    - Goal or objective of LMS that is being supported by this project/program.
    - Update applicant information such as responsible agency instead of employer and add responsible department
    - Level of vulnerability section instructions and checkboxes to be updated
- Discussion of ongoing mitigation projects versus singular mitigation projects.
    - Example is public education/notification of harmful algal blooms as an ongoing project.
- Reviewed FDEM's eight-page Mitigation Generator's Worksheet to further explain and show why so much information is required on the New Project/Program Worksheet.
- Do not wait until the last minute to apply for grants due to the lengthy application process.

STAPLEE Form

- Working Group discussed the project prioritization process.
- Working Group agreed to continue with the STAPLEE Form for project prioritization.

Homework -- Due Nov 20

- Community Profiles, Policies and Regulations
  - If you have not submitted your community profile or updated policies and regulations, please do so immediately. If there are no changes, an email is required stating so.
- LMS Project Updates
  - Mark projects for your jurisdiction or agency as deferred, completed, or deleted and the reason why (examples provided in the presentation).
  - Begin considering new projects to be added to the list.
  - The updated New Project Submittal Form will be emailed out to be used for submitting new projects.
- Hazard Profiles
  - Only the ones marked with further analysis need the agency or jurisdictional history of the hazard occurring. Please provide photos if you have them.

Other

- Winter Haven monitors for Harmful Algal Blooms but does not talk with the pubic while Polk County sends the reports to the State and Florida Department of Environmental Protection.

Community Rating System (CRS) Subgroup meeting to follow today's LMSWG meeting.

Next LMS Meeting is November 20, 2024 at 9:00 am at the Polk County EOC.

Local Mitigation Strategy

Working Group Meeting

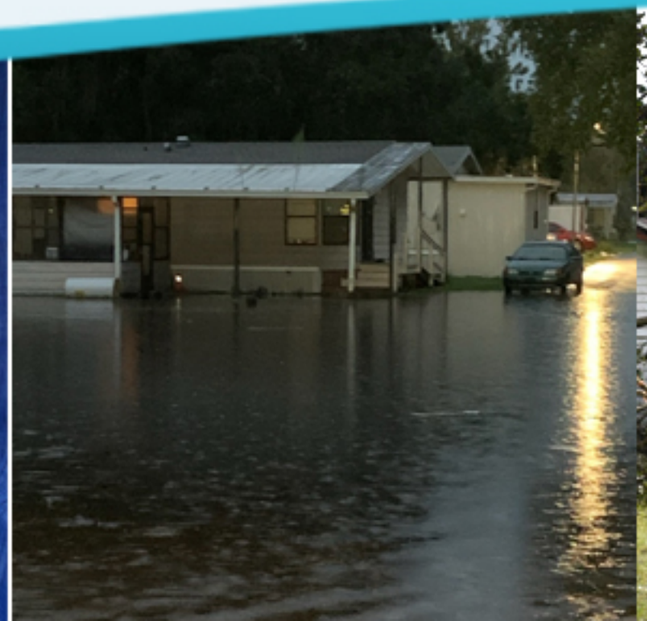
November 20, 2024 | 9:30 - 11:30 a.m.

Polk County Emergency Operations Center

1890 Jim Keene Blvd., Winter Haven, FL 33880

Help reduce the impact of disasters to Polk County

polkcountylms.org



POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
NOVEMBER 20, 2024

AGENDA

1. Welcome and Introductions
2. Approval of Minutes
3. Old Business
    a. Community Profiles
    b. Policies and Regulations
    c. Agency/Jurisdictional History of Hazards
    d. New Project Form
    e. Status of Current Project List (Completed, Deferred, Deleted)
    f. Survey and Incident Photo Submission Update
4. New Business
    a. Discussion - Funding Opportunity Section
    b. Highlights of LMS Draft
    c. Successes and Challenges since 2020
    d. Development Changes
5. Homework

Next Working Group Meeting – January 22, 2024, at 9:30 am at Polk EOC

LMS Working Group Meeting

Polk County 2025 LMS Update

November 20, 2024

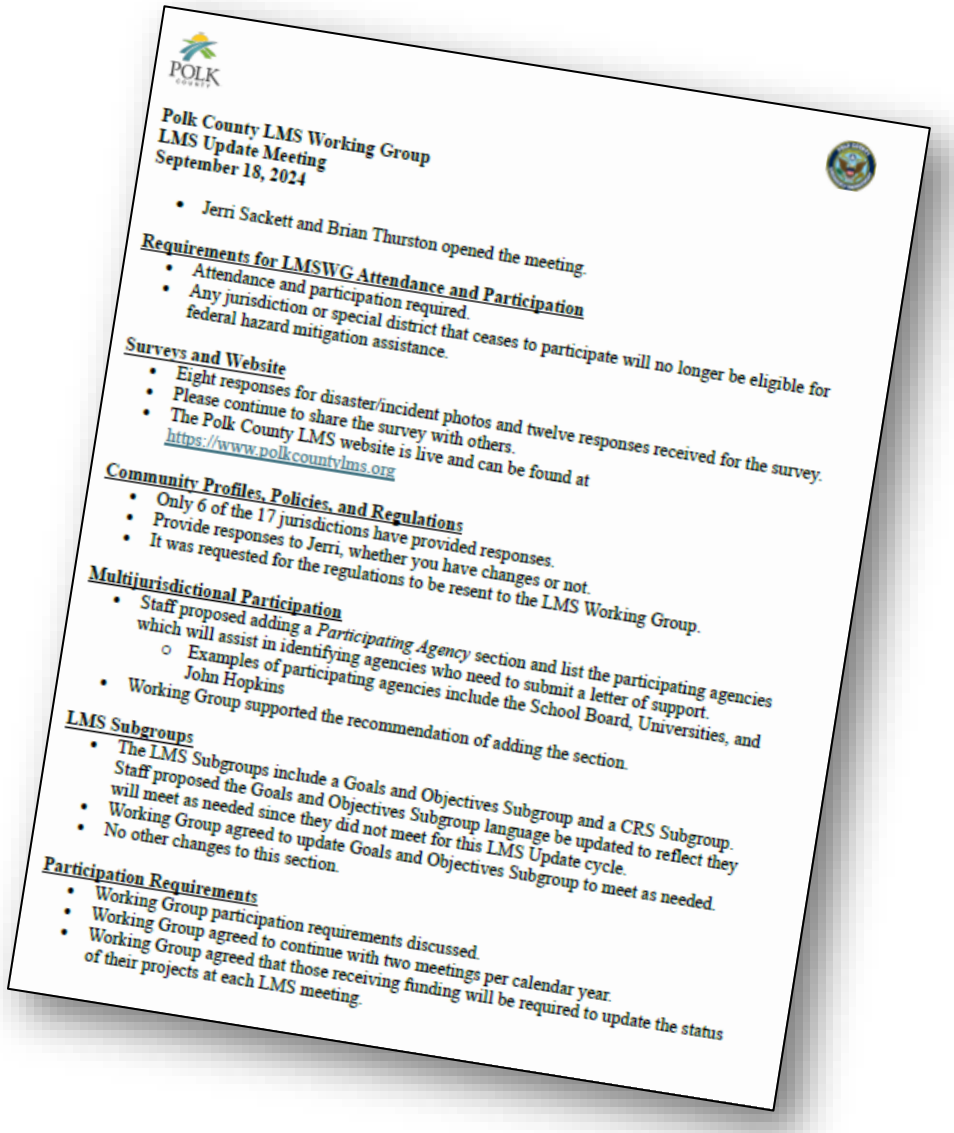
Agenda

1. Welcome and Introductions
2. Approval of Minutes
3. Old Business
   a) Community Profiles
   b) Policies & Regulations
   c) Agency/Jurisdictional History of Hazards
   d) New Project Form
   e) Status of Current Project List
   f) Survey Responses
4. New Business
   a) Discussion – Funding Opportunity Section
   b) Highlights of LMS Draft
   c) Successes and Challenges
   d) Development Changes
5. Homework

Introductions

Meeting Minutes

Review and approve
September 18, 2024 Minutes



Polk County LMS Working Group
LMS Update Meeting
September 18, 2024

- Jerri Sackett and Brian Thurston opened the meeting.

Requirements for LMSWG Attendance and Participation

- Attendance and participation required.
- Any jurisdiction or special district that ceases to participate will no longer be eligible for federal hazard mitigation assistance.

Surveys and Website

- Eight responses for disaster/incident photos and twelve responses received for the survey.
- Please continue to share the survey with others.
- The Polk County LMS website is live and can be found at https://www.polkcountylms.org

Community Profiles, Policies, and Regulations

- Only 6 of the 17 jurisdictions have provided responses.
- Provide responses to Jerri, whether you have changes or not.
- It was requested for the regulations to be resent to the LMS Working Group.

Multijurisdictional Participation

- Staff proposed adding a *Participating Agency* section and list the participating agencies which will assist in identifying agencies who need to submit a letter of support.
  - Examples of participating agencies include the School Board, Universities, and John Hopkins
- Working Group supported the recommendation of adding the section.

LMS Subgroups

- The LMS Subgroups include a Goals and Objectives Subgroup and a CRS Subgroup.
- Staff proposed the Goals and Objectives Subgroup language be updated to reflect they will meet as needed since they did not meet for this LMS Update cycle.
- Working Group agreed to update Goals and Objectives Subgroup to meet as needed.
- No other changes to this section.

Participation Requirements

- Working Group participation requirements discussed.
- Working Group agreed to continue with two meetings per calendar year.
- Working Group agreed that those receiving funding will be required to update the status of their projects at each LMS meeting.


open
discussion

Updates – FEPA Mitigation Working Group

- HMGP
  - Instead of separate Notice of Funding Opportunity (NOFO) for each grant, FDEM is researching the possibility of combining them into one
  - Between Helene and Milton, FDEM estimates they will have more funding available than what was allocated for Hurricane Ian ($1 billion)

- FMA Swift Current
  - FDEM developing a program to use these funds for residential mitigation
  - Funds of at least $40 million for this program
  - Limited to residential projects for elevation, acquisition, and mitigation reconstruction
  - The resident must have NFIP flood insurance in order to apply for program funding and will have to maintain NFIP flood insurance for the life of the structure
  - Residential projects will not be required to be part of the LMS project list or require LMS Working Group endorsement
  - Unknown when this program will be available

Old Business – Community Profiles

Pending responses from:

- Polk County BOCC
- Dundee
- Eagle Lake
- Mulberry

Old Business – Policies and Regulations

Pending responses from:

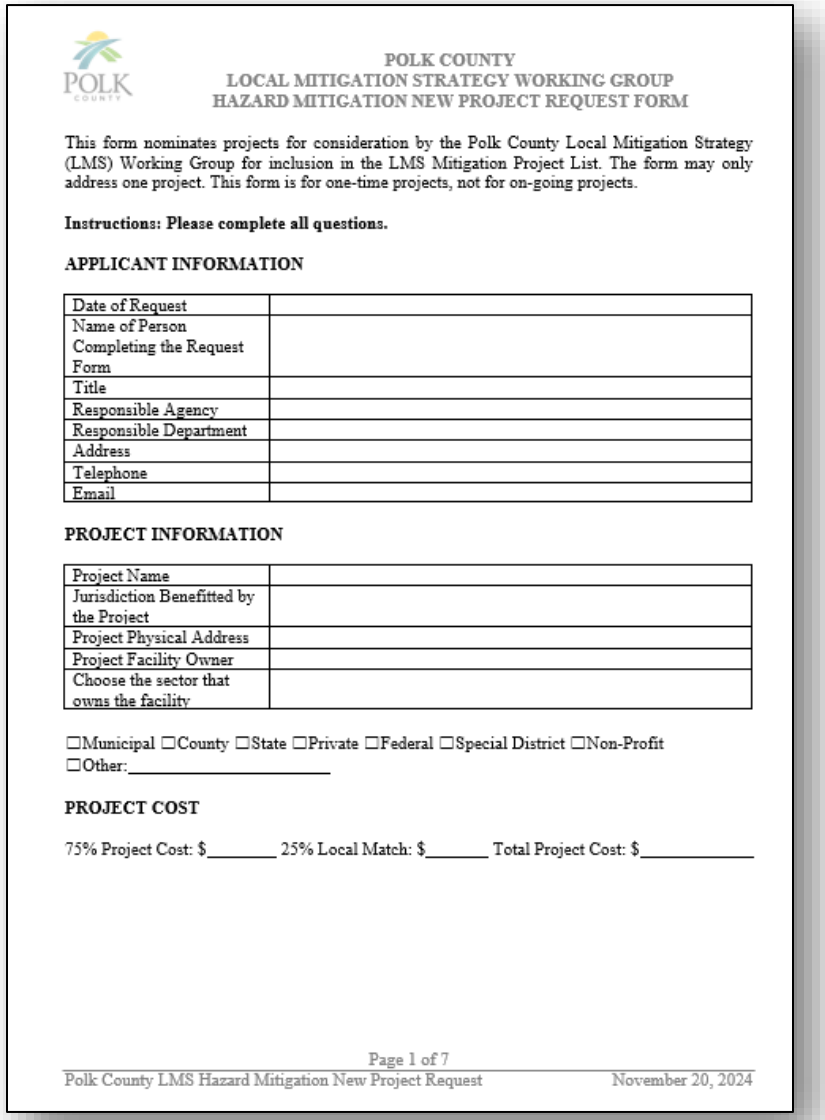
- Polk County BOCC
- Dundee
- Eagle Lake
- Lakeland
- Mulberry

Old Business – History of Hazards

- Extreme Temperatures (Heat and Freezes)
- Fog
- Hurricanes/Tropical Storms
- Severe Storm and Tornado
- Subsidence and Sinkhole
- Drought
- Flood
- Wildfires
- Civil Disturbance/Terrorism
- Cyber Attacks
- Dam/Levee Failure
- Harmful Algal Bloom
- Hazardous Materials Incidents
- Epidemics/Pandemics
- Transportation Incident

What is your agency or jurisdiction impacts of each of these hazards? Specific incidents needed especially for the ones in orange (new).

Old Business – New Project Form



POLK COUNTY
LOCAL MITIGATION STRATEGY WORKING GROUP
HAZARD MITIGATION NEW PROJECT REQUEST FORM

This form nominates projects for consideration by the Polk County Local Mitigation Strategy (LMS) Working Group for inclusion in the LMS Mitigation Project List. The form may only address one project. This form is for one-time projects, not for on-going projects.

Instructions: Please complete all questions.

APPLICANT INFORMATION

Date of Request	
Name of Person Completing the Request Form	
Title	
Responsible Agency	
Responsible Department	
Address	
Telephone	
Email	

PROJECT INFORMATION

Project Name	
Jurisdiction Benefitted by the Project	
Project Physical Address	
Project Facility Owner	
Choose the sector that owns the facility	

☐Municipal ☐County ☐State ☐Private ☐Federal ☐Special District ☐Non-Profit
☐Other:_____

PROJECT COST

75% Project Cost: $_____ 25% Local Match: $_____ Total Project Cost: $_____

Page 1 of 7
Polk County LMS Hazard Mitigation New Project Request November 20, 2024

- Review new form
- Any additional changes needed?
- Vote to approve the new form as presented or with proposed changes.

Old Business – Status of Current Projects

Pending Responses From:

- Polk County BOCC
- Bartow
- Dundee
- Eagle Lake
- Frostproof
- Haines City
- Highland Park
- Hillcrest Heights
- Lake Alfred
- Lake Hamilton
- Lakeland
- Lake Wales
- Mulberry
- Polk City
- Winter Haven

Examples for deferred projects: ongoing project, working on plans, awaiting funding, funding not available, contracted for HMGP funding.

Examples for deleted projects: project is not cost effective, no record of project, not applicable for meeting standards.

Examples for completed projects: project completed in 2020. If at all possible, include the year a project was completed.

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existi	Responsible Agency	Responsible Departme	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	County Public Safety Departments (Fire, EMS, E-911, etc)	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual		
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	Polk County	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual		
Auburndale	Auburndale	Alberta Street Drainage Improvement	Drainage	Relieves flooding and drainage problem at major intersection on Alberta St	Flood	Both	Auburndale	Public Works	$500,000	HMGP, FMA	12-18 Months		
Auburndale	Auburndale	Highway 92, Lakeshore and Beach Lift Station Generator Project	Infrastructure	Highway 92, Lakeshore and Beach Lift Station Generator Project	All	Both	City of Auburndale	Public Works	$189,995	HMGP	12-18 Months		
Bartow	Bartow	Fiber Smart Grid Pilot Project	New Infrastructure, Critical Facilities	Develop and Implement Smart Grid Pilot Project	All	New	Bartow	Public Works	$2,500,000	General Fund	24-36 Months		

Old Business – Survey Responses

- 15 online responses received
- 18 online photos received
- 2 completed public engagement activities:
  - Polk County Comp Plan Workshop
  - Great American Teach-In

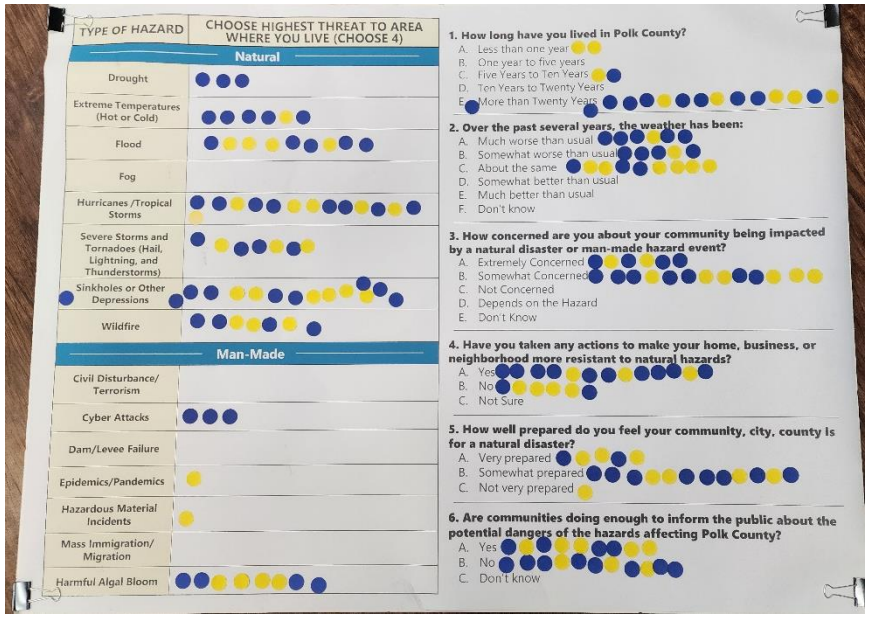
Highest Threat to Area Where You Live		
Hurricanes/Tropical Storms	66	23%
Flood	40	14%
Extreme Temperatures	38	13%
Severe Storms	31	11%
Fog	28	10%
Sinkholes	27	10%
Wildfire	25	9%
Drought	10	4%
Harmful Algal Bloom	8	3%
Cyber Attacks	3	1%
Epidemics/Pandemics	3	1%
Civil Disturbance/Terrorism	1	0%
Hazardous Materials Incidents	1	0%
Mass Immigration/Migration	1	0%
Dam/Levee Failure	0	0%
Total	**282**	**100%**

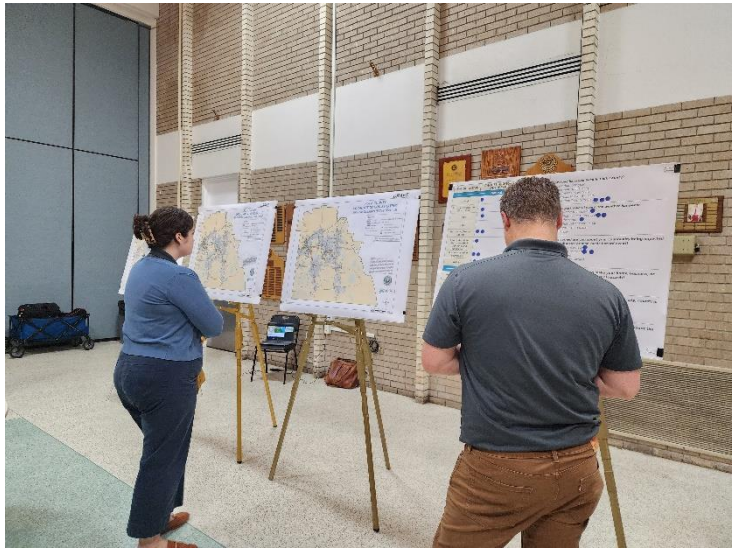
New Business – Funding Opportunity Section

- Funding section no longer required by FEMA or Florida Division of Emergency Management.
- Recommendation to remove the section.

4. New Business – LMS Draft Highlights

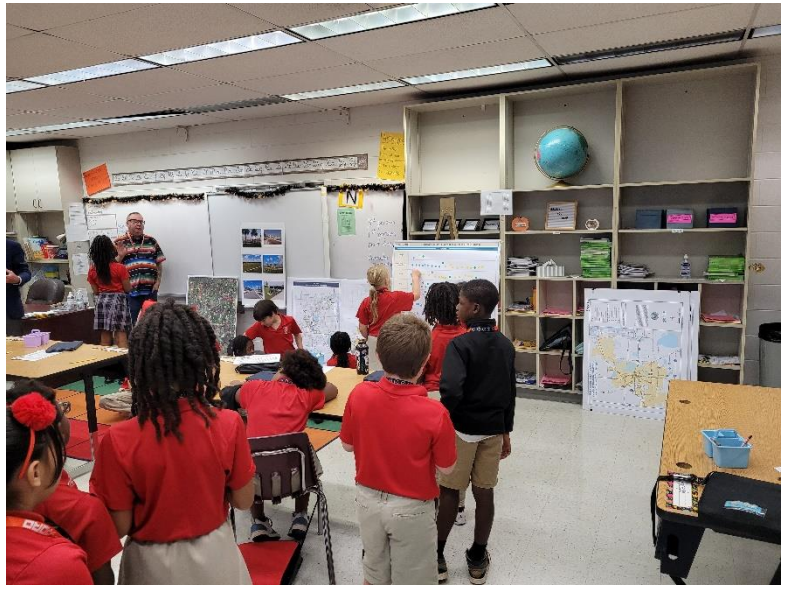
Public Participation Events

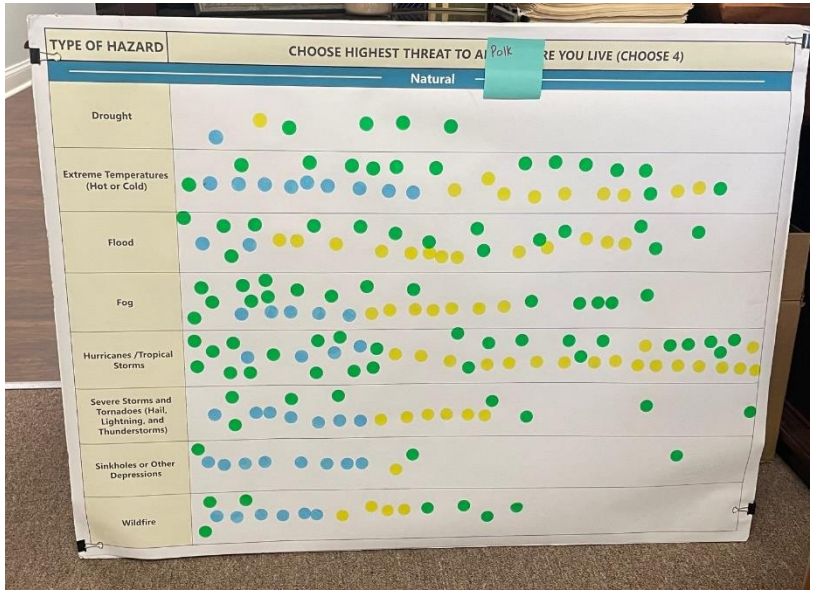




4. New Business – LMS Draft Highlights

Public Participation Events





4. New Business – LMS Draft Highlights

Public Participation Events Upcoming

Lake Hancock Master Trail Plan Public Meeting

When: December 10, 2024

Time: 4 to 6 p.m.

Location: Polk's Nature Discovery Center At Circle B Bar Reserve, 4399 Winter Lake Road, Lakeland, FL, 33803

Polk County Parks and Natural Resources is seeking public input on the draft Lake Hancock Trails Master Plan, which identifies future trail opportunities in the area. A public meeting will be held at the Polk's Nature Discovery Center at Circle B Bar Reserve on Tuesday, Dec. 10 from 4 to 6 p.m.

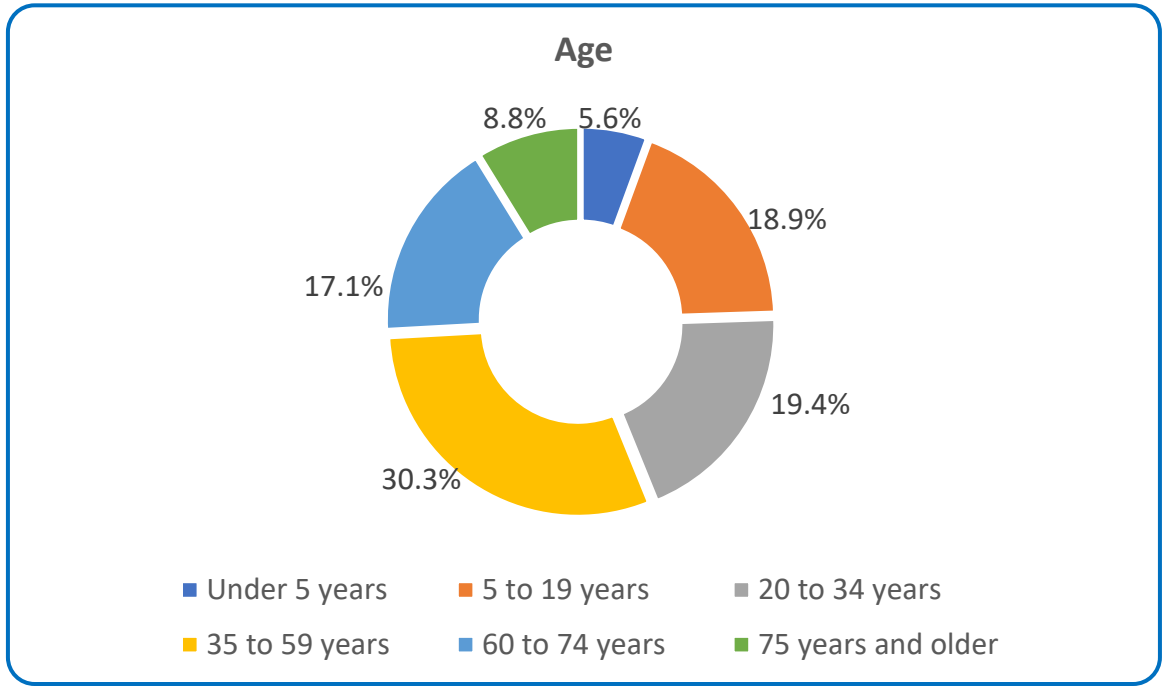
Residents are encouraged to provide feedback on the proposed trail locations and amenities even if they don't attend the meeting. Feedback can be provided by clicking here to fill out a Google form.

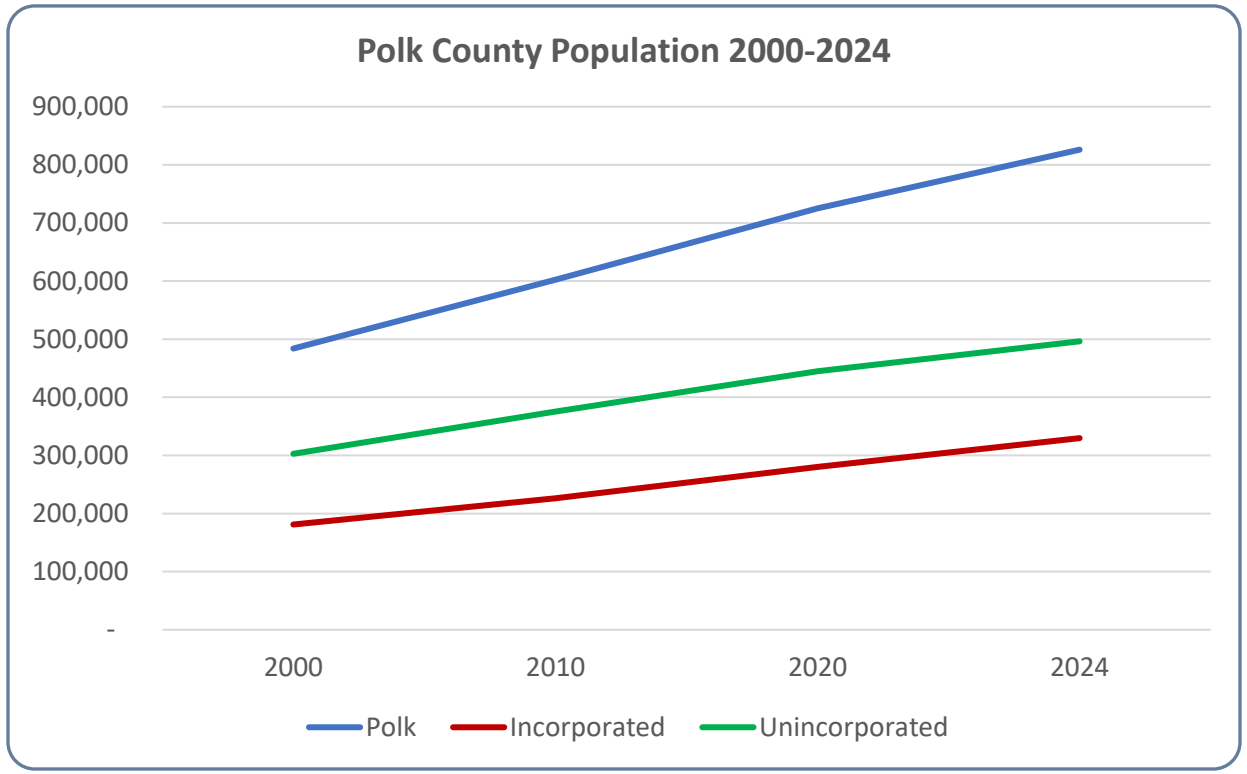
CLICK HERE TO FILL OUT OUR SURVEY

BACK TO CALENDAR >

4. New Business – LMS Draft Highlights

TABLE IV-2: POPULATIONS OF MUNICIPALITIES AND UNINCORPORATED AREAS IN POLK COUNTY			
Municipality	**2020 Population**	**2024 Population Estimate**	**Percent (%) Change**
Incorporated Total Population	**280,148**	**329,738**	**17.7**
Unincorporated Total Population	444,898	496,352	11.6
Total County	**725,046**	**826,090**	**13.9**

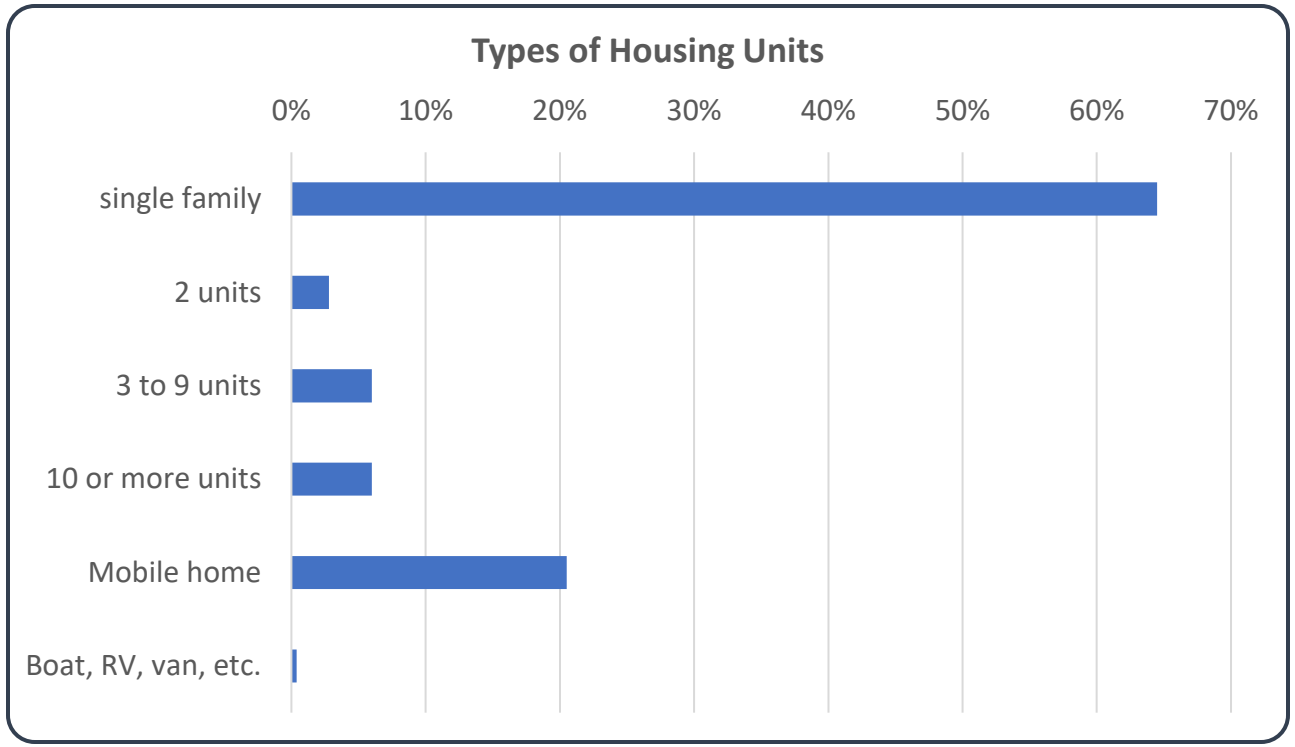


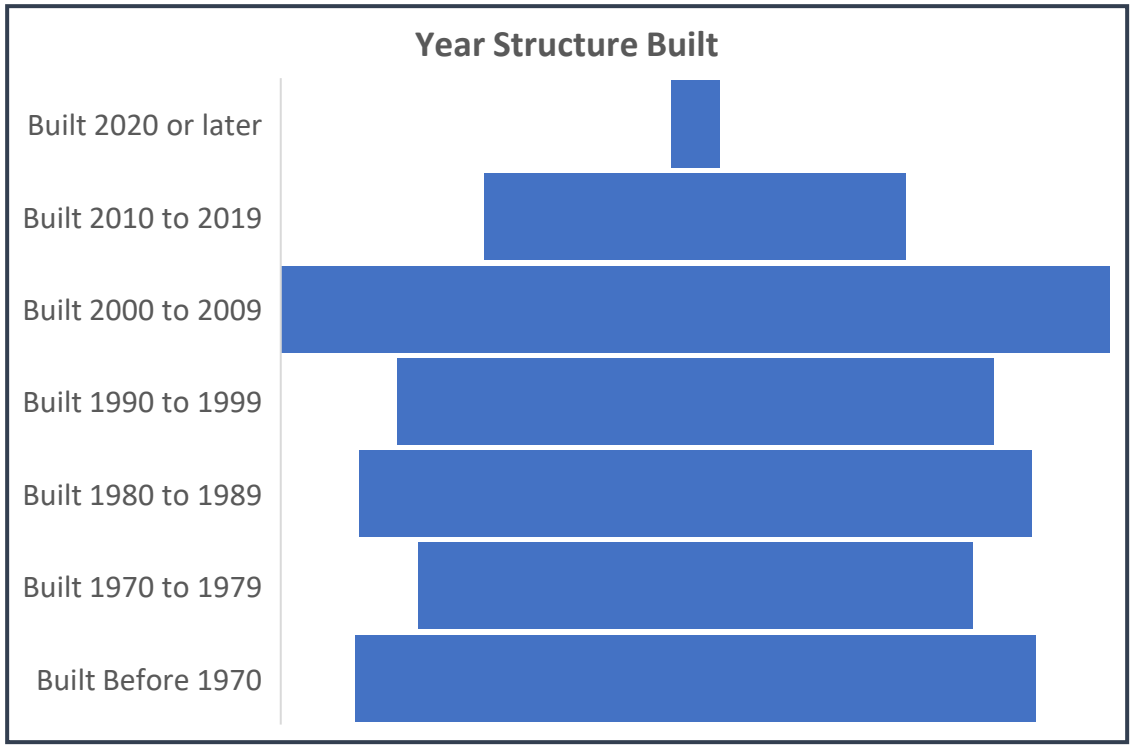


Incorporated Areas include 40% of Total County population in 2024

Median Age = 39.8

4. New Business – LMS Draft Highlights





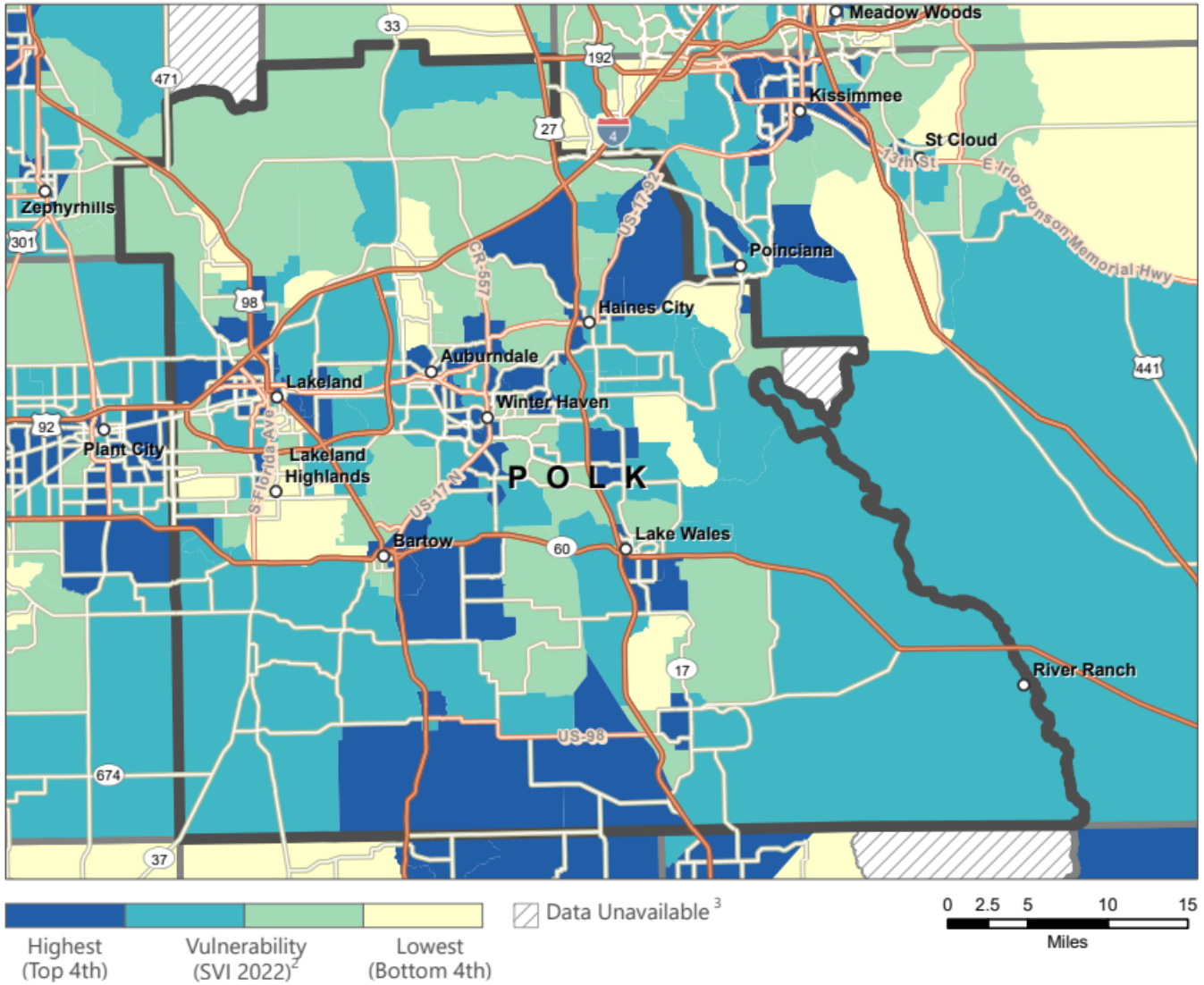
18% of the houses 50 years or older (Built Before 1970)

4. New Business – LMS Draft Highlights

Social Vulnerability

Measures a Community's capacity to prepare for and respond to the stress of hazardous events

Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry/Geospatial Research, Analysis, and Services Program. CDC/ATSDR Social Vulnerability Index Interactive Map



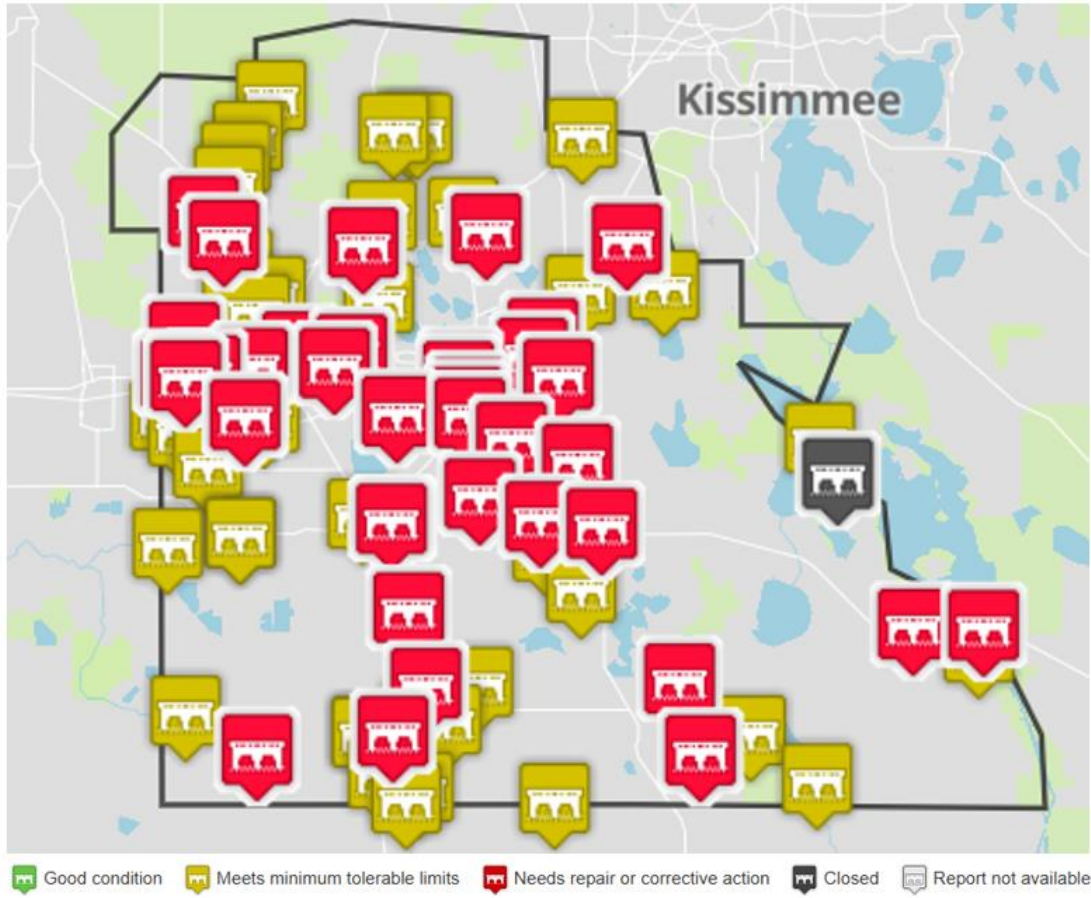
4. New Business – LMS Draft Highlights

FORT MEADE LEADER

LIFTING THE WORLD UPWARD AND ONWARD ARE THOSE WHO ENCOURAGE MORE THAN CRITICIZE. SPEAK GOOD WORDS WHILE YOU MAY, GIVING FL

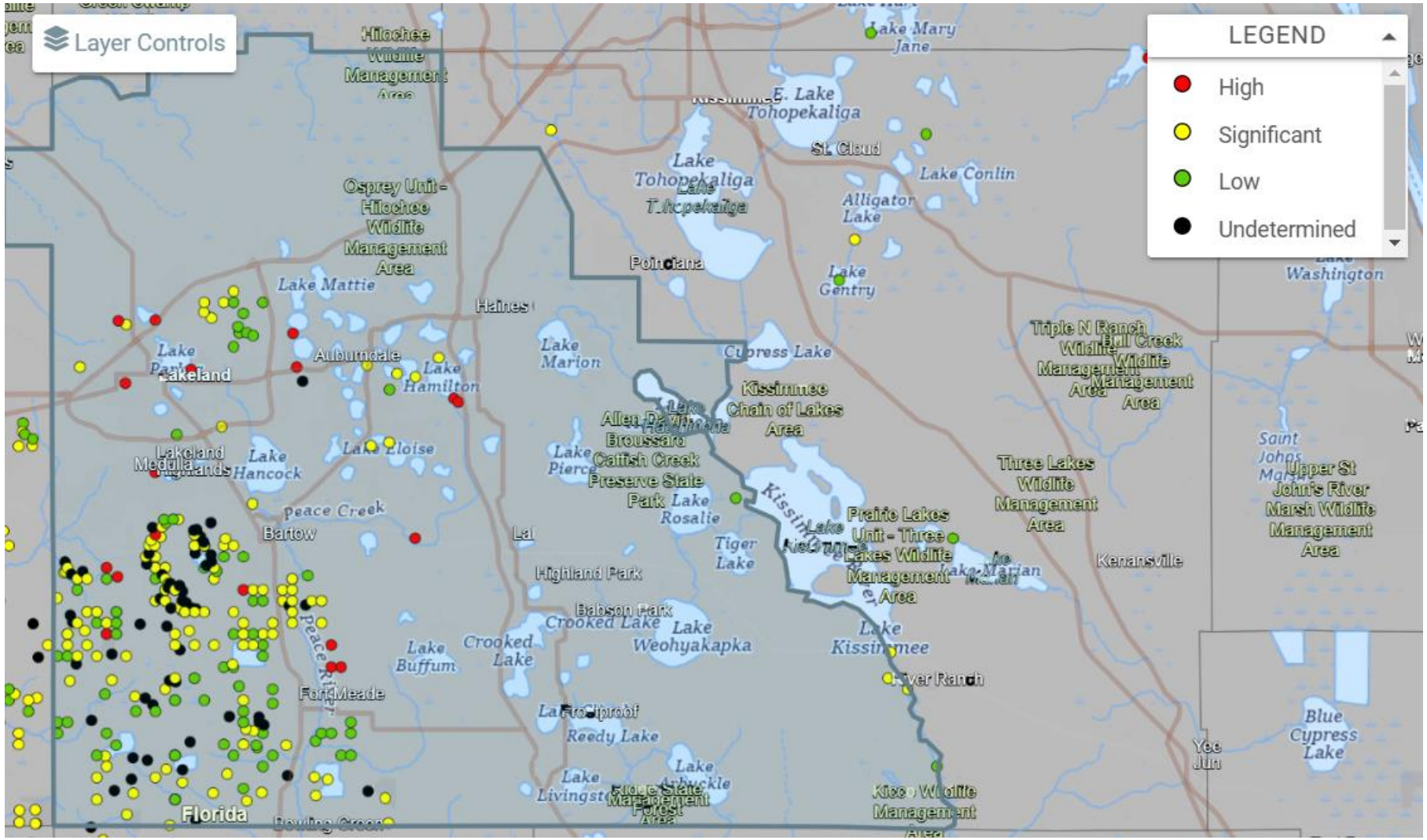
FORT MEADE, FLA. APRIL, 12, 1928

New Concrete Bridge just complet[illegible] across Peace River at Fort Meade by Special Road and Bridge District No. 10. J. O. Singletary, County Commissioner from District No. 2 under whose direct sup[illegible]sion it was built; Johnson & Brown, Contractors; Post Hallowes, Civil Engineer in Charge; Richard Houghton, Supervisor of Concrete. Design of beam and girder type, conc[illegible]ete pilings, with upper panel railings, cement floor, 25-ft. spans with heavy expansion joints, by Frank Keller, Civil Engineer.



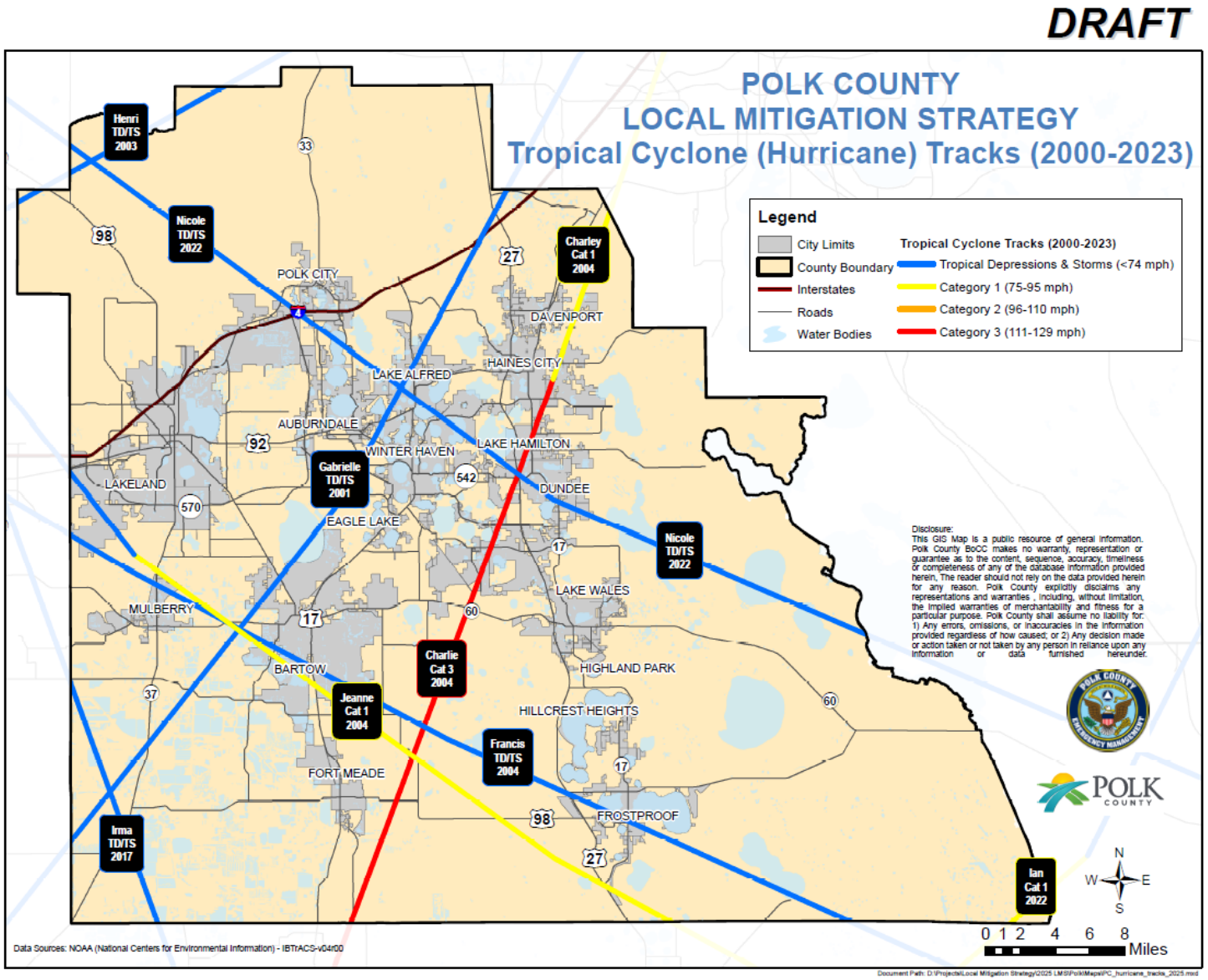
Source: https://data.rgj.com/bridge/florida/polk/12105/

4. New Business – LMS Draft Highlights

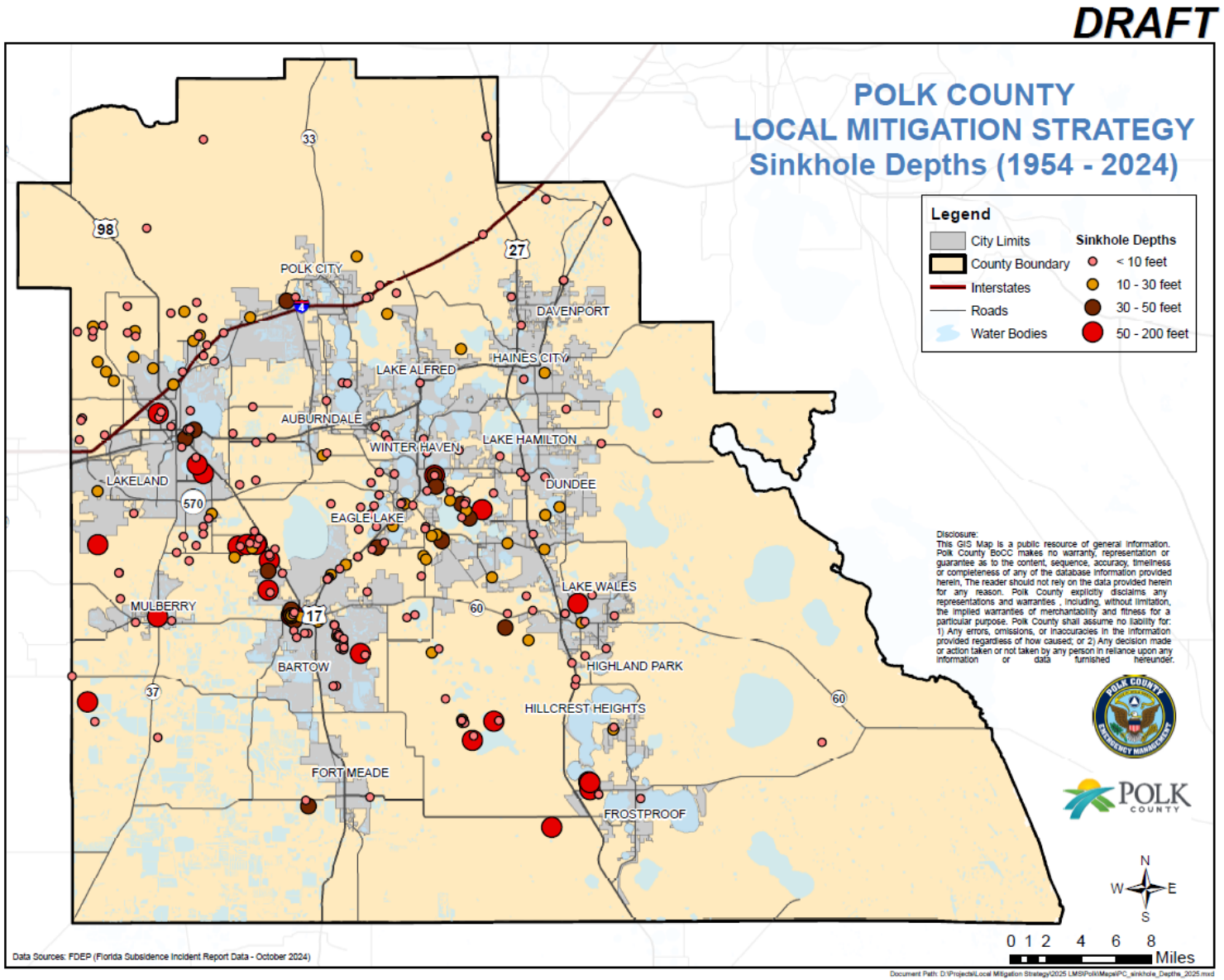


Primary Owner Type	Count
Federal	0
Local Government	8
Private	303
Public Utility	0
State	15
Tribal	0
Not Listed	0

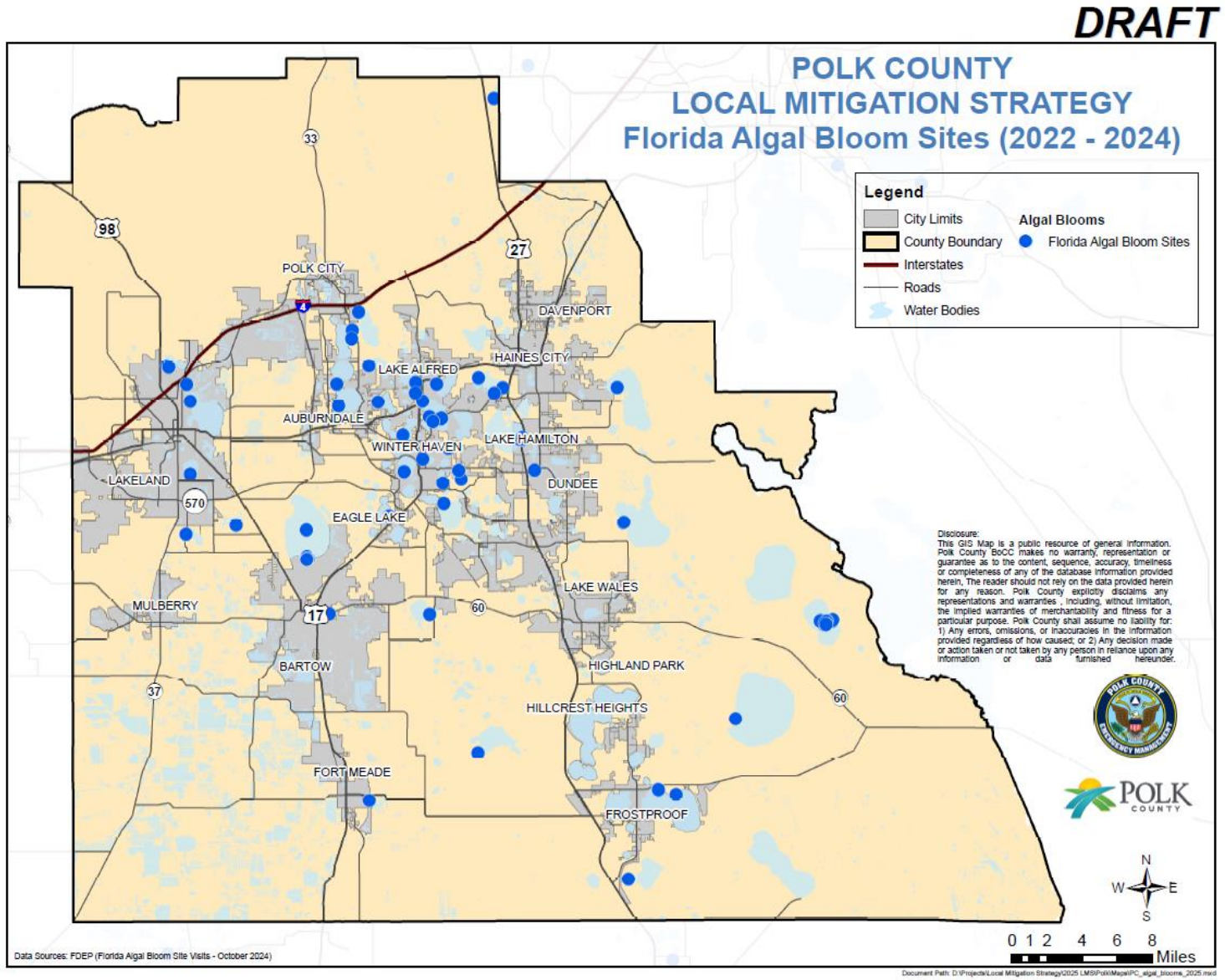
New Business – LMS Draft Highlights



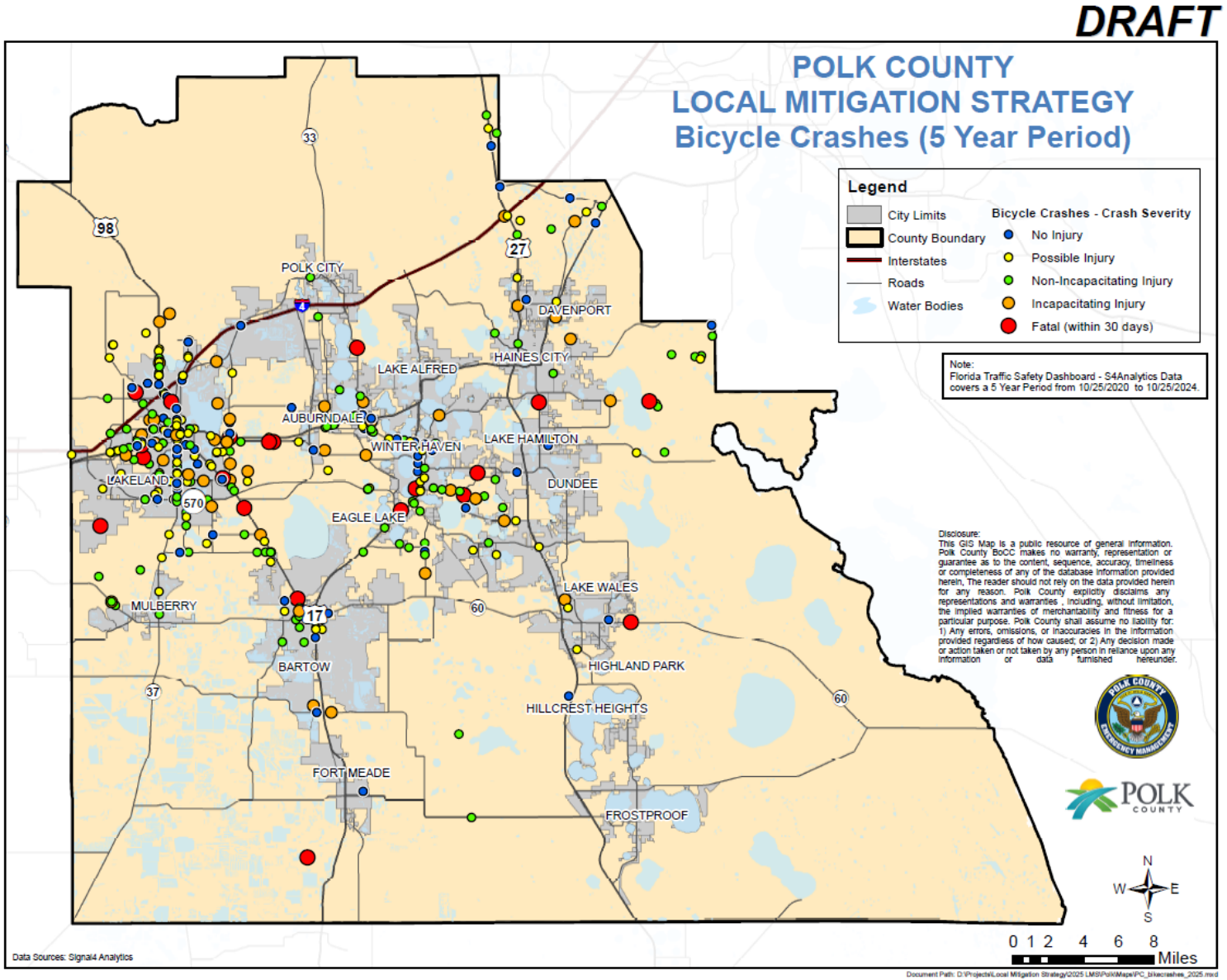
New Business – LMS Draft Highlights



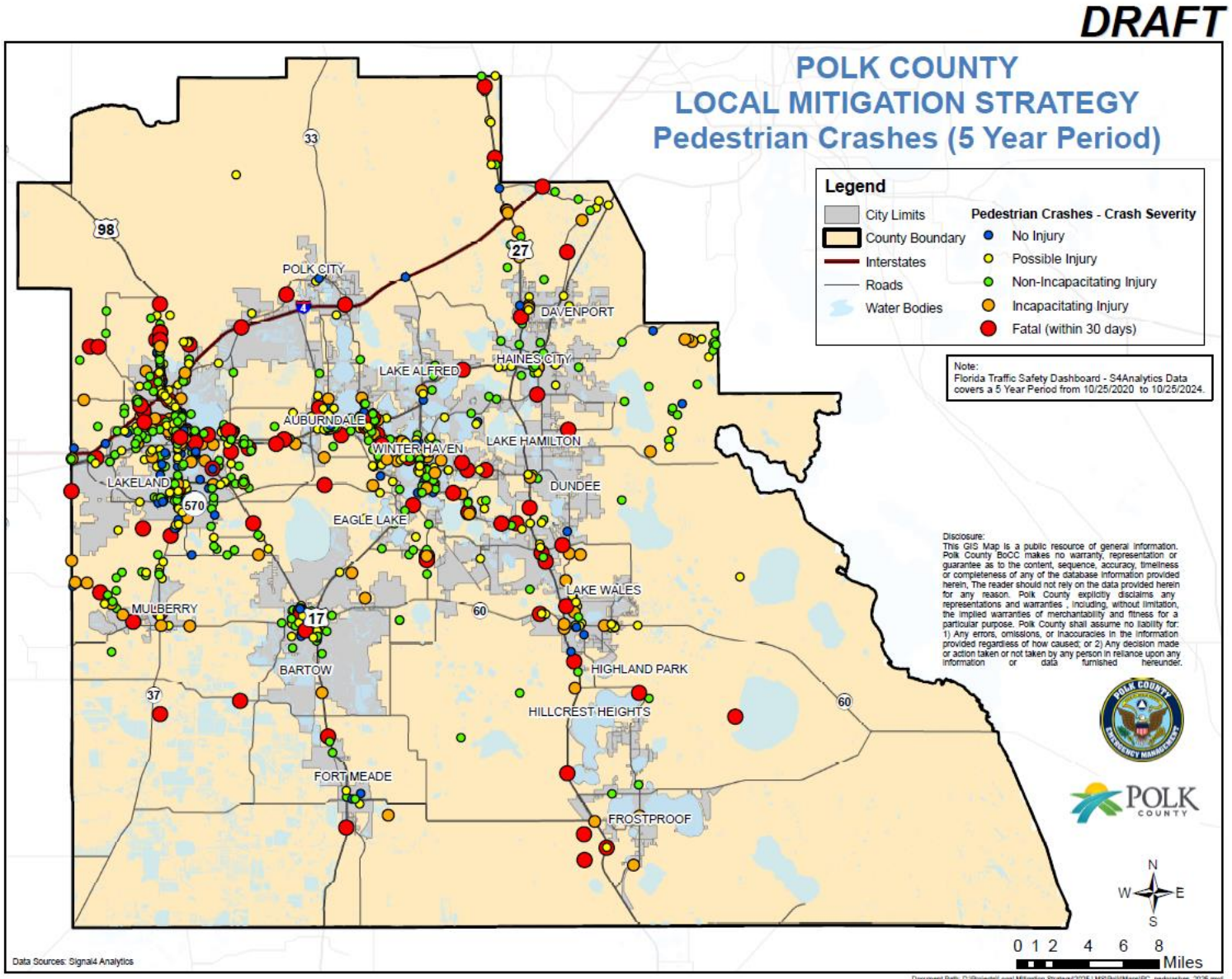
New Business – LMS Draft Highlights



New Business – LMS Draft Highlights



New Business – LMS Draft Highlights



New Business – Successes & Challenges

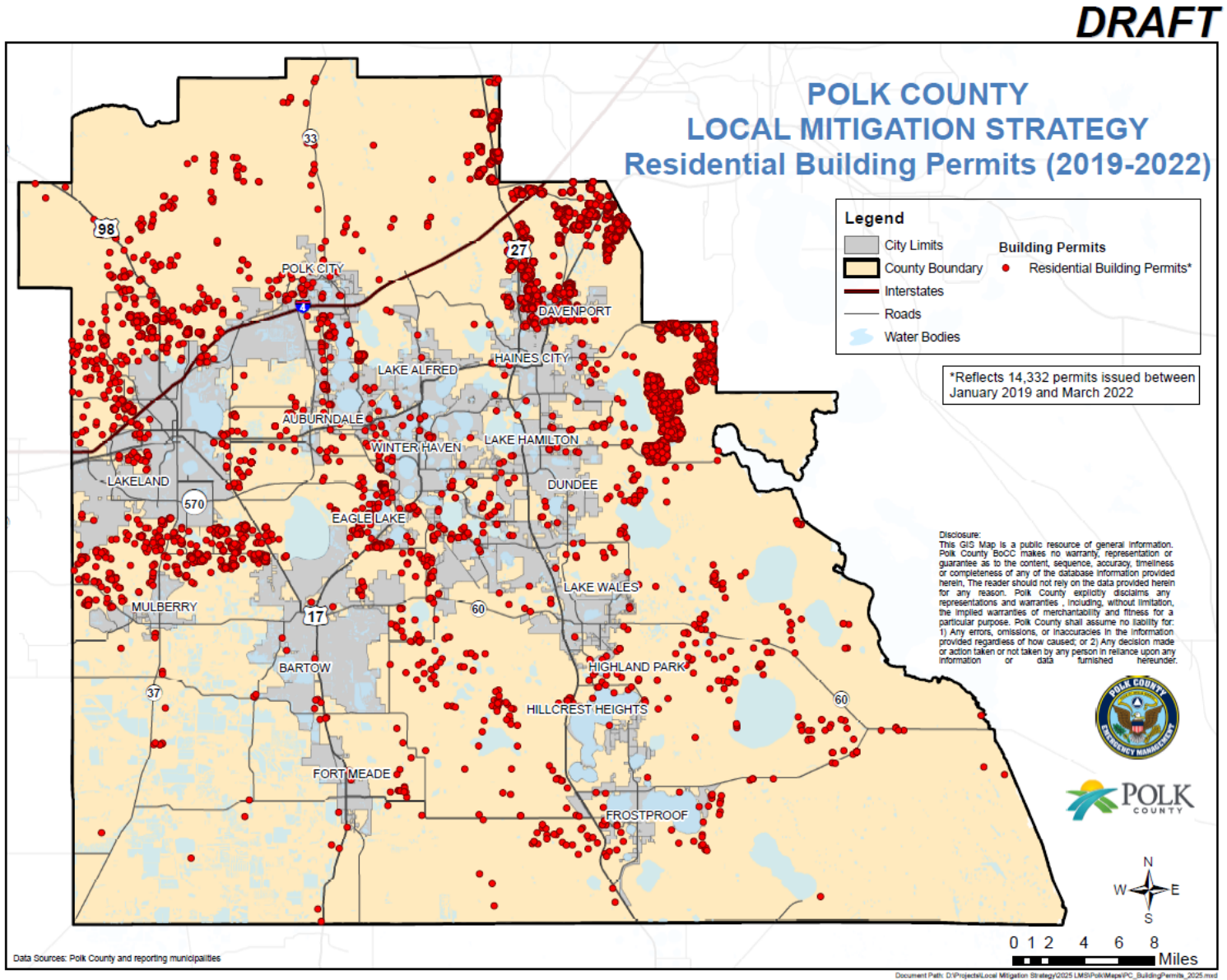
Examples of Successes:

- Completed LMS projects
- Submitting eligible projects for Hazard Mitigation Grant Program Funding
- Incorporating mitigation practices in development and redevelopment projects
- Completing stormwater master plans
- Participating in the National Flood Insurance Program
- Integrating mitigation goals, objectives, or policies into planning documents

Examples of Challenges:

- Securing funding for mitigation activities
- Not incorporating mitigation practices in development and redevelopment projects
- Lack of risk awareness

New Business – Development Changes



Homework

Please work on and submit any sections not submitted as soon as possible.

Please complete new requests as soon as possible.

Contacts

Polk County Emergency Management
Brian Thurston
863-298-7000
brianthurston@polk-county.net

Central Florida Regional Planning Council
Jerri Sackett
863-534-7130, ext. 103
jsackett@cfrpc.org

Questions

CRS Subcommittee meeting in 10 minutes in the conference room.

Next LMS Working Group Meeting:
January 22 at 9:30 am

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
NOVEMBER 20, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
American Red Cross	Kris Abel	Disaster Program Manager	147 Avenue A NW, Winter Haven	kristin.abel@redcross.org	
American Red Cross	Tina Sweeten	Executive Director	147 Avenue A NW, Winter Haven	Tinora.sweeten@redcross.org	
BayCare	Timothy Allen	Healthcare EM Coordinator	200 Ave F NE, Winter Haven	Timothy.allen@baycare.org	
Bridgewater CDD	Richard McGrath	District Manager	4530 Eagle Falls Place, Tampa	rmcgrath@gms-tampa.com	
CFRPC	Curtis Knowles	EM and Community Projects Director	555 E. Church Street, Bartow	cknowles@cfrpc.org	
CFRPC	Jerri Sackett	EM Projects Senior Planner	555 E. Church Street, Bartow	jsackett@cfrpc.org	JSackett
CFRPC	Marisa Barmby	Program Manager – Planning and Research	555 E. Church Street, Bartow	mbarmby@cfrpc.org	
Charles Cove CDD/Lakeside Landings CDD	Lynn Mullins	District Manager	3501 Quadrangle Blvd, Orlando FL 32817	mullinsl@pfm.com	
City Center CDD	David McInnes	District Manager	250 International Parkway, Lake Mary FL	Ext. 193	
City of Auburndale	John Dickson	Public Works Director	915 Charles Avenue Auburndale	jdickson@auburndalefl.com	
City of Auburndale	Caleb Gabany	Sanitation	915 Charles Avenue Auburndale	cgabany@auburndalefl.com	
City of Bartow	Jay Robinson	Fire Department Chief	450 N. Wilson Avenue Bartow	jrobinson.fire@cityofbartow.net	
City of Bartow	Sara Jones	Grant Administrator	450 N. Wilson Ave, Bartow	Salbert.pw@cityofbartow.net	
City of Davenport	Thomas Murphy Jr.	Fire Operations	226 W. 4th Street, Davenport	tmurphy@mydavenport.org	
City of Eagle Lake	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
City of Eagle Lake	Tom Ernharth	City Manager	75 N. 7th Street Eagle Lake	ternharth@eaglelake-fla.com	

POLK COUNTY

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
NOVEMBER 20, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
City of Fort Meade	Matthew Zahara	Fire Department Chief	8 West Broadway, Fort Meade, FL 33841	mzahara@cityoffortmeade.com	
City of Fort Meade	Edward Dean	City Manager	8 West Broadway, Fort Meade, FL 33841	edean@citoffortmeade.com	
City of Fort Meade	Amy Wheeler	Assistant City Manager	8 West Broadway, Fort Meade, FL 33841	awheeler@cityoffortmeade.com	Amy Wheeler
City of Fort Meade	Melissa Cannon	Deputy City Clerk	8 West Broadway, Fort Meade, FL 33841	mcannon@cityoffortmeade.com	M Cannon
City of Fort Meade	Veronica Hairston	Chief Operations Officer	8 West Broadway, Fort Meade, FL 33841	vhairston@cityoffortmeade.com	
City of Frostproof	Josh Turner	Public Works	111 W. First Street Frostproof	JTurner@cityoffrostproof.com	
City of Frostproof	Nicole McDowell	City Manager	111 W. First Street Frostproof	nmcdowell@cityoffrostproof.com	
City of Haines City	Lamar Cliett	Deputy Public Works Director	300 North 5th Street, Haines City	lamar.cliett@hainescity.com	
City of Haines City	James Keene	Public Services Administrator	620 E. Main Street Haines City	james.keene@hainescity.com	
City of Lake Alfred	Community Development Department		120 E. Pomelo Street Lake Alfred	comdev@mylakealfred.com	
City of Lake Alfred	Art Bodenheimer	Police Department Chief	120 E. Pomelo Street Lake Alfred	abodenheimer@mylakealfred.com	
City of Lake Alfred	Ryan Leavengood	City Manager	120 E. Pomelo Street Lake Alfred	rleavengood@mylakealfred.com	
City of Lake Wales	Shannon Hancock	Growth Management Executive Assistant	201 W. Central Avenue Lake Wales	shancock@lakewalesfl.gov	
City of Lake Wales	Dale Hampton	Investigations Commander	133 E. Tillman Avenue, Lake Wales	dhampton@lakewalesfl.gov	
City of Lake Wales	Emmanuel Figueroa	Police Department	133 E. Tillman Avenue, Lake Wales	efigueroa@lakewalesfl.gov	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
NOVEMBER 20, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
City of Lake Wales	James Slaton	City Manager	201 W. Central Avenue, Lake Wales	jslaton@lakewalesfl.gov	
City of Lake Wales	Joe Jenkins	Fire Department Chief	201 W. Central Avenue Lake Wales	jjenkins@lakewalesfl.gov	
City of Lake Wales	Sara Irvine	Special Projects Administrator	2010 W. Central Avenue, Lake Wales	sirvine@lakewalesfl.gov	
City of Lakeland	Anne Marie Locascio	Claims Specialist Risk Management	Lakeland	annmarie.locascio@lakelandgov.net	
City of Lakeland	Michael Lewis	Captain Investigative Services Division	Lakeland	michael.lewis@lakelandgov.net	
City of Lakeland	Cole Edwards	Director of Engineering and Metering	Lakeland	Cole.edwards@lakelandgov.net	
City of Lakeland	Matthew Lyons	Executive Planner	Lakeland	Matthew.kyons@lakelandgov.net	
City of Lakeland	Chuck Barmby	Planning and Transportation Manager	Lakeland	charles.barmby@lakelandgov.net	
City of Mulberry	Billie Segree	Code Enforcement Officer	104 S. Church Ave Mulberry	bsegree@cityofmulberryfl.com	
City of Mulberry	John Wasmund	Finance Director	104 S. Church Ave Mulberry	jwasmund@cityofmulberryfl.com	
City of Mulberry	Ron Borchers	Planning & Development Director	104 S. Church Ave Mulberry	rborchers@cityofmulberryfl.com	
Polk City	Patricia Jackson	City Manager	123 Broadway Blvd SE, Polk City	Patricia.jackson@mypolkcity.org	
City of Winter Haven	Ahmad Abdeljawad	Assistant City Engineer	451 Third St. NW, Winter Haven	aabdeljawad@mywinterhaven.com	
City of Winter Haven	G.D Nabong	City Engineer	451 Third St. NW, Winter Haven	gdstar@yahoo.com	
City of Winter Haven	Dustin Everitt	Natural Resources Division Manager	451 Third St. NW, Winter Haven	deveritt@mywinterhaven.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
NOVEMBER 20, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
City of Winter Haven	Jeff Crouse	Engineering Designer	451 Third St. NW, Winter Haven	jcrouse@mywinterhaven.com	
City of Winter Haven	Mark Bombard	Assistant Director of Utilities	451 Third St. NW, Winter Haven	mbombard@mywinterhaven.com	
City of Winter Haven	Joseph Emery	Fire Chief	301 Ave G SW, Winter Haven	jemery@mywinterhaven.com	
FL Department of Health	Scott Sjoblom	Assistant CHD Director	1290 Golf View Avenue Bartow	Scott.Sjoblom@flhealth.gov	
Florida Department of Environmental Protection	Jasson Drinkard	Professional Responder	13051 N. Telecom Parkway, Temple Terrace, FL 33637	Jasson.Drinkard@FloridaDEP.gov	
Florida Division of Emergency Management	Jeremy O'Dell	Recovery		jeremy.odell@em.myflorida.com	
Florida Division of Emergency Management	Antonio Miranda Zapata	Recovery		Antonio.zapata@em.myflorida.com	
Florida Division of Emergency Management	Cristian Rivera	Mitigation		Cristian.rivera@em.myflorida.com	
Florida Forest Service	Pete Lewis	Forest Area Supervisor for Eastern Polk County		Peter.Lewis@fdacs.gov	
Florida Forest Service	Todd Chlanda	Wildfire Mitigation Specialist	5745 S. Florida Avenue, Lakeland	William.Chlanda@fdacs.gov	
Florida Forest Service	Vic Memmoli	Forest Area Supervisor for Western Polk County		Victor.Memmoli@fdacs.gov	
Golden Lakes Community Dev.	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
Golden Lakes Community Dev.	Maurice Formaz		401 Third Street SW, Winter Haven	mformaz@pennoni.com	

POLK COUNTY

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
NOVEMBER 20, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
John Hopkins All Children's Hospital	Larry Green	Director of Safety	3310 Lakeland Hills Blvd., Lakeland	Lgreen52@jhmi.edu	
John Hopkins All Children's Hospital	Patricia White		3310 Lakeland Hills Blvd, Lakeland	Patricia.white@iparametrics.com	
John Hopkins All Children's Hospital	Shanti Smith-Copeland	Director of Emergency Management	3310 Lakeland Hills Blvd., Lakeland	Shanti.smith-copeland@iparametrics.com	
Harmony on Lake Eloise CDD/Hawthorne Mill North CDD	Craig Wrathell	District Manager	2300 Glades Rd, Boca Raton, FL 33431	info@harmonyonlakeeloisecdd.net info@hawthornemillnorthcdd.net	
Health and Human Services	Marcia Andersen	Social Service Director	2135 Marshall Edwards Drive, Bartow	marciaandersen@polk-county.net	
Health and Human Services	Jennifer Cooper	Housing and Neighborhood Manager	1290 Gulfview Blvd, Bartow	jennifercooper@polk-county.net	
Highland Meadows CDD/Holly Hill Rd East CDD/North Blvd CDD/Poinciana West CDD	Tricia Adams	District Manager	219 E. Livingston Street, Orlando FL 32801	tadams@gmscfl.com	
Lake Ashton CDD	Jill Burns	District Manager	4141 Ashton Club Drive, Lake Wales	jburns@gmsfl.com	
Lake Ashton II CDD	Jason Greenwood	District Manager	6052 Pebble Beach Blvd, Winter Haven	jgreenwood@gm-tampa.com	
Lakeside Preserve CDD	Jane Gaarlandt	District Manager	3501 Quadrangle Blvd, Orlando	gaarlandtj@pfm.com	
Lake Region Lakes Mgmt. District	Roger Griffiths	Ex Director	804 Ave X SW, Winter Haven	Rdg1744@gmail.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
NOVEMBER 20, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Peace River Center	Candace Barnes	COO	1239 E. Main Street, Bartow	cbarnes@peacerivercenter.org	
Polk County	Apryl Faurote	Volunteer Services Coordinator	1290 Golfview Avenue Bartow	aprylfaurote@polk-county.net	
Polk County	Benjamin Dunn	Planning and Development, Building Dir.	330 W. Church Street Bartow	benjamindunn@polk-county.net	
Polk County	Billy Abernathy	Emergency Management EOC Coordinator	1890 Jim Keene Blvd Winter Haven	billyabernathy@polk-county.net	
Polk County	Richard Benton	Land Development / Floodplain Manager	330 W. Church Street Bartow	richardkbenton@polk-county.net	
Polk County	Christia Johnson	Budget Director	330 W. Church Street, Bartow	christiajohnson@polk-county.net	
Polk County	Brian Thurston	EM Program Manager	1890 Jim Keene Blvd., Winter Haven	brianthurston@polk-county.net	
Polk County	James Schnell	Building Division	330 W. Church Street, Bartow	jamesschnell@polk-county.net	
Polk County	Jana Nickles	Special Needs Coordinator	1890 Jim Keene Blvd Winter Haven	jananickles@polk-county.net	
Polk County	Jay Jarvis	Transportation Director	330 W. Church Street Bartow	jayjarvis@polk-county.net	
Polk County	Brian Nadler	Deputy Chief	1295 Brice Blvd., Bartow	briannadler@polk-county.net	
Polk County	Jeff Foley	Communications	330 W. Church Street, Bartow	jefffoley@polk-county.net	
Polk County	Darius Livingston	Battalion Chief	1295 Brice Blvd., Bartow	dariuslivingston@polk-county.net	
Polk County	Ben Cassista	Assistant Fire Chief	1295 Brice Blvd., Bartow	bencassista@polk-county.net	
Polk County	Katie Hollenbeck	EM Planner	1890 Jim Keene Blvd Winter Haven	kathrynhollenbeck@polk-county.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
NOVEMBER 20, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Polk County	Michele Sims	Procurement Manager	330 W. Church Street Bartow	michelesims@polk-county.net	
Polk County	Michelle Shiver	RSVP Polk	1290 Golfview Avenue Bartow	michelleshiver@polk-county.net	
Polk County	Paul Womble	Emergency Management Director	1890 Jim Keene Blvd Winter Haven	paulwomble@polk-county.net	
Polk County	Richard Benton	Floodplain Manager	330 W. Church Street, Bartow	richardkbenton@polk-county.net	
Polk County	Shawn Smith	Assistant Fire Chief	330 W. Church Street, Bartow	shawnsmith@polk-county.net	
Polk County	Scott Anderson	Floodplain Tech	330 W. Church Street, Bartow	scottanderson@polk-county.net	
Polk County	Tabitha Biehl	Parks and Natural Resources	4177 Ben Durrance Road, Bartow	tabithabiehl@polk-county.net	
Polk County	Gaye Sharpe	Park and Natural Resources, Fiscal Mgr.	4177 Ben Durrance Road, Bartow	gayesharpe@polk-county.net	
Polk County	Todd Bond	Deputy County Manager Support Services	330 W. Church Street Bartow	toddbond@polk-county.net	
Polk County	Glenda Rogers	Lead Management & Budget Analyst	330. W Church Street, Bartow	glendarogers@polk-county.net	
Polk County School Board	Josh McLemore	Facilities Planning Director	1915 S. Floral Avenue Bartow	Joshua.mclemore@polk-fl.net	
Polk County School Board	Linda King	Director of Risk Management	1915 S. Floral Avenue Bartow	Linda.king@polk-fl.net	
Reserve at Van Oaks CDD/Silverlake CDD/Springs at Lake Alfred CDD/Stuart Crossing CDD	Kristen Suit	District Manager	1049 Oak Vly Dr. Auburndale	suitk@whhassociates.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
NOVEMBER 20, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Solterra Resort CDD	Barry Jeskewich	District Manager	250 International Parkway, Lake Mary	Ext. 398	
The Freedom Tour	Bobby Williams	President	108 1st Eloise Street, Winter Haven	bobbyw@thefreedomtour.org	
Town of Dundee	Joseph Carbone	Fire Department Chief	202 East Main Street, Dundee	jcarbone@townofdundee.com	
Town of Dundee	Lorraine Peterson	Planner	202 East Main Street, Dundee	lpeterson@townofdundee.com	
Town of Dundee	Tandra Davis	Town Manager	202 East Main Street, Dundee	tdavis@townofdundee.com	
Town of Dundee	Vermalyn Williams	Code Enforcement Director	202 East Main Street, Dundee	vwilliams@townofdundee.com	
Town of Hillcrest Heights	Larry Blackwelder	Town Clerk	151 N. Scenic Hwy, Hillcrest Heights	townofhillcrestheights@netzero.com	
Town of Lake Hamilton	Patrick Henry	Water Utility Director	100 Smith Avenue Lake Hamilton	henryp@townoflakehamilton.com	
Town of Lake Hamilton	Brittney Sandoval	Town Administrator	100 Smith Avenue Lake Hamilton	brittney@townoflakehamilton.com	
Town of Lake Hamilton	Cathy Sumner	Water Department Administrative Assistant	100 Smith Avenue Lake Hamilton	csumner@townoflakehamilton.com	
United Way Central Florida	June May	Director of Community Resources	5605 US-98, Lakeland, FL 33812	June.may@uwcf.org	
Village of Highland Park	Ric Busbee	City Manager	1650 Highland Park Drive North, Lake Wales	citymanager@highlandpark-fl.org	
Webber International University	Ryan Reis	Director of Annual Fund and Alumni Affairs	1201 N. Scenic Highway, Babson Park	Reisrj2@webber.edu	
Webber International University	Kenneth Reaves	Campus President	1201 N. Scenic Highway, Babson Park	reaveskm@webber.edu	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
NOVEMBER 20, 2024

Affiliation	Name	Department and/or Title	Address	Email	Signature
Westridge CDD	Brian Mendes	District Manager	8529 South Park Circle Orlando	bmendes@rizzetta.com	
Westview South CDD	Andrew Kantarzhi	District Manager	2300 Glades Rd, Boca Raton	kantarzhia@whhassociates.com	
On Deck Restoration	Scott Lineback		3702 Century Blvd #1, Lakeland, FL 33811	scott@ondeckrestoration.com	
On Deck Restoration	Shaun Prather		3702 Century Blvd #1, Lakeland, FL 33811	shaun@ondeckrestoration.com	

Local Mitigation Strategy Meeting #3

****IF YOUR NAME IS NOT ON THE SIGNATURE LIST, PLEASE ADD YOURSELF HERE!**

Date: November 20,2024

Time: 0900-1100

NAME	AGENCY	EMAIL	Signature
Jennifer Cooper	Polk County	jennifercooper@polk-county.net	Jennifer Cooper
MARISA BARMBY	HILLCREST HEIGHTS CCFRPC on BEHALF	MBarmby@ccfrpc.org	
Marcia Andersen	BoCC - HHS	on file	
Caleb Gabany	City of Auburndale	cgabany@auburndalefl.com	
CHUCK BARMBY	CITY OF LAKELAND		
James Schnell	Polk County BOCC Building	jamesschnell@polk-county.net	

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
NOVEMBER 20, 2024

MINUTES

1. Welcome and Introductions
   - Jerri Sackett welcomed the attendees to the meeting.
   - Brian Thurston, EM Manager for Polk County provided information regarding upcoming events/meetings.
     - Lake Bonnie pumping scheduled to end on 12/9
     - 12/4 is the Threat Hazard and Risk Assessment Seminar held at Polk EOC. This is a process to identify threats assessments and a requirement to fulfill every 3 years.
   - Brian thanked those who were at the EOC during Hurricane Milton and reminded attendees that the After-Action meetings will be scheduled soon. He encouraged people to attend after-action reports and come up with solutions.
   - Jerri reviewed the agenda with attendees and encouraged everyone to introduce themselves.

   Approval of Minutes
   - Motion to approve: Sara Irvine
   - Second: Katie Hollenbeck
2. Open Discussion
   - Jerri opened the room to discussion regarding what challenges people are facing that we can improve upon. How can we help facilitate getting information back from you?
     - Sara Hollenbeck asked: is there a way for us to know people have submitted photos?
     - Jay suggested more time to look through details for staff.
   - Jerri recently attended the FEPA mitigation working group meeting and shared:
     - Notice of Funding opportunity for the Hazard Mitigation Grant Program, Florida Division of Emergency Management (FDEM) is researching the possibility of combining them into one. Between Milton and Helene, FDEM

estimates they will have more funding available than was allocated for Hurricane Ian ($1 billion)

- FMA Swift Current:
  - FDEM developing a program to use these funds for residential mitigation
  - Funds at least $40 million for this program
  - Limited to residential projects for elevation, acquisition, and mitigation reconstruction.
  - The resident MUST have NFIP flood insurance in order to apply for this funding and will have to maintain the insurance for the life of the structure.

3. Old Business
   a. Community Profiles
      - CFRPC is waiting to hear back from some agencies including:
        - Polk County BOCC, Dundee, Eagle Lake and Mulberry.
      - A question was asked relating to changes in city boundaries from new annexations:
        - Can we send the information as it comes in?
          - ✓ Yes. Marisa Barmby clarified that we can include updated boundary changes, but we must have a point of time for our analysis. The acreages can change in the Community Profile, but the information for the Data and Analysis must have a fixed point in time.
          - ✓ Also, Marisa asked attendees to please send shape files/maps. If you're doing something between now and when we're sending it up to the state, send us the information.
        - When using outside sources for risk reports should we send their data?
          - ✓ Yes, we welcome any information you have to share.
   b. Policies and Regulations
      - CFRPC is waiting for responses from the following agencies, some of which have been in contact:

- Polk BOCC, Dundee, Eagle Lake, Lakeland, Mulberry.
  - Information is there and it just needs to be reviewed.
  - Please follow the existing format of the current information. If agencies need to change the information listed or if there are no changes, please let CFRPC know.

c. Agency/Jurisdictional History of Hazards
  - Added a new hazard; algal bloom
  - If attendees have anything specific to share, please include occurrences

d. New Project Form
  - The new project form was updated based on our discussions to make sure this is aligned with the grant and what's needed on the spreadsheet for the project.
  - This will be on a PDF that will be editable.
  - Some questions on the form were broken out to better clarify.
  - This form is used for mitigation grant funding, for ongoing projects this form is not needed.
    - Jerri noted that you should be filling the document out entirely.
      - Motion to approve the new form: Jay Jarvis
      - Second: Tabitha Biehl

e. Status of Current Project List (Completed, Deferred, Deleted)
  - Missing responses from most organizations.
    - Deferred projects, examples include ongoing, working on plans, awaiting funding, funding not available, etc.
    - Deleted projects, examples include a project that is not cost effective, no record of project, etc.
    - Completed Projects, examples include projects completed since 2020, please include year project was completed.
  - Some organizations/agencies do not know who added projects to the existing list.
    - It was suggested to add a column category for "applicant" so that going forward applicants can see who is adding projects.

f. Survey and Incident Photo Submission Update

- Received; 15 survey responses and 18 photos.
- There have been two engagement activities in Polk County
- Jerri shared the highest responses: hurricanes/tropical storms and floods

4. New Business
    a. Discussion - Funding Opportunity Section
        - List all funding sources. This is no longer a requirement by FEMA for LMS. The LMS Working Group agreed to remove it from the LMS Plan.
    b. Highlights of LMS Draft
        - Two public engagement efforts have been held so far.
        - CFRPC would like to hear about any efforts attending agencies are working on.
        - Marisa presented information on the presentations at the Polk County Prosper 2050 event and the Great American Teach-In event at Blake Academy in Lakeland.
        - Upcoming events:
            - Lake Hancock Master Trail meeting on December 10, 2024.
            - EPAC in Polk in January
        - The LMS will include demographics for every jurisdiction in Polk County. Today's presentation provides highlights for Polk County.
            - Marisa presented information gathered. Some details shared were:
                - ✓ incorporated areas include 40% of total county population in 2024
                - ✓ median age = 39.8
                - ✓ Majority of housing (60%) are single family housing with approximately 20% mobile homes.
                - ✓ 18%of houses 50 years or older
            - We are looking at social vulnerability which measures a community's capacity to prepare for and respond to the stress of hazardous events. It includes topics such as income, transportation, housing, etc to determine the areas that are most vulnerable.
            - A slide was presented showing bridge locations and conditions.

- ✓ Discussion: The Working Group questioned the source of the data and its reliability. The map is from the national bridge database. We are working to pull GIS to match up data.
- ✓ One of the concerns is that this map may show bridges as red because they need corrective action in terms of number of lanes, not due to the structure of the bridge itself. The Working Group would like the map to show items that need repairs from structural issues. Polk County maintains a GIS shape file. FDOT also maintains a file.

- Other maps shared:
  - ✓ Location, ownership status, and Hazard Potential of dams in Polk County
  - ✓ Hurricane paths through Polk County from NOAA
  - ✓ Sinkholes and depths
  - ✓ Algal bloom sites
  - ✓ Bike crashes
  - ✓ Pedestrian crashes

c. Identifying Successes and Challenges since 2020
   - We need to identify successes and challenges since the last LMS.
     - Examples of successes included a completed LMS, submitting eligible projects for hazard mitigation grant program, incorporating mitigation practices, completing stormwater master plants, etc
     - Challenges discussed were Securing funding, not incorporating mitigation practices in development and redevelopment, and lack of risk awareness.
     - Jurisdictions need to submit successes and challenges they have experienced since the last LMS update.

d. Development Changes
   - We are required to show development changes since the 2020 LMS. Marisa shared a map of residential building permits in Polk County from 2019 to 2022 as an example. CFRPC will need help from agencies to fill in data where

those changes are happening and if they are happening in areas identified as hazard areas or if the hazard areas are being avoided.

5. Homework
    a. CFRPC will coordinate sending an email with the new homework requests as discussed during the meeting.

Next Working Group Meeting – January 22, 2024, at 9:30 am at Polk EOC

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
JANUARY 22, 2025

AGENDA

1. Welcome and Introductions
2. Approval of Minutes
3. Old Business
    a. Community Profiles
    b. Policies and Regulations
    c. Agency/Jurisdictional History of Hazards
    d. Status of Current Project List (Completed, Deferred, Deleted)
    e. Outreach Efforts
4. New Business

Next Working Group Meeting – February 19, 2025, at 9:30 am at Polk EOC

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
American Red Cross	Kris Abel	Disaster Program Manager	147 Avenue A NW, Winter Haven	kristin.abel@redcross.org	
American Red Cross	Tina Sweeten	Executive Director	147 Avenue A NW, Winter Haven	Tinora.sweeten@redcross.org	
BayCare	Timothy Allen	Healthcare EM Coordinator	200 Ave F NE, Winter Haven	Timothy.allen@baycare.org	
Bridgewater CDD	Richard McGrath	District Manager	4530 Eagle Falls Place, Tampa	rmcgrath@gms-tampa.com	
CFRPC	Curtis Knowles	EM and Community Projects Director	555 E. Church Street, Bartow	cknowles@cfrpc.org	
CFRPC	Jerri Sackett	EM Projects Senior Planner	555 E. Church Street, Bartow	jsackett@cfrpc.org	J Sackett
CFRPC	Marisa Barmby	Program Manager – Planning and Research	555 E. Church Street, Bartow	mbarmby@cfrpc.org	
Charles Cove CDD/Lakeside Landings CDD	Lynn Mullins	District Manager	3501 Quadrangle Blvd, Orlando FL 32817	mullinsl@pfm.com	
City Center CDD	David McInnes	District Manager	250 International Parkway, Lake Mary FL	Ext. 193	
City of Auburndale	John Dickson	Public Works Director	915 Charles Avenue Auburndale	jdickson@auburndalefl.com	
City of Auburndale	Caleb Gabany	Sanitation	915 Charles Avenue Auburndale	cgabany@auburndalefl.com	
City of Bartow	Jay Robinson	Fire Department Chief	450 N. Wilson Avenue Bartow	jrobinson.fire@cityofbartow.net	
City of Bartow	Sara Jones	Grant Administrator	450 N. Wilson Ave, Bartow	Salbert.pw@cityofbartow.net	
City of Davenport	Thomas Murphy Jr.	Fire Operations	226 W. 4th Street, Davenport	tmurphy@mydavenport.org	
City of Eagle Lake	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
City of Eagle Lake	Tom Ernharth	City Manager	75 N. 7th Street Eagle Lake	ternharth@eaglelake-fla.com	

CFRPC April DaSilva Prog. Coord. adasilva@cfrpc.org

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Fort Meade	Matthew Zahara	Fire Department Chief	8 West Broadway, Fort Meade, FL 33841	mzahara@cityoffortmeade.com	
City of Fort Meade	Edward Dean	City Manager	8 West Broadway, Fort Meade, FL 33841	edean@citoffortmeade.com	
City of Fort Meade	Amy Wheeler	Assistant City Manager	8 West Broadway, Fort Meade, FL 33841	awheeler@cityoffortmeade.com	Amy Wheeler
City of Fort Meade	Melissa Cannon	Deputy City Clerk	8 West Broadway, Fort Meade, FL 33841	mcannon@cityoffortmeade.com	
City of Fort Meade	Veronica Hairston	Chief Operations Officer	8 West Broadway, Fort Meade, FL 33841	vhairston@cityoffortmeade.com	
City of Frostproof	Josh Turner	Public Works	111 W. First Street Frostproof	JTurner@cityoffrostproof.com	
City of Frostproof	Nicole McDowell	City Manager	111 W. First Street Frostproof	nmcdowell@cityoffrostproof.com	
City of Haines City	Lamar Cliett	Deputy Public Works Director	300 North 5th Street, Haines City	lamar.cliett@hainescity.com	
City of Haines City	James Keene	Public Services Administrator	620 E. Main Street Haines City	james.keene@hainescity.com	
City of Lake Alfred	Community Development Department		120 E. Pomelo Street Lake Alfred	comdev@mylakealfred.com	
City of Lake Alfred	Art Bodenheimer	Police Department Chief	120 E. Pomelo Street Lake Alfred	abodenheimer@mylakealfred.com	
City of Lake Alfred	Ryan Leavengood	City Manager	120 E. Pomelo Street Lake Alfred	rleavengood@mylakealfred.com	
City of Lake Wales	Shannon Hancock	Growth Management Executive Assistant	201 W. Central Avenue Lake Wales	shancock@lakewalesfl.gov	
City of Lake Wales	Dale Hampton	Investigations Commander	133 E. Tillman Avenue, Lake Wales	dhampton@lakewalesfl.gov	
City of Lake Wales	Emmanuel Figueroa	Police Department	133 E. Tillman Avenue, Lake Wales	efigueroa@lakewalesfl.gov	

POLK COUNTY

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Lake Wales	James Slaton	City Manager	201 W. Central Avenue, Lake Wales	jslaton@lakewalesfl.gov	
City of Lake Wales	Joe Jenkins	Fire Department Chief	201 W. Central Avenue Lake Wales	jjenkins@lakewalesfl.gov	
City of Lake Wales	Sara Irvine	Special Projects Administrator	2010 W. Central Avenue, Lake Wales	sirvine@lakewalesfl.gov	
City of Lakeland	Anne Marie Locascio	Claims Specialist Risk Management	Lakeland	annmarie.locascio@lakelandgov.net	
City of Lakeland	Michael Lewis	Captain Investigative Services Division	Lakeland	michael.lewis@lakelandgov.net	
City of Lakeland	Cole Edwards Floodplain Admin.	Director of Engineering and Metering	Lakeland	Cole.edwards@lakelandgov.net	
City of Lakeland	Matthew Lyons	Executive Planner	Lakeland	Matthew.kyons@lakelandgov.net	
City of Lakeland	Chuck Barmby	Planning and Transportation Manager	Lakeland	charles.barmby@lakelandgov.net	
City of Mulberry	Billie Segree	Code Enforcement Officer	104 S. Church Ave Mulberry	bsegree@cityofmulberryfl.com	
City of Mulberry	John Wasmund	Finance Director	104 S. Church Ave Mulberry	jwasmund@cityofmulberryfl.com	
City of Mulberry	Ron Borchers	Planning & Development Director	104 S. Church Ave Mulberry	rborchers@cityofmulberryfl.com	
Polk City	Patricia Jackson	City Manager	123 Broadway Blvd SE, Polk City	Patricia.jackson@mypolkcity.org	
City of Winter Haven	Ahmad Abdeljawad	Assistant City Engineer	451 Third St. NW, Winter Haven	aabdeljawad@mywinterhaven.com	
City of Winter Haven	G.D Nabong	City Engineer	451 Third St. NW, Winter Haven	gdstar@yahoo.com	
City of Winter Haven	Dustin Everitt	Natural Resources Division Manager	451 Third St. NW, Winter Haven	deveritt@mywinterhaven.com	

POLK COUNTY

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Winter Haven	Jeff Crouse	Engineering Designer	451 Third St. NW, Winter Haven	jcrouse@mywinterhaven.com	
City of Winter Haven	Mark Bombard	Assistant Director of Utilities	451 Third St. NW, Winter Haven	mbombard@mywinterhaven.com	
City of Winter Haven	Joseph Emery	Fire Chief	301 Ave G SW, Winter Haven	jemery@mywinterhaven.com	
FL Department of Health	Scott Sjoblom	Assistant CHD Director	1290 Golf View Avenue Bartow	Scott.Sjoblom@flhealth.gov	
Florida Department of Environmental Protection	Jasson Drinkard	Professional Responder	13051 N. Telecom Parkway, Temple Terrace, FL 33637	Jasson.Drinkard@FloridaDEP.gov	
Florida Division of Emergency Management	Jeremy O'Dell	Recovery		jeremy.odell@em.myflorida.com	
Florida Division of Emergency Management	Antonio Miranda Zapata	Recovery		Antonio.zapata@em.myflorida.com	
Florida Forest Service	Pete Lewis	Forest Area Supervisor for Eastern Polk County		Peter.Lewis@fdacs.gov	
Florida Forest Service	Todd Chlanda	Wildfire Mitigation Specialist	5745 S. Florida Avenue, Lakeland	William.Chlanda@fdacs.gov	
Florida Forest Service	Vic Memmoli	Forest Area Supervisor for Western Polk County		Victor.Memmoli@fdacs.gov	
Golden Lakes Community Dev.	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
Golden Lakes Community Dev.	Maurice Formaz		401 Third Street SW, Winter Haven	mformaz@pennoni.com	
John Hopkins All Children's Hospital	Larry Green	Director of Safety	3310 Lakeland Hills Blvd., Lakeland	Lgreen52@jhmi.edu	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
John Hopkins All Children's Hospital	Patricia White		3310 Lakeland Hills Blvd, Lakeland	Patricia.white@iparametrics.com	
John Hopkins All Children's Hospital	Shanti Smith-Copeland	Director of Emergency Management	3310 Lakeland Hills Blvd., Lakeland	Shanti.smith-copeland@iparametrics.com	
Harmony on Lake Eloise CDD/Hawthorne Mill North CDD	Craig Wrathell	District Manager	2300 Glades Rd, Boca Raton, FL 33431	info@harmonyonlakeeloisecdd.net info@hawthornemillnorthcdd.net	
Health and Human Services	Marcia Andersen	Social Service Director	2135 Marshall Edwards Drive, Bartow	marciaandersen@polk-county.net	Marcia Andersen
Health and Human Services	Jennifer Cooper	Housing and Neighborhood Manager	1290 Gulfview Blvd, Bartow	jennifercooper@polk-county.net	Jennifer Cooper
Highland Meadows CDD/Holly Hill Rd East CDD/North Blvd CDD/Poinciana West CDD	Tricia Adams	District Manager	219 E. Livingston Street, Orlando FL 32801	tadams@gmscfl.com	
Lake Ashton CDD	Jill Burns	District Manager	4141 Ashton Club Drive, Lake Wales	jburns@gmsfl.com	
Lake Ashton II CDD	Jason Greenwood	District Manager	6052 Pebble Beach Blvd, Winter Haven	jgreenwood@gm-tampa.com	
Lakeside Preserve CDD	Jane Gaarlandt	District Manager	3501 Quadrangle Blvd, Orlando	gaarlandtj@pfm.com	
Lake Region Lakes Mgmt. District	Roger Griffiths	Ex Director	804 Ave X SW, Winter Haven	Rdg1744@gmail.com	
Peace River Center	Candace Barnes	COO	1239 E. Main Street, Bartow	cbarnes@peacerivercenter.org	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
Polk County	Apryl Faurote	Volunteer Services Coordinator	1290 Golfview Avenue Bartow	aprylfaurote@polk-county.net	
Polk County	Benjamin Dunn	Planning and Development, Building Dir.	330 W. Church Street Bartow	benjamindunn@polk-county.net	
Polk County	Billy Abernathy	Emergency Management EOC Coordinator	1890 Jim Keene Blvd Winter Haven	billyabernathy@polk-county.net	
Polk County	Richard Benton	Land Development / Floodplain Manager	330 W. Church Street Bartow	richardkbenton@polk-county.net	
Polk County	Christia Johnson	Budget Director	330 W. Church Street, Bartow	christiajohnson@polk-county.net	
Polk County	Brian Thurston	EM Program Manager	1890 Jim Keene Blvd., Winter Haven	brianthurston@polk-county.net	
Polk County	James Schnell	Building Division	330 W. Church Street, Bartow	jamesschnell@polk-county.net	
Polk County	Jana Nickles	Special Needs Coordinator	1890 Jim Keene Blvd Winter Haven	jananickles@polk-county.net	
Polk County	Jay Jarvis	Transportation Director	330 W. Church Street Bartow	jayjarvis@polk-county.net	
Polk County	Brian Nadler	Deputy Chief	1295 Brice Blvd., Bartow	briannadler@polk-county.net	
Polk County	Jeff Foley	Communications	330 W. Church Street, Bartow	jefffoley@polk-county.net	
Polk County	Darius Livingston	Battalion Chief	1295 Brice Blvd., Bartow	dariuslivingston@polk-county.net	
Polk County	Ben Cassista	Assistant Fire Chief	1295 Brice Blvd., Bartow	bencassista@polk-county.net	
Polk County	Katie Hollenbeck	EM Planner	1890 Jim Keene Blvd Winter Haven	kathrynhollenbeck@polk-county.net	
Polk County	Michele Sims	Procurement Manager	330 W. Church Street Bartow	michelesims@polk-county.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
Polk County	Michelle Shiver	RSVP Polk	1290 Golfview Avenue Bartow	michelleshiver@polk-county.net	
Polk County	Paul Womble	Emergency Management Director	1890 Jim Keene Blvd Winter Haven	paulwomble@polk-county.net	
Polk County	Richard Benton	Floodplain Manager	330 W. Church Street, Bartow	richardkbenton@polk-county.net	
Polk County	Shawn Smith	Assistant Fire Chief	330 W. Church Street, Bartow	shawnsmith@polk-county.net	
Polk County	Scott Anderson	Floodplain Tech	330 W. Church Street, Bartow	scottanderson@polk-county.net	
Polk County	Tabitha Biehl	Parks and Natural Resources	4177 Ben Durrance Road, Bartow	tabithabiehl@polk-county.net	
Polk County	Gaye Sharpe	Park and Natural Resources, Fiscal Mgr.	4177 Ben Durrance Road, Bartow	gayesharpe@polk-county.net	
Polk County	Glenda Rogers	Lead Management & Budget Analyst	330. W Church Street, Bartow	glendarogers@polk-county.net	
Polk County School Board	Josh McLemore	Facilities Planning Director	1915 S. Floral Avenue Bartow	Joshua.mclemore@polk-fl.net	
Polk County School Board	Linda King	Director of Risk Management	1915 S. Floral Avenue Bartow	Linda.king@polk-fl.net	
Reserve at Van Oaks CDD/Silverlake CDD/Springs at Lake Alfred CDD/Stuart Crossing CDD	Kristen Suit	District Manager	1049 Oak Vly Dr. Auburndale	suitk@whhassociates.com	
Solterra Resort CDD	Barry Jeskewich	District Manager	250 International Parkway, Lake Mary	Ext. 398	
The Freedom Tour	Bobby Williams	President	108 1st Eloise Street, Winter Haven	bobbyw@thefreedomtour.org	
Town of Dundee	Joseph Carbone	Fire Department Chief	202 East Main Street, Dundee	jcarbone@townofdundee.com	

POLK COUNTY

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
Town of Dundee	Lorraine Peterson	Planner	202 East Main Street, Dundee	lpeterson@townofdundee.com	
Town of Dundee	Tandra Davis	Town Manager	202 East Main Street, Dundee	tdavis@townofdundee.com	
Town of Dundee	Vermalyn Williams	Code Enforcement Director	202 East Main Street, Dundee	vwilliams@townofdundee.com	
Town of Hillcrest Heights	Larry Blackwelder	Town Clerk	151 N. Scenic Hwy, Hillcrest Heights	townofhillcrestheights@netzero.com	
Town of Lake Hamilton	Patrick Henry	Water Utility Director	100 Smith Avenue Lake Hamilton	henryp@townoflakehamilton.com	
Town of Lake Hamilton	Brittney Sandoval	Town Administrator	100 Smith Avenue Lake Hamilton	brittney@townoflakehamilton.com	
Town of Lake Hamilton	Cathy Sumner	Water Department Administrative Assistant	100 Smith Avenue Lake Hamilton	csumner@townoflakehamilton.com	
United Way Central Florida	June May	Director of Community Resources	5605 US-98, Lakeland, FL 33812	June.may@uwcf.org	
Village of Highland Park	Ric Busbee	City Manager	1650 Highland Park Drive North, Lake Wales	citymanager@highlandpark-fl.org	
Webber International University	Ryan Reis	Director of Annual Fund and Alumni Affairs	1201 N. Scenic Highway, Babson Park	Reisrj2@webber.edu	
Webber International University	Kenneth Reaves	Campus President	1201 N. Scenic Highway, Babson Park	reaveskm@webber.edu	
Westridge CDD	Brian Mendes	District Manager	8529 South Park Circle Orlando	bmendes@rizzetta.com	
Westview South CDD	Andrew Kantarzhi	District Manager	2300 Glades Rd, Boca Raton	kantarzhia@whhassociates.com	
On Deck Restoration	Scott Lineback		3702 Century Blvd #1, Lakeland, FL 33811	scott@ondeckrestoration.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
JANUARY 22, 2025

	Name	Department and/or Title	Address	Email	Signature
On Deck Restoration	Shaun Prather		3702 Century Blvd #1, Lakeland, FL 33811	shaun@ondeckrestoration.com	

LMS WORKING GROUP MEETING

****IF YOUR NAME IS NOT LISTED ON THE SIGNATURE LIST, PLEASE ADD IT HERE!**

Date: January 22, 2025
Time: 9:30AM-11:30AM

NAME	AGENCY	EMAIL	Signature
[redacted]	[redacted]	[redacted]	[redacted]
April Faucett	Volunteer Polk	aprylfaucett@polk-county.net	April Faucett
Ryan Wiggins	Polk County	Ryan.Wiggins@polk-county.net	Ryan Wiggins
Caleb Gaberny	City of Auburndale	cgaberny@auburndale.org	
Michelle Shiver	RSAP		
~~Ryan Reis~~	~~Webber~~	~~reisrj2@webber.edu~~	~~[redacted]~~
Devon Moore	City of Winter Haven	dmoore@mywinterhaven.com	
Olivia Usik	City of Winter Haven	ohusik@mywinterhaven.com	
Anna Marie LoCascio	City of Lakeland	annmarie.locascio@lakelandgov.net	
Christina Adams	Iceberg Home Services	christinaa@icebergcooling.com	
Nicole Masters	SFWMD	nmasters@sfwmd.gov	
Doug Cockerham	PC EM	dougcockerham@[redacted]	
Amy Wheeler	Fort Meade	awheeler@cityoffortmeade.com	

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
JANUARY 22, 2025

MINUTES

1. Welcome and Introductions
   - ❖ Paul welcomed attendees to the meeting and reviewed the remaining timeline of the project and how important it is to get information from organizations/municipalities that have not provided the needed data. He reminded attendees that there is a lot of resiliency and mitigation funds coming into the state that will make future projects available, provided the LMS is completed. He also discussed that there is some CRS work for the floodplain managers. He is hearing that the state is being more selective than they previously have so as much information/data as possible is helpful.
   - ❖ Attendees introduced themselves.
2. Approval of Minutes
   - ❖ Motion: Art Bodenheimer, Lake Hamilton
   - ❖ Second: Jana Nichols, Polk County EM
3. Old Business
   a) Community Profiles
      - ✓ Jerri encouraged all attendees to review her recent email and include any changes if needed, if no changes apply Jerri asked that agencies please reply with "no changes".
      - ✓ As of this meeting; Bartow, Mulberry and Polk County are outstanding.

   b) Policies and Regulations

   c) Agency/Jurisdictional History of Hazards

   d) Status of Current Project List (Completed, Deferred, Deleted)
      - ✓ Current projects need to be designated as "Deferred", "Deleted" or "Completed"; individual agencies need to designate those projects. Jerri reviewed some of the outstanding projects with those in attendance:
        - City of Bartow clarified that Jerri should designate all projects as "deleted". Jerri reminded Bartow staff that they will need to submit a new

project. Bartow staff asked to add a category to include a contact person so that tracking is possible.

- Lake Alfred staff will need to review with current City Manager.
- Lakeland staff was able to update several projects including some that are still a work in progress.

✓ CFRPC staff clarified that these updates and their data are needed by February 14, 2025.

- Polk County staff were able to clarify the designation of several projects. Staff will also need to make sure a representative from "Utilities" is on the project roster. Paul will reach out to outstanding departments for data.
- School board representatives were not in attendance. Jerri was encouraged to reach out to Josh and cc Rob Davis
- Winter Haven representatives were able to designate several outstanding projects. Devin Moore, from Natural Resources, can get some data and will follow up on projects related to drainage and public works.
- Johns Hopkins representatives were not in attendance

✓ Jerri will take the updated information and move that data over to the 2025 project list.

4. Outreach Efforts
   - ❖ Jerri shared the information received from the recent outreach efforts.
   - ❖ CFRPC staff will be conducting more outreach during the spring. Attendees were encouraged to let CFRPC know when they have events planned.
5. New Business
   - ❖ Marisa reviewed the needed data for the LMS project including:
     - ✓ repetitive loss (information for each jurisdiction, by structures and amounts)
     - ✓ Who is responsible for the NFIP? Do you have your own floodplain administrator at each jurisdiction or the county or other? Include positions and not names.
       - Jerri will follow up with the crosswalk language and the comments from the state.

- ✓ Capabilities to support the LMS. The language says, “describe how the existing authorities, policies, programs, funding and resources of each participant are available to support the mitigation strategy.” Marisa addressed that smaller jurisdictions might be able to reference that they may not have enough staff, etc., to address these strategies.
  - Attendees asked if it would be helpful to do a questionnaire, so everyone is answering the same question and addressing this specific question?
- ✓ The data Marisa discussed is required to be included in the LMS and is needed by COB Thursday January 30.

Next Working Group Meeting – February 19, 2025, at 9:30 am at Polk EOC

LMS Working Group Meeting

Polk County 2025 LMS Update

January 22, 2025

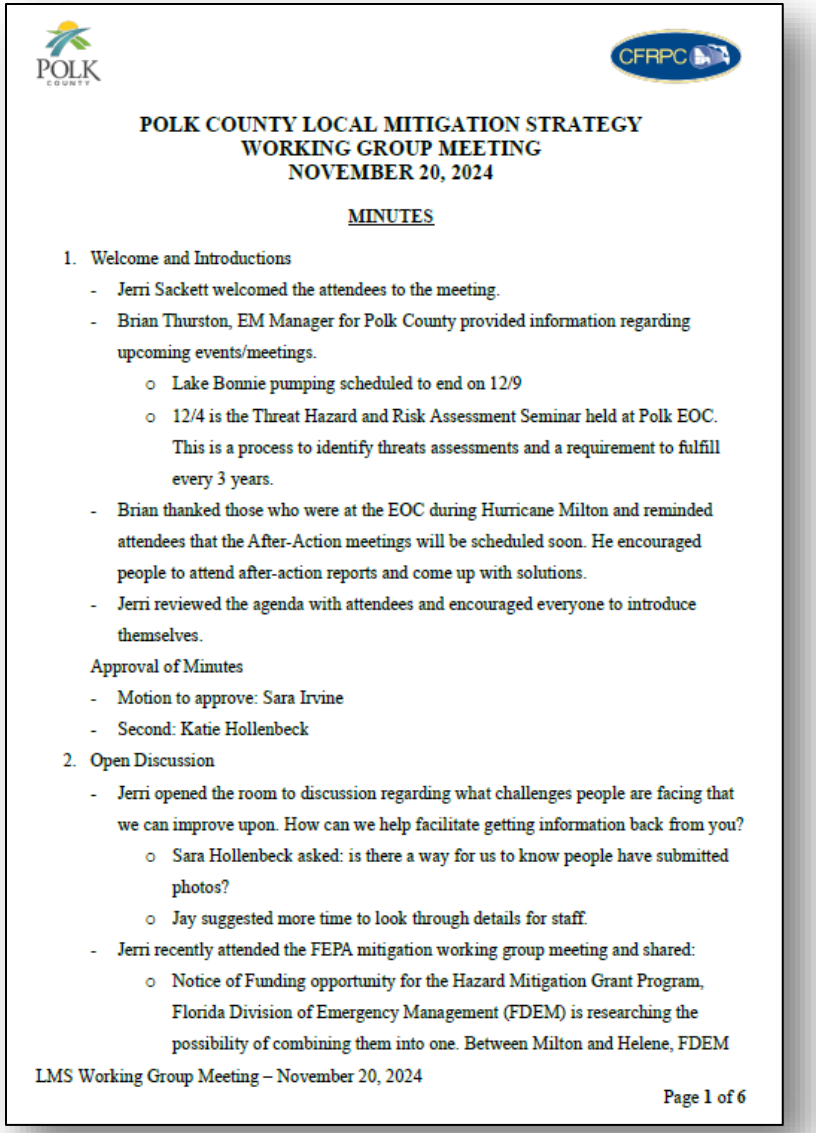
Agenda

1. Welcome and Introductions
2. Approval of Minutes
3. Old Business
   a) Community Profiles
   b) Policies & Regulations
   c) Agency/Jurisdictional History of Hazards
   d) Status of Current Project List (Completed, Deferred, Deleted)
   e) Survey Responses
4. New Business
   a) Draft Discussion

Introductions

Meeting Minutes

Review and approve
November 20, 2024 Minutes



POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
NOVEMBER 20, 2024

MINUTES

1. Welcome and Introductions
   - Jerri Sackett welcomed the attendees to the meeting.
   - Brian Thurston, EM Manager for Polk County provided information regarding upcoming events/meetings.
     - Lake Bonnie pumping scheduled to end on 12/9
     - 12/4 is the Threat Hazard and Risk Assessment Seminar held at Polk EOC. This is a process to identify threats assessments and a requirement to fulfill every 3 years.
   - Brian thanked those who were at the EOC during Hurricane Milton and reminded attendees that the After-Action meetings will be scheduled soon. He encouraged people to attend after-action reports and come up with solutions.
   - Jerri reviewed the agenda with attendees and encouraged everyone to introduce themselves.

   Approval of Minutes
   - Motion to approve: Sara Irvine
   - Second: Katie Hollenbeck
2. Open Discussion
   - Jerri opened the room to discussion regarding what challenges people are facing that we can improve upon. How can we help facilitate getting information back from you?
     - Sara Hollenbeck asked: is there a way for us to know people have submitted photos?
     - Jay suggested more time to look through details for staff.
   - Jerri recently attended the FEPA mitigation working group meeting and shared:
     - Notice of Funding opportunity for the Hazard Mitigation Grant Program, Florida Division of Emergency Management (FDEM) is researching the possibility of combining them into one. Between Milton and Helene, FDEM

Old Business – Community Profiles

Old Business – Status of Current Projects

Examples for deferred projects: ongoing project, working on plans, awaiting funding, funding not available, contracted for HMGP funding.

Examples for deleted projects: project is not cost effective, no record of project, not applicable for meeting standards.

Examples for completed projects: project completed in 2020. If at all possible, include the year a project was completed.

Jurisdiction Benefitted	Jurisdiction (Location of Project)	Project Name	Project Type	Description	Hazard Mitigated*	Address New or Existi	Responsible Agency	Responsible Departme	Estimated Cost	Possible Funding Source(s)	Time to Complete	Deferred, Completed, or Deleted	Why?
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	County Public Safety Departments (Fire, EMS, E-911, etc)	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual		
All	All	Public Education/Outreach	Education, Public Awareness	Ongoing mitigation initiative designed to mitigate the impact of various disasters by educating residential and commercial property owners of the hazards they face, vulnerability from hazards, and action s they can take to reduce the impacts of these hazards before they occur. Activities include participation in the National Weather Service Weather Ready Nation/Storm Ready program, partnerships with the Lakeland Flying Tigers minor league baseball team to host the annual Ready Night, use of social medial, and other outreach mechanisms.	All	Both	Polk County	County Public Safety Departments (Fire, EMS, E-911, etc)	$25,000	Public Safety Admin	Annual and Bi-annual		
Auburndale	Auburndale	Alberta Street Drainage Improvement	Drainage	Relieves flooding and drainage problem at major intersection on Alberta St	Flood	Both	Auburndale	Public Works	$500,000	HMGP, FMA	12-18 Months		
Auburndale	Auburndale	Highway 92, Lakeshore and Beach Lift Station Generator Project	Infrastructure	Highway 92, Lakeshore and Beach Lift Station Generator Project	All	Both	City of Auburndale	Public Works	$189,995	HMGP	12-18 Months		
Bartow	Bartow	Fiber Smart Grid Pilot Project	New Infrastructure, Critical Facilities	Develop and Implement Smart Grid Pilot Project	All	New	Bartow	Public Works	$2,500,000	General Fund	24-36 Months		

Old Business – Outreach

- 27 online responses received
- 18 online photos received
- 4 completed public engagement activities:
  - Polk County Comp Plan Workshop
  - Great American Teach-In
  - Circle B
  - EPAC

Old Business – Survey Responses

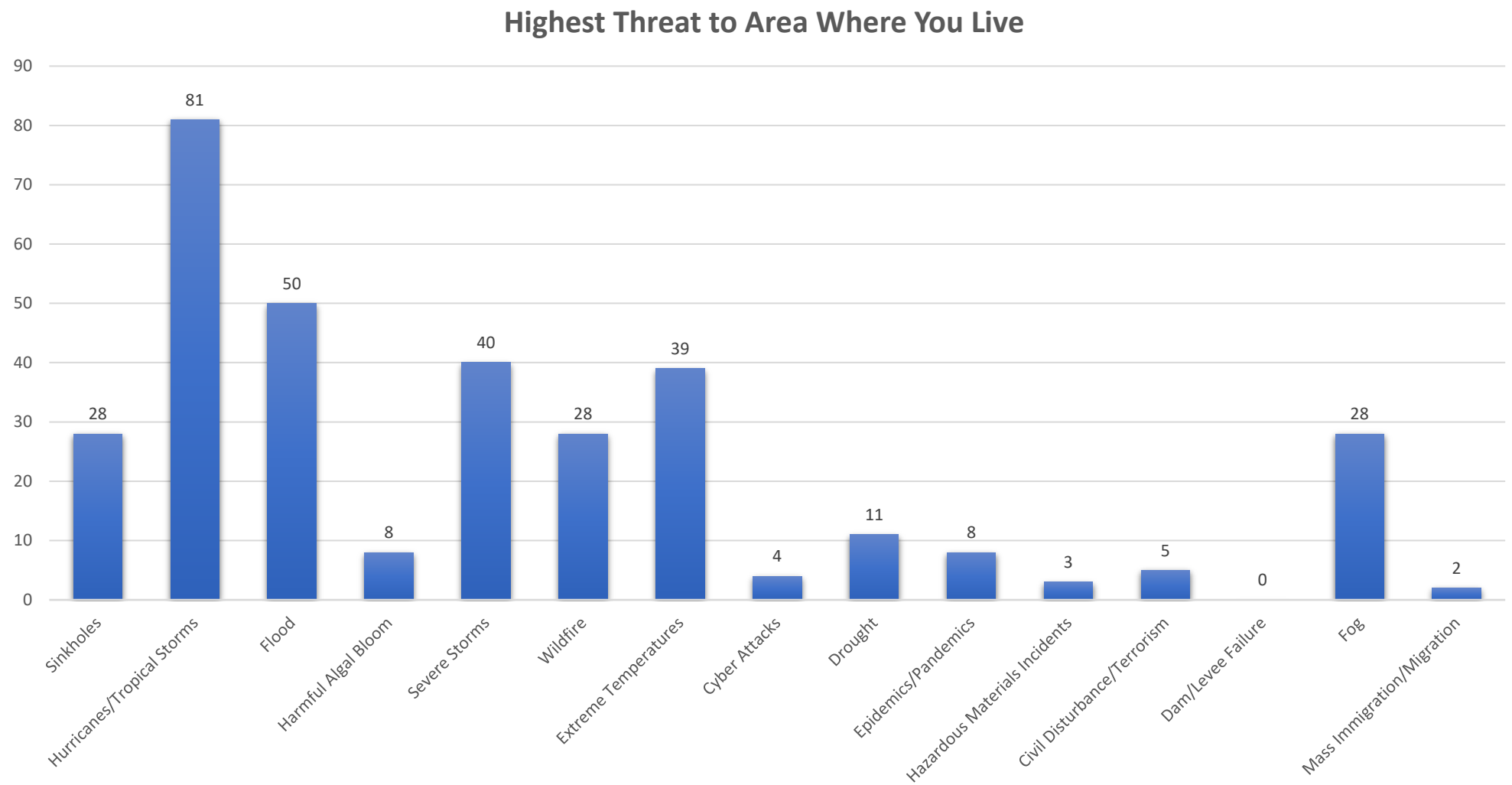
How Long have you Lived in Polk County?		
Less than One Year	4	5%
One Year to Five Years	13	17%
Five Years to Ten Years	9	12%
Ten Years to Twenty Years	7	9%
More than Twenty Years	43	57%
TOTAL	76	100%

Over the Past Several Years, the Weather has Been:		
Much Worse then Usual	10	13%
Somewhat Worse than Usual	36	47%
About the Same	27	36%
Somewhat Better than Ususal	1	1%
Much Better than Usual	0	0%
Don't Know	2	3%
TOTAL	76	100%

How well Prepared do You Feel your Community, City, County is for a Natural Disaster?		
Very Prepared	26	35%
Somewhat Prepared	40	53%
Not Very Prepared	8	11%
Not Sure	1	1%
TOTAL	75	100%

How Concerned are You about Your Community being Impacted?		
Extremely Concerned	23	30%
Somewhat Concerned	42	55%
Not Concerned	6	8%
Depends on the Hazard	5	6%
Don't Know	1	1%
TOTAL	77	100%

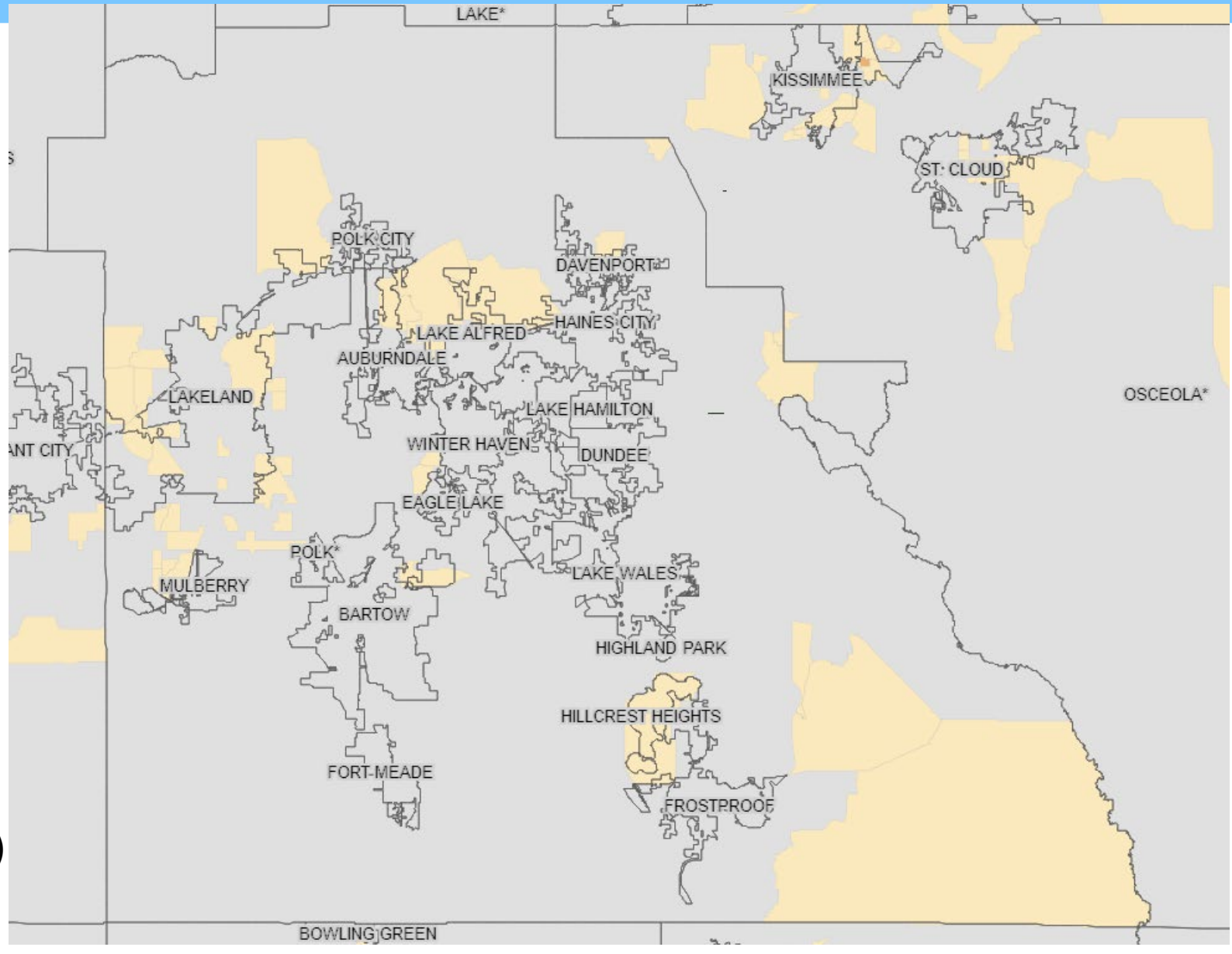
Old Business – Survey Responses



4. New Business – LMS Draft Discussion

Needed Information

Repetitive Loss Information for each jurisdiction



FEMA NFIP Repetitive Loss Overview (Feb. 2024)

Needed Information

NFIP Information

-Who is Responsible

Floodplain Manager at jurisdiction or the County?

Other?

Needed Information

Capabilities to Support LMS

-The plan must describe how the existing authorities, policies, programs, funding, and resources of each participant are available to support the mitigation strategy. This must include a discussion of the existing building codes and land use and development ordinances or regulations. Capabilities may be described in a table or narrative.

-*Discuss Gaps and Lack of Capability*

CRS Subcommittee

No Subcommittee Meeting Today.

Must Submit Repetitive Loss Information

Submit information to include in the LMS by COB Thursday, January 30.

Contacts

Polk County Emergency Management
Brian Thurston
863-298-7000
brianthurston@polk-county.net

Central Florida Regional Planning Council
Jerri Sackett
863-534-7130, ext. 103
jsackett@cfrpc.org

Questions

Next LMS Working Group Meeting:
February 19 at 9:30 am

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
American Red Cross	Kris Abel	Disaster Program Manager	147 Avenue A NW, Winter Haven	kristin.abel@redcross.org	
American Red Cross	Tina Sweeten	Executive Director	147 Avenue A NW, Winter Haven	Tinora.sweeten@redcross.org	
BayCare	Timothy Allen	Healthcare EM Coordinator	200 Ave F NE, Winter Haven	Timothy.allen@baycare.org	
Bridgewater CDD	Richard McGrath	District Manager	4530 Eagle Falls Place, Tampa	rmcgrath@gms-tampa.com	
CFRPC	Curtis Knowles	EM and Community Projects Director	555 E. Church Street, Bartow	cknowles@cfrpc.org	
CFRPC	Jerri Sackett	EM Projects Senior Planner	555 E. Church Street, Bartow	jsackett@cfrpc.org	
CFRPC	April Dasilva	Program Coordinator	555 E. Church Street, Bartow	Adasilva@cfrpc.org	
CFRPC	Marisa Barmby	Program Manager – Planning and Research	555 E. Church Street, Bartow	mbarmby@cfrpc.org	
Charles Cove CDD/Lakeside Landings CDD	Lynn Mullins	District Manager	3501 Quadrangle Blvd, Orlando FL 32817	mullinsl@pfm.com	
City Center CDD	David McInnes	District Manager	250 International Parkway, Lake Mary FL	Ext. 193	
City of Auburndale	John Dickson	Public Works Director	915 Charles Avenue Auburndale	jdickson@auburndalefl.com	
City of Auburndale	Caleb Gabany	~~Sanitation~~	915 Charles Avenue Auburndale	cgabany@auburndalefl.com	
City of Bartow	Jay Robinson	Fire Department Chief	450 N. Wilson Avenue Bartow	jrobinson.fire@cityofbartow.net	
City of Bartow	Sara Jones	Grant Administrator	450 N. Wilson Ave, Bartow	Salbert.pw@cityofbartow.net	
City of Davenport	Thomas Murphy Jr.	Fire Operations	226 W. 4th Street, Davenport	tmurphy@mydavenport.org	
City of Eagle Lake	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Eagle Lake	Tom Ernharth	City Manager	75 N. 7th Street Eagle Lake	ternharth@eaglelake-fla.com	
City of Fort Meade	Matthew Zahara	Fire Department Chief	8 West Broadway, Fort Meade, FL 33841	mzahara@cityoffortmeade.com	
City of Fort Meade	Edward Dean	City Manager	8 West Broadway, Fort Meade, FL 33841	edean@citoffortmeade.com	
City of Fort Meade	Amy Wheeler	Assistant City Manager	8 West Broadway, Fort Meade, FL 33841	awheeler@cityoffortmeade.com	
City of Fort Meade	Melissa Cannon	Deputy City Clerk	8 West Broadway, Fort Meade, FL 33841	mcannon@cityoffortmeade.com	
City of Fort Meade	Veronica Hairston	Chief Operations Officer	8 West Broadway, Fort Meade, FL 33841	vhairston@cityoffortmeade.com	
City of Frostproof	Josh Turner	Public Works	111 W. First Street Frostproof	JTurner@cityoffrostproof.com	
City of Frostproof	Nicole McDowell	City Manager	111 W. First Street Frostproof	nmcdowell@cityoffrostproof.com	
City of Haines City	Lamar Cliett	Deputy Public Works Director	300 North 5th Street, Haines City	lamar.cliett@hainescity.com	
City of Haines City	James Keene	Public Services Administrator	620 E. Main Street Haines City	james.keene@hainescity.com	
City of Lake Alfred	Community Development Department		120 E. Pomelo Street Lake Alfred	comdev@mylakealfred.com	
City of Lake Alfred	Art Bodenheimer	Police Department Chief	120 E. Pomelo Street Lake Alfred	abodenheimer@mylakealfred.com	
City of Lake Alfred	Ryan Leavengood	City Manager	120 E. Pomelo Street Lake Alfred	rleavengood@mylakealfred.com	
City of Lake Wales	Shannon Hancock	Growth Management Executive Assistant	201 W. Central Avenue Lake Wales	shancock@lakewalesfl.gov	
City of Lake Wales	Dale Hampton	Investigations Commander	133 E. Tillman Avenue, Lake Wales	dhampton@lakewalesfl.gov	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Lake Wales	Emmanuel Figueroa	Police Department	133 E. Tillman Avenue, Lake Wales	efigueroa@lakewalesfl.gov	
City of Lake Wales	James Slaton	City Manager	201 W. Central Avenue, Lake Wales	jslaton@lakewalesfl.gov	
City of Lake Wales	Joe Jenkins	Fire Department Chief	201 W. Central Avenue Lake Wales	jjenkins@lakewalesfl.gov	
City of Lake Wales	Sara Irvine	Special Projects Administrator	2010 W. Central Avenue, Lake Wales	sirvine@lakewalesfl.gov	
City of Lakeland	Anne Marie Locascio	Claims Specialist Risk Management	Lakeland	annmarie.locascio@lakelandgov.net	
City of Lakeland	Michael Lewis	Captain Investigative Services Division	Lakeland	michael.lewis@lakelandgov.net	
City of Lakeland	Cole Edwards	Floodplain Administration	Lakeland	Cole.edwards@lakelandgov.net	
City of Lakeland	Matthew Lyons	Executive Planner	Lakeland	Matthew.kyons@lakelandgov.net	
City of Lakeland	Chuck Barmby	Planning and Transportation Manager	Lakeland	charles.barmby@lakelandgov.net	
City of Mulberry	Billie Segree	Code Enforcement Officer	104 S. Church Ave Mulberry	bsegree@cityofmulberryfl.com	
City of Mulberry	John Wasmund	Finance Director	104 S. Church Ave Mulberry	jwasmund@cityofmulberryfl.com	
City of Mulberry	Ron Borchers	Planning & Development Director	104 S. Church Ave Mulberry	rborchers@cityofmulberryfl.com	
Polk City	Patricia Jackson	City Manager	123 Broadway Blvd SE, Polk City	Patricia.jackson@mypolkcity.org	
City of Winter Haven	Ahmad Abdeljawad	Assistant City Engineer	451 Third St. NW, Winter Haven	aabdeljawad@mywinterhaven.com	
City of Winter Haven	G.D Nabong	City Engineer	451 Third St. NW, Winter Haven	gdstar@yahoo.com	

POLK COUNTY

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
City of Winter Haven	Devon Moore	Senior Environmental Scientist	451 Third St. NW, Winter Haven	dmoore@mywinterhaven.com	
City of Winter Haven	Dustin Everitt	Natural Resources Division Manager	451 Third St. NW, Winter Haven	deveritt@mywinterhaven.com	
City of Winter Haven	Jeff Crouse	Engineering Designer	451 Third St. NW, Winter Haven	jcrouse@mywinterhaven.com	
City of Winter Haven	Mark Bombard	Assistant Director of Utilities	451 Third St. NW, Winter Haven	mbombard@mywinterhaven.com	
City of Winter Haven	Joseph Emery	Fire Chief	301 Ave G SW, Winter Haven	jemery@mywinterhaven.com	
FL Department of Health	Scott Sjoblom	Assistant CHD Director	1290 Golf View Avenue Bartow	Scott.Sjoblom@flhealth.gov	
Florida Department of Environmental Protection	Jasson Drinkard	Professional Responder	13051 N. Telecom Parkway, Temple Terrace, FL 33637	Jasson.Drinkard@FloridaDEP.gov	
Florida Division of Emergency Management	Jeremy O'Dell	Recovery		jeremy.odell@em.myflorida.com	
Florida Division of Emergency Management	Antonio Miranda Zapata	Recovery		Antonio.zapata@em.myflorida.com	
Florida Division of Emergency Management	Cristian Rivera	Mitigation		Cristian.rivera@em.myflorida.com	
Florida Forest Service	Pete Lewis	Forest Area Supervisor for Eastern Polk County		Peter.Lewis@fdacs.gov	
Florida Forest Service	Todd Chlanda	Wildfire Mitigation Specialist	5745 S. Florida Avenue, Lakeland	William.Chlanda@fdacs.gov	
Florida Forest Service	Vic Memmoli	Forest Area Supervisor for Western Polk County		Victor.Memmoli@fdacs.gov	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
Golden Lakes Community Dev.	Steven Shealey	Engineer	401 Third Street SW, Winter Haven	sshealey@pennoni.com	
Golden Lakes Community Dev.	Maurice Formaz		401 Third Street SW, Winter Haven	mformaz@pennoni.com	
John Hopkins All Children's Hospital	Larry Green	Director of Safety	3310 Lakeland Hills Blvd., Lakeland	Lgreen52@jhmi.edu	
John Hopkins All Children's Hospital	Patricia White		3310 Lakeland Hills Blvd, Lakeland	Patricia.white@iparametrics.com	
John Hopkins All Children's Hospital	Shanti Smith-Copeland	Director of Emergency Management	3310 Lakeland Hills Blvd., Lakeland	Shanti.smith-copeland@iparametrics.com	
Harmony on Lake Eloise CDD/Hawthorne Mill North CDD	Craig Wrathell	District Manager	2300 Glades Rd, Boca Raton, FL 33431	info@harmonyonlakeeloisecdd.net info@hawthornemillnorthcdd.net	
Health and Human Services	Marcia Andersen	Social Service Director	2135 Marshall Edwards Drive, Bartow	marciaandersen@polk-county.net	
Health and Human Services	Jennifer Cooper	Housing and Neighborhood Manager	1290 Gulfview Blvd, Bartow	jennifercooper@polk-county.net	
Highland Meadows CDD/Holly Hill Rd East CDD/North Blvd CDD/Poinciana West CDD	Tricia Adams	District Manager	219 E. Livingston Street, Orlando FL 32801	tadams@gmscfl.com	
Lake Ashton CDD	Jill Burns	District Manager	4141 Ashton Club Drive, Lake Wales	jburns@gmsfl.com	
Lake Ashton II CDD	Jason Greenwood	District Manager	6052 Pebble Beach Blvd, Winter Haven	jgreenwood@gm-tampa.com	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
Lakeside Preserve CDD	Jane Gaarlandt	District Manager	3501 Quadrangle Blvd, Orlando	gaarlandtj@pfm.com	
Lake Region Lakes Mgmt. District	Roger Griffiths	Ex Director	804 Ave X SW, Winter Haven	Rdg1744@gmail.com	
Peace River Center	Candace Barnes	COO	1239 E. Main Street, Bartow	cbarnes@peacerivercenter.org	
Polk County	Apryl Faurote	Volunteer Services Coordinator	1290 Golfview Avenue Bartow	aprylfaurote@polk-county.net	
Polk County	Benjamin Dunn	Planning and Development, Building Dir.	330 W. Church Street Bartow	benjamindunn@polk-county.net	
Polk County	Billy Abernathy	Emergency Management EOC Coordinator	1890 Jim Keene Blvd Winter Haven	billyabernathy@polk-county.net	
Polk County	Richard Benton	Land Development / Floodplain Manager	330 W. Church Street Bartow	richardkbenton@polk-county.net	
Polk County	Christia Johnson	Budget Director	330 W. Church Street, Bartow	christiajohnson@polk-county.net	
Polk County	Brian Thurston	EM Program Manager	1890 Jim Keene Blvd., Winter Haven	brianthurston@polk-county.net	
Polk County	James Schnell	Building Division	330 W. Church Street, Bartow	jamesschnell@polk-county.net	
Polk County	Jana Nickles	Special Needs Coordinator	1890 Jim Keene Blvd Winter Haven	jananickles@polk-county.net	
Polk County	Doug Cockerham	Emergency Management Coordinator	1890 Jim Keene Blvd Winter Haven	dougcockerham@polk-county.net	
Polk County	Jay Jarvis	Transportation Director	330 W. Church Street Bartow	jayjarvis@polk-county.net	
Polk County	Brian Nadler	Deputy Chief	1295 Brice Blvd., Bartow	briannadler@polk-county.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
Polk County	Jeff Foley	Communications	330 W. Church Street, Bartow	jefffoley@polk-county.net	
Polk County	Darius Livingston	Battalion Chief	1295 Brice Blvd., Bartow	dariuslivingston@polk-county.net	
Polk County	Ben Cassista	Assistant Fire Chief	1295 Brice Blvd., Bartow	bencassista@polk-county.net	
Polk County	Katie Hollenbeck	EM Planner	1890 Jim Keene Blvd Winter Haven	kathrynhollenbeck@polk-county.net	
Polk County	Michele Sims	Procurement Manager	330 W. Church Street Bartow	michelesims@polk-county.net	
Polk County	Michelle Shiver	RSVP Polk	1290 Golfview Avenue Bartow	michelleshiver@polk-county.net	
Polk County	Paul Womble	Emergency Management Director	1890 Jim Keene Blvd Winter Haven	paulwomble@polk-county.net	
Polk County	Richard Benton	Floodplain Manager	330 W. Church Street, Bartow	richardkbenton@polk-county.net	
Polk County	Shawn Smith	Assistant Fire Chief	330 W. Church Street, Bartow	shawnsmith@polk-county.net	
Polk County	Scott Anderson	Floodplain Tech	330 W. Church Street, Bartow	scottanderson@polk-county.net	
Polk County	Tabitha Biehl	Parks and Natural Resources	4177 Ben Durrance Road, Bartow	tabithabiehl@polk-county.net	
Polk County	Gaye Sharpe	Park and Natural Resources, Fiscal Mgr.	4177 Ben Durrance Road, Bartow	gayesharpe@polk-county.net	
Polk County	Glenda Rogers	Lead Management & Budget Analyst	330. W Church Street, Bartow	glendarogers@polk-county.net	
Polk County	Ryan Wiggins	Building Director	330 West Church Street Bartow Florida 33830 United States	ryanwiggins@polk-county.net	
Polk County School Board	Josh McLemore	Facilities Planning Director	1915 S. Floral Avenue Bartow	Joshua.mclemore@polk-fl.net	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
Polk County School Board	Linda King	Director of Risk Management	1915 S. Floral Avenue Bartow	Linda.king@polk-fl.net	
Reserve at Van Oaks CDD/Silverlake CDD/Springs at Lake Alfred CDD/Stuart Crossing CDD	Kristen Suit	District Manager	1049 Oak Vly Dr. Auburndale	suitk@whhassociates.com	
Solterra Resort CDD	Barry Jeskewich	District Manager	250 International Parkway, Lake Mary	Ext. 398	
The Freedom Tour	Bobby Williams	President	108 1st Eloise Street, Winter Haven	bobbyw@thefreedomtour.org	
Town of Dundee	Joseph Carbone	Fire Department Chief	202 East Main Street, Dundee	jcarbone@townofdundee.com	
Town of Dundee	Lorraine Peterson	Planner	202 East Main Street, Dundee	lpeterson@townofdundee.com	
Town of Dundee	Tandra Davis	Town Manager	202 East Main Street, Dundee	tdavis@townofdundee.com	
Town of Dundee	Vermalyn Williams	Code Enforcement Director	202 East Main Street, Dundee	vwilliams@townofdundee.com	
Town of Hillcrest Heights	Larry Blackwelder	Town Clerk	151 N. Scenic Hwy, Hillcrest Heights	townofhillcrestheights@netzero.com	
Town of Lake Hamilton	Patrick Henry	Water Utility Director	100 Smith Avenue Lake Hamilton	henryp@townoflakehamilton.com	
Town of Lake Hamilton	Brittney Sandoval	Town Administrator	100 Smith Avenue Lake Hamilton	brittney@townoflakehamilton.com	
Town of Lake Hamilton	Cathy Sumner	Water Department Administrative Assistant	100 Smith Avenue Lake Hamilton	csumner@townoflakehamilton.com	
United Way Central Florida	June May	Director of Community Resources	5605 US-98, Lakeland, FL 33812	June.may@uwcf.org	

POLK COUNTY
MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY
WORKING GROUP REPRESENTATIVES
FEBRUARY 19, 2025

	Name	Department and/or Title	Address	Email	Signature
Village of Highland Park	Ric Busbee	City Manager	1650 Highland Park Drive North, Lake Wales	citymanager@highlandpark-fl.org	
Webber International University	Ryan Reis	Director of Annual Fund and Alumni Affairs	1201 N. Scenic Highway, Babson Park	Reisrj2@webber.edu	
Webber International University	Kenneth Reaves	Campus President	1201 N. Scenic Highway, Babson Park	reaveskm@webber.edu	
Westridge CDD	Brian Mendes	District Manager	8529 South Park Circle Orlando	bmendes@rizzetta.com	
Westview South CDD	Andrew Kantarzhi	District Manager	2300 Glades Rd, Boca Raton	kantarzhia@whhassociates.com	
On Deck Restoration	Scott Lineback		3702 Century Blvd #1, Lakeland, FL 33811	scott@ondeckrestoration.com	
On Deck Restoration	Shaun Prather		3702 Century Blvd #1, Lakeland, FL 33811	shaun@ondeckrestoration.com	
polk county utilities	Holden Wright	PM	121 Jim Keene Blvd, Winter Haven, FL 33880	holdenwright@polk-county.net	
City of Mulberry	Billy Abernathy	Polk EM	1890 Jim Keene		
	Jenn Garcia	City Clerk		JGarcia@CityofMulberryFL.com	

Local Mitigation Strategy Working Group Meeting

**Only add your name here if not already on the sign in sheet!!

Date: February 19, 2025

Time: 9:30AM-11:30AM

NAME	AGENCY	EMAIL	Signature
MALE V. [illegible]	Polk County	[illegible]	
Ryan Wiggins	Polk County	RyanWiggins@Polk-County.net	
Doug Cockerham	PCEM	on file	

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
FEBRUARY 19, 2025

MINUTES

1. Welcome and Introductions
   - ❖ Paul welcomed attendees to the meeting.
     - ✓ Paul shared that the notice of funding available for Hurricane Milton was recently publicized and there are funds available for mitigation projects. Applications will be due in May.
     - ✓ Paul also shared that the Elevate Florida program was recently announced. This is hazardous mitigation funds for raising elevation of residential homes. There have been some applications already. Requests are made by individuals and require a 25% match by the homeowner.
     - ✓ Marisa thanked attendees for coming to the meetings and for their input on this project.
   - ❖ Attendees introduced themselves.
2. Old Business
   - ❖ Outstanding Items
     - ✓ Marisa reminded the group that there are still some jurisdictions that need community profiles, policies & regulations data, agency/jurisdictional history of hazards, status of current projects, and for some to define who is responsible for NFIP (need position title). Marisa asked attendees to please make sure Jerri has that data, which may be emailed directly to her.
3. New Business
   - ❖ LMS Draft Discussion: Data and Analysis
     - ✓ Marisa reviewed the demographic information and what data is included, such as population growth, median age and the statistics of persons below poverty level, as well as information regarding Polk County's housing stock and the year the structure was built.

- ✓ Maps were reviewed to show the purpose of their inclusion in the LMS including.
- ✓ CFRPC will also include information regarding the 326 dams in the county which average in age at 52 years.
- ✓ Marisa reviewed the data associated with bicycle and pedestrian crash maps and the hazards posed from that information. She also reviewed the importance of the FIRM maps that were included for each jurisdiction in the LMS.
- ✓ Marisa shared that the data pending from the FEMA to the County regarding the repetitive loss properties will contain a comment that Polk County is waiting to receive that data.
- ✓ Agal blooms is the newly added category, received from DEP.
- ✓ Impacts to citrus production and the two Florida federal quarantine areas was shared.
- ✓ Hazardous facilities will also be included which can range from facilities with florescent lights to wastewater facilities and more.

❖ It is possible that we may need to meet before the next meeting scheduled in June to review the comments.

❖ Marisa is hopeful to submit a draft in March and anticipates having comments back by the next meeting.

Next Working Group Meeting – June 4, 2025

LMS Working Group Meeting

Polk County 2025 LMS Update

February 19, 2025

Agenda

1. Welcome and Introductions

2. Old Business – Outstanding Items

3. New Business – LMS Draft Discussion: Data and Analysis

Introductions

Old Business – Outstanding Items

If you haven't already done so, please submit . . .

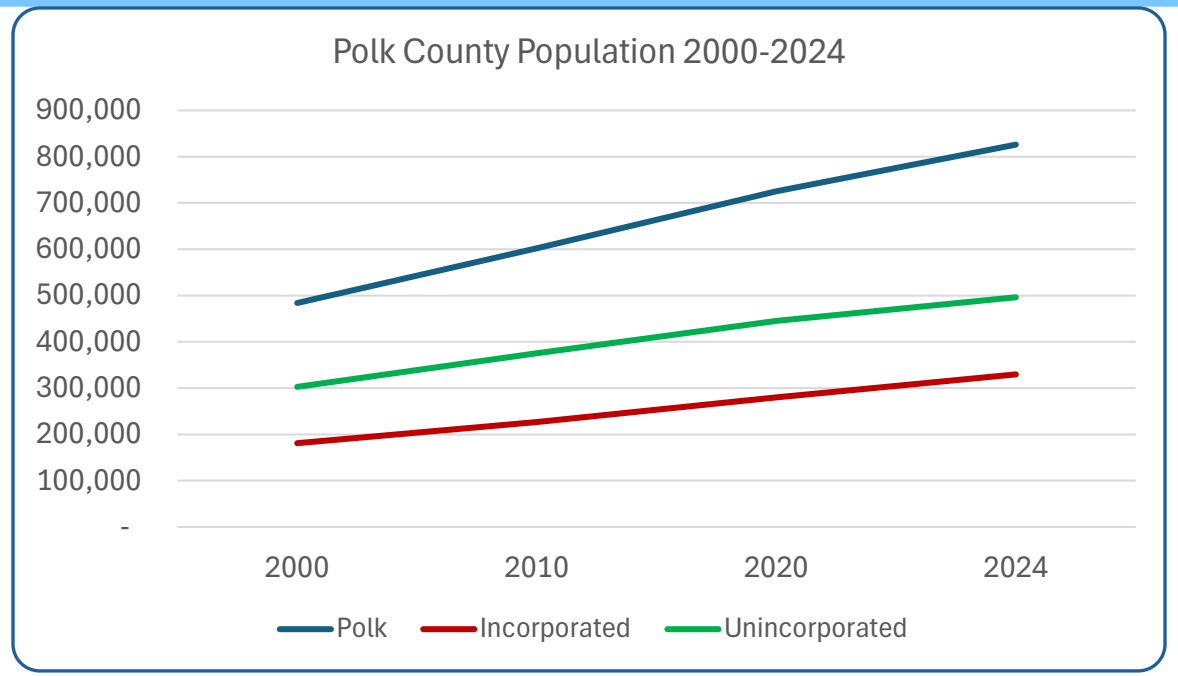
a) Community Profiles
b) Policies & Regulations
c) Agency/Jurisdictional History of Hazards
d) Status of Current Project List (Completed, Deferred, Deleted)

e) Who is Responsible for NFIP – need position title

New Business – LMS Draft Discussion

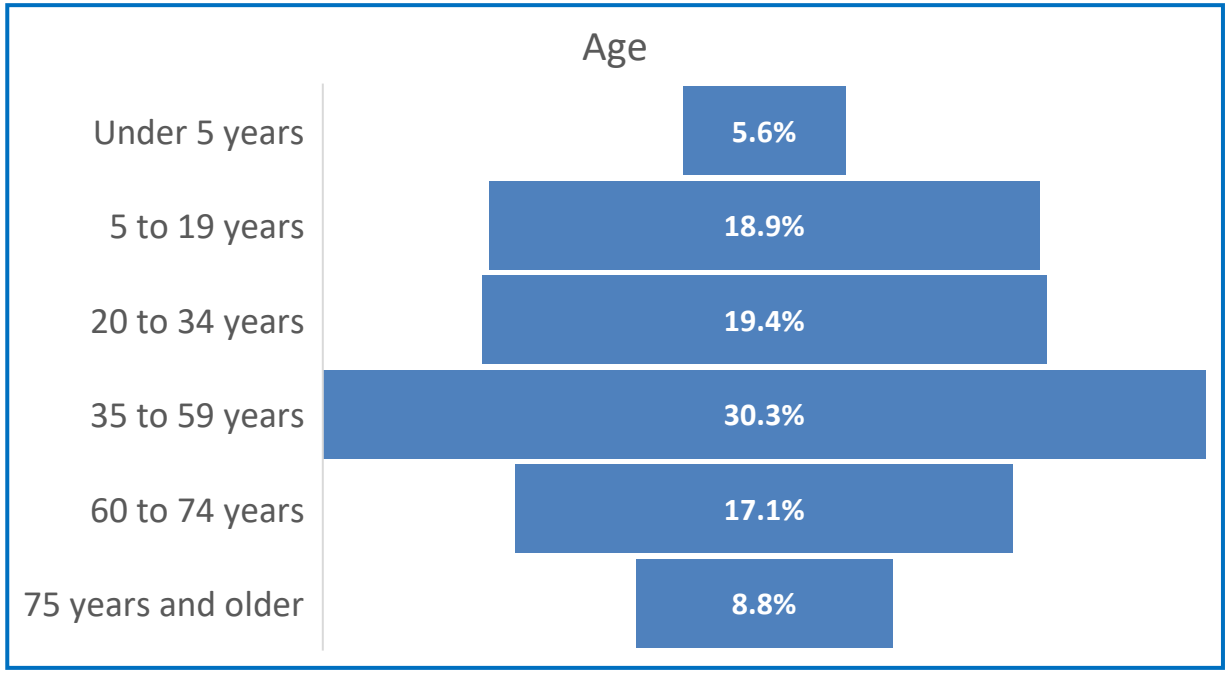
Data and Analysis

Demographic Information

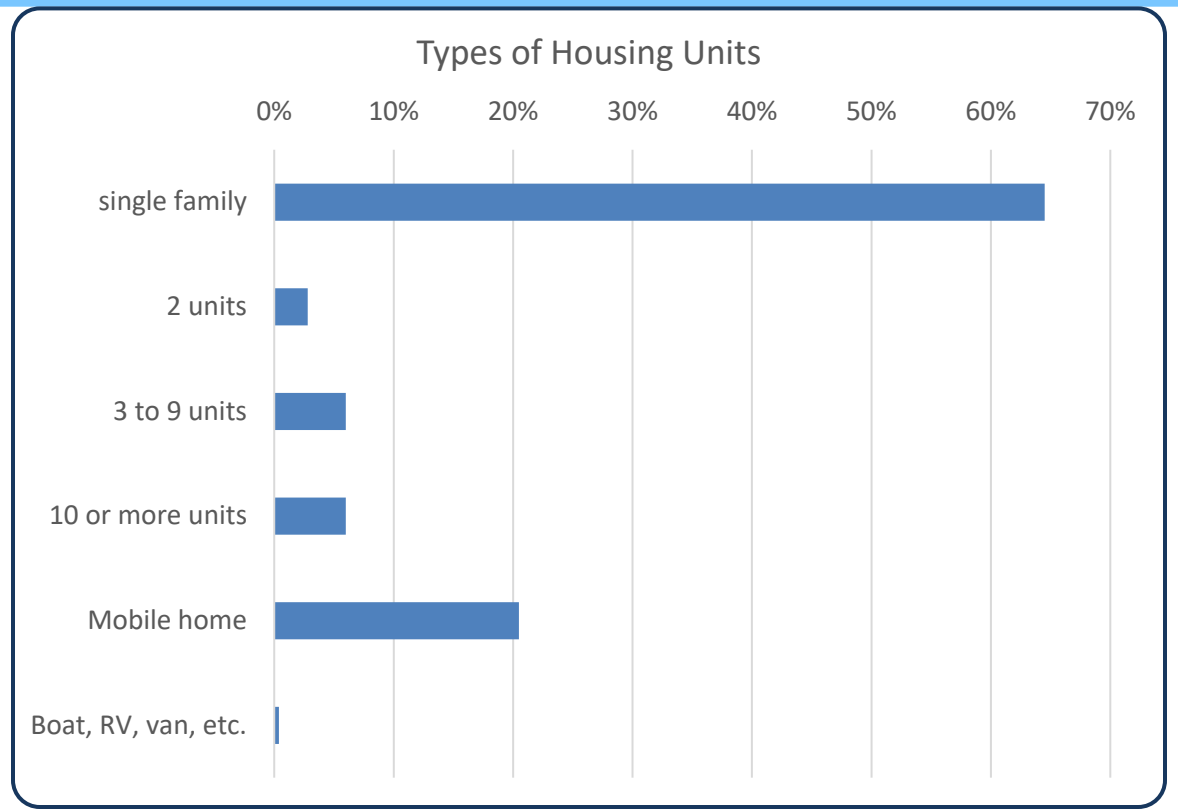


Median Age = 39.8

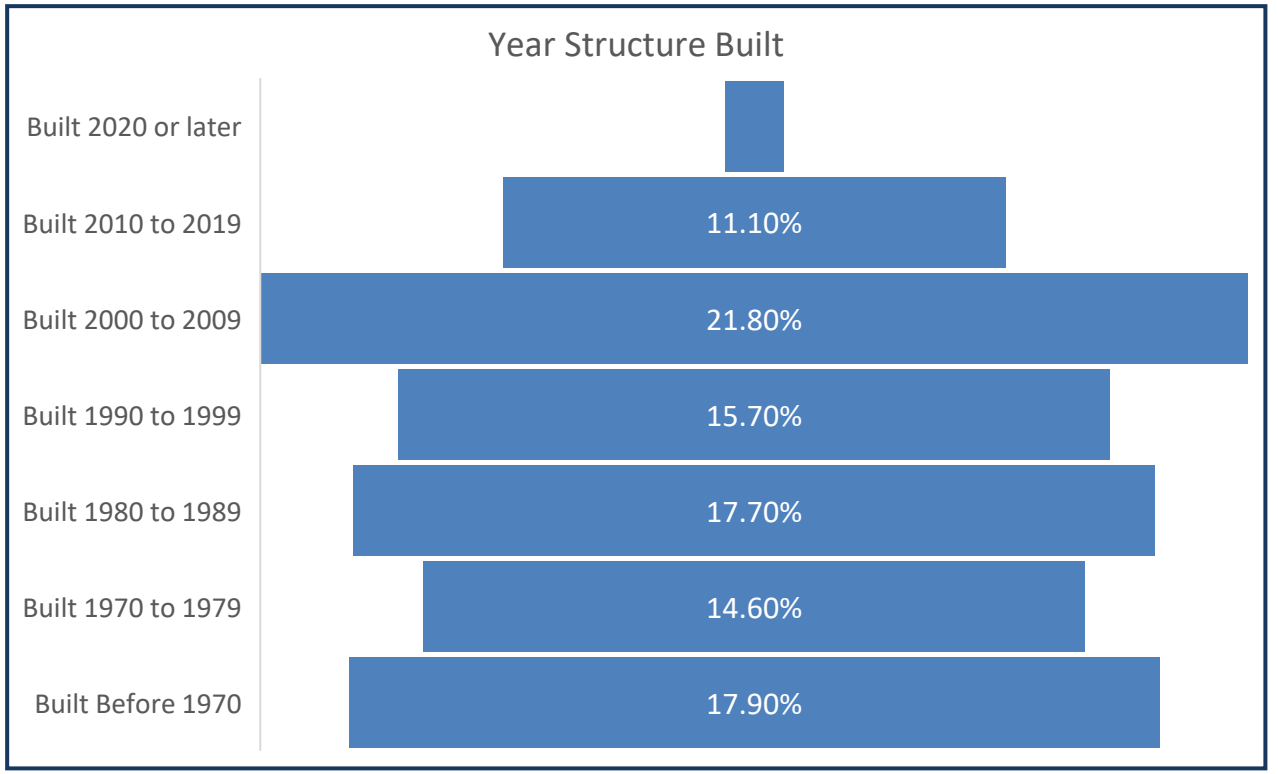
Persons Below Poverty Level = 13.0%



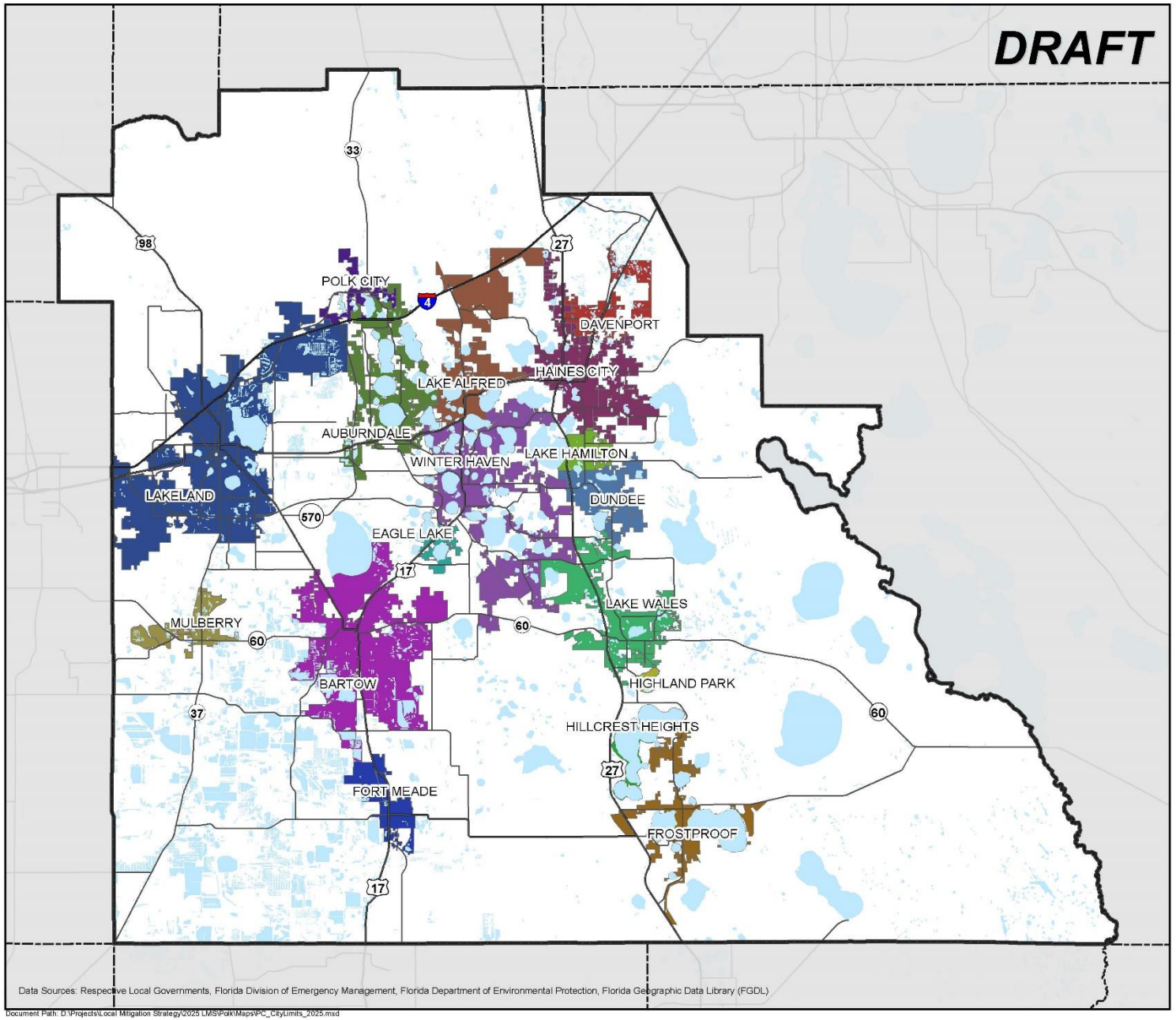
Demographic Information



32.5% Over 50 Years Old



POLK COUNTY - LOCAL MITIGATION STRATEGY
City Limits



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_CityLimits_2025.mxd

Legend

- Polk County
- Water Bodies

Municipalities

- Auburndale
- Bartow
- Davenport
- Dundee
- Eagle Lake
- Fort Meade
- Frostproof
- Haines City
- Highlands Park
- Hillcrest Heights
- Lake Alfred
- Lake Hamilton
- Lake Wales
- Lakeland
- Mulberry
- Polk City
- Winter Haven

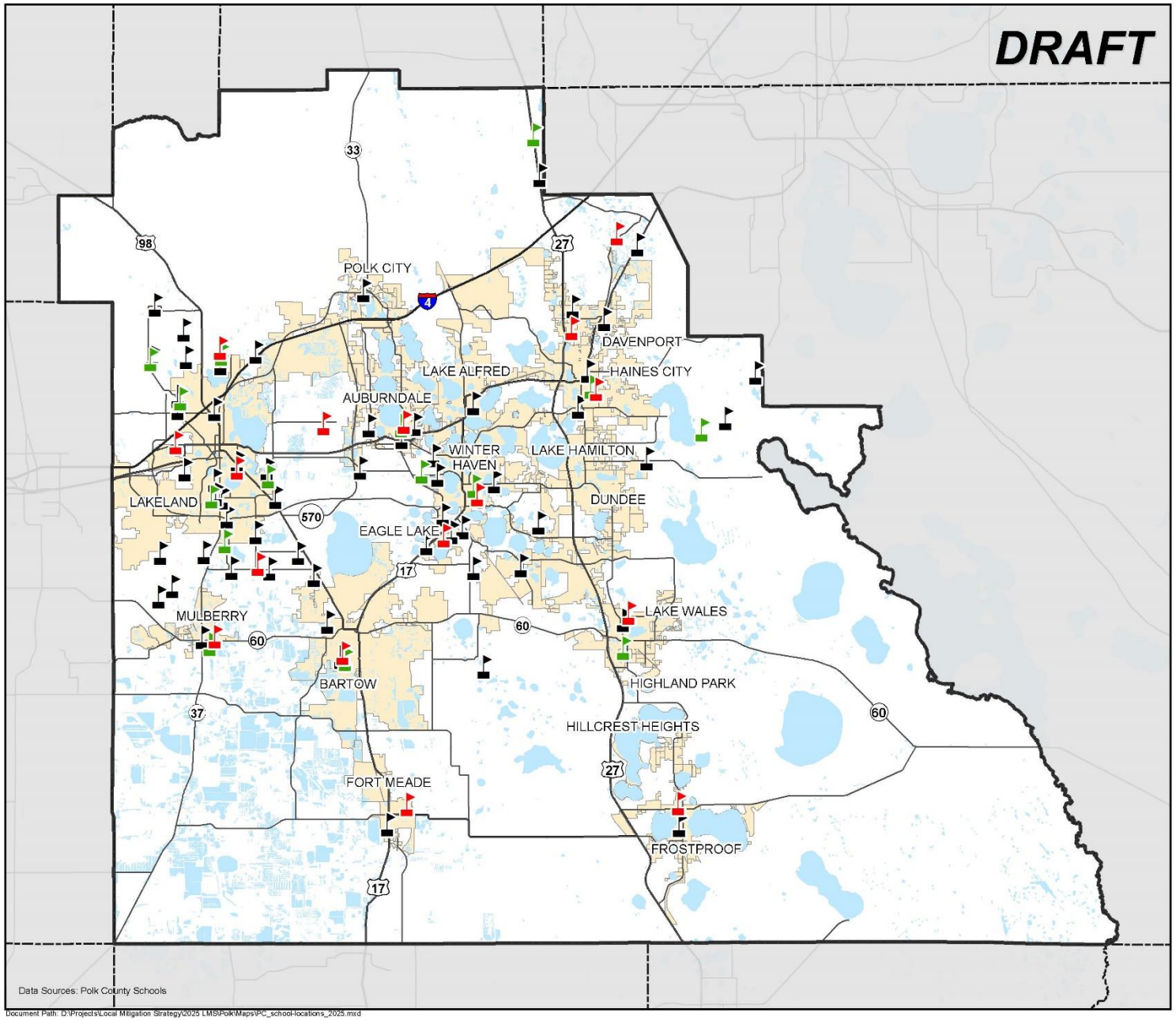
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Public School Locations



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_school-locations_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Public Schools

- Elementary School
- Middle School
- High School

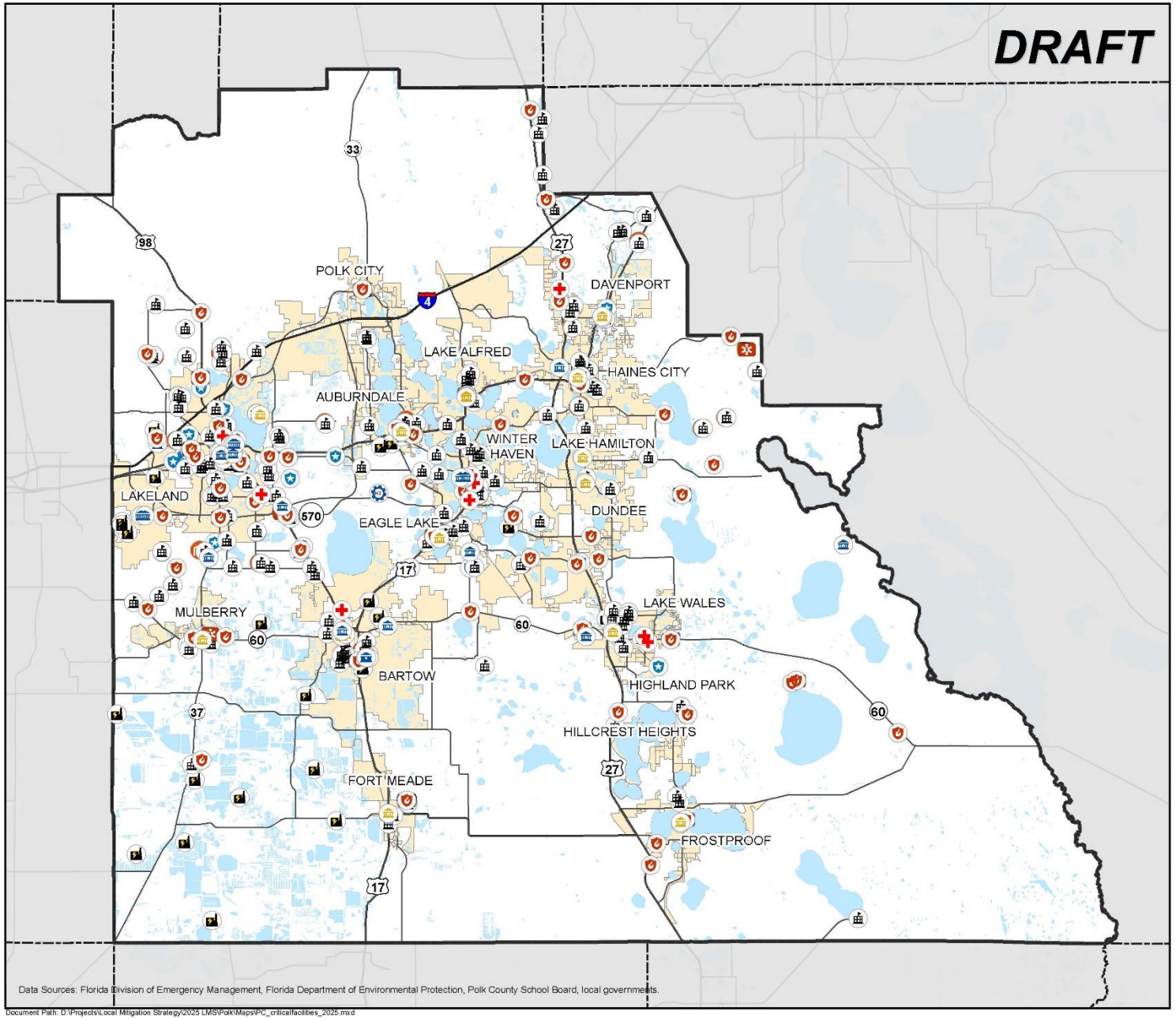
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Critical Facilities



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_criticalfacilities_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

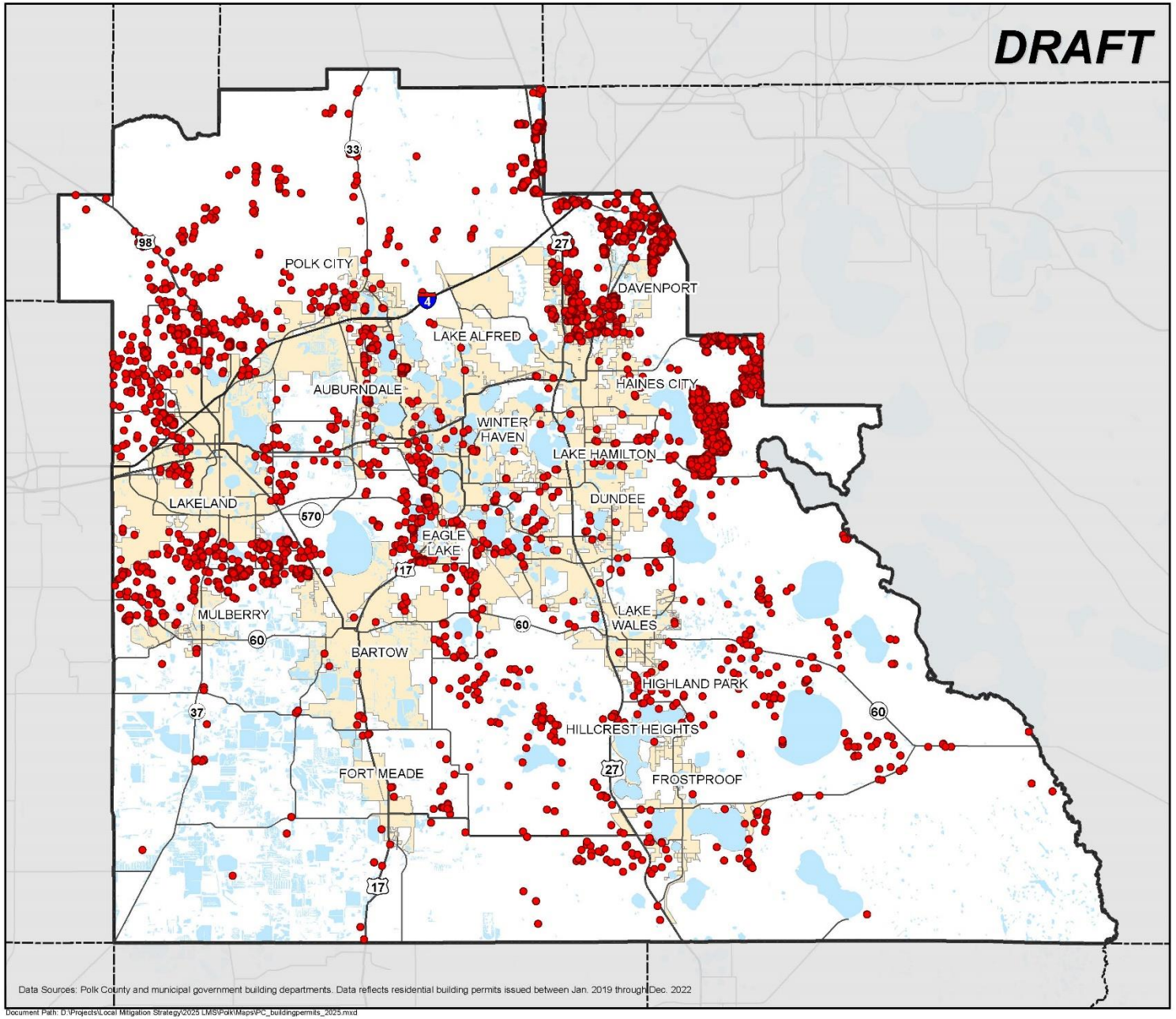
Critical Facilities

- State Government Facility
- Local Government Facility
- EOC
- Law Enforcement
- Fire Station
- EMS
- Hospital/Medical Clinic
- Public School
- Shelter
- Power Plant

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Residential Building Permits (2019 - 2022)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_buildingpermits_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Building Permits

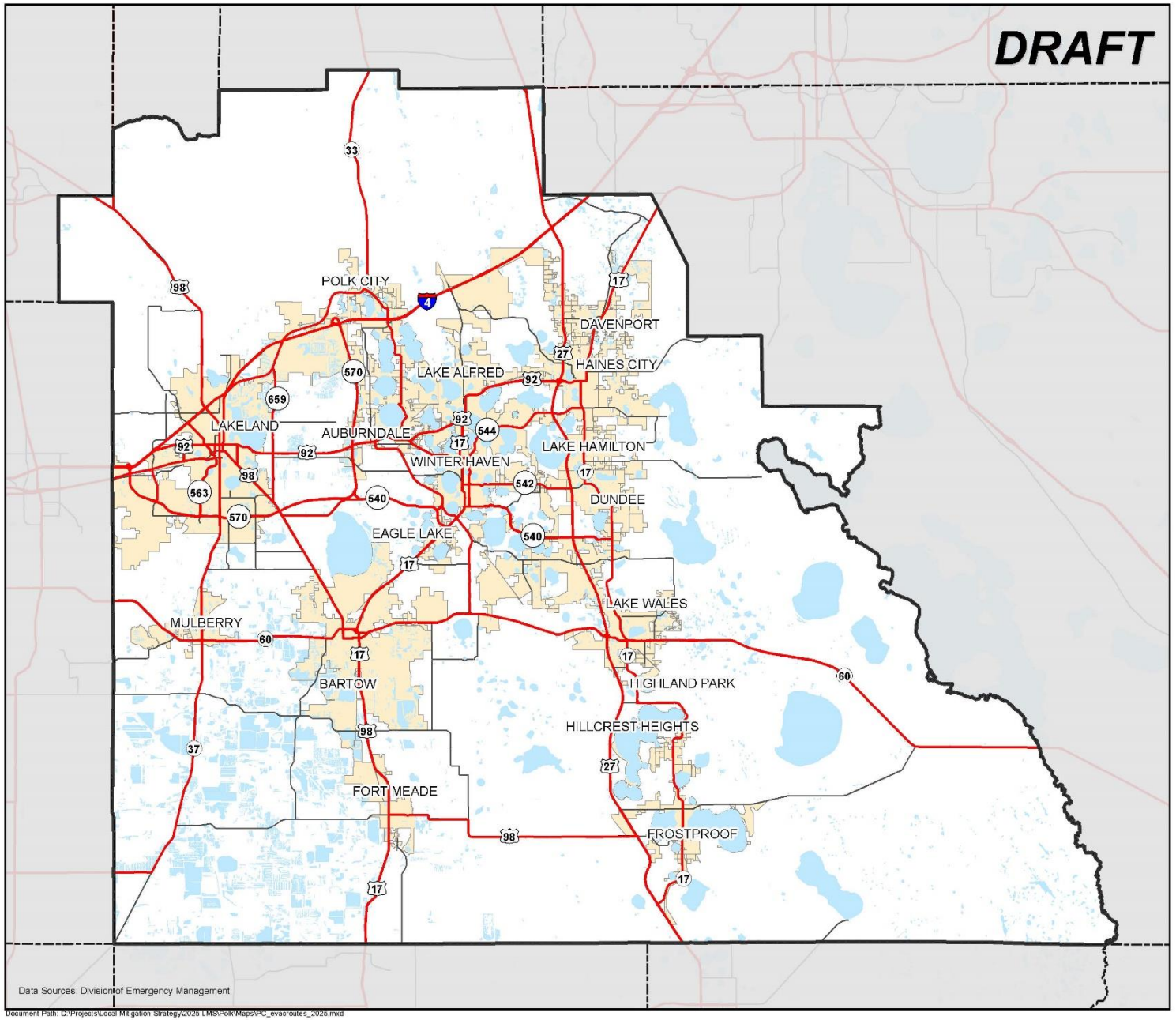
- Residential Building Permits

Disclosure:
This GIS Map is a public resource of general information. Polk County BoCC makes no warranty, representation or guarantee as to the content, sequence, accuracy, timeliness or completeness of any of the database information provided herein. The reader should not rely on the data provided herein for any reason. Polk County explicitly disclaims any representations and warranties , including, without limitation, the implied warranties of merchantability and fitness for a particular purpose. Polk County shall assume no liability for: 1) Any errors, omissions, or inaccuracies in the information provided regardless of how caused; or 2) Any decision made or action taken or not taken by any person in reliance upon any information or data furnished hereunder.

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Evacuation Routes



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_evacroutes_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Evacuation Routes

- Roadways

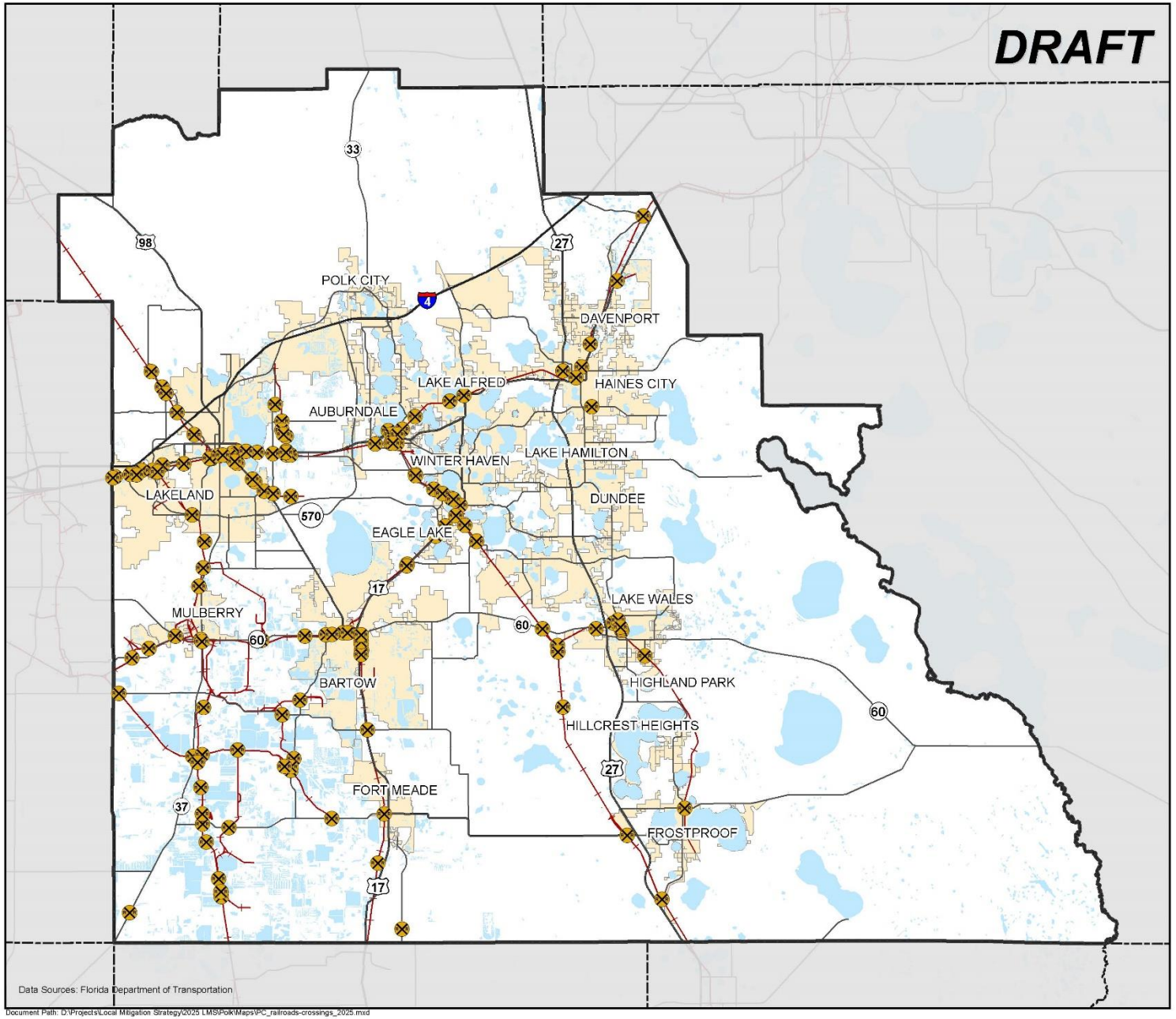
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Railroad Lines and Railroad Crossings



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_railroads-crossings_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

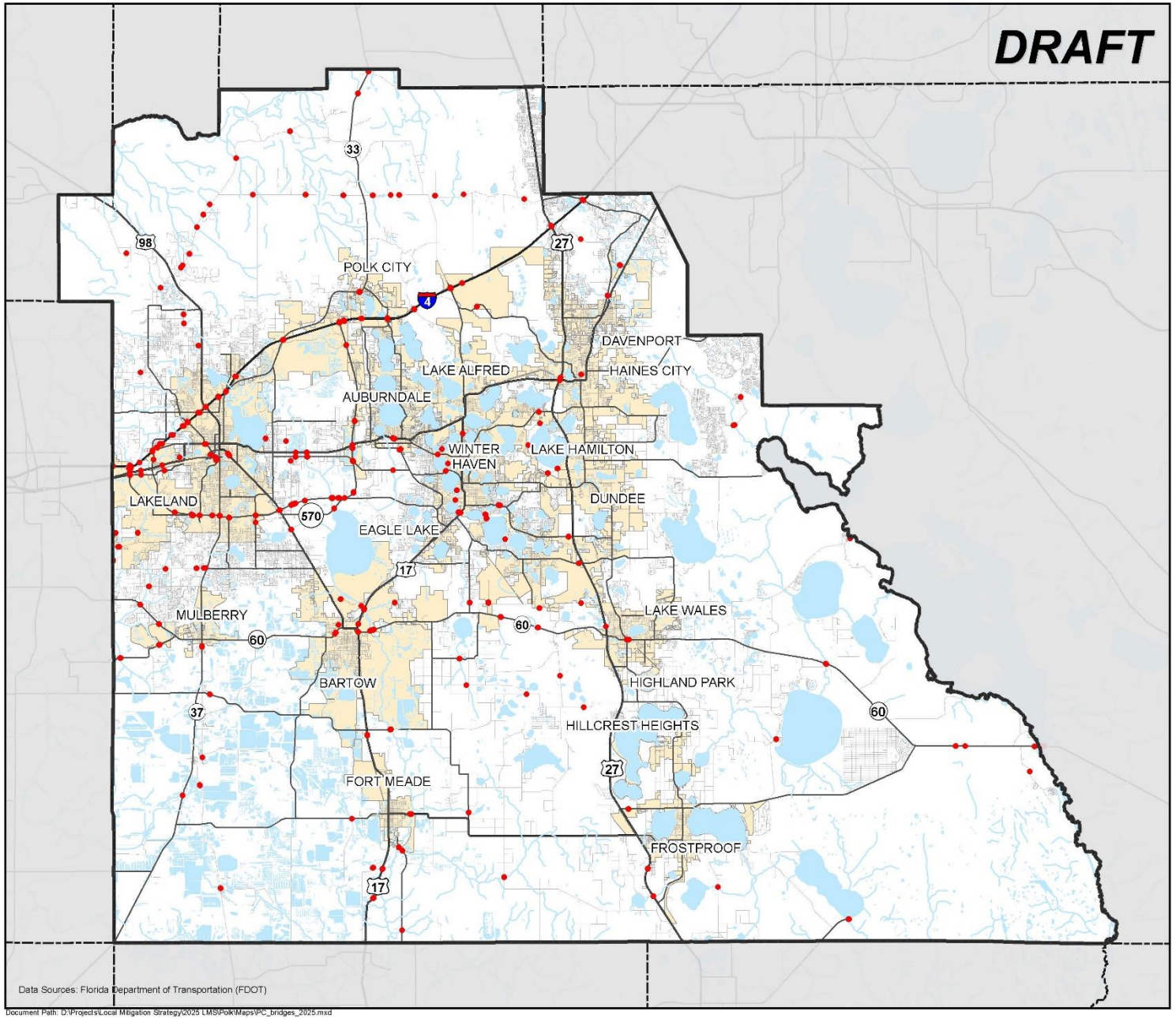
Railroad Facilities

- Railroad Lines
- Railroad Crossings

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Bridges



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_bridges_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Bridges

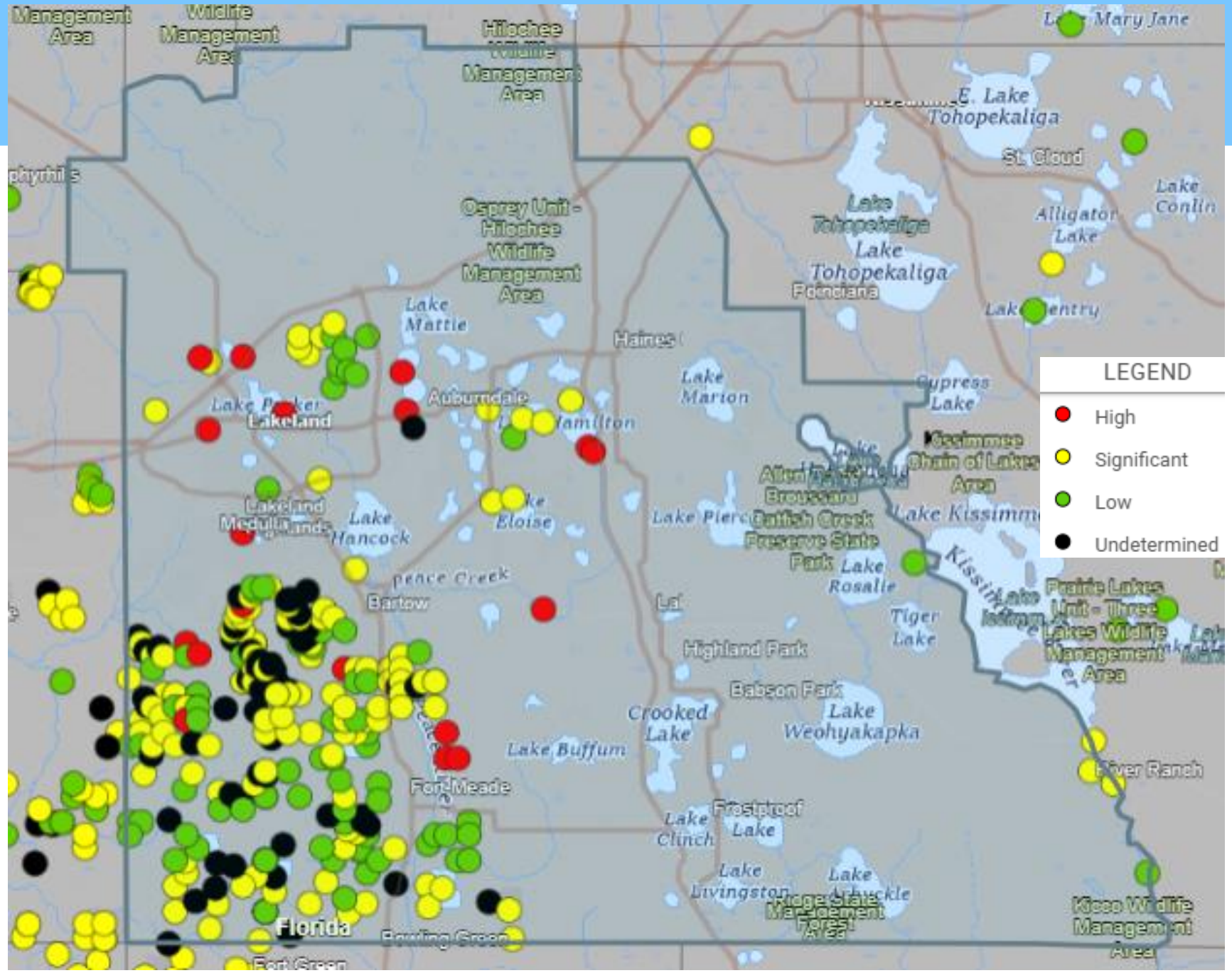
- bridge

POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

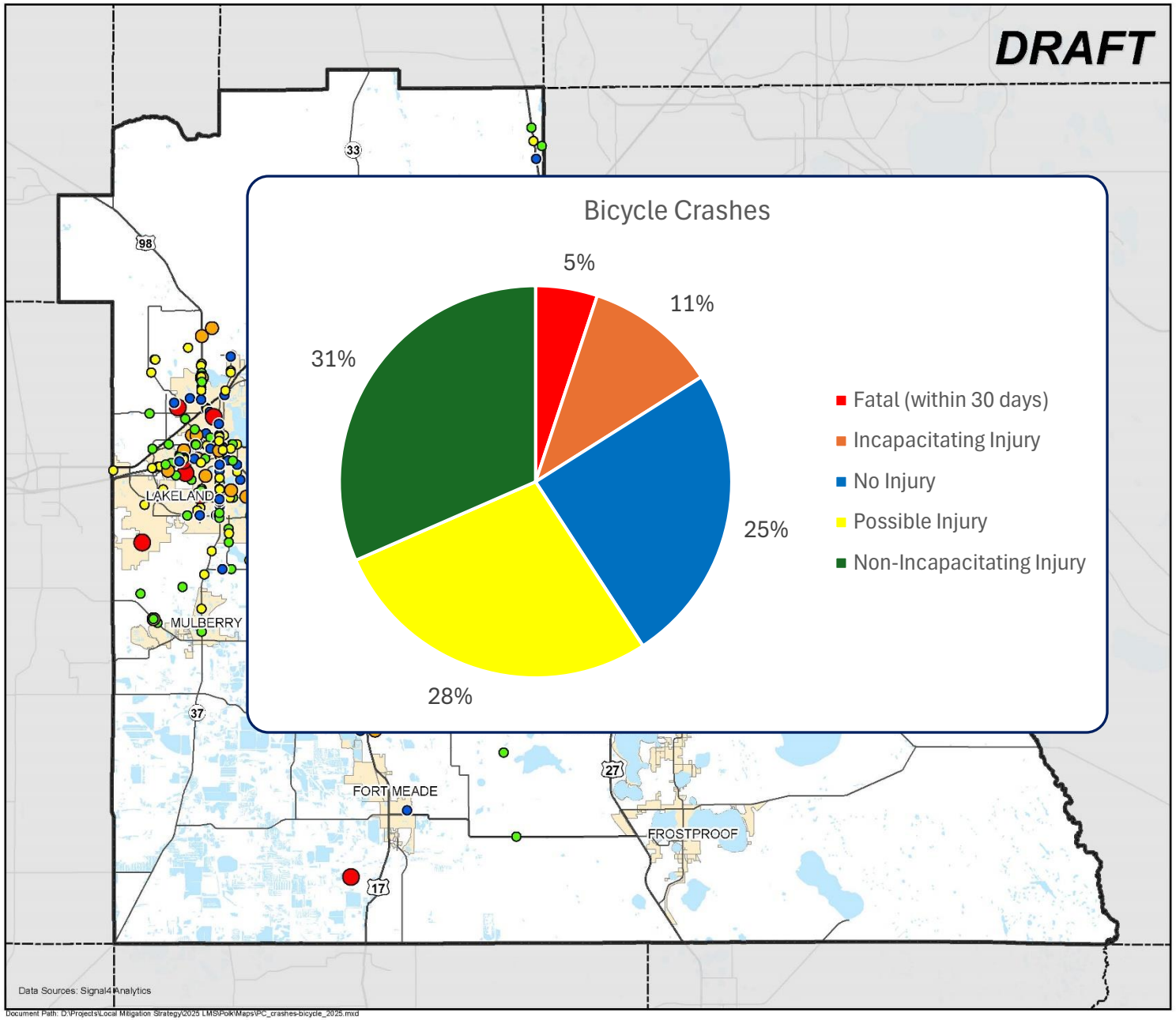
N
W E
S

0 4 8
Miles



326 Dams
52 years Average Dam Age
16% high Hazard Potential

POLK COUNTY - LOCAL MITIGATION STRATEGY
Bicycle Crashes (5 Year Period)



Legend

- Polk County
- Municipalities
- Water Bodies

Bicycle Crashes - Crash Severity

- No Injury
- Possible Injury
- Non-Incapacitating Injury
- Incapacitating Injury
- Fatal (within 30 days)

Note:
Florida Traffic Safety Dashboard - S4Analytics Data covers a 5 Year Period from 10/25/2020 to 10/25/2024.

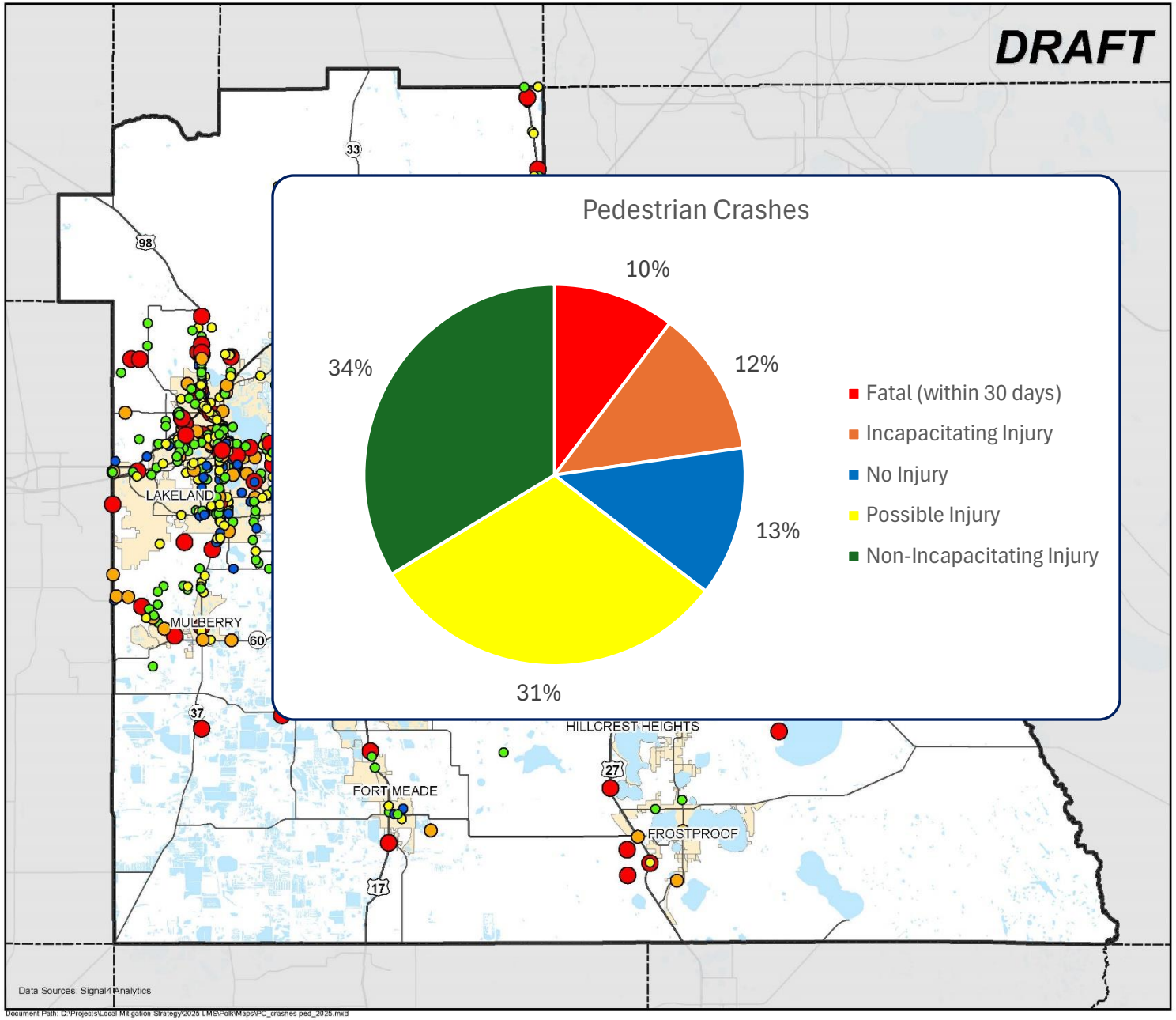
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Pedstrian Crashes (5 Year Period)



Legend

- Polk County
- Municipalities
- Water Bodies

Pedestrian Crashes - Crash Severity

- No Injury
- Possible Injury
- Non-Incapacitating Injury
- Incapacitating Injury
- Fatal (within 30 days)

Note:
Florida Traffic Safety Dashboard - S4Analytics Data covers a 5 Year Period from 10/25/2020 to 10/25/2024.

POLK COUNTY EMERGENCY MANAGEMENT

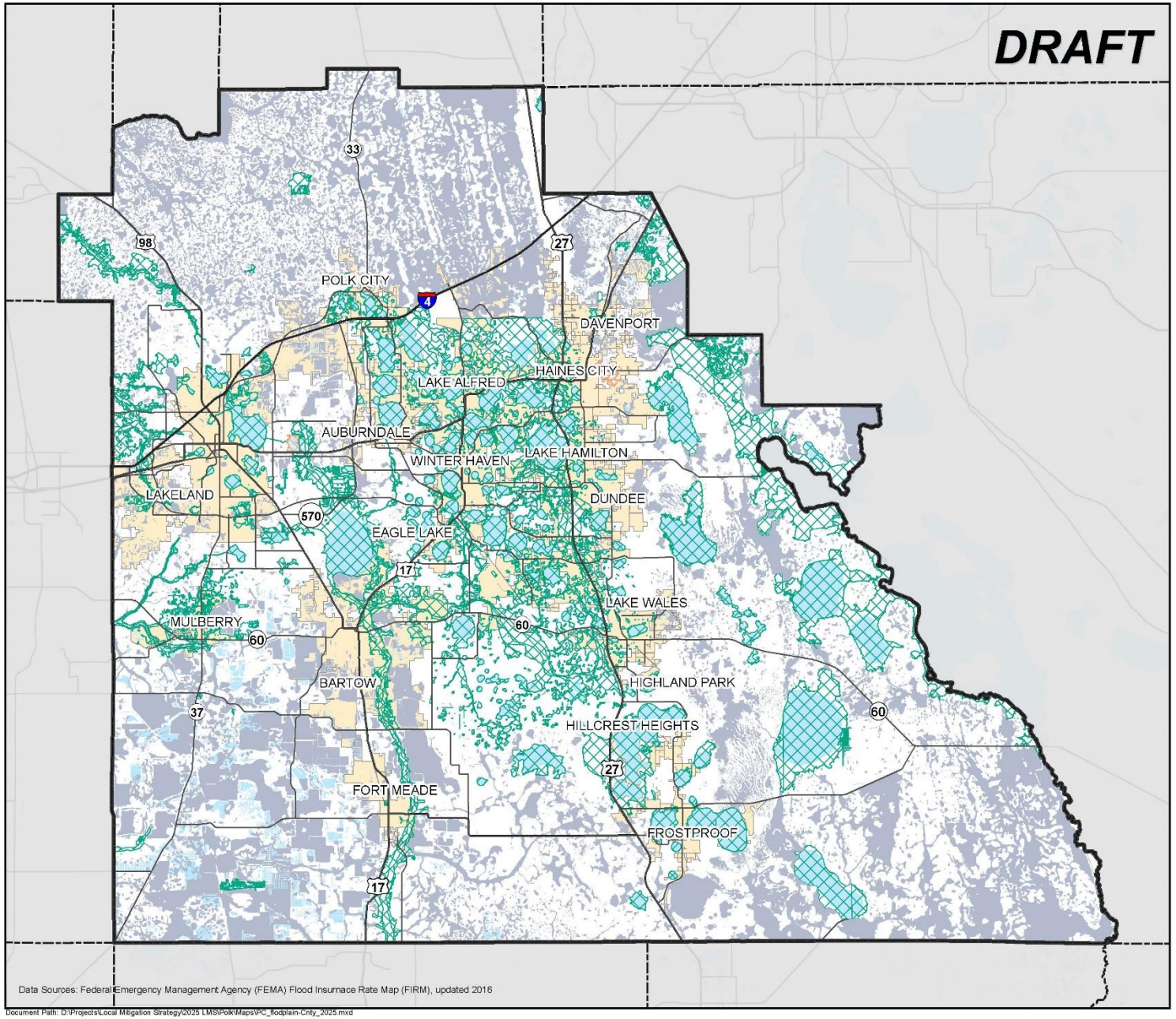
POLK COUNTY

N
W E
S

0 4 8
Miles

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_crashes-ped_2025.mxd

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_flodplain-Cnty_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

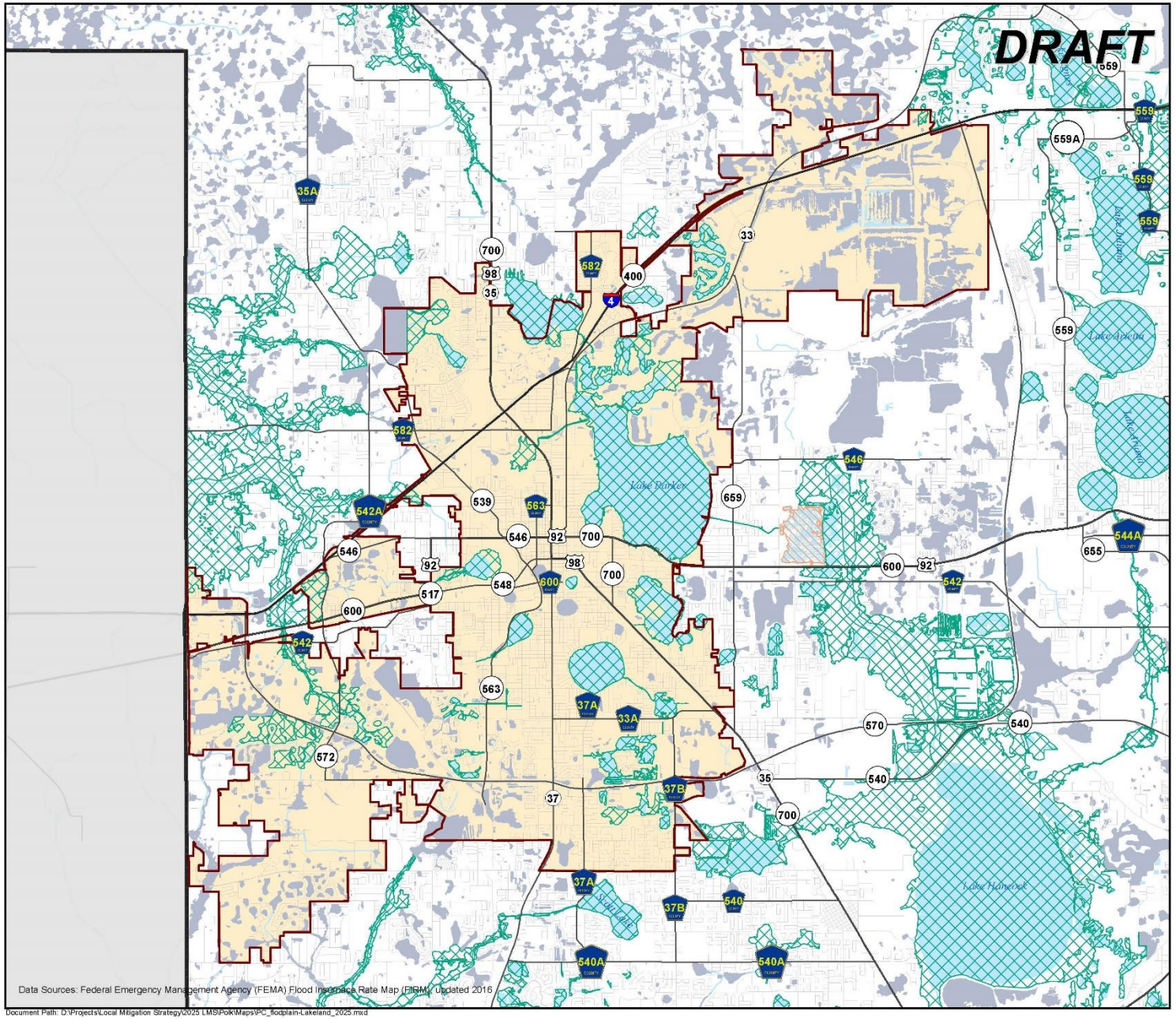
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
FEMA Flood Insurance Rate Map (FIRM) - City of Lakeland



Data Sources: Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Updated 2016

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_floodplain-Lakeland_2025.mxd

Legend

- Polk County
- City of Lakeland
- Water Bodies
- Waterways

FEMA Floodzones

- A - Special Flood Hazard Area
- AE - Special Flood Hazard Area
- AH - Special Flood Hazard Area
- X - Outside 500 yr floodplain

POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

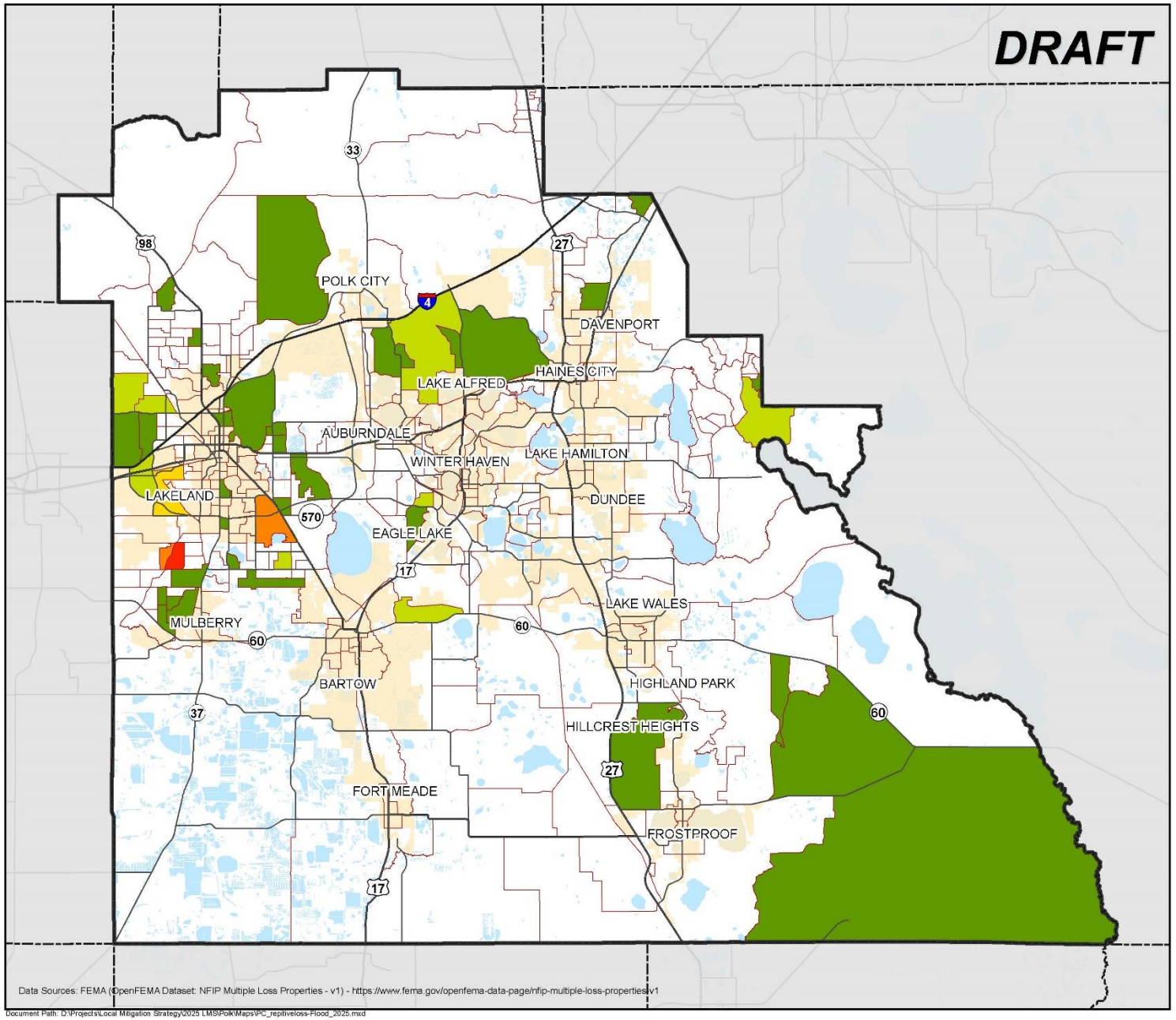
N
W E
S

0 1½ 3
Miles

TABLE VI-11o:
SPECIAL HIGH HAZARD AREA POTENTIAL LOSSES – LAKELAND

Use	Parcel Acreage	Building Value ($)	Total Value ($)
Agriculture	5,251	30,058,173	101,140,697
Residential	4,189	976,281,217	1,478,093,739
Commercial/Industrial	6,432	1,331,406,573	2,027,922,280
Government/Institutional	12,166	817,824,930	1,019,670,575
Miscellaneous	1,850	-	6,686,911
Total	**29,888**	**3,155,570,893**	**4,633,514,202**

POLK COUNTY - LOCAL MITIGATION STRATEGY
Repetitive Loss Properties - Total Losses (by Census Block Groups)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_repitiveloss-Flood_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Repetitive Loss Properties by Census Block Groups (represents # of Total Losses)

- =<1
- 2
- 3
- 4
- 5
- 7

Note:
This dataset provides information on structures that have had multiple National Flood Insurance (NFIP) claims across the history of the program. The data shown here represents NFIP-insured structures that have experienced totl losses.

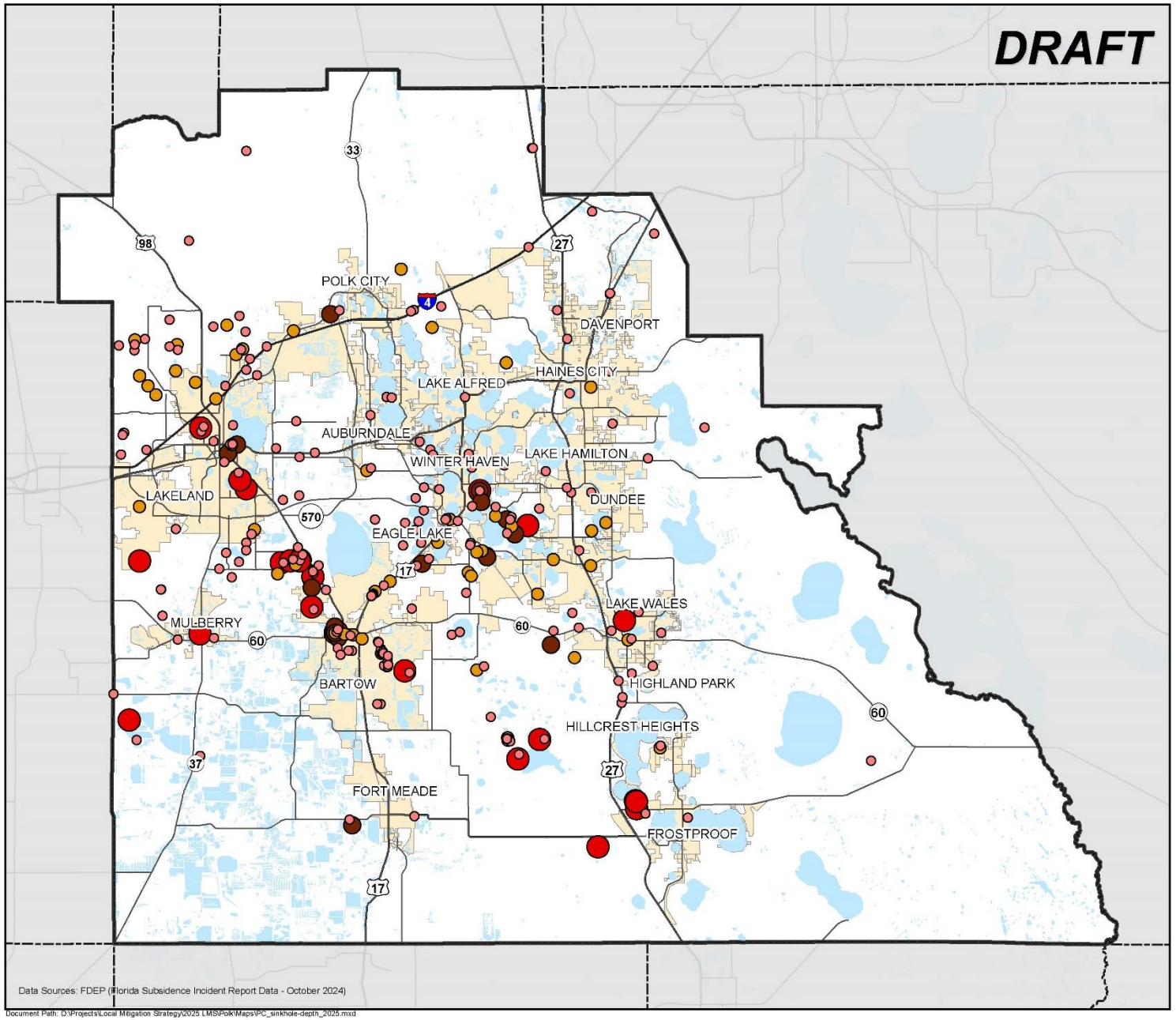
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Sinkhole Depths (1954 - 2024)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_sinkhole-depth_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

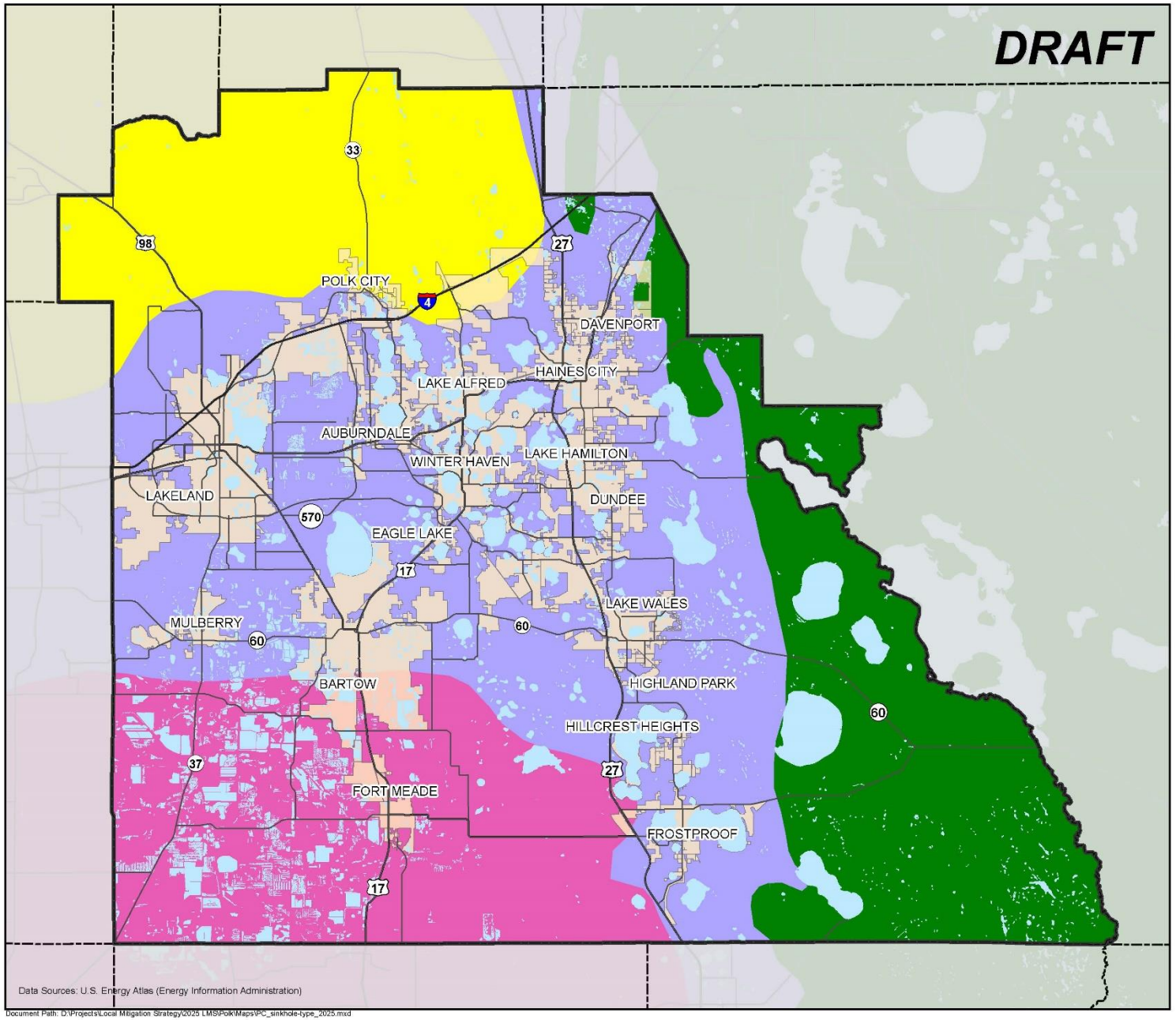
Sinkhole Depths

- < 10 feet
- 10 - 30 feet
- 30 - 50 feet
- 50 - 200 feet

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Sinkhole Area Types



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_sinkhole-type_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Florida Sinkhole Types

- Area I
- Area II
- Area III
- Area IV

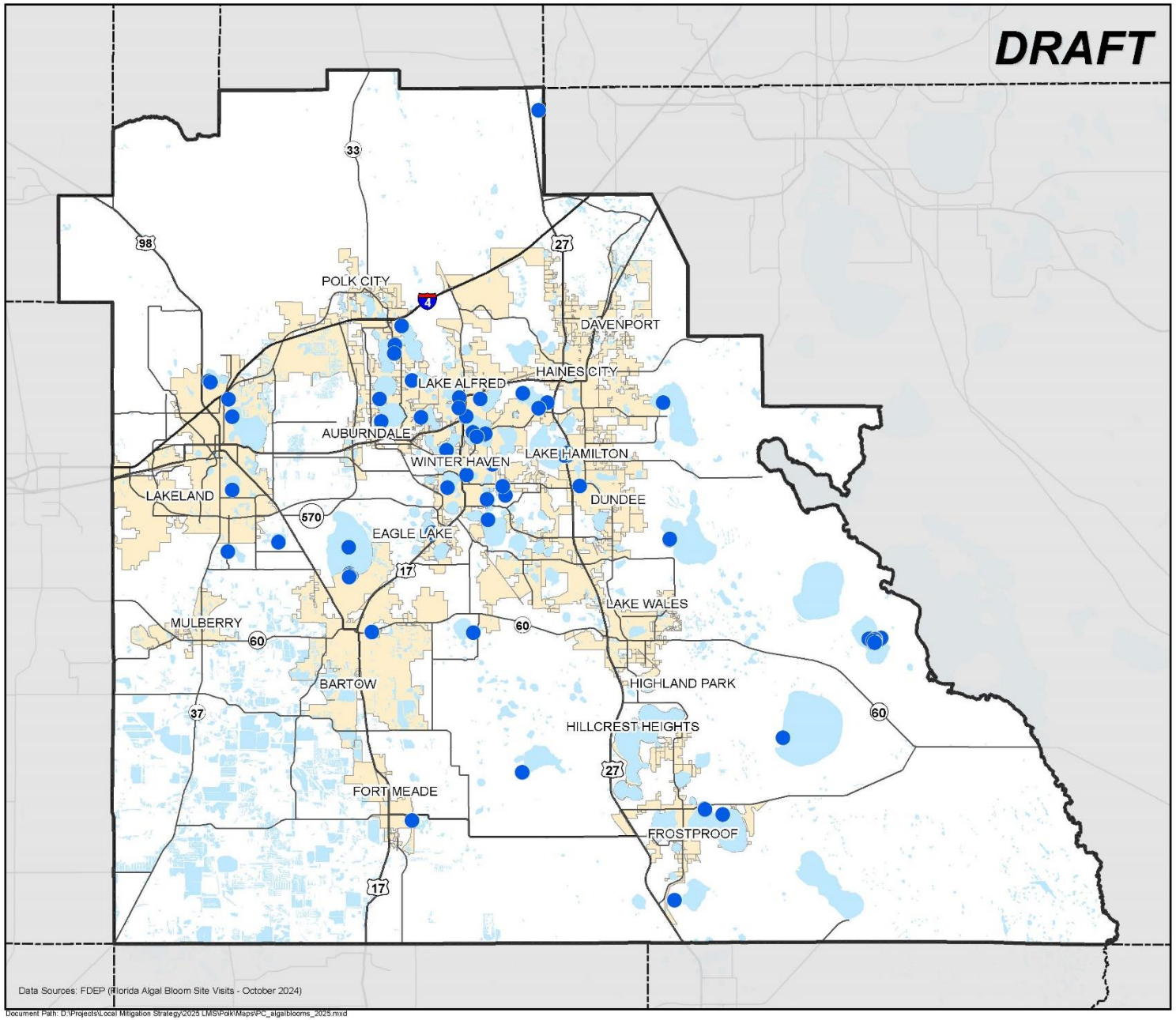
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Florida Algal Bloom Sites (2022 - 2024)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_algalblooms_2025.mxd

Legend

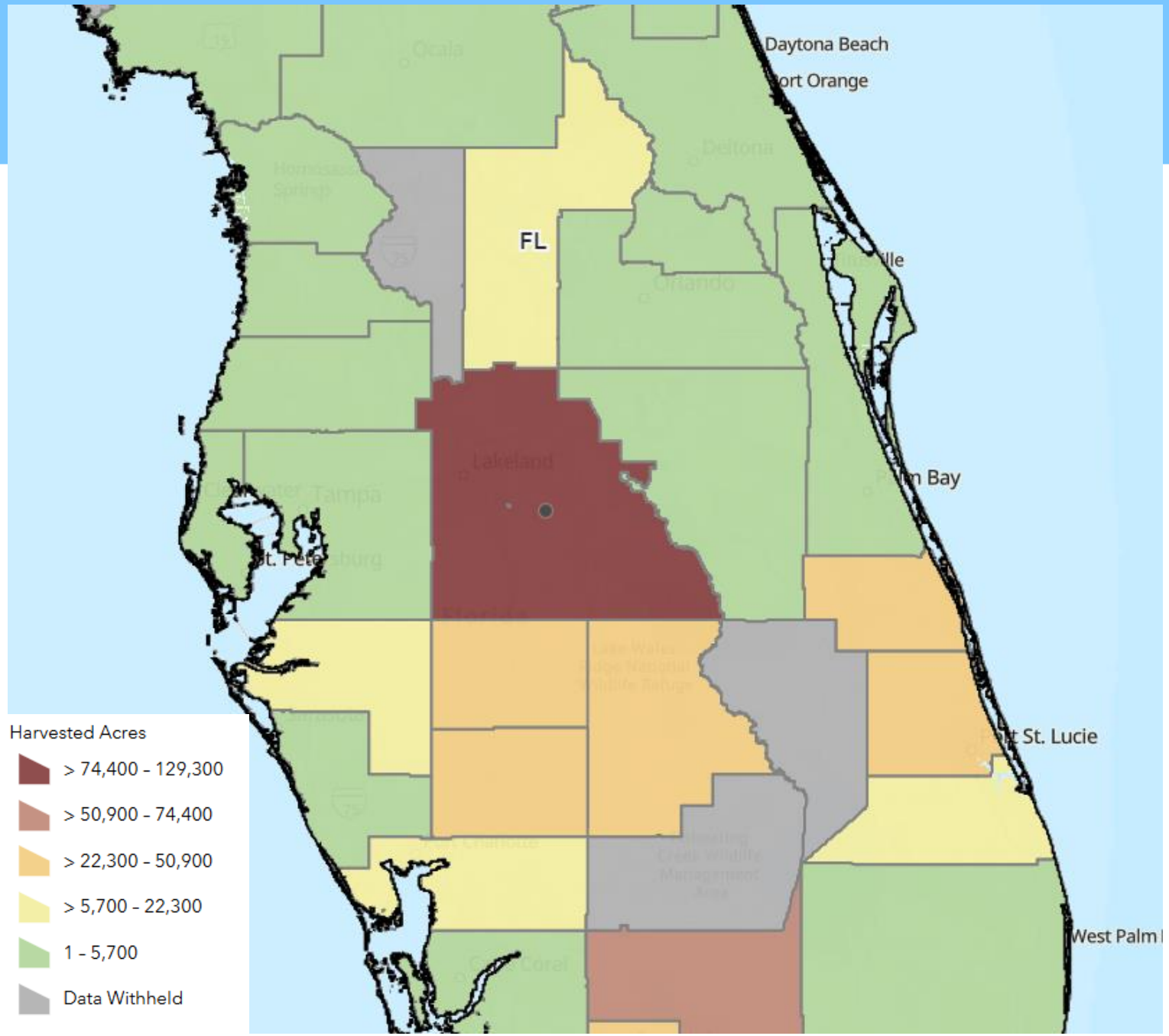
- Polk County
- Municipalities
- Water Bodies

Algal Blooms

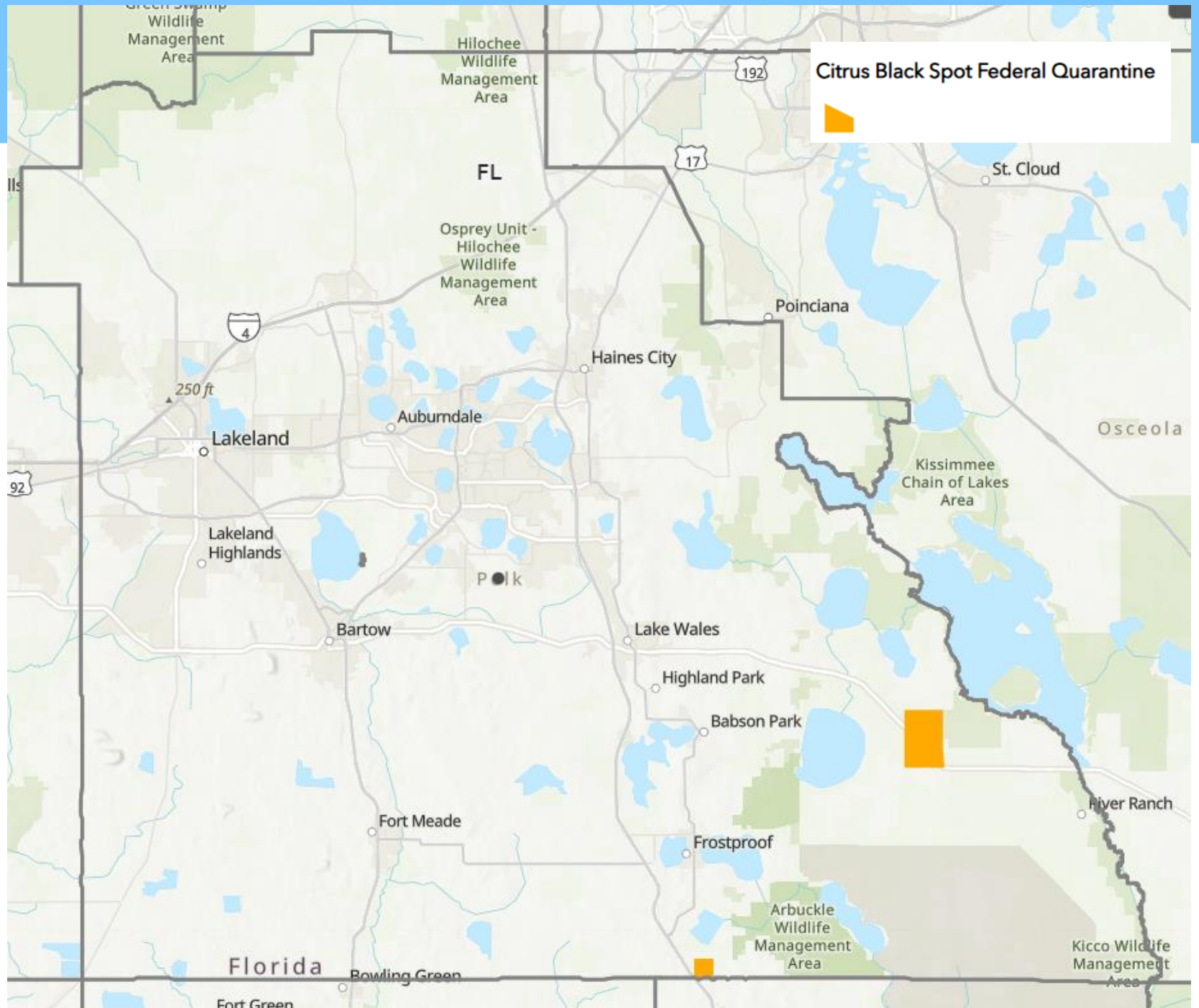
- Florida Algal Bloom Sites

N
W E
S

0 4 8
Miles



Citrus Production



Federal Quarantines

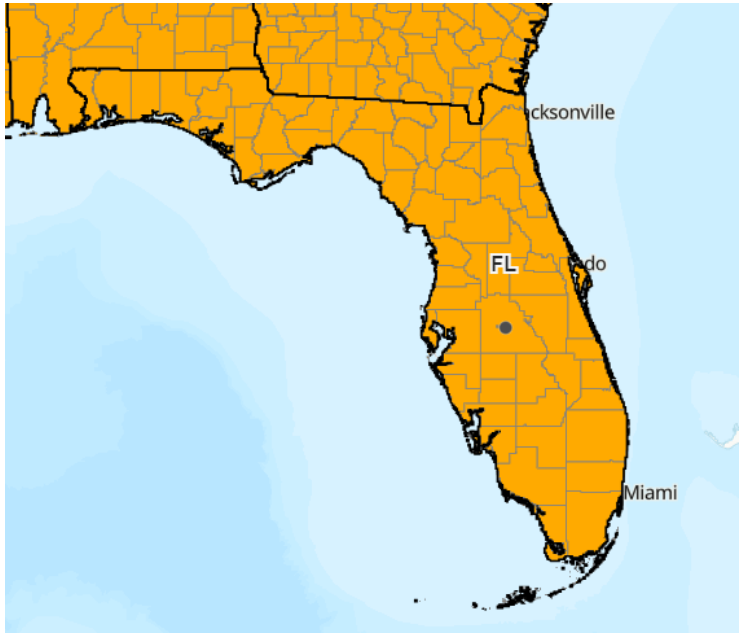
Entire County and State Under:

-Asian Citrus Psyllid

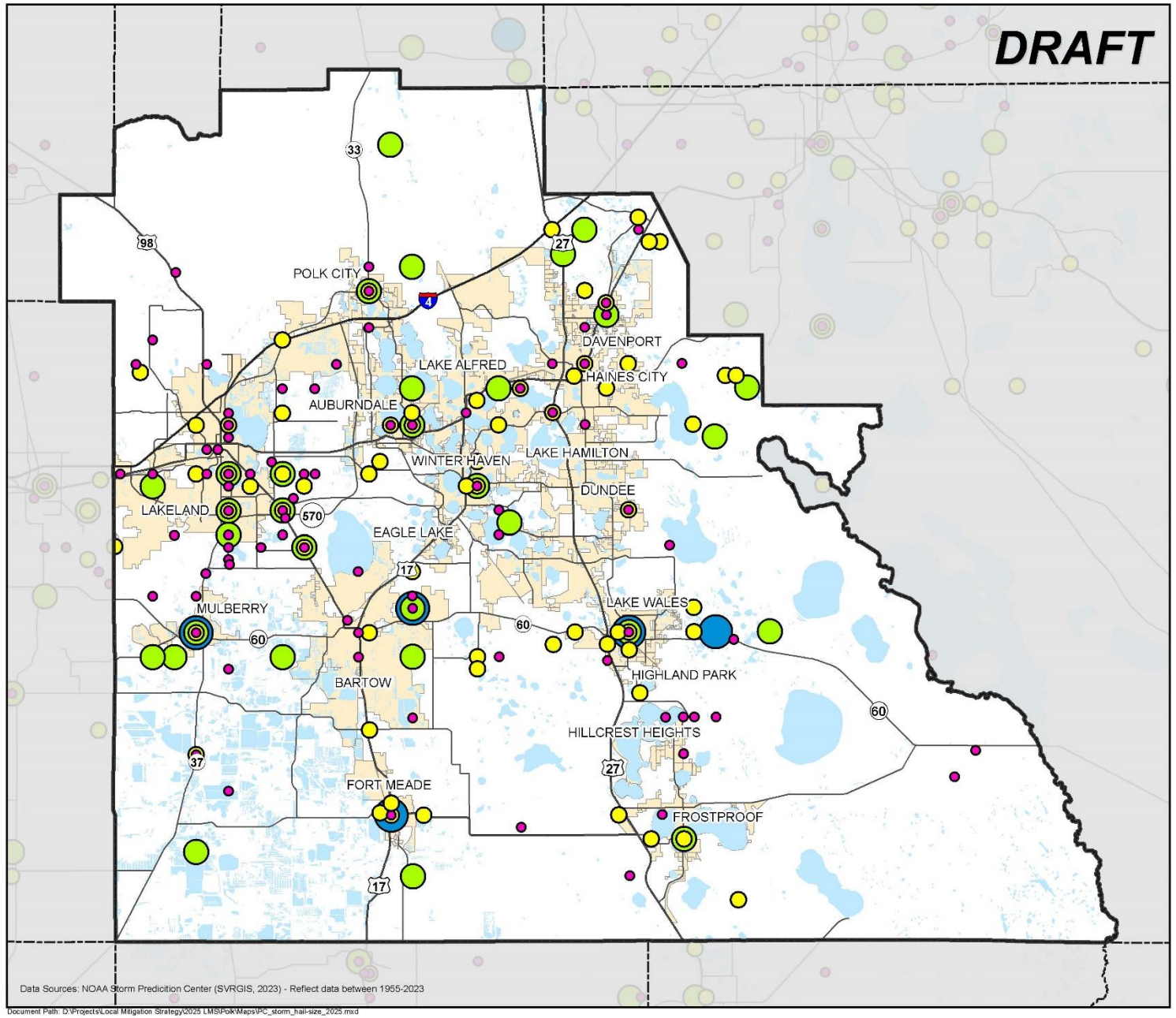
-Citrus Canker

-Citrus Greening

-Sweet Orange Scab



POLK COUNTY - LOCAL MITIGATION STRATEGY
Severe Thunderstorms - Hail (1960 - 2023)



Legend

- Polk County
- Municipalities
- Water Bodies

Hail Size (inches)

- 0.75 - 0.88
- 0.88 - 1.25
- 1.25 - 2.00
- 2.00 - 4.50

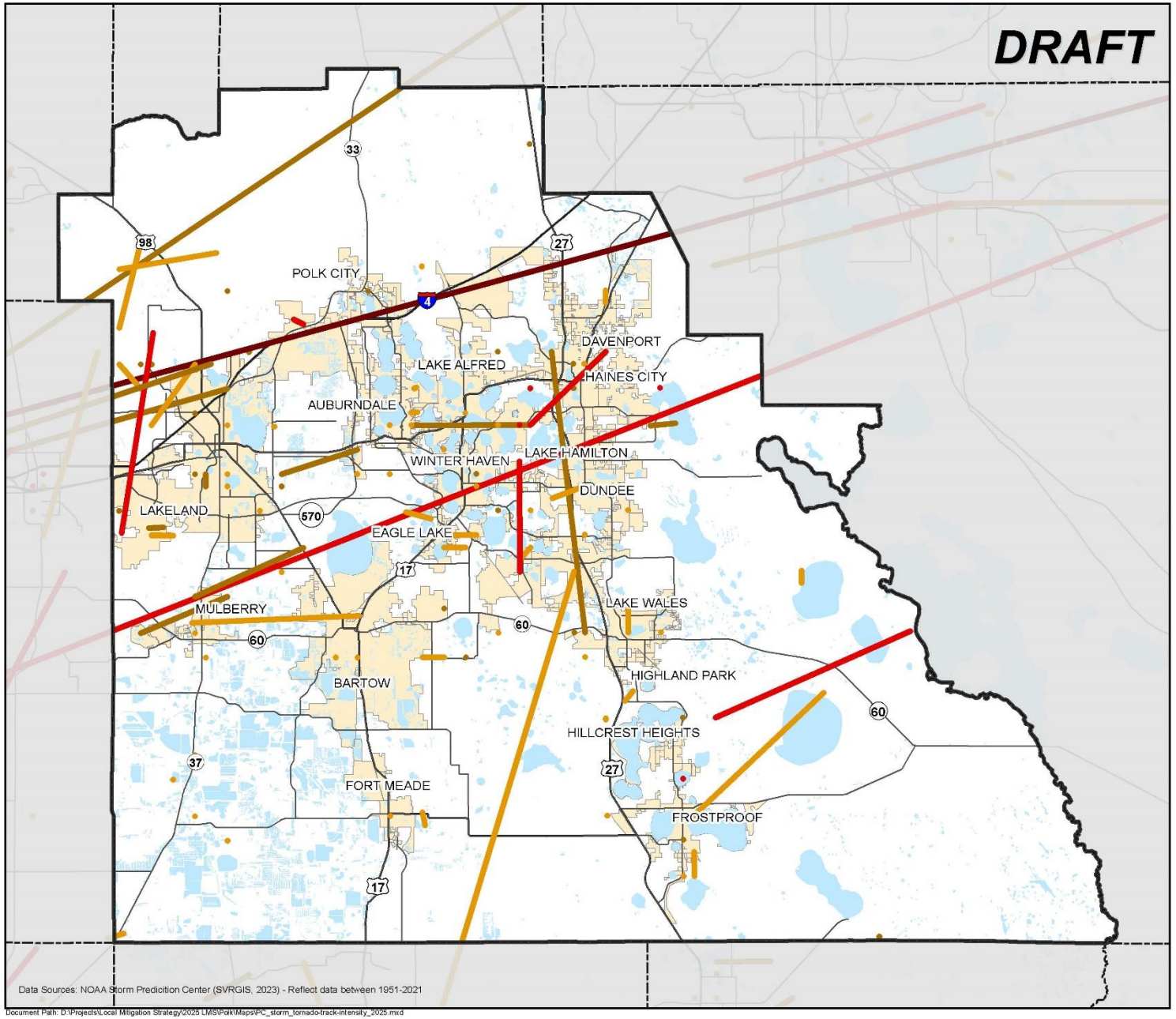
Disclosure:
This GIS Map is a public resource of general information. Polk County BoCC makes no warranty, representation or guarantee as to the content, sequence, accuracy, timeliness or completeness of any of the database information provided herein. The reader should not rely on the data provided herein for any reason. Polk County explicitly disclaims any representations and warranties , including, without limitation, the implied warranties of merchantability and fitness for a particular purpose. Polk County shall assume no liability for: 1) Any errors, omissions, or inaccuracies in the information provided regardless of how caused; or 2) Any decision made or action taken or not taken by any person in reliance upon any information or data furnished hereunder.

N W E S

0 4 8
Miles

Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_hail-size_2025.mxd

POLK COUNTY - LOCAL MITIGATION STRATEGY
Tornado Tracks by Intensity (1951 - 2021)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_tornado-track-intensity_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Tornado - Fujita (F-Scale)

- F0 (>73 MPH)
- F1 (73 - 112 MPH)
- F2 (113 - 157 MPH)
- F4 (207 - 260 MPH)

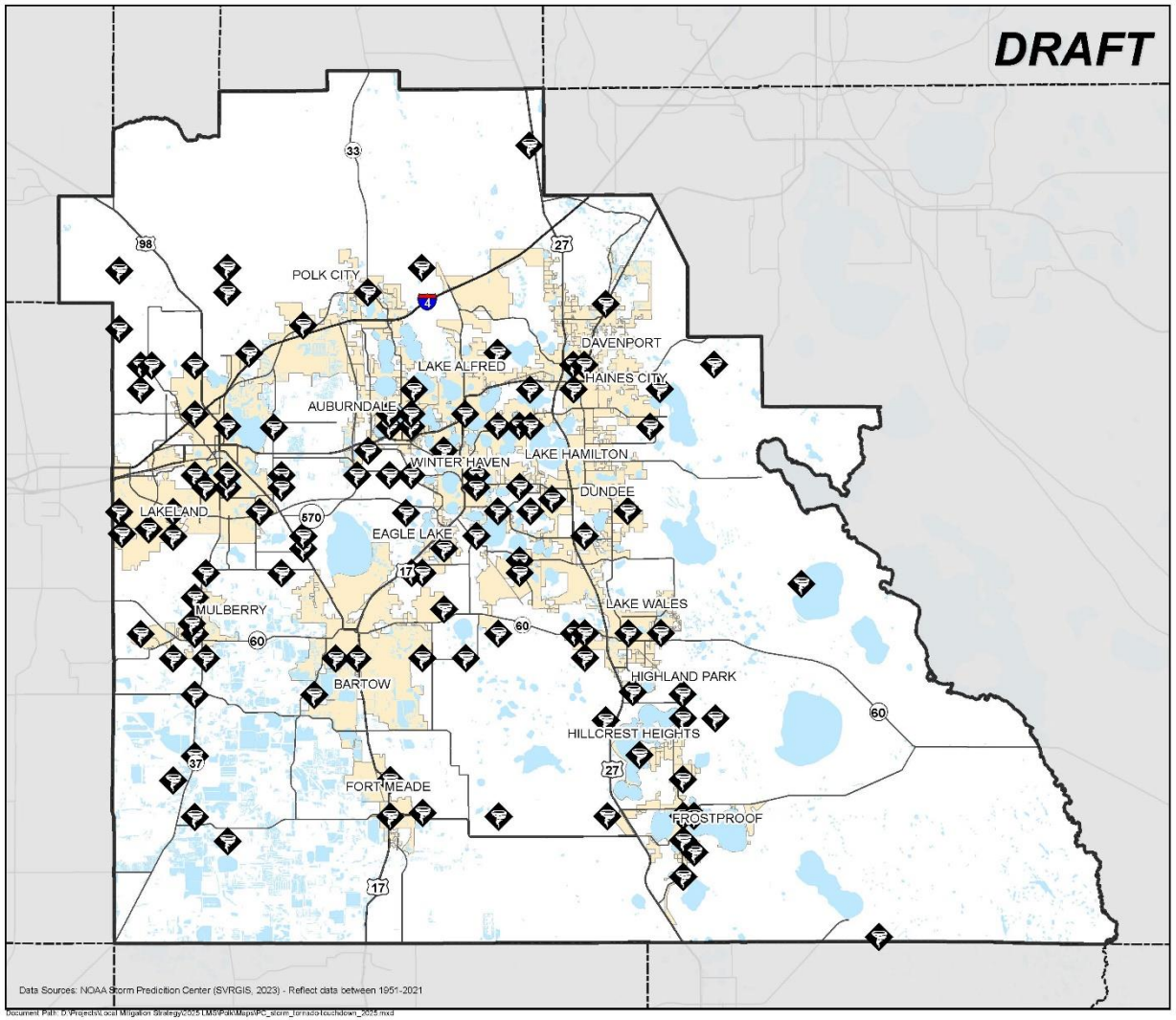
POLK COUNTY EMERGENCY MANAGEMENT

POLK COUNTY

N
W E
S

0 4 8
Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Tornado Touchdowns (1951 - 2021)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\PolkMaps\PC_storm_tornado-touchdown_2025.mxd

Legend

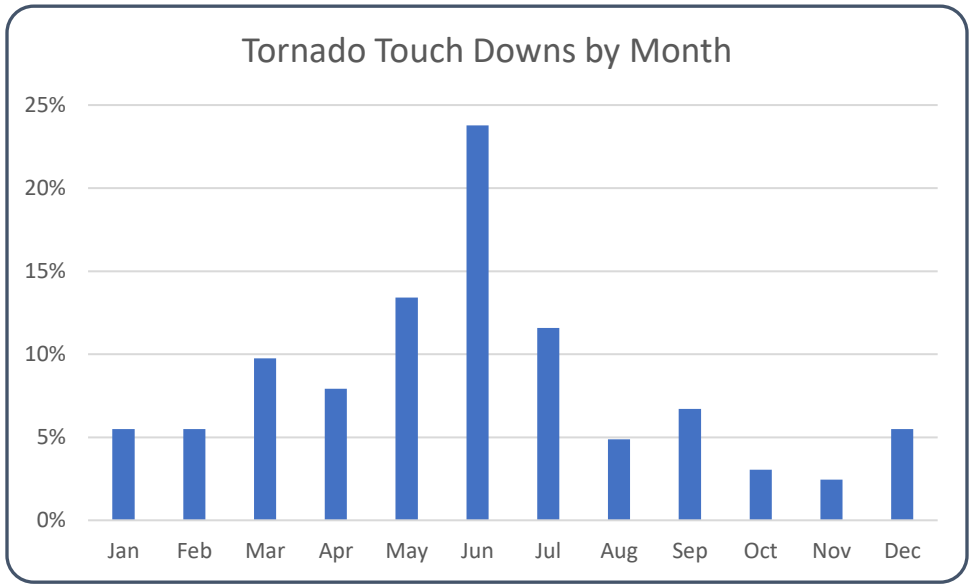
- Polk County
- Municipalities
- Water Bodies

Tornado Event

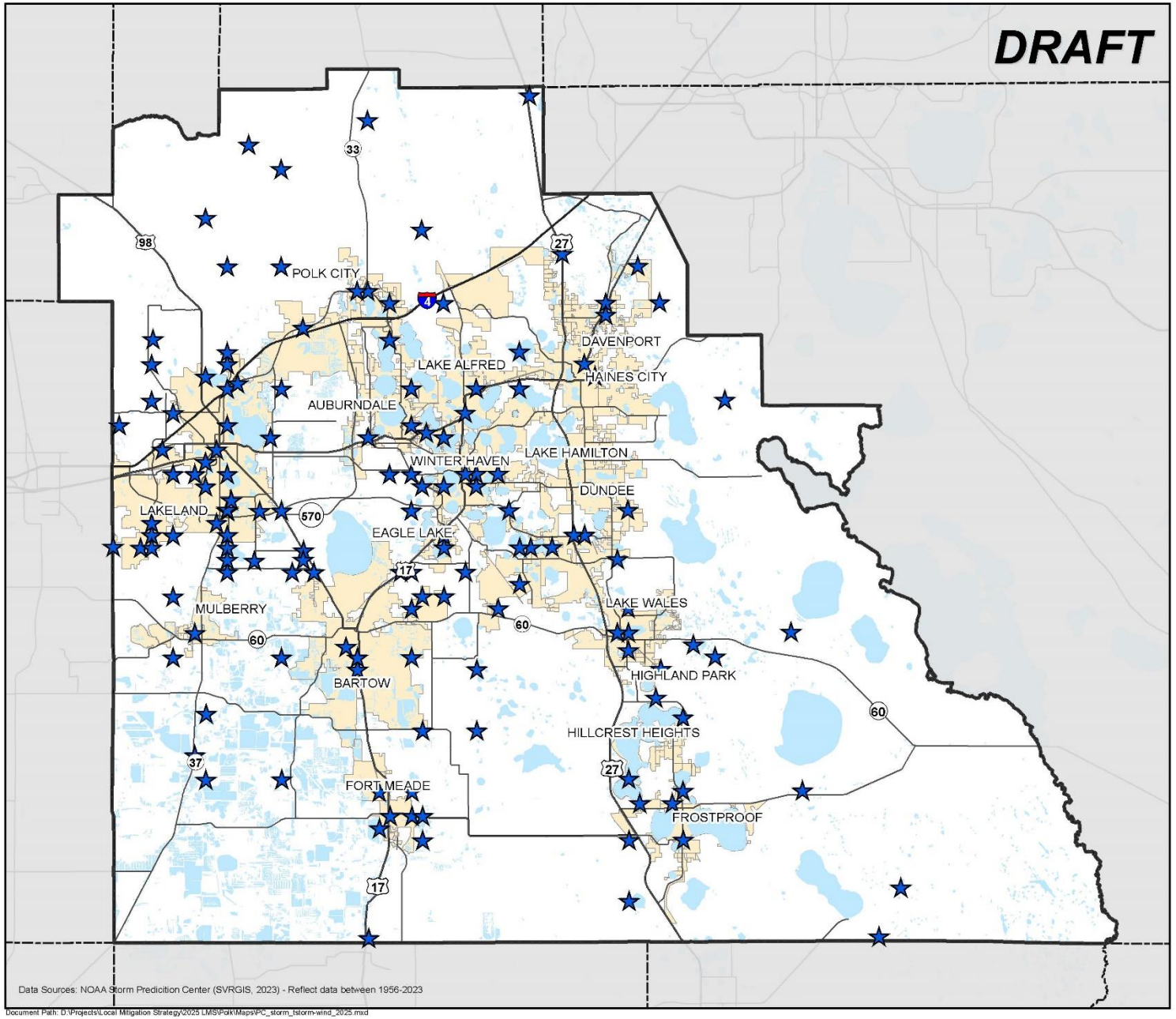
- Touchdown Location

N W E S

0 4 8
Miles



POLK COUNTY - LOCAL MITIGATION STRATEGY
Severe Thunderstorms - Wind (1956 - 2023)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_tstorm-wind_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Severe Thunderstorms - Wind

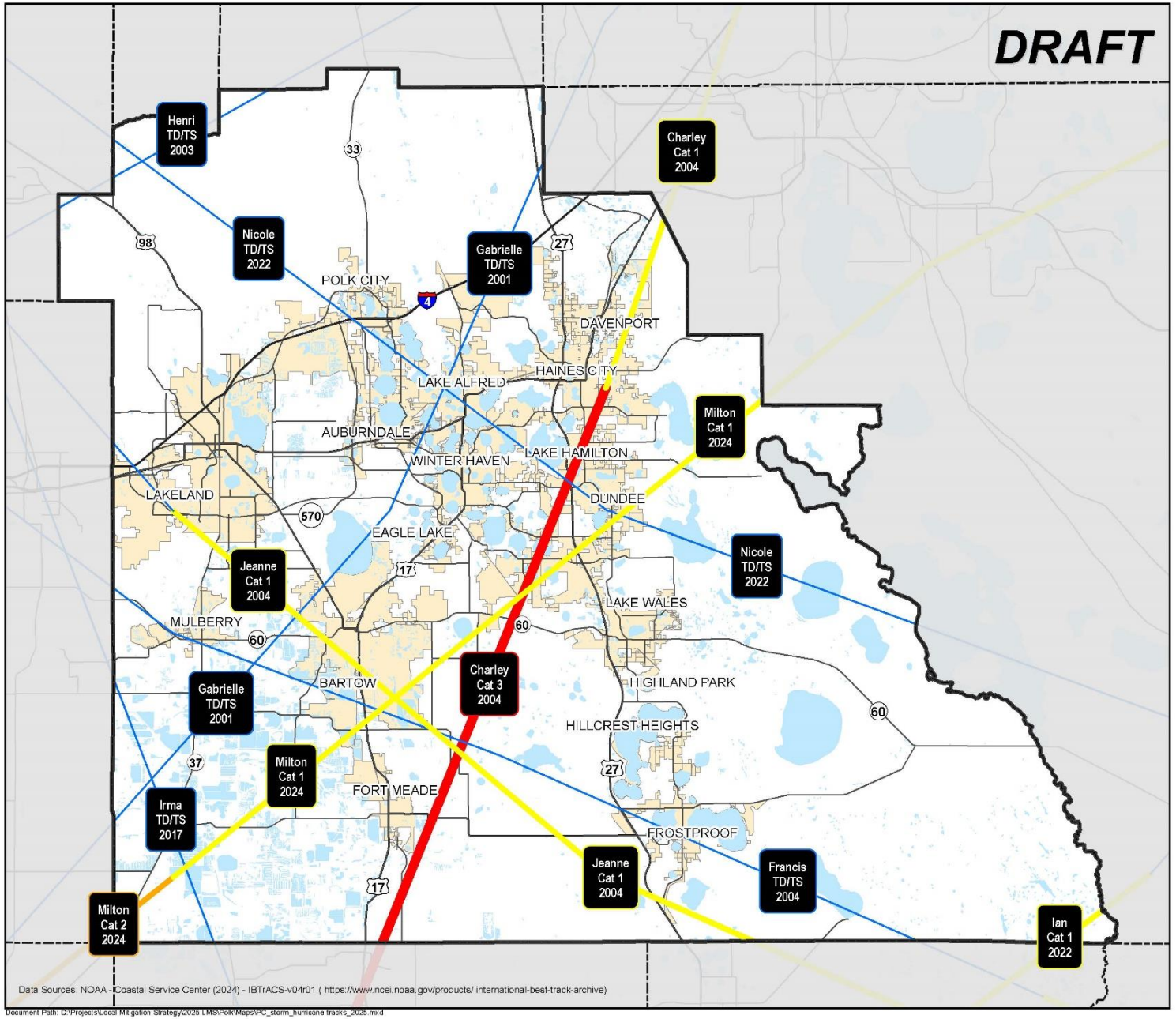
- Wind Locations

N W E S

0 4 8

Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Tropical Cyclone (Hurricane) Tracks (2000-2024)



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_storm_hurricane-tracks_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Tropical Cyclone Tracks (2000-2024)

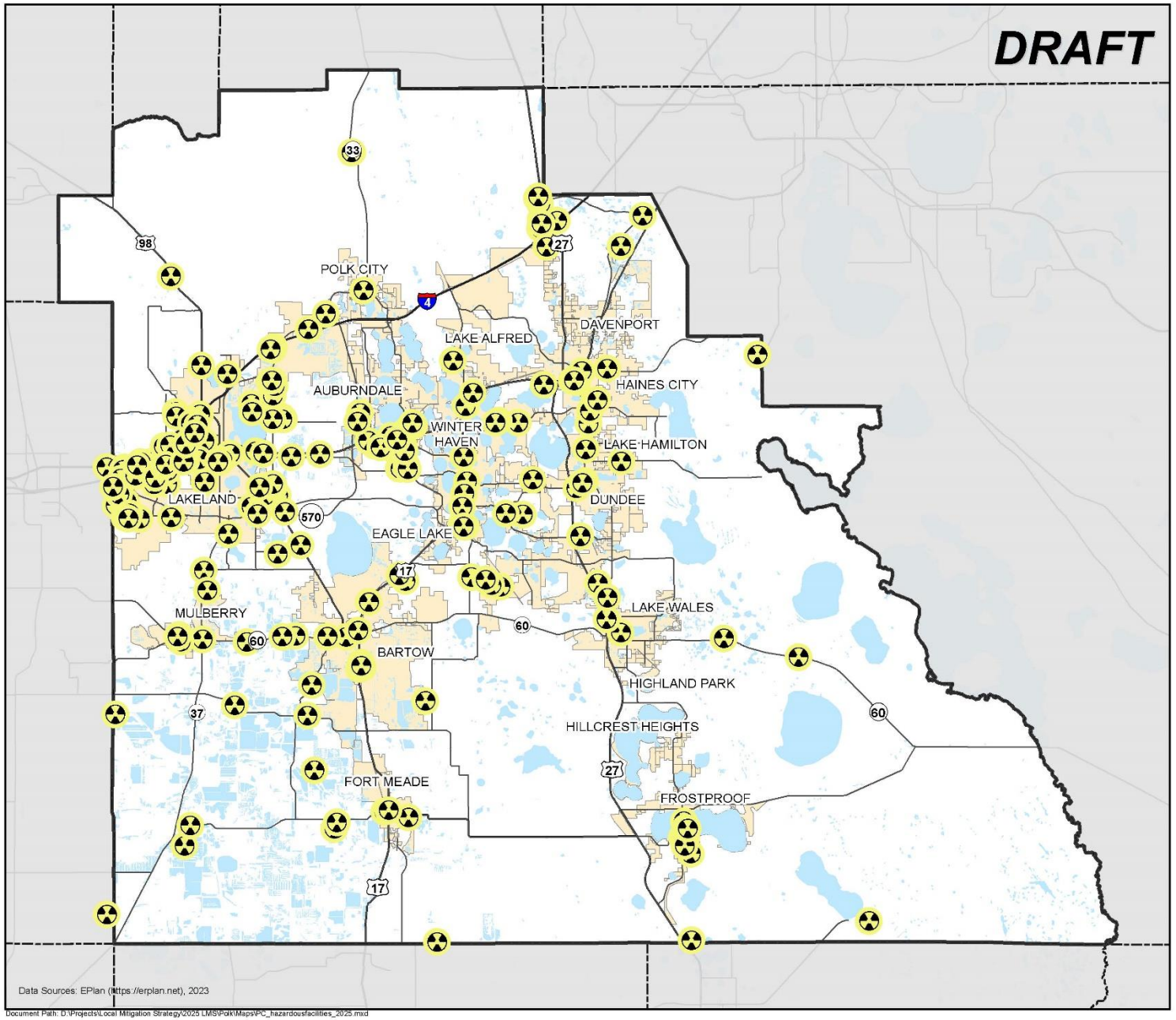
- Tropical Depressions & Storms (<74 mph)
- Category 1 (75-95 mph)
- Category 2 (96-110 mph)
- Category 3 (111-129 mph)

N W E S

0 4 8

Miles

POLK COUNTY - LOCAL MITIGATION STRATEGY
Harzardous Facilities



Document Path: D:\Projects\Local Mitigation Strategy\2025 LMS\Polk\Maps\PC_hazardousfacilities_2025.mxd

Legend

- Polk County
- Municipalities
- Water Bodies

Hazardous Facilities

- Facility

Disclosure:
This GIS Map is a public resource of general information. Polk County BoCC makes no warranty, representation or guarantee as to the content, sequence, accuracy, timeliness or completeness of any of the database information provided herein. The reader should not rely on the data provided herein for any reason. Polk County explicitly disclaims any representations and warranties , including, without limitation, the implied warranties of merchantability and fitness for a particular purpose. Polk County shall assume no liability for: 1) Any errors, omissions, or inaccuracies in the information provided regardless of how caused; or 2) Any decision made or action taken or not taken by any person in reliance upon any information or data furnished hereunder.

N
W E
S

0 4 8
Miles

Contacts

Polk County Emergency Management
Brian Thurston
863-298-7000
brianthurston@polk-county.net

Central Florida Regional Planning Council
Jerri Sackett
863-534-7130, ext. 103
jsackett@cfrpc.org

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
June 4, 2025

AGENDA

1. Welcome and Introductions
2. Approval of Minutes
3. LMS Review Status
4. LMS Updates
5. HMGP Debby and HMGP Milton
6. Other Business

POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
June 4, 2025

MINUTES

1. Welcome and Introductions
    - ✓ Jerri Sackett welcomed the attendees and reviewed the agenda for the meeting.
    - ✓ Attendees introduced themselves.
2. Approval of Minutes
    - ✓ Motion: Jay Robinson, City of Bartow
    - ✓ Second: Sara Jones, City of Bartow
3. LMS Review Status
    - ✓ Jerri shared that FDEM is currently reviewing the draft.
4. LMS Updates
    - ✓ Jerri also reminded the group that we will also have one final public engagement event for the LMS update. Following the public engagement, Polk County BOCC will need to adopt the LMS update and then each municipality can adopt by resolution. Jerri clarified that municipalities would need to adopt the update via resolution as letters of support are only to be used by non-profit organizations.
    - ✓ Paul estimated the timeline to take the update to the BOCC potentially by one of the scheduled July Board meetings. The full BOCC board will need to be present to approve the LMS update.
    - ✓ Paul encouraged attendees to investigate the upcoming meetings for each of their municipalities to avoid delays with potential HMGP projects.
    - ✓ Paul answered questions regarding adoption procedures.
    - ✓ Jerri let attendees know that there is a draft Resolution and Letter of Support available on the website for them to review and/or utilize for adoption.
5. HMGP Debby and HMGP Milton

a. Final Hurricane Debby projects

- ✓ Paul reviewed the final project ranking.
    1. Auburndale FD/PD Wind Retrofit
    2. Freedom Tour Generator
    3. Lakeland Lift Station Generators
    4. Advent Health Generator
- ✓ Polk County is looking at about $59 million worth of projects on the books with applications due to FDEM on 7/25/2025.
- ✓ As a reminder, applicants cannot submit an application without the letter of support from Emergency Management.
- ✓ Paul shared information regarding HMGP resources and reminded attendees to reach out for help if needed.
- ✓ Applications are in the FDEM portal; please select "Hazard Mitigation" for Milton and Helene.
- ✓ To help prioritize project rankings the LMS Working Group will meet on 7/9/2025 at 9:30AM, in person.
- ✓ Some advice was shared that encouraged applicants to include information on whole building assessments to bring your building up to code and to submit as one application envelope. This will also need an engineer's inspection/recommendation.
- ✓ Elevate Florida is no longer available.
- ✓ Paul reminded everyone that until we know the fixed budget, continue submitting applications.

b. Reduced HMGP estimate from FDEM

- ✓ The deadline for submitting for Elevate Florida was April 21. There were 50 applications submitted for Polk County.
- ✓ Paul shared the Elevate Florida GIS map to show where projects were submitted around Polk County, some combinations of wind mitigation, structure elevation, acquisition/demolition, etc.
- ✓ NOFA for Milton was a little over $1 billion estimated.
- ✓ This was updated recently to $512,083,024.14.

- ✓ There was also additional correspondence sharing that Polk will receive $25 million in federal share.
- ✓ Paul reminded everyone that the funding status may go back to a 30-day estimate.

c. Status of HMGP projects/application development

- ✓ None

6. Other Business

LMS Working Group Meeting

Polk County 2025 LMS Update

June 4, 2025

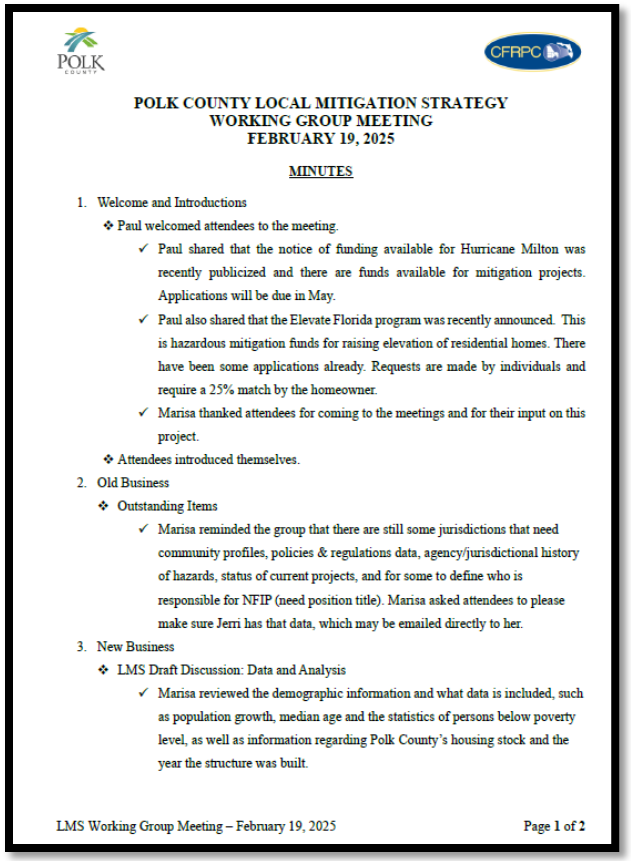
Agenda

1. Welcome and Introductions
2. Approval of Minutes
3. LMS Review Status
4. LMS Updates
5. HMGP Debby and HMGP Milton

Introductions

Approval of Minutes

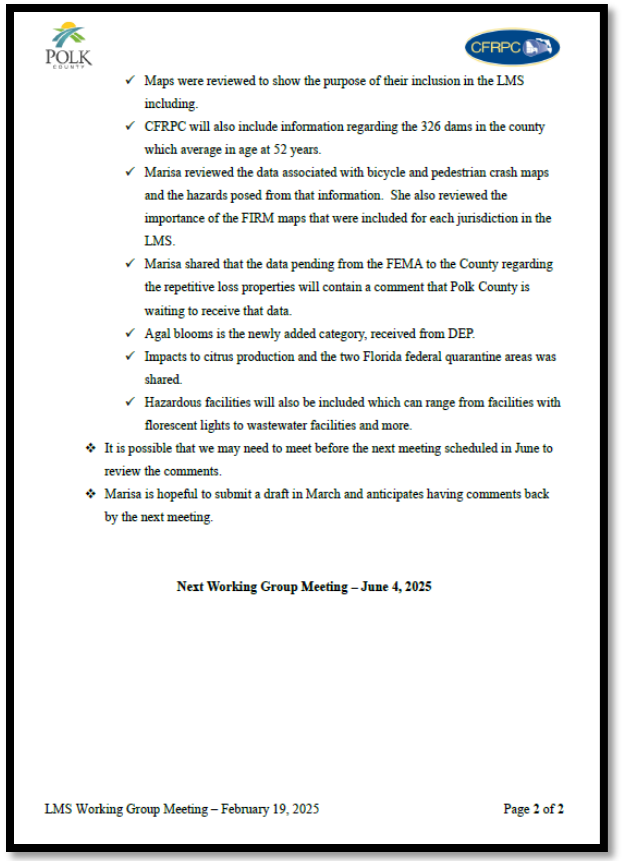
Approval of February 19, 2025 Meeting Minutes



POLK COUNTY LOCAL MITIGATION STRATEGY
WORKING GROUP MEETING
FEBRUARY 19, 2025

MINUTES

1. Welcome and Introductions
   - ❖ Paul welcomed attendees to the meeting.
     - ✓ Paul shared that the notice of funding available for Hurricane Milton was recently publicized and there are funds available for mitigation projects. Applications will be due in May.
     - ✓ Paul also shared that the Elevate Florida program was recently announced. This is hazardous mitigation funds for raising elevation of residential homes. There have been some applications already. Requests are made by individuals and require a 25% match by the homeowner.
     - ✓ Marisa thanked attendees for coming to the meetings and for their input on this project.
   - ❖ Attendees introduced themselves.
2. Old Business
   - ❖ Outstanding Items
     - ✓ Marisa reminded the group that there are still some jurisdictions that need community profiles, policies & regulations data, agency/jurisdictional history of hazards, status of current projects, and for some to define who is responsible for NFIP (need position title). Marisa asked attendees to please make sure Jerri has that data, which may be emailed directly to her.
3. New Business
   - ❖ LMS Draft Discussion: Data and Analysis
     - ✓ Marisa reviewed the demographic information and what data is included, such as population growth, median age and the statistics of persons below poverty level, as well as information regarding Polk County's housing stock and the year the structure was built.



- ✓ Maps were reviewed to show the purpose of their inclusion in the LMS including.
- ✓ CFRPC will also include information regarding the 326 dams in the county which average in age at 52 years.
- ✓ Marisa reviewed the data associated with bicycle and pedestrian crash maps and the hazards posed from that information. She also reviewed the importance of the FIRM maps that were included for each jurisdiction in the LMS.
- ✓ Marisa shared that the data pending from the FEMA to the County regarding the repetitive loss properties will contain a comment that Polk County is waiting to receive that data.
- ✓ Agal blooms is the newly added category, received from DEP.
- ✓ Impacts to citrus production and the two Florida federal quarantine areas was shared.
- ✓ Hazardous facilities will also be included which can range from facilities with florescent lights to wastewater facilities and more.

❖ It is possible that we may need to meet before the next meeting scheduled in June to review the comments.

❖ Marisa is hopeful to submit a draft in March and anticipates having comments back by the next meeting.

Next Working Group Meeting – June 4, 2025

LMS Status

- Draft being reviewed by FDEM
- Next steps after FDEM acceptance:
  - LMS reviewed by LMSWG and Polk EM
  - Final public engagement event
  - Polk County BOCC adopts LMS
  - All other municipalities and agencies either adopt by Resolution or submit Letter of Support

LMS Updates

- **Adoption of LMS by Resolution vs Letter of Support**

HMGP Hurricane Debby – DR-4806

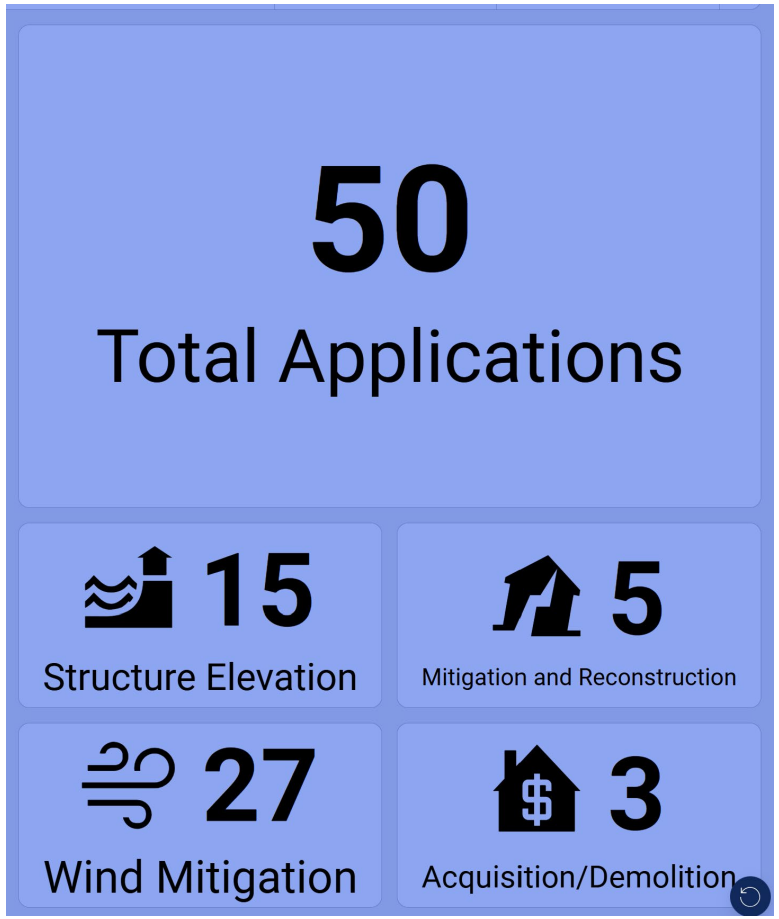
Final Project Ranking:

Rank	Project Name	Estimated Total Project Cost	Estimated Federal Share
1	Auburndale FD/PD Wind Retrofit	$653,510.00	$490,132.50
2	Freedom Tour Generator	$50,000.00	$37,500.00
3	Lakeland Lift Station Generators	$540,504.00	$405,378.00
4	Advent Health Generator	$5,695,453.00	$4,271,589.75

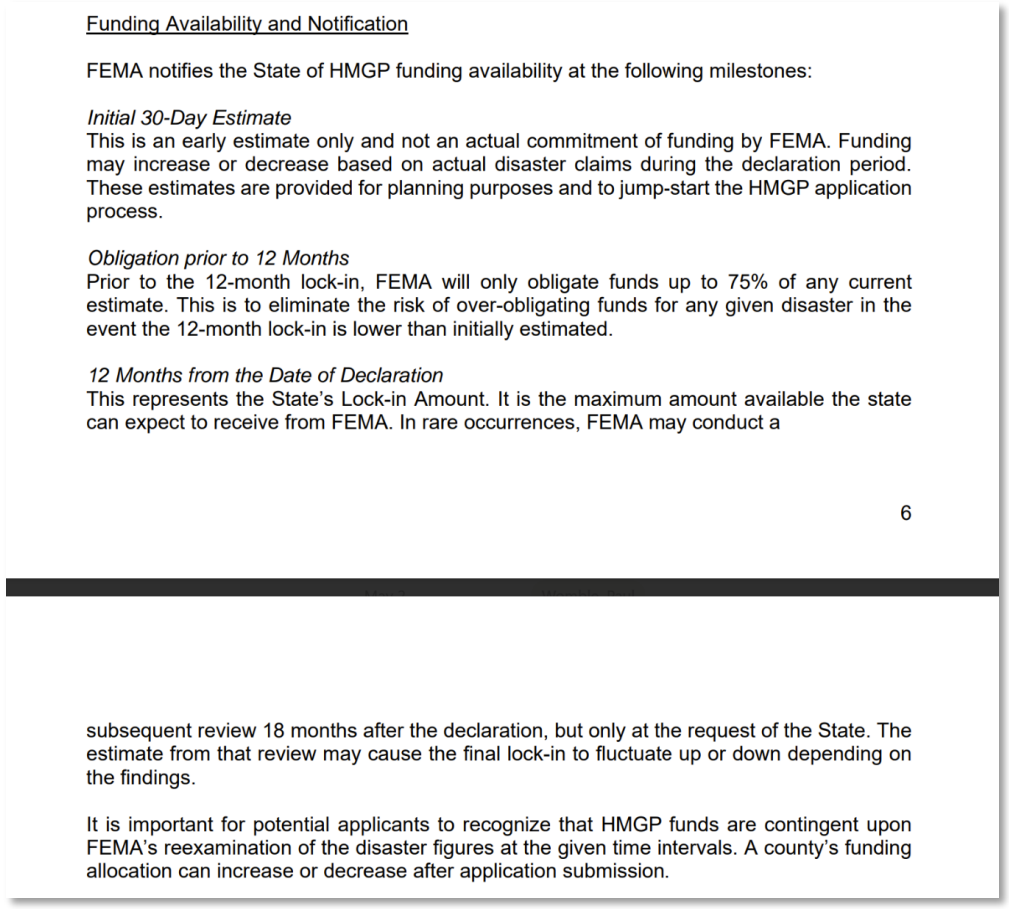
HMGP Hurricane Milton – DR4834

Elevate Florida – Polk Allocated $3.5M

Elevate Florida Dashboard



HMGP Hurricane Milton – DR-4834



Funding Availability and Notification

FEMA notifies the State of HMGP funding availability at the following milestones:

Initial 30-Day Estimate
This is an early estimate only and not an actual commitment of funding by FEMA. Funding may increase or decrease based on actual disaster claims during the declaration period. These estimates are provided for planning purposes and to jump-start the HMGP application process.

Obligation prior to 12 Months
Prior to the 12-month lock-in, FEMA will only obligate funds up to 75% of any current estimate. This is to eliminate the risk of over-obligating funds for any given disaster in the event the 12-month lock-in is lower than initially estimated.

12 Months from the Date of Declaration
This represents the State's Lock-in Amount. It is the maximum amount available the state can expect to receive from FEMA. In rare occurrences, FEMA may conduct a

6

subsequent review 18 months after the declaration, but only at the request of the State. The estimate from that review may cause the final lock-in to fluctuate up or down depending on the findings.

It is important for potential applicants to recognize that HMGP funds are contingent upon FEMA's reexamination of the disaster figures at the given time intervals. A county's funding allocation can increase or decrease after application submission.

NOFA: Initial Federal Share Estimate Statewide:

$1,038,284,290.56

5/28/25: 6 Month Federal Share Estimate Statewide:

$512,083,024.14

HMGP Hurricane Milton – DR-4834

Polk County Estimates:

- **NOFA: Initial Federal Share Estimate - $49,676,965.73**
- **5/28/25: 6 Month Federal Share Estimate - $24,366,857.24**

HMGP Hurricane Milton – DR-4834

Updated 6.04.25

Orignial estimate: 49,676,965.73

HMGP - Hurricane Milton DR-4834

Project Tracking Spreadsheet

Polk County Allocation

24,366,857.24

Applications Due to FDEM:

July 25, 2025, 11:59 p.m. (EDT)

Rank	Applicant	Project Name	Estimated Total Project Cost	Estimated Federal Share	Estimated Local Share
		Elevate Florida	$3,500,000.00	$3,500,000.00	$0.00
	Josh McLemore	Polk County Public Schools Generators	$4,500,000.00	$3,375,000.00	$1,125,000.00
	Shanti Copeland/Tanner Forde	Advent Health Heart of Florida Central Energy Plant	$15,571,712.00	$11,678,784.00	$3,892,928.00
	Shanti Copeland/Tanner Forde	Advent Lake Wales Central Energy Plant	$7,009,458.00	$5,257,093.50	$1,752,364.50
	Dale Henderson	PC Solid Waste Division mobile generator	$200,000.00	$150,000.00	$50,000.00
	Sara Irvine	Lake Wales Lakeshore Blvd Drainage	$541,547.90	$406,160.93	$135,386.98
	Jay Jarvis	PC Roads & Drainage Lake Bonny	$20,000,000.00	$15,000,000.00	$5,000,000.00
	Jay Jarvis	PC Roads & Drainage Lake Seward	$5,000,000.00	$3,750,000.00	$1,250,000.00
	Cindy Clemmons	Lakeland Electric McInctosh flood mitigation	$6,500,000.00	$4,875,000.00	$1,625,000.00
	Keith Tate	PC Fire Rescue Station x 3 Wind Retrofit	$921,053.01	$690,789.76	$230,263.25
	Sarah Jones/Billy Groover	Bartow Property Acquisition	$3,200,000.00	$2,400,000.00	$800,000.00
	Jay Jarvis	PC Roads & Drainage Willow Ridge Drainage	$500,000.00	$375,000.00	$125,000.00
	Sarah Jones/Roger Murphy	Bartow Electric Substation Breakers Church Street Substation	$2,000,000.00	$1,500,000.00	$500,000.00
	Sarah Jones/Roger Murphy	Bartow Electric Substation Breakers Connersville Substation	$2,000,000.00	$1,500,000.00	$500,000.00
	Sarah Jones/Roger Murphy	Bartow Electric Substation Breakers Southwest Substation	$2,000,000.00	$1,500,000.00	$500,000.00
	Thomas Murphy	Davenport City Hall & FD Wind Retrofit	$240,296.00	$180,222.00	$60,074.00
	Sara Irvine	Lake Wales Drainage Washington Ave/B Street	$711,911.00	$533,933.25	$177,977.75
	Sara Irvine	Lake Wales Drainage Johnson Ave/3rd Street	$152,952.00	$114,714.00	$38,238.00
	Sara Irvine	Lake Wales Stormwater - Lake Wailes	$2,144,955.00	$1,608,716.25	$536,238.75
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$58,395,413.68	
			Remaining Federal Share	**-$34,028,556.44**	

HMGP Resources

Home / About the Division / Mitigation / Hazard Mitigation Grant Program

Hazard Mitigation Grant Program

The Hazard Mitigation Grant Program is authorized by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. It is a partnership that is designed to assist states, local governments, private non-profit organizations and Indian Tribes in implementing long-term hazard mitigation measures following a major disaster declaration.

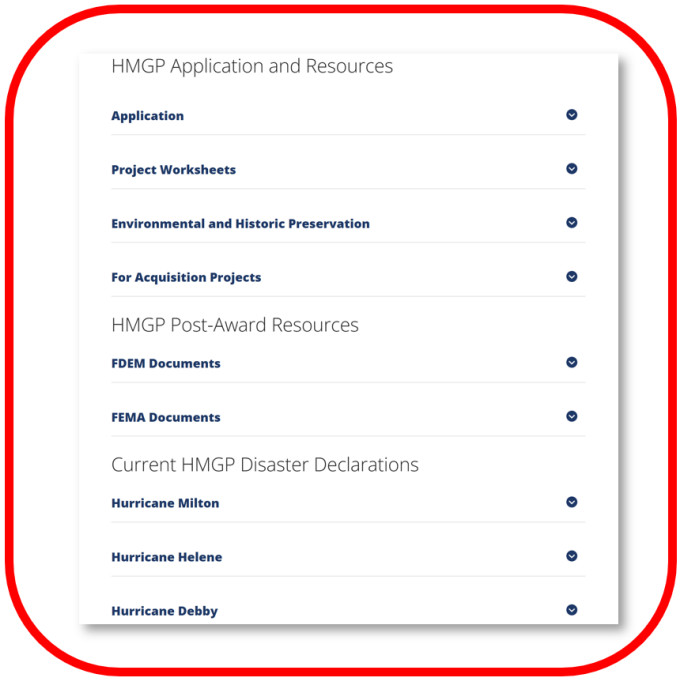
Although the Hazard Mitigation Grant Program is federally funded, the program is administered by the Florida Division of Emergency Management. The process of selecting eligible mitigation projects to be submitted for funding consideration has been delegated to each county's Local Mitigation Strategy Working Group (LMSWG) in accordance with 27P-22 of the Florida Administrative Code

Have Questions? Call our **Mitigation Hotline - (850) 759-3574**

New Job-Aid for Recent Changes to the HMGP in the FDEM Portal (DEMES)

Apply using the FDEM Portal. The digital application and all supporting documentation should be uploaded to the FDEM Portal before the deadline.

Instructions about how to request access to the FDEM Portal are in the NOFA. **It is imperative that your access request for the FDEM Portal is received by the Division no later than 5:00 p.m. EDT on the date of the application deadline for the specific disaster that you are applying for.** Otherwise, you will not have access to the FDEM Portal to submit an application on time. If you already have an existing account, you do not need to re-register.



HMGP Application and Resources

Application

Project Worksheets

Environmental and Historic Preservation

For Acquisition Projects

HMGP Post-Award Resources

FDEM Documents

FEMA Documents

Current HMGP Disaster Declarations

Hurricane Milton

Hurricane Helene

Hurricane Debby

https://www.floridadisaster.org/dem/mitigation/hazard-mitigation-grant-program/

HMGP Applications

Submitted online to FDEM via the DEMES Portal
www.fdemportal.com/grants

DEADLINE: July 25, 2025, 11:59 p.m. (EDT)

HMGP Hurricane Milton – DR4834

LMSWG Meeting – Project Ranking

Wednesday July 9th, 930am

Other Business

- **Any other business to discuss?**

Contacts

Polk County Emergency Management
Brian Thurston
863-298-7000
brianthurston@polk-county.net

Central Florida Regional Planning Council
Jerri Sackett
863-534-7130, ext. 103
jsackett@cfrpc.org

APPENDIX D

APPENDIX D – INTEGRATION INTO OTHER PLANNING MECHANISMS

Tables D-1 through D-18 list the policies and regulations in each jurisdiction that support the local mitigation strategy. The language included in these tables is verbatim from each jurisdiction's plan.

APPENDIX D: INTEGRATION INTO OTHER PLANNING MECHANISMS

TABLE D-1: POLK COUNTY POLICIES AND REGULATIONS	
Source (Document, Number, Chapter, Section)	**Text/Description**
Comprehensive Plan – Section 2.123-G Local Mitigation Strategy	
Objective 2.123-G Local Mitigation Strategy	Polk County shall coordinate future land use designations to eliminate or reduce inconsistencies with the goals, objectives, and recommendations of the adopted Local Mitigation Strategy.
Policy 2.123-G1	The County, through the implementation of its land development regulation, will ensure that development approvals are consistent with the objectives and policies of the Local Mitigation Strategy. If the site is such that all beneficial use of the property is precluded due to the hazard identification/determination, then the County will consider purchasing the property for preservation purposes through the use of moneys from environmental lands preservation programs, grants or other similar sources of funding.
Policy 2.123-G2	The County will consider changes to the Land Development Code to address different storm water design in basin areas considered to be stressed.
Unified Land Development Code – Section 630 Flood Hazard Management and Flood Plain Protection	
Purpose and Intent	The flood hazard areas of Polk County are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare. These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages.

TABLE D-2:
CITY OF AUBURNDALE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Policy 1.4	Environmentally sensitive lands shall be defined as public supply potable water wellfield cones of influence, wetlands as identified by the Southwest Florida Water Management District (SWFWMD), floodplains as identified by the Federal Emergency Management Agency (FEMA); Areas of Critical State Concern as defined by Chapter 380, F.S.; and natural resources identified by State and Federal agencies. These areas shall be protected through the application of the City's zoning and site plan review regulations, which shall regulate the density and intensity of use, and shall incorporate techniques such as cluster development to protect these resources. Residential densities in areas of 100-Year floodplains shall not exceed 1 dwelling per 5 acres.
Objective 10 Coordination with the Objectives and Programs in the Polk County Hazard Mitigation Strategy; and Coordination with Chapter 380 Plans.	The City shall coordinate future land use designations with the County and surrounding municipalities to eliminate or reduce development in areas identified as having repetitive loss due to natural hazards and which are identified in the Polk County Hazard Mitigation Strategy; and the City shall coordinate with any resource planning and management plan prepared.
Policy 10.2	The City, through the implementation of its land development regulations, will ensure that development approvals are consistent with the objectives and policies of the Polk County Hazard Mitigation Strategy, August 1999, as amended. In so doing, the City shall specifically limit the extension of infrastructure to areas of repetitive loss due to natural hazards, especially within any 100-year floodplain or wetland area.
Policy 10.3	The City shall identify and include in the 5-Year Capital Improvements Plan equipment and facility improvements needed to insure the delivery of municipal services during and after a natural disaster such as hurricane or flood; and to maintain traffic flow on all key roadways and at critical intersections during heavy rainfall events.
Policy 10.4	In conjunction with the American Red Cross and the Polk County School Board, the City will develop plans for reduction of the shelter deficit state-wide.
Policy 10.5	The City hereby requires all operators/developers of mobile/manufactured home parks to provide hurricane shelters to be built in their park to house all mobile/manufactured home park residents. If the park has a population of part-time residents, the shelter shall be large enough to house all park residents that reside in the park

TABLE D-2:
CITY OF AUBURNDALE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	during the official Hurricane Season, from June 1 to November 1.
Policy 10.6	The City will develop, maintain and annually update a list of all mobile/manufactured home parks, all singly-sited mobile/manufactured homes, and all high-risk resident facilities, such as, nursing homes and adult restricted communities, within the City limits, in order to assist emergency managers during an evacuation. Persons at risk shall be provided written evacuation procedures and the location of shelters.
Policy 10.7	The City will trim trees on city rights-of-way on a regular, rotating schedule, and coordinate such activities with local power companies, in order to, reduce the incidence of blocked streets and storm hazards to overhead utility lines that may occur during periods of heavy rainfall and especially during hurricanes.
Policy 11.16	Wetlands, Lakes, and Floodplains - While the City may generally map wetlands, lakes, and floodplains within its corporate limits using National Wetlands Inventory maps and similar tools, their locations as identified within this Plan are preliminary and may change at the time of a State or Federal agency jurisdictional determination. Furthermore, the City relies upon regulatory agency specialists to identify, designate, exercise, and enforce regulations of natural resources, including mitigation requirements. It is the applicant's responsibility to obtain a site-specific survey which indicates the jurisdictional limits, quality, and function of the resource. Development of wetlands, lakes, and floodplains within the Auburndale Green Swamp Protection Area shall conform to the following criteria: a) No new lots shall be created which are entirely within a jurisdictional wetland or 100- year floodplain. b) An undisturbed 25-foot-wide native vegetative buffer shall be maintained from the ordinary high-water line of any lake. c) Jurisdictional wetlands, lakes, and 100-year floodplains are designated Environmentally Sensitive Lands. d) Development shall cluster in non-wetland and non-floodplain areas. e) The applicant shall provide assurances that the development will be directed away from wetlands and conducted in a manner to

TABLE D-2:
CITY OF AUBURNDALE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	protect the vegetation, habitat, water storage, water quantity, water quality, and recharge functions of wetlands. f) Controlled burns, fire lanes, silviculture, and ecosystem restoration and maintenance are permissible activities in wetlands provided they are performed in accordance with Best Management Practices. But for the provisions of this section, wetlands shall be maintained in their natural and unaltered state. g) Development shall designate natural buffers averaging 25 feet in width but not less than 15 feet from the landward extent of jurisdictional wetlands. Wider setbacks may be imposed by the City if warranted by the wetlands' environmental sensitivity and the intensity of the proposed development. h) Natural buffers averaging 25 feet in width but in no case less than 15 feet shall be maintained upland of the 100-year floodplain. i) No development shall be permitted within a wetland unless authorized or exempted by the Florida Department of Environmental Protection, the U.S. Army Corps of Engineers, the Southwest Florida Water Management District, and the policies of this Comprehensive Plan. j) Consideration of wetland impacts shall include, but not necessarily be limited to, the following circumstances where no reasonable alternative exists: (1) access to the site. (2) internal traffic circulation. (3) utility lines. (4) pretreated stormwater and floodplain management. (5) public safety. (6) mining that meets State and Federal regulations. (7) to avoid precluding all beneficial use of the property. k) Where impacts to wetlands, floodplains, and the associated buffers of each cannot be avoided, the developer must demonstrate: (1) maximum utilization of uplands. (2) that there is no other reasonable, practical, or economical alternative; and (3) that without the proposed activity the property owner will be

TABLE D-2:
CITY OF AUBURNDALE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	deprived of all reasonable uses of the property. l) The applicant must provide a narrative illustrating the degree to which wetland avoidance and minimization were undertaken in the project design. All wetland impacts shall be offset by agency-approved mitigation to be performed within the Green Swamp. m) Particular attention in the project design evaluation will be paid to those wetlands occurring in conjunction with other Environmentally Sensitive Lands, particularly habitats known to support State or Federally listed species. n) Structures in wetlands shall be placed in a manner that will not adversely affect the natural flow regime and not reduce aquifer recharge capabilities. Placement of structures shall be consistent with sound floodplain management practices. o) Where impacts to wetlands cannot be avoided, all agency permits with jurisdiction shall be approved prior to the issuance of a development order. An "intent to issue a final Development Order" may be issued in writing prior to the issuance of said order if pre-approval is required by an agency with jurisdiction. p) Activities permitted to encroach into native vegetative wetland buffers include the following: (1) agriculture and silviculture (2) passive recreation (3) irrigation systems (4) native species planting including mitigation or habitat restoration (5) utility lines (6) pretreated stormwater and floodplain management (7) boardwalks, docks, or trails (8) ramps for lake access q) Development shall not alter the natural function of the floodplain. r) Development shall not enlarge the off-site floodplain. s) Development shall not result in post development run-off rates which exceed pre- development run-off rates for storm frequencies

TABLE D-2:
CITY OF AUBURNDALE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	at least as stringent as those rates established by SWFWMD. t) Encroachment, including fill, new construction, substantial improvements, and other development, shall be prohibited within the floodplain unless certification (with supporting technical data) by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the 100-year base-flood discharge. u) The extent of lakes shall be defined by their Ordinary High-Water Line (OHWL). v) Floodplain Assessment. A detailed flood insurance study shall be performed for all subdivision proposals and other proposed development having five (5) acres or more in the 100-year floodplain. The construction of a single-family dwelling on a parcel containing five (5) or more acres which is not part of a subdivision or which is part of a subdivision in existence on the effective date of this plan is exempt from this requirement. Phases of a larger development, if the larger development meets the five (5) acre criterion, are not exempt from this requirement. If existing subdivisions are proposed for replatting, the replatted portion shall be required to comply with this requirement if the replatted portion meets the five (5) acre criterion. Subdivisions which contain 10 lots or less shall be exempt from these requirements. The study shall be performed in accordance with the Flood Insurance Study Guidelines and Specifications for Flood Contractors (FEMA Publication 37). w) Projects or portions of projects in Most Effective Recharge Areas must retain three inches of runoff from directly connected impervious areas within the project. Applicants may instead demonstrate that the-post-development recharge will be equal to or greater than the pre-development recharge. Most Effective Recharge Areas are those areas with soils classified by the Soil Conservation Service as Type "A" Hydrologic Soil Group. Directly connected impervious areas are those impervious areas which are connected to the surface water management system by a drainage improvement such as a ditch, storm sewer, paved channel, or other man-made conveyance. Stormwater that is retained must be infiltrated into the soil or evaporated such that the storage volume

TABLE D-2:
CITY OF AUBURNDALE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	is recovered within 14 days following a storm event.
Comprehensive Plan – Infrastructure Element	
Policy 3.3	Stormwater management facilities shall be designed to accommodate the 25-year, 24-hour design storm to meet the water quality and quantity standards that follow: a: Water Quantity: Peak post-development runoff shall not exceed peak pre-development runoff rates. b: Water Quality: Water Quality: Treatment of stormwater runoff shall be required for all development, redevelopment and, when expansion occurs, existing developed areas. The stormwater treatment system or systems can be project specific, serve sub-areas within the City or be a system to serve the entire City. Regardless of the area served and in accordance with Chapter 62-25, F.A.C., the stormwater treatment systems must provide a level of treatment for the runoff from the first one (1) inch of rainfall for projects in natural drainage basins of 100 acres or more, or as an option, for projects or project subunits in natural drainage basins of less than 100 acres, the first one-half (1/2) inch of runoff, from the design storm in accordance with Rule 62-25, F.A.C. in order to meet the receiving water quality standards of Rule 17-302, section 17-302.500, F.A.C. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 17-302, F.A.C. It is intended that all standards in these citations are to apply to all development and redevelopment and that any exemptions or exceptions in these citations, including project size thresholds, do not apply for concurrency determinations. Infill residential development within improved residential areas or subdivisions existing prior to the adoption of this comprehensive plan, must ensure that its post-development stormwater runoff will not contribute pollutants which will cause the run-off from the entire improved area or subdivision to degrade receiving water bodies and their water quality as stated above.

TABLE D-2:
CITY OF AUBURNDALE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Objective 7 Protection of Natural Drainage Features and Man-made Drainage Structures	Protect natural drainage features, man-made drainage structures and the City's lakes from receiving stormwater runoff that could degrade water quality in the City or downstream from the City.
Policy 7.7	The City shall not extend stormwater management facilities to new areas if such an extension would exceed the present ability of the City to provide protection from flooding to presently served areas, consistent with the established level of service standard for new stormwater management facilities.
Comprehensive Plan – Intergovernmental Coordination Element	
Policy 5.6	The City will enter into an interlocal agreement with Polk County for joint projects identified in the City's stormwater management plan and the County's Stormwater Management Plan.
Land Development Regulations – Chapter 5 Zoning	
Sec. 5.2.8 LOCATION OF STRUCTURES NEAR BODIES OF WATER; 100 YEAR FLOOD LEVEL.	5.2.8.1. No building or structure, other than a boat house or dock, shall be erected within 50 feet of the shoreline of any lake or other body of water which has a width of 10 feet or greater at its normal water level. 5.2.8.2. For purposes of the Land Development Regulations, normal water level and 100 year flood levels shall be considered to be those established on the Flood Insurance Rate Maps.
Land Development Regulations – Chapter 8 Environmental Protection	
Sec. 8.1.1 PURPOSE	The City is committed to the protection of environmental resources through the adoption of the Comprehensive Plan and more specifically the adoption of the Conservation Element of the Plan. Some of the issues addressed in this Element include surface water, water wells, lakes, fisheries and wetlands. Other issues contained in the Element are addressed as appropriate in other Chapters of the Land Development Regulations. This Chapter provides the regulations necessary to implement stormwater management systems, water well protection, impervious surface coverage, and protection of lakes, wetlands, threatened or endangered species habitat, conservation area, native ecological communities and water shortages.
Chapter 14 Flood Protection Sec. 14.1.1 General	These regulations shall be known as the Floodplain Management Chapter of the City of Auburndale Land Development Regulations, hereinafter referred to as "this chapter or these regulations."

TABLE D-2: CITY OF AUBURNDALE POLICIES AND REGULATIONS	
Source (Document, Number, Chapter, Section)	**Text/Description**
	14.1.1.2 INTENT. The purposes of this chapter and the flood load and flood resistant construction requirements of the Florida Building Code are to establish minimum requirements to safeguard the public health, safety, and general welfare and to minimize public and private losses due to flooding through regulation of development in flood hazard areas.

TABLE D-3:
CITY OF BARTOW POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Policy 1.2.1	The City will approve the location of new development on the basis of the suitability of the land to support development without adversely affecting the natural environment resources, potable water well protection areas and environmentally sensitive land, through the use of a development review process and appropriate mitigation measures. Specifically, the densities and intensities of land uses in wetlands, flood prone areas, and areas with severe soil limitations to development shall be as follows: a. In the isolated wetlands shown on the Future Land Use Map, low density residential land uses shall be limited to one dwelling units per ten acres for all development and redevelopment; only passive recreation facilities shall be permitted and they shall be limited to a floor area ratio of 0.01; and all other public facilities, buildings and grounds shall be limited to a floor area ratio of 0.10. All other uses, specifically all nonresidential uses, shall be prohibited. All future wetlands annexed into the City of Bartow that are 10 acres or more in size shall be classified as either Conservation or Recreation and Open Space Land Use on the Future Land Use Map. Wetland areas less than 10 acres in size on any parcel do not need to be shown on the Future Land Use Map unless the area is part of a larger contiguous system, when combined, totals 10 acres or more in size. Areas less than 10 acres in size will be delineated at the time of development and are subject to the same protection standards and guidelines applicable to the wetland areas shown on the Future Land Use Map. Any proposed development within isolated wetlands shall be evaluated as to its impacts on wetland species and natural systems consistent with State and Federal permitting procedures. Land uses in future wetlands shall be restricted to the density and intensity standards stated above. b. All future flood plains annexed into the City of Bartow that are 10 acres or more in size shall be designated either Conservation or Recreation and Open Space on the Future Land Use Map. Floodplain areas less than 10 acres in size on any parcel do not need to be shown on the Future Land Use Map unless the area is part of a larger contiguous system, when combined, totals 10 acres or more in size. Areas less than 10 acres in size will be delineated at the time of development and are subject to the same protection standards and guidelines applicable to the floodplain areas shown on the Future Land Use Map. Any proposed development within the 100-year floodplain shall be evaluated as to its impacts on flood storage and capacity, as well as any impacts to natural

TABLE D-3:
CITY OF BARTOW POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	resources. All development and redevelopment of permitted uses and facilities shall be set back 100 feet from the natural bank of the Peace River, flood proofed, and the first floor elevation shall be one foot above the elevation of the 100-year flood. No development or redevelopment shall undertake any activity that will reduce the capacity, alter the flow characteristics of the Peace River, or otherwise degrade the functions of the floodplain. c. The density and intensity of land uses shown in areas with severe soil limitations are established in Objective 5 and supporting policies of this Element. Severe soils do not alone, constitute reason to reduce densities and intensities established for land uses by Objective 5. Map 4, page 15 serves as a statement of limitations that may affect the development capacity of a particular site. The City shall require specific soils analysis and may impose additional construction standards in such areas. d. Environmentally sensitive lands shall be defined as high aquifer recharge areas, public supply potable water wellfield protection areas, wetlands, floodplains, Areas of Critical State Concern as defined by Chapter 380, F.S., and Natural Resources of Regional Significance, as delineated in the Strategic Regional Policy Plan of the Central Florida Regional Planning Council. These areas shall be protected through the application of the City's zoning and site plan review regulations, which shall regulate the density and intensity of use, and shall incorporate techniques such as cluster development to protect these resources. Residential densities in areas of 100-Year floodplains shall not exceed 1 dwelling per 5 acres.
Objective 1.9: Coordination with the Objectives and Programs in the Polk County Hazard Mitigation Strategy; and Coordination with Chapter 380 Plans	The City shall coordinate Future Land Use designations with the County and surrounding municipalities to eliminate or reduce development in areas identified as having repetitive loss due to natural hazards and which are identified in the Polk County Hazard Mitigation Strategy; and the City shall coordinate with any resource planning and management plan prepared pursuant to Chapter 380.
Policy 1.9.1:	The City, through the implementation of its Land Development Regulations, will ensure that development approvals are consistent with the objectives and policies of the Polk County Hazard Mitigation Strategy, August 1999, as amended. In so doing, the City shall specifically limit the extension of infrastructure to areas of repetitive loss due to natural hazards, especially within any 100-year floodplain or wetland area.

TABLE D-3:
CITY OF BARTOW POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Infrastructure Element	
Policy 3.3	Stormwater management facilities shall be designed to accommodate the 25 year, 24-hour design storm to meet the water quality and quantity standards that follow: a: Water Quantity: Peak post-development runoff shall not exceed peak pre-development runoff rates. b. Water Quality: Treatment of stormwater runoff shall be required for all development, redevelopment, and, when expansion occurs, existing developed areas. The stormwater treatment system or systems can be project specific, serve sub-areas within the City, or be a system to serve the entire City. Regardless of the area served and in accordance with Chapter 17-25, F.A.C., the stormwater treatment systems must provide a level of treatment for the runoff from the first one (1) inch of rainfall for projects in natural drainage basins of 100 acres or more, or as an option, for projects or project subunits in natural drainage basins of less than 100 acres, the first one-half (1/2) inch of runoff, from the design storm in accordance with Rule 17-25, F.A.C. in order to meet the receiving water quality standards of Rule 17-302, section 17-302.500, F.A.C. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 17-302, F.A.C. It is intended that all standards in these citations are to apply to all development and redevelopment and that any exemptions or exceptions in these citations, including project size thresholds, do not apply for concurrency determinations. Infill residential development within improved residential areas or subdivisions existing prior to the adoption of this Comprehensive Plan, must ensure that its post-development stormwater runoff will not contribute pollutants which will cause the run-off from the entire improved area or subdivision to degrade receiving water bodies and their water quality as stated above.

TABLE D-3:
CITY OF BARTOW POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
OBJECTIVE 6: PROTECTION OF NATURAL DRAINAGE FEATURES AND MAN-MADE DRAINAGE STRUCTURES	PROTECT NATURAL DRAINAGE FEATURES, MAN-MADE DRAINAGE STRUCTURES (THE CITY'S LAKES) AND THE PEACE RIVER FROM RECEIVING STORMWATER RUNOFF THAT COULD DEGRADE WATER QUALITY IN THE CITY OR DOWNSTREAM FROM THE CITY.
Policy 6.4	The City shall regulate stormwater run-off for new development through the enforcement of performance standards for design and treatment of stormwater facilities at least as stringent as those specified in Section 17-25, F.A.C.
Policy 6.5	The City shall continue to participate in the Federal Flood Insurance Program.
Policy 6.8	The City shall correct all identified stormwater management facility deficiencies. Deficiencies for existing development shall be defined as inability to manage a 25-year 24 hour storm event or contributing to the degradation of the receiving body below minimum conditions necessary to assure the suitability of water for the designated use of its classification as established in Chapter 17-3, F.A.C. The expenditure of public funds on stormwater management facility improvements shall be prioritized as follows: to fulfill legal obligations; to prevent further degradation of surface or water bodies; to provide adequate stormwater management facilities for existing development in the City; to provide adequate stormwater management for new development in the City; and to extend municipal stormwater management facilities to areas outside of the City.
Policy 6.10	The City shall not extend stormwater management facilities to new areas if such an extension would exceed the present ability of the City to provide protection from flooding to presently served areas, consistent with the established level of service standard for new stormwater management facilities.
Comprehensive Plan – Conservation Element	
Policy 2.4	The City will restrict uses in the wellhead protection zone. When funds become available through the Southwest Florida Water Management District or another agency with jurisdiction, the City will request funding assistance to identify cones of influence for all of its wellheads and extend protection measures to those areas.
Policy 6.3	Jurisdictional wetlands and 100-year floodplain areas within the City's jurisdiction are recognized as "environmentally sensitive lands." These areas that are 10 acres or more in size shall be designated Conservation or Recreation and Open Space on the Future Land Use Map. These areas less than 10 acres on any parcel do not need to be shown on the Future Land

TABLE D-3:
CITY OF BARTOW POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	Use Map unless the area is part of a contiguous system, when combined, totals 10 acres or more in size. Areas less than 10 acres in size will be delineated at the time of development and are subject to the same protection standards and guidelines applicable to the wetland and floodplain areas shown on the Future Land Use Map. The hydrologic functions and habitat characteristics of jurisdictional wetlands and 100-year floodplain areas shall be protected through the enforcement of land development regulations, including zoning, site plan review, buffer zones, minimum setback requirements, regulation and prohibition of certain uses, and stormwater treatment regulations. The areas designated as Conservation or Recreation and Open Space pursuant to this policy and applicable policies in the Future Land Use Element shall serve as conceptual indicators of wetlands and/or 100-year floodplain areas. The precise delineation of these areas shall be determined through site-specific studies and field determinations which assess the extent of wetland and floodplain areas consistent with State and Federal permitting procedures. Alterations to jurisdictional wetlands and 100-year floodplain areas are regulated through the State and Federal permitting process.
Policy 6.4	The hydrologic functions of the 100-year floodplain shall be protected.
Comprehensive Plan – Intergovernmental Coordination Element	
Policy 5.6	The City will enter into an interlocal agreement with Polk County for joint projects identified in the City's Stormwater Management Plan and the County's Stormwater Management Plan.
Comprehensive Plan – Capital Improvements Element	
Policy 2.5	Stormwater management facilities shall be designed to accommodate the 25-year, 24-hour design storm to meet the water quality and quantity standards that follow: a. Water Quantity: Peak post-development runoff shall not exceed peak pre-development runoff rates. b. Water Quality: Treatment of stormwater runoff shall be required for all development, redevelopment and, when expansion occurs, existing developed areas. The stormwater treatment system or systems can be project specific, serve sub-areas within the City or be a system to serve the entire City. Regardless of the area served and in accordance with Chapter 62-25, F.A.C., the stormwater treatment systems must provide a level of treatment for the runoff from the first one (1) inch of rainfall for projects in natural drainage basins of 100 acres or more, or as an option, for projects or project subunits in natural drainage basins of

TABLE D-3:
CITY OF BARTOW POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	less than 100 acres, the first one-half (1/2) inch of runoff, from the design storm in accordance with Rule 62-25, F.A.C. in order to meet the receiving water quality standards of Rule 62-302, section 62-302.500, F.A.C. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 62-302, F.A.C. It is intended that all standards in these citations are to apply to all development and redevelopment and that any exemptions or exceptions in these citations, including project size thresholds, do not apply for concurrency determinations. Infill residential development within improved residential areas or subdivisions existing prior to the adoption of this comprehensive plan, must ensure that its post-development stormwater runoff will not contribute pollutants which will cause the run-off from the entire improved area or subdivision to degrade receiving water bodies and their water quality as stated above.
Policy 2.6	The City establishes a stormwater management level of service for existing development equal to a 3-year, 24-hour storm event. Stormwater will be handled by, and contained within existing stormwater management facilities.
Land Development Regulations - Article 3 Development Design and Improvement Standards	
3.05.00 Stormwater Management.	Treatment of stormwater runoff shall be required for all development, redevelopment and, when expansion occurs, existing developed areas. The stormwater treatment system or systems can be project specific, or serve sub-areas within the County. The design and performance of all stormwater management systems shall comply with applicable State Regulations, Chapter 17-25 and Chapter 17-302, Florida Administrative Code; and the rules of the SWFWMD stated in Chapter 40D-4, F.A.C; and with this section of the Code, which implements the City's ordinance and Polk County Ordinance 93-06. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 17-302, F.A.C. Steps to control erosion and sedimentation shall be taken for all development.

TABLE D-3:
CITY OF BARTOW POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
3.05.01 Stormwater Management Requirements	The contribution of pollutants through discharges from storm sewer systems has a significant impact on the receiving waters in Polk County. Improperly treated discharges from industrial activities and interconnected Municipal Separate Storm Sewer Systems (MS4's) and illicit discharges from spilling, dumping or disposal of material other than stormwater to the municipal separate storm sewer system will adversely affect the quality of waters receiving such discharges. The EPA, pursuant to Title 40, Section 122.26 of the Code of Federal Regulations, has mandated that municipalities provide the legal authority to control discharges to the municipal separate storm sewer system under the National Pollutant Discharge Elimination System (NPDES) in order to control the quality of discharges from the MS4. The City Commission of the City of Bartow therefore finds it necessary and in the public interest, to protect the quality of waters receiving stormwater discharges from becoming contaminated, for the health, safety, and general welfare of the citizens of the City. (A) Control of Stormwater Discharges (1) Stormwater Discharges to the Municipal System and U.S. Waters. The discharge of stormwater to an MS4 shall be controlled to the extent that such discharge will not impair the operation of the MS4 or contribute to the failure of the MS4 to meet any State or Federal requirements. Discharges to waters of the U.S. shall be controlled to the extent that the discharge will not adversely impact the quality or beneficial uses of the receiving water. Any person responsible for stormwater discharges determined by the municipality to be contributing to the impairment of the waters of the U.S., either directly or through an MS4, shall provide corrective measure in accordance with a schedule approved by the municipality. (2) Stormwater Discharges from Industrial Activities and Construction Sites. Stormwater from construction sites shall be controlled in such a way as to retain sediment on-site and prevent violations of State water quality standards. All erosion and sediment controls required pursuant to the pollution prevention plan of a NPDES stormwater permit for construction or required pursuant to a State stormwater permit issued by either the FDEP or appropriate water management district shall be properly

TABLE D-3:
CITY OF BARTOW POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	implemented, maintained and operated. The minimum acceptable requirements for construction sites are set forth in Appendix B, Best Management Practices (BMP's) for Construction Activities, attached at the back of the Code. Stormwater from areas of industrial activity shall be treated or managed on-site, using best management practices, prior to discharging to an MS4 or to U.S. Waters. All stormwater discharges from the site shall be of a quality which will not adversely impact the water quality or beneficial uses of the receiving water. The owners of industrial facilities or constructions sites which will discharge stormwater to an MS4, must provide written notification to the appropriate municipality prior to discharging. (3) Control of Pollutant Contributions from Interconnected MS4's. The discharge of stormwater between interconnected State, County or other municipal storm sewer systems shall not impair the quality of the discharge from the receiving storm sewer system. Owners of sections of an interconnected MS4 shall be responsible for the quality of discharge from their portion of the system and shall coordinate with the owners of the downstream segments prior to initiating any modifications to the system. (B) Control of Non-Stormwater Discharges. Any discharge, other than stormwater, to an MS4 or to waters of the U.S. which is not exempt under Section 3.05.01(D) is considered an illicit discharge and is prohibited. Upon discovery of an illicit discharge, persons responsible for the discharge shall report their findings immediately to the City. Persons responsible for illicit discharges shall immediately, upon notification, initiate procedures to cease discharging or provide suitable containment facilities until modifications are made to properly treat the discharge, or a NPDES permit is obtained. Such procedures shall include a requirement to obtain approval of a schedule for implementing proposed corrective measures from the City. (C) Inspection and Maintenance of Systems. City personnel shall be granted access for inspection of facilities discharging or suspected of discharging to an MS4 or waters of the U.S. in order to evaluate the potential for release of materials other than stormwater. All

TABLE D-3:
CITY OF BARTOW POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	structures which allow discharges to an MS4 shall be made accessible to municipal personnel for continual monitoring of the quality of the discharges. Structural controls and other BMP's used to reduce pollutants in stormwater discharges shall be operated and maintained so as to function in accordance with the original design or performance criteria. Operation and maintenance shall be done so as to assure treatment of stormwater or reduction in pollutants in stormwater discharges consistent with appropriate Federal, State or Water Management District rules or permit requirements. (D) Variances and Exemptions. Variances from specific requirements of this Code shall be considered on a case by case basis to the extent that granting of such variance will not adversely impact the quality of the receiving water or relieve a person from any Federal, State or local requirements which may apply. Notification of variance application shall be provided to the owners of all MS4's within the City.
Land Development Regulations - Article 5 Resource Protection Standards	
5.01.00 Development in Flood-Prone Areas 5.01.01 Purpose and Intent	It is the purpose and intent of this Section to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas. This Section shall apply to all areas of special flood hazard within the jurisdictional boundaries of the City of Bartow. No structure or land shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of this Section and other applicable regulations. Areas of special flood hazard that have been or may be identified on a Flood Insurance Rate Map (FIRM), published by the Federal Emergency Management Agency (FEMA), and any revisions thereto, are adopted by reference and declared to be a part of this Section. In the absence of FIRMs and supporting data, areas of special flood hazard shall be identified by field analysis until such FIRMs are available. These flood hazard management regulations do not repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. Although the degree of flood protection required by this Section is reasonable and appropriate for regulatory purposes, based on scientific

TABLE D-3:
CITY OF BARTOW POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	and engineering considerations, more severe floods will occur, and flood heights may be increased by man-made or natural causes. Consequently, this Section is not intended to imply that land outside the areas of special flood hazard or uses permitted within those areas will be free from flooding or flood damages. This Section shall not create liability on the part of the City or any of its officers or employees for any flood damages that result from reliance on these flood hazard management regulations or any administrative decision lawfully made thereunder.
5.01.101.03 Intent.	The purposes of this ordinance and the flood load and flood resistant construction requirements of the Florida Building Code are to establish minimum requirements to safeguard the public health, safety, and general welfare and to minimize public and private losses due to flooding through regulation of development in flood hazard areas.
Land Development Regulations – Article 6 Public Facility Monitoring and Permitting	
6.01.07.02 Adequacy of Stormwater Management.	The proposed development shall be designed to provide adequate areas and easements for the construction and maintenance of a water management system to serve the proposed development and adjacent public rights of way in a manner that conforms to sound engineering standards. The development order shall require that the applicant meet the following LOS standards, where applicable, prior to any plan approval. (A) Road Protection. Residential streets having not more than fifty (50) feet of pavement width shall have crown elevations equal to the 100-year flood elevation. Rights of way having greater than fifty (50) feet of pavement width shall have a final edge of pavement elevation no lower than the 100-year flood elevation. (B) Buildings. The lower floor elevation for buildings shall be no lower than one foot above the 100-year elevation. (C) Off-Site Discharge. Off-site discharge is not to exceed the standards allowed by the SWFWMD and this Code. (D) Storm Sewers. The design frequency applicable to storm sewers is the 25-year, 24-hour storm event.

TABLE D-4:
CITY OF DAVENPORT POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Objective 4	Beginning on the date of adoption of the Comprehensive Plan, the City shall protect the quality and quantity of its natural and historic resources. This shall be accomplished through the enforcement of Land Development Regulations and through the Development Review Process.
Policy 4.6	The City shall include in its Land Development Regulations standards for proposed development to provide for equivalent storage of stormwater in order to prevent other areas from flooding.
Objective 6	The City shall manage future growth through enforcement of Land Development Regulations. Land Development Regulations shall include provisions for the use of innovative land development techniques that provide the most efficient use of city resources
Policy 6.1	The City shall adopt Land Development Regulations to ensure that future uses are consistent with the Future Land Use map or map series and to provide compatibility between different land use intensities. Land Development Regulations shall, at a minimum: d) Regulate land development in areas subject to seasonal or periodic flooding and provide for drainage and stormwater management.
Comprehensive Plan – Infrastructure Element	
Policy 1.1.5	The City shall adopt development standards which prohibit the location of new septic systems in wetlands, floodplains, and areas containing soils with "severe" limitations or which do not pass percolation tests conducted by the Department of Health. Existing septic systems located in areas with severe soil limitations may be maintained or replaced to provide more efficient wastewater treatment.
GOAL 4	TO ENSURE THE PROPER MANAGEMENT OF THE QUANTITY AND QUALITY OF STORMWATER RUNOFF.
OBJECTIVE 4.1	THE CITY SHALL MANAGE THE QUALITY AND QUANTITY OF STORMWATER RUNOFF. EXISTING DEFICIENCIES IN MAN-MADE OR ALTERED NATURAL DRAINAGE FACILITIES SHALL BE CORRECTED. NEW DEVELOPMENT SHALL BE REQUIRED TO ADEQUATELY MANAGE STORMWATER RUNOFF. THE FUNCTIONS OF NATURAL DRAINAGE FEATURES SHALL BE PROTECTED THROUGH ENFORCEMENT OF LAND DEVELOPMENT REGULATIONS.
Policy 4.1.7	The volume of stormwater runoff to be treated for a site shall be determined by the type of treatment system. A wet detention treatment system shall treat one inch of runoff from the contributing area. Detention with an effluent filtration system (manmade underdrains), on-line and offline treatment systems shall treat runoff from the first one inch of

TABLE D-4:
CITY OF DAVENPORT POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	rainfall; or as an option for projects or project subunits with drainage areas less than 100 acres, the first one-half inch of runoff. In determining the runoff from one inch of rainfall, calculations must be provided to determine the runoff from the directly connected impervious areas separately from any other contributing areas.
Policy 3.2	In order to minimize the impact of on-site wastewater disposal systems on the quality of surface water and groundwater, the City shall enforce development standards which prohibit the location of new septic systems in wetlands, floodplains and areas containing soils with "severe" limitations or which do not pass percolation tests conducted by the State of Florida. Existing septic systems located in areas with severe soil limitations may be maintained or replaced to provide more efficient wastewater treatment.
OBJECTIVE 4	THE CITY SHALL INCLUDE IN ITS LAND DEVELOPMENT REGULATIONS, DEVELOPMENT STANDARDS AND MITIGATION PROCEDURES TO CONSERVE, APPROPRIATELY USE, AND PROTECT THE NATURAL FUNCTION OF FLOODPLAINS AND WETLANDS.
Comprehensive Plan – Intergovernmental Coordination Element	
Policy 5.6	The City will enter into an interlocal agreement with Polk County for joint projects identified in the City's Stormwater Management Plan and the County's Stormwater Management Plan.
Land Development Regulations – Article 2 – General Regulations for Zoning Districts	
SECTION 2.18.00 TEMPORARY MANUFACTURED HOME, RECREATIONAL VEHICLE, OR TINY HOUSE FOR USE DURING POST-DISASTER RELIEF.	During post-disaster rehabilitation or reconstruction of a single-family dwelling made unfit for human habitation, the Development Director or Building Official may authorize the use of temporary emergency housing on a single-family parcel for temporary occupancy by residents of the same parcel who have been displaced by natural or manmade disaster damage such as fire, flood, or hurricane, regardless of the zoning district requirements, subject to the following conditions:
Land Development Regulations – Article 8 – Natural Resource Protection	
SECTION 8.01.00 GENERAL	The City is committed to the protection of environmental resources through the adoption of the Comprehensive Plan and more specifically the adoption of the Conservation Element of the Plan. Some of the issues addressed in the Conservation Element include floodplains, surface water, ground water, lakes, and wetlands. This Article provides the regulations necessary to implement flood protection, water well protection, impervious surface overage, and protection of lakes and wetlands; threatened or endangered species habitat, conservation area, native ecological communities, and water shortages.

TABLE D-4:
CITY OF DAVENPORT POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
SECTION 8.02.00 FLOOD PROTECTION	The City of Davenport has participated in the National Flood Insurance Program (NFIP) since December 2, 1980. To remain compliant with the National Flood Insurance Program, the City is required to adopt requirements consistent with Title 44 Code of Federal Regulations, Sections 59 and 60. Davenport's adopted flood control and drainage requirements are located in the Code of Ordinances, Chapter 8, Flood Control and Drainage.

TABLE D-5:
TOWN OF DUNDEE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Policy 1.2	The adopted Land Development Regulations shall regulate the use of land consistent with the Future Land Use Element and the Future Land Use Map Series, shall ensure the compatibility of adjacent land uses, and, at a minimum, shall: d) Regulate land development in areas subject to periodic flooding and provide for drainage and stormwater management; e)Regulate land development to protect potable water wells and aquifer recharge areas;
OBJECTIVE 3: PROTECTION OF NATURAL, HISTORICAL, AND CULTURAL RESOURCES	TO THE MAXIMUM EXTENT POSSIBLE, PROTECT NATURAL, HISTORICAL, AND CULTURAL RESOURCES FROM THE NEGATIVE IMPACTS OF DEVELOPMENT AND REDEVELOPMENT.
Policy 3.2	The Town of Dundee shall require that all development proposals be accompanied by evidence that an inventory of wetlands; soils posing severe limitations to construction; unique habitat; endangered species of wildlife and plants; and areas prone to periodic flooding has been conducted. The Town shall further require that the extent to which any development or redevelopment is proposed to be placed in/on, to disturb, or to alter the natural functions of any of these resources be identified. Such identification shall occur at a phase in the development review process that provides the opportunity for the Town to review the proposed project to ensure that direct and irreversible impacts on the identified resources are minimized, or in the extreme, mitigated. Where development is determined to encroach upon a resource, the Town shall require a specific management plan to be prepared by the developer, which results in no net loss of wetlands and which includes necessary modifications to the proposed development, specific setback and buffers, and clustering of development away from site resources, to ensure the protection, preservation or natural functions of the resource. Where mitigation is approved by appropriate State or Federal agencies, wetlands shall be replaced with the same type and form that perform the same function as the wetland lost to development. Residential development in wetlands is permitted at a density not greater than one dwelling unit per five acres (1 du/5 ac). The minimum setback shall be 25 feet and the average of all setbacks from the resource shall be 40 feet. Development shall always be clustered away from wetlands on the upland portion of the site. Where no upland exists, development may occur so long as all

TABLE D-5:
TOWN OF DUNDEE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	applicable environmental permit requirements can be satisfied. All future subdivision of land shall contain adequate uplands for the permitted use. Areas designated as buffers shall preserve all-natural vegetative cover, except where drainage-ways and access paths are approved to cross the buffer. Buffers may be supplemented only with native trees, shrubs and ground covers. Final development orders shall be contingent upon implementation of every aspect of the approved management plan, which plan shall be consistent with all-natural resource protection policies of the Conservation Element of this Plan.
Policy 3.3	The Town of Dundee shall enforce the 150-foot radius interim zone of protection for each public supply potable water wellfield within the Town's jurisdiction. Proposed land uses which are incompatible with the designated interim protection zones shall be disapproved. The use or storage of hazardous substances within these designated interim protection zones shall also be disapproved. The Town shall complete a detailed mapping of cones of influence for public supply potable water wellfields. Assistance from the SWFWMD and/or the FDER shall also be requested to accomplish this task.
Comprehensive Plan – Transportation Element	
Policy 5.2	The treatment of stormwater runoff shall be included as an integral component of all new roadway construction and reconstruction.
Comprehensive Plan – Infrastructure Element	
GOAL 4: DRAINAGE	MANAGE THE QUANTITY AND QUALITY OF STORMWATER RUNOFF TO PREVENT DAMAGE AND LOSS DUE TO FLOODING AND DEGRADATION OF WATER RESOURCES DUE TO POLLUTION LOADING. [9J-5.011(2)(A)]
Policy 4.1.2	For all new development and redevelopment, post-development peak-discharge volumes and runoff-rates shall not exceed the corresponding pre-development volumes and rates. All development requests, except those for individual single-family dwelling units on a lot of record, minor subdivisions, and minor commercial sites, shall be required to submit engineering plans, prepared by a professional engineer licensed to practice in Florida, for the purpose of providing evidence of compliance with this policy. Single-family dwelling units on existing lots of record, minor subdivisions, and minor commercial sites are not considered to pose a significant amount of adverse impacts with regard to stormwater runoff. However, this does not exempt them from meeting the Level of Service Standards for storm-water management.

TABLE D-5:
TOWN OF DUNDEE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Policy 4.1.3	The volume of stormwater runoff to be treated for a site shall be determined by the type of treatment system. A wet detention treatment system shall treat one inch of runoff from the contributing area. Detention with an effluent filtration system (manmade underdrains), on-line and offline treatment systems shall treat runoff from the first one inch of rainfall; or as an option for projects or project subunits with drainage areas less than 100 acres, the first one-half inch of runoff. In determining the runoff from one inch of rainfall, calculations must be provided to determine the runoff from the directly connected impervious areas separately from any other contributing areas.
Policy 4.1.4	Continue to inventory and evaluate drainage facilities, including natural and man-made drainage patterns and features.
Policy 4.1.5	Participate in the proposed Polk County Stormwater Utility studies.
OBJECTIVE 4.2: EXPANSION OR INCREASE IN CAPACITY OF SYSTEM	EXPAND OR INCREASE THE MUNICIPAL DRAINAGE SYSTEM AS NEEDED TO MEET THE NEEDS OF FUTURE RESIDENTS AND BUSINESSES IN SUCH AS MANNER AS TO MAXIMIZE THE USE OF EXISTING FACILITIES AND DISCOURAGE URBAN SPRAWL.
Policy 4.2.1	Continue to implement the stormwater management plan that estimates and plans for future stormwater management needs while maximizing the use of existing facilities and limiting urban sprawl.
OBJECTIVE 4.3: PROTECTION OF NATURAL DRAINAGE FEATURES	REGULATE LAND USE AND DEVELOPMENT TO PROTECT THE FUNCTIONS OF NATURAL DRAINAGE WAYS THAT SERVE AS PRIMARY CONVEYANCE SYSTEMS FOR STORMWATER RUNOFF.
Policy 5.2.1	Proposed land uses which are incompatible with designated prime groundwater aquifer recharge areas shall be disapproved. The use or storage of hazardous substances within designated prime groundwater aquifer recharge areas shall be regulated through enforcement of the Town's Land Development Regulations.
Comprehensive Plan – Conservation Element	
Policy 1.3	As part of a stormwater management plan, prioritize which lakes, and which drainage facilities affecting those lakes, should receive drainage improvements. Consideration should be given to each lake's relative aesthetic and recreational value to the community and its need and potential for restoration or protection.
OBJECTIVE 3: FLOODPLAINS	PROTECT THE NATURAL HYDROLOGIC AND ECOLOGICAL FUNCTIONS OF FLOODPLAINS.
Policy 3.1	Dundee shall enforce the Town's Land Development Regulations that

TABLE D-5:
TOWN OF DUNDEE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	provide protection measures for floodplains from development activities. This shall be accomplished by: 1. Requiring new development to locate on non-sensitive portions of development site. 2. Requiring developers to adhere to applicable Southwest Florida Water Management District or Florida Department of Environmental Protection stormwater management standards. 3. Requiring the clustering of dwelling units away from sensitive portions of site. 4. Disapproval of proposed development which would fragment large ecological communities. 5. Requiring buffering of sensitive areas; and 6. The provision of conservation easements.
Policy 3.3	Dundee shall continue to designate 100-year floodplains as "environmentally sensitive lands" and protect them in accordance with the Goals, Objectives, and Policies of this Element.
Comprehensive Plan – Intergovernmental Coordination Element	
Policy 5.7	The Town will enter into an interlocal agreement with Polk County for joint projects identified in the Town's stormwater management plan and the County's Stormwater Management Plan.
Land Development Regulations - Article 5 Resource Protection Standards	
5.01.00 Development in Flood-Prone Areas 5.01.01 Purpose and Intent	It is the purpose and intent of this Section to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas.
Code of Ordinances	
Sec. 44-169. - Stormwater management fund.	All stormwater drainage utility fees collected by the town shall be paid into a proprietary fund which is hereby created, to be known as the "stormwater management fund." Such fund shall be used for the purpose of paying the cost of the stormwater management facilities to be constructed in the various storm drainage basins and paying the cost of operation, administration and maintenance of the stormwater management facilities of the town. To the extent that the stormwater drainage fees collected are insufficient to construct the needed

TABLE D-5:
TOWN OF DUNDEE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	stormwater management facilities, the costs of the same may be paid from such town funds as may be determined by the town commission, but the town commission may order the reimbursement of such fund if additional fees are thereafter collected. When the fund has surplus dollars on hand in excess of current needs, the surplus dollars will be invested to return the highest yield consistent with proper safeguards and shall be available to be used exclusively for stormwater management expenditures.

TABLE D-6:
CITY OF EAGLE LAKE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Policy 1.1	The city shall enforce the adopted Land Development Regulations that contain provisions to implement the adopted Comprehensive Plan which will, at a minimum: c. Protect and regulate areas subject to seasonal and periodic flooding and provide for drainage and stormwater management.
Policy 1.2	The City shall revise its existing Land Development Regulations and adopt new provisions where needed to implement the Future Land Use Element and Map. These revised and new regulations shall address at a minimum, (3) regulation of lands subject to seasonal and periodic flooding.
Policy 3.3	The City shall designate on the Future Land Use Map Series, in the form of overlays or other graphic format, those natural resources such as water well fields and cones of influence, conservation and preservation areas identified as part of the Conservation Element, areas subject to flooding, lakes and soils.
Policy 3.5	The City of Eagle Lake shall enforce the protection standards established in the Land Development Regulations for the cones of influence for each public supply potable water wellfield within the City's jurisdiction. Proposed land uses which are incompatible with the designated interim protection zones shall be disapproved. The use or storage of hazardous substances within these designated interim protection zones shall also be disapproved. The City shall update the existing cones of influence map located in the Technical Support document and add the map to the Future Land Use Map series by December 2012. Assistance from the SWFWMD and/or the FDEP shall also be requested to accomplish this task.
Comprehensive Plan – Infrastructure Element	
OBJECTIVE 4.2	THE CITY SHALL CONTINUE TO PROMOTE THE PROPER DISPOSAL OF HAZARDOUS AND BIOHAZARDOUS MATERIALS.
GOAL 5	PROVIDE ADEQUATE PROTECTION OF EXISTING STORMWATER MANAGEMENT SYSTEMS AND RECEIVING WATER BODIES AND TO PROTECT THE NATURAL FUNCTION OF AQUIFER RECHARGE AREAS WITHIN THE CORPORATE LIMITS OF EAGLE LAKE AND TO ASSURE A SAFE AND AMPLE SUPPLY OF GROUNDWATER TO ITS RESIDENTS.
OBJECTIVE 5.1	THE CITY SHALL CONTINUE TO REGULATE STORMWATER DISCHARGES TO PREVENT FLOODING OF EXISTING AND PROPOSED STORMWATER FACILITIES.
Policy 5.1.5	Proposed land uses which are incompatible with designated prime groundwater aquifer recharge areas shall be disapproved. The use or

TABLE D-6:
CITY OF EAGLE LAKE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	storage of hazardous substances within designated prime groundwater aquifer recharge areas shall be regulated through enforcement of the City's Land Development Regulations.
Comprehensive Plan – Conservation Element	
Policy 1.2.2	Stormwater run-off from new developments shall be directed to retention systems that will provide treatment that meets FDEP and SWFWMD minimum requirements.
Policy 1.2.8	The City of Eagle Lake shall abide by the Florida Department of Environmental Protection Best Management Practices program which monitors point source discharges into lakes. The City shall adopt and enforce Land Development Regulations that require shoreline buffer zones adjacent to lakes to preserve natural vegetation, and general design and construction standards for on-site stormwater management systems for new development and redevelopment to ensure that post-development runoff rates, volumes, and pollutant loads do not exceed pre-development conditions.
OBJECTIVE 1.3: FLOODPLAINS	PROTECT THE NATURAL HYDROLOGIC AND ECOLOGICAL FUNCTIONS OF FLOODPLAINS DEVELOPMENT REGULATIONS THAT PROTECT THE NATURAL FUNCTIONS OF THE 100-YEAR FLOODPLAIN AROUND THE LAKES AND WITHIN WETLANDS WILL CONTINUE TO BE ENFORCED.
Policy 1.3.1	Eagle Lake shall adopt and enforce the City's Land Development Regulations that provide protection measures for floodplains from development activities. This shall be accomplished by: 1. Requiring new development to locate on non-sensitive portions of development site; 2. Requiring developers to adhere to applicable Southwest Florida Water Management District or Florida Department of Environmental Protection stormwater management standards. 3. Requiring the clustering of dwelling units away from sensitive portions of site. 4. Disapproval of proposed development which would fragment large ecological communities. 5. Requiring buffering of sensitive areas; and 6. The provision of conservation easements.

TABLE D-6:
CITY OF EAGLE LAKE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Capital Improvements Element	
Policy 3.4	The City shall not permit the use of small satellite water, wastewater, solid waste, and hazardous waste facilities by proposed developments by requiring, as part of the development approval process, that such facilities and services be provided only by the City or City/other local governments as applicable, primarily in appropriately located public centers.
Land Development Regulations – Division 7 - Environmental	
7.1.1.10 – Purpose and Intent	It is intended to establish an overlay zoning district designated as flood hazard (FH) districts and to depict such districts on the official zoning map. Flood hazard districts are declared to be areas subject to periodic inundation ranging from moderate to severe, and within such areas to regulate and restrict land uses in such a manner as to protect life and property, prevent or minimize damage, and reduce public costs for flood control and rescue and relief efforts occasioned by unwise use or occupancy of such areas.

TABLE D-7:
CITY OF FORT MEADE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Policy 1.4	The City will approve the location of new development on the basis of the suitability of the land to support such uses without adversely affecting natural resources, potable water wellhead protection areas, and environmentally sensitive land, using proper site plan review procedures and appropriate mitigation measures.
Policy 8.1	The City shall enforce its land development regulations to encourage development techniques which mix and distribute land uses to accomplish the following: e) Regulate areas subject to periodic flooding.
Comprehensive Plan – Infrastructure Element	
Policy 5.3	Stormwater management facilities shall be designed to accommodate the 25-year, 24-hour design storm to meet the water quality and quantity standards that follow: a) Water Quantity: Peak post-development runoff shall not exceed peak pre-development runoff rates. b) Water Quality: Treatment of stormwater runoff shall be required for all development, redevelopment and, when expansion occurs, existing developed areas. The stormwater treatment system or systems can be project specific, serve sub-areas within the City or be a system to serve the entire City. Regardless of the area served and in accordance with Chapter 17-25, F.A.C., the stormwater treatment systems must provide a level of treatment for the runoff from the first one (1) inch of rainfall for projects in natural drainage basins of 100 acres or more, or as an option, for projects or project subunits in natural drainage basins of less than 100 acres, the first one-half (1/2) inch of runoff, from the design storm in accordance with Rule 17-25, F.A.C. in order to meet the receiving water quality standards of Rule 17-302, section 17-302.500, F.A.C. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 17-302, F.A.C. It is intended that all standards in these citations are to apply to all development and redevelopment and that any exemptions or exceptions in these citations, including project size thresholds, do not apply for concurrency determinations.

TABLE D-7:
CITY OF FORT MEADE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	Infill residential development within improved residential areas or subdivisions existing prior to the adoption of this comprehensive plan, must ensure that its post-development stormwater runoff will not contribute pollutants which will cause the run-off from the entire improved area or subdivision to degrade receiving water bodies and their water quality as stated above.
Policy 5.4	No development permit will be issued if it will result in the inability of the City to maintain the Levels of Service at or above the levels established in this plan.
Policy 8.2	The City will enforce land development regulations to restrict land use activities which may adversely affect natural drainage features and man-made drainage structures. Submitted site plans shall include an identification and analysis of natural drainage features and man-made drainage structures, and the impacts of proposed development on drainage and topographic features.
Policy 8.3	The City shall regulate stormwater run-off for all new development through the enforcement of performance standards for design and treatment of stormwater facilities at least as stringent as those specified in Section 17-25, F.A.C.
Policy 8.4	The City shall continue to participate in the Federal Flood Insurance Program.
Policy 8.5	The City shall institute a program to remove sediments from retention/detention ponds as well as silt and vegetation from ditches and storm sewers to ensure the design capacity of these facilities is maintained. This Policy shall only be applicable to facilities owned or maintained by the City of Fort Meade.
Policy 8.6	The City shall correct all identified stormwater management facility deficiencies. Deficiencies for existing development shall be defined as the inability to manage a 25-year, 24 hour storm event, or contributing to the degradation of the receiving body below minimum conditions necessary to assure the suitability of water for the designated use of its classification as established in Chapter 17-3, F.A.C. The expenditure of public funds on stormwater management facility improvements shall be prioritized as follows: to fulfill legal obligations; to prevent further degradation of surface or water bodies; to provide adequate stormwater management facilities for existing development in the City; to provide adequate stormwater management for new development in the City; and to extend municipal stormwater management facilities to

TABLE D-7:
CITY OF FORT MEADE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	areas outside of the City.
Policy 8.7	The City shall ensure that stormwater management facility improvements requiring correction shall be included in the 5-Year Schedule of Capital Improvements (CIP).
Policy 8.8	The City shall not extend stormwater management facilities to new areas if such an extension would exceed the present ability of the City to provide protection from flooding to presently served areas, consistent with the established level of service standard for new stormwater management facilities.
Comprehensive Plan – Intergovernmental Coordination Element	
Policy 5.6	The City will enter into an Interlocal Agreement with Polk County for joint projects identified in the City's Stormwater Management Plan and the County's Stormwater Management Plan.
Policy 6.5	The City will coordinate with the Central Florida Regional Planning Council (CFRPC) to identify and protect Natural Resources of Regional Significance as identified in the CFRPC's Strategic Regional Policy Plan, October 1997. The City will cooperate with Florida Department of Environmental Protection (FDEP) and CFRPC to identify and include greenways and an integrated habitat network of uplands on all planning maps. The City will adopt goals and objectives for protection of the Peace River and its wetlands and floodplains, as recommended by the Charlotte Harbor National Estuary Program board and continue to participate by attending advisory board meetings.
Comprehensive Plan - Capital Improvement Element	
Policy 2.3	Stormwater management facilities shall be designed to accommodate the 25-year, 24-hour design storm to meet the water quality and quantity standards that follow: a. Water Quantity: Peak post-development runoff shall not exceed peak pre-development runoff rates. b. Water Quality: Treatment of stormwater runoff shall be required for all development, redevelopment and, when expansion occurs, existing developed areas. The stormwater treatment system or systems can be project specific, serve sub-areas within the City or be a system to serve the entire City. Regardless of the area served and in accordance with Chapter 62-25, F.A.C., the stormwater treatment

TABLE D-7:
CITY OF FORT MEADE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	systems must provide a level of treatment for the runoff from the first one (1) inch of rainfall for projects in natural drainage basins of 100 acres or more, or as an option, for projects or project subunits in natural drainage basins of less than 100 acres, the first one-half (1/2) inch of runoff, from the design storm in accordance with Rule 62-25, F.A.C. in order to meet the receiving water quality standards of Rule 62-302, section 62-302.500, F.A.C. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 62-302, F.A.C. It is intended that all standards in these citations are to apply to all development and redevelopment and that any exemptions or exceptions in these citations, including project size thresholds, do not apply for concurrency determinations. Infill residential development within improved residential areas or subdivisions existing prior to the adoption of this comprehensive plan, must ensure that its post-development stormwater runoff will not contribute pollutants which will cause the run-off from the entire improved area or subdivision to degrade receiving water bodies and their water quality as stated above.
Policy 2.4	The City establishes a stormwater management level of service for existing development equal to a 3-year, 24-hour storm event. Stormwater will be handled by and contained within existing stormwater management facilities.
Comprehensive Plan – Conservation Element	
Policy 2.3	The wetlands and 100-year floodplains the Peace River are designated as "environmentally sensitive lands." These areas shall be designated Conservation on the Future Land Use Map. Their hydrologic functions and habitat characteristics shall be protected through the enforcement of land development regulations, including zoning, site plan review, buffer zones, minimum setback requirements, regulation and prohibition of certain uses, and stormwater treatment regulations. Development shall be restricted to access structures, such as boat ramps and boardwalks, only.
Unified Land Development Code – Article 3 Development Design and Improvement Standards	
Section 3.05.00 Stormwater Management	Treatment of stormwater runoff shall be required for all development, redevelopment and, when expansion occurs, existing developed areas.

TABLE D-7:
CITY OF FORT MEADE POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	The stormwater treatment system or systems can be project specific or serve sub-areas within the County. The design and performance of all stormwater management systems shall comply with applicable State Regulations (Chapter 17-25 and Chapter 17-302, Florida Administrative Code) and the rules of the SWFWMD stated in Chapter 40D-4, F.A.C. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 17-302, F.A.C. Steps to control erosion and sedimentation shall be taken for all development.
Unified Land Development Code – Article 5 Resource Protection Standards	
5.01.00 Development in Flood-Prone Areas 5.01.01 – Purpose and Intent	It is the purpose and intent of this Section to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas vulnerable to floods or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Policy 1.1	The following Residential Future Land Use classifications are adopted: a. Residential Estate (RE) – Two (2.0) to four (4.0) units/acre to be applied to existing area developed in this density range. Densities within the 100-year flood plain shall be limited to 2.0 units/acre and to Flood Damage Prevention provisions of the Unified Land Development Code (ULDC).
Policy 4.3	The City shall require developers to provide utilities on-site, infrastructure improvements for all stormwater management systems, open space, traffic flow and parking as required to serve their development.
Policy 4.4	The City shall consider topographic, hydrological and vegetative cover factors in the site plan review process of proposed developments, and require changes in the proposed design and, as applicable by this review, that erosion and sediment control be employed during construction.
Policy 5.1	Implement the adopted Comprehensive Plan and prevent the expansion of non-conforming uses of land and which as a minimum: C. Protect areas subject to seasonal and periodic flooding and provide for drainage and stormwater management.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Policy 6.2	Proposals for development within areas designated by FEMA as being in the flood prone area shall be approved by the City only if residential densities (single family and mobile home) are limited to one unit/acre, have finished floor elevations 12" higher than base flood elevations or the existing crown in the adjoining road, whichever is greater, and if proposed development is consistent with performance standards set forth in both the City's Zoning Ordinance and Flood Damage Prevention Ordinance, regulating development within the floodplain and designated zoning district. Residential site planning shall include locating structures on individual lots out of the 100-year floodway whenever, or to the greatest extent possible, while maintaining all other required setbacks and buffers. When residences cannot be located out of the floodplain, stilting shall be required. The crown in road requirement for finished floor elevations may be waived by the City Engineer based on final site grading plans that shown that this would not cause first floor flooding.
Policy 6.3	The developer/owner of any site shall be responsible for the on-site management of stormwater runoff in a manner so that post-development runoff rates, volumes and pollutant loads do not exceed pre-development conditions by meeting the following standards: A. Water Quality: Peak post-development runoff rates shall not exceed peak pre-development runoff rates. B. Water Quality: Stormwater treatment shall be required for all new development, redevelopment and when expansion occurs, existing developed areas. The stormwater treatment system or systems can be site-specific, serve sub-areas of the City, or be a system to serve the entire City. Regardless of the area served, the stormwater treatment systems must provide a level of treatment which meets the requirements of Chapter 40D, Florida Administrative Code (FAC) and the SWFWMD Basis of Review for ERP Applications in order to meet the receiving water quality standards of Rule 62-302 FAC. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 62-302 FAC. It is intended that all standards in these citations are to apply to all development and redevelopment, and that any exemptions or exceptions in these citations, including project size

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	thresholds, do not apply for concurrency determinations. Infill residential development within improved residential areas or subdivisions existing prior to the adoption of this comprehensive plan, must ensure that its post-development stormwater runoff will not contribute pollutants which will cause the runoff from the entire improved area or subdivision to degrade receiving water bodies and their water quality as stated above. Development and redevelopment projects, which are not exempt from Southwest Florida Water Management District permitting requirements, must also meet the requirements of applicable Florida Statues and FAC.
Policy 11.2	Public facilities and utilities shall be located to: A. Maximize the efficiency of services provided. B. Minimize their cost. C. Minimize their impacts on the natural environment. D. Expand the City's Sanitary Sewer Service Area in the south-central section of the City in support of sites for affordable housing projects. E. Provide opportunities for residents to hook up to the municipal sewer system through sewer collection system, extensions and mandatory hookup requirements in the south-central section of the City; and F. Provide for retrofitting the City's stormwater management system to provide for water quality treatment.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
OBJECTIVE 10	LEVEL OF SERVICE STANDARDS SHALL BE MET WITHIN THIS PLAN FOR ALL NEW FACILITIES. [9J-5.001(1)(h), (2)(a, b, c)] a. Average and peak flow design capacity for sanitary sewer facilities b. Design capacities for solid waste c. Design storm return frequency for stormwater facilities capacity as specified by the Southwest Florida Water Management District. d. Minimum design flow, storage capacity, and pressure for potable water facilities. e. Water quality standards for stormwater discharge as specified by the Southwest Florida Water Management District and the Department of Environmental Protection.
Policy 19.2	The following criteria will be used for school locations: F. The site should be of sufficient size to ensure that building and ancillary facilities and future expansions can be located away from flood plains, flood prone areas, wetlands and other environmentally sensitive areas, and will not interfere with historic or archaeological resources.
Comprehensive Plan – Transportation Element	
Policy 1.4	Proposed local City-controlled roadway projects shall be evaluated and ranked in order of priority according to the following guidelines: B. Whether the project increases efficiency of use of existing facilities, prevents or reduces future improvement cost, provides service to developed areas lacking full service, or promotes in-fill development; and whether it prevents or reduces development within designated flood plains area; D. Whether the project design fits the existing topography, soil conditions and drainage conditions. E. The City Public Works Director maintains a systematic program to open and eliminate Unpaved streets at identified in the existing traffic network section of this element.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Infrastructure Element	
GOAL 1	THE CITY OF FROSTPROOF SHALL PROVIDE NEEDED PUBLIC SERVICES INCLUDING SANITARY SEWER, POTABLE WATER, STORMWATER DRAINAGE AND SOLID WASTE DISPOSAL TO MEET CURRENT AND ANTICIPATED NEEDS AND WILL PROTECT THE NATURAL GROUNDWATER AQUIFER RECHARGE AREAS.
Policy 1.1	The following levels of service standards are hereby adopted and shall be used as the basis for determining the availability of facility capacity and the demand operation. In order to ensure that these levels of service standards are maintained, methodologies for determining available capacity and demand shall incorporate appropriate peak demand coefficients for each facility and for the type of development proposed. Flood Control –No significant structural flooding. All drainage solutions not exempt from review shall be reviewed and approved by the Southwest Florida Water Management District (Accumulated stormwater is not to enter the first floor of any structure because of 100-year storm flood conditions).
Policy 1.4	The City shall enforce land development regulations that require that stormwater management systems shall be designed to meet a level of service that meets the requirements Southwest Florida Water Management District and shall meet the standards that follow: 1. Water Quality: Peak post-development run-off rates shall not exceed peak pre-development run-off rates. 2. Water Quality: Stormwater treatment shall be required for all new development, redevelopment, and when expansion occurs, existing developed areas. The stormwater treatment system or systems can be site-specific, serve sub-areas of the City, or be a system to serve the entire City. Regardless of the area served, the stormwater treatment systems must provide a level of treatment which meets the requirements of the Florida Administrative Code (FAC), for the run-off from the first one (1) inch of rainfall for projects in drainage basins of 100 acres or more, or, as an option for projects or project subunits with drainage basins less than 100 acres, the first one-half (.5) inch of run-off, from the design storm in accordance with FAC, in order to meet the receiving water quality standards of FAC. Stormwater discharge facilities shall be designed

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classification as established in, FAC. It is intended that all standards in these citations are to apply to all development and redevelopment and that any exemptions or exceptions in these citations, including project size thresholds, do not apply for concurrency determinations. Infill residential development within improved residential areas or subdivisions existing prior to the adoption of this comprehensive plan must ensure that its post-development stormwater run-off will not contribute pollutants which will cause the run-off from the entire improved area or subdivision to degrade receiving water bodies and the water quality as stated above. Development and redevelopment projects, which are not exempt from Southwest Florida Water Management District permitting requirements, must also meet the requirements of applicable Florida Statues.
Policy 2.1	The City has performed a master stormwater drainage study which completes the identification and evaluation of the drainage system within its boundaries, determine its deficiencies, and develop programs for its improvement and maintenance. The study includes at a minimum: A. Drainage Patterns by Sub-basins. B. Structures in Place. C. Natural and Man-Made Drainage Features. D. Connectivity. E. Disposition. F. Easements and Right-of-Ways. G. Capacities. H. Other Features; and I. Intergovernmental Concerns
Policy 2.3	The City amended the Comprehensive Plan to include the recommendations of the master stormwater management study and a cone of influence study.
Policy 4.1	The City shall develop and implement educational programs that: A. Encourage recycling of both hazardous and non-hazardous waste materials;

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	B. Minimize disposal of household hazardous materials; and C. Continue to support recycling efforts by non-profit organizations.
Policy 4.3	The City shall enforce regulations requiring the disposal of oil, tires, batteries, white goods and hazardous waste in accordance with Polk County's landfill regulations and the Polk County Hazardous Materials Plan.
Policy 6.5	The Public Works Department shall establish a maintenance schedule, with a minimum annual review, of all stormwater management facilities that are the responsibility of Frostproof.
Policy 6.6	The Public Works Department shall conduct annual inspections of all stormwater management facilities maintained by the private sector and require repairs of maintenance activities as appropriate.
Policy 6.7	The City shall require all commercial and industrial operations that handle hazardous materials to report their storage and usage of such materials annually to the Polk County Civil Defense Division in order to update the County's Hazardous Materials Plan as required by EPA.
Policy 6.8	The City shall follow State and Federal regulations pertaining to the handling, transporting, and storage of hazardous wastes.
OBJECTIVE 7	FROSTPROOF SHALL ENFORCE ITS STORMWATER MANAGEMENT PROGRAM AND TO PROTECT NATURAL GROUNDWATER RECHARGE AND DRAINAGE FEATURES INCLUDING THE ATTAINMENT AND MAINTENANCE OF STATE WATER QUALITY STANDARDS OF THE LAKE REEDY AND LAKE CLINCH AND THE MAINTENANCE OF THE CAPACITY FOR STORAGE AND CONVEYANCE OF FLOODWATERS WITHIN FLOOD PRONE AREAS.
Policy 7.1	The City shall continue not to issue development orders or other construction approvals for projects requiring Southwest Florida Water Management District stormwater management permits prior to the issuance of such permit.
Policy 7.2	The City will enforce land development regulations to implement design criteria, both for quantity and quality of water consistent with requirements that all new development manage runoff from a 25-year frequency, 24-hour duration design storm event and meet the following standards:

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	1. Water Quality: Peak post-development run-off rates shall not exceed peak pre-development run-off rates. 2. Water Quality: Stormwater treatment shall be required for all new development, redevelopment, and when expansion occurs, existing developed areas. The stormwater treatment system or systems can be site-specific, serve sub-areas of the City, or be a system to serve the entire City. Regardless of the area served, the stormwater treatment systems must provide a level of treatment which meets the requirements of the applicable, Florida Administrative Code (FAC), for the run-off from the first one (1) inch of rainfall for projects in drainage basins of 100 acres or more, or as an option for projects or project subunits with drainage basins less than 100 acres, the first one-half (2) inch of run-off, from the design storm in accordance with applicable FAC, in order to meet the receiving water quality standards of applicable FAC. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classification as established in applicable FAC. It is intended that all standards in these citations are to apply to all development and redevelopment and that any exemptions or exceptions in these citations, including project size thresholds, do not apply for concurrency determinations. Infill residential development within improved residential areas or subdivisions existing prior to the adoption of this comprehensive plan must ensure that its post-development stormwater run-off will not contribute pollutants which will cause the run-off from the entire improved area of subdivision to degrade receiving water bodies and their water quality as stated above. Development and redevelopment projects that are not exempt from Southwest Florida Water Management District permitting requirements must also meet the requirements of applicable FAC and Florida Statue.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Policy 7.3	The City will enforce land development regulations that require an average 25' wide upland buffer zone be established around identified wetland vegetative communities and along Lake Clinch, Lake Reedy and Lake Ida. Septic tanks and drain fields shall be placed in front yards on all lakefront properties and be placed no closer than 50' to the established mean high-water elevation of the adjoining lake. The locating of septic tanks within the 100-year flood prone area, except as replacements, shall be prohibited.
Policy 7.4	No certificate of occupancy or other final development approval shall be issued prior to certification of construction completion of the stormwater management system permitted by the Southwest Florida Water Management District.
Policy 7.6	The City shall enforce its land development regulations that require areas designated by FEMA as being in the flood prone areas be limited to a density of 1 units/acre, and have finished floor elevations 12 inches higher than base flood elevations or the existing crown in the adjoining road whichever is greater. Residential site planning shall include locating structures on individual lots located within designated flood prone areas out of the 100 year flood whenever or to the greatest extent possible while maintaining all other required setbacks and buffers. The City Engineer based on final site grading plans that show that this would not cause first floor flooding may waive the crown in road requirement for finished floor elevations.
Policy 7.7	The City shall enforce land development requirements that will require that stormwater engineering including site grading; design and construction specifications shall be reviewed by the City for approval. Approved developments will bear the total cost of both the review and construction.
Policy 7.8	The City shall enforce land development regulations that require conservation of all wetlands within the city and provide for a zoning category of development restricted for those areas shown to have wetland soils to provide for on-site jurisdiction determination by a professional environmentalist.
Policy 7.10	The city shall implement retrofitting the city's overall stormwater management system with retention/detention basins based upon recommendations from the proposed Master Stormwater Management Study (Policy 2.1) to significantly reduce this source of pollution to surface waters.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Policy 7.11	The City shall establish a Stormwater Utility Management Fee to improve the existing surface water quality and assist in meeting the water quality classifications established by DEP for Lake Clinch, Lake Reedy, and Lake Ida.
Comprehensive Plan – Conservation Element	
Policy 3.3	The City shall implement its comprehensive stormwater management polices establishing: 1. A 25' wide buffer zone adjacent to lakes and wetland areas to preserve natural vegetation wetland areas to preserve natural vegetation, which provides filtration of stormwater runoff. 2. General design and construction standards for on-site stormwater management systems for new development to ensure that post-development runoff rates, volumes and pollutant loads do not exceed pre-development conditions, and at a minimum, retain the first 2 inch of rainfall on site. 3. Standards for all new developments to ensure compliance with treatment practices and standards adopted by the Water Management District and other appropriate rules and regulations. 4. Best management practices for agricultural land uses consistent with State and Federal recommended standards to reduce pesticide and fertilizer runoff and soil erosion. 5. Prohibiting the location of septic tanks and package plants within the 100-year flood plain except as replacements.
Policy 4.1	The City shall enforce its Land Development Regulations that protect the natural functions of the 100-year floodplain so that the flood-carrying and flood storage capacity are maintained by reducing new construction densities to 1 units per acre or less within the floodplain areas, excluding property replacement.
Policy 4.3	The City shall not to allow temporary or permanent solid waste disposal sites within the City in order to protect groundwater quality. Temporary hazardous waste collection centers shall be set up based on Polk County requirements and regulations.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Policy 4.5	The City shall identify and recommend to the County and the South West Florida Water Management District environmentally sensitive lands (i.e., floodplains) that would warrant acquisition under the Florida Forever Program or the Save Our Rivers (SOR) Program.
Policy 9.6	The City of Frostproof, Polk County and the SWFWMD shall develop joint planning and management programs which include controlling water levels, preservation of wetlands and enforcement of City and County floodplain ordinances in order to protect the identified wetlands and the lake system located on Frostproof's borders.
Policy 9.7	Frostproof's environmentally sensitive lands shall include creek banks, major drainage ways, viable wetlands, (identified or unidentified), floodplains, poorly drained soils indicating potential wetland vegetation and prime groundwater recharge areas, if any. The prime groundwater recharge areas to be determined by the SWFWMD.
OBJECTIVE 10	THE CITY, IN CONCERT WITH POLK COUNTY, SHALL MAINTAIN A HAZARDOUS WASTE MANAGEMENT PROGRAM FOR THE PROPER STORAGE, RECYCLING, COLLECTION AND DISPOSAL OF HAZARDOUS WASTE.
Policy 10.1	The City shall have its Fire Department develop an emergency response plan to handle accidents involving hazardous waste.
Policy 10.2	The City shall promote the recycling of hazardous waste by publicizing the County's list of approved recyclers.
Policy 10.4	The City shall seek funding from the DEP's Local Hazardous Waste Collection Grants Program to manage hazardous wastes.
Policy 12.1	The City shall encourage the acquisition or conservation of an interconnected network of open spaces, natural areas, and agricultural lands. The network will provide for: a. Protection of natural resources and wildlife habitat. b. Habitat corridors through linked open spaces. c. Protection of historic and cultural resources. d. Recreational opportunities. e. Community health benefits.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	f. Economic development opportunities; and g. Multi-use trails connecting population centers to natural areas.
Comprehensive Plan – Capital Improvements Element	
Policy 2.7	The level of service standard that shall be applied to stormwater management facilities is the retention and detention of a storm with a 24-hour, 25 year frequency are as follows: 1. Water Quality: Peak post-development run-off rates shall not exceed peak pre-development run-off rates. 2. Water Quality: Stormwater treatment shall be required for all new development, redevelopment and when expansion occurs, and existing developed areas. The stormwater treatment system or systems can be site-specific, serve sub-areas or the City or be a system to serve the entire City. Regardless of the area served, the stormwater treatment systems must provide a level of treatment which meets the requirements of Chapter 40D-4, Florid Administrative Code (FAC), for the run-off from the first one-half (.5) inch of rainfall for the design storm in accordance with Rule 40-D, FAC, and the SWFWMD Basis of Review for ERP Applications in order to meet the receiving water quality standards of Rule 62-302 FAC. It is intended that all standards in these citations are to apply to all development and redevelopment and that any exemptions or exceptions in these citations, including project size thresholds, do not apply for concurrency determinations. Infill residential development within improved residential areas or subdivisions existing prior to the adoption of this comprehensive plan, must ensure that its post-development stormwater run-off will not contribute pollutants which will cause the run-off from the entire improved area or subdivision to degrade receiving water bodies and their water quality as stated above. Development and redevelopment projects that are not exempt from Southwest Florida Water Management District permitting requirements must also meet the requirements of FAC.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Policy 2.10	The facilities required to meet the level of service needs of existing development and previously issued development orders shall be evaluated when determining when a deficiency exists and when new facilities are required to meet new growth needs. The recommendations of the Master Stormwater Management Study shall be amended to this capital improvements program within six months of completion of the study.
OBJECTIVE 3	All public expenditures in the designated flood prone area shall support existing development patterns and not encourage substantial additional development.
Policy 3.1	The flood prone area shall be that area designated as areas of 100-year flood on the City's flood prone area map.
Policy 3.2	Public expenditures in the flood prone area shall be limited to: 1. Maintenance of existing facilities. 2. Improvements designed to improve the efficiency of existing facilities. 3. Replacement of obsolete or worn out facilities. 4. Recreation facilities. 5. Water quality improvement facilities. 6. New construction and or expansion of arterial and collector streets.
Policy 3.3	The City shall require construction within the flood prone area to conform to the standards adopted in the Frostproof Floodplain Regulations.
Policy 5.7	Policy 5.7: Where possible, public facilities including potable water, sanitary sewer, stormwater management and solid waste disposal, shall be provided and managed through enterprise fund accounts.
Unified Land Development Code – Article 5 Density, Dimensional and Setback Regulations	
Section 5.06.05. Gas Pumps and Pump Islands.	Gas pumps and pump islands are accessory structures normally associated with convenience stores, automotive service businesses, truck stops and terminals, and businesses maintaining fleets of vehicles. The intent of this Section is to set forth requirements for the location and appearance of gas pumps and pump islands. All new and substantially reconstructed facilities providing for the dispensing of fuels

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	shall meet the following: E. Liquid fuels shall be stored in underground tanks. The design of these tanks shall meet all current standards established for the prevention of leaks and environmental contamination of groundwater supplies. Fuel tanks located in an industrial zoning district may be exempt from the requirement to be located underground. Where permitted, above ground fuel tanks shall be required to meet the same setback as a gas pump or pump island.
Section 5.09.00. Waterfront Properties.	All new structures adjacent to surface water or watercourses shall be located landward of the 100 year flood plain or fifty (50) feet landward of the 10 year flood plain if one has been established (whichever is less restrictive) and a minimum twenty-five foot (25') upland buffer shall be required around identified wetlands. A site-specific survey shall be performed, signed and sealed by a professional surveyor and mapper. Water dependent structures are exempt from this requirement. Article 6, Section 6.07.06, J. provides stormwater setbacks requirements along waterfront properties. Development of waterways and canals involving dredge and fill and excavation shall require permits from State and Federal agencies having jurisdiction, including but not limited to the Southwest Florida Water Management District (SWFWMD), Army Corp of Engineers (ACOE), Florida Department of Transportation (FDOT), Florida Department of Environmental Protection (FDEP), and the Environmental Protection Agency (EPA). Such permits shall be submitted to the Building Official as part of a site development application.
Unified Land Development Code – Article 6 Development Design and Improvement Standards	
Section 6.07.03. State Agency Permitting.	The Southwest Florida Water Management District (SWFWMD) and the Florida Department of Environmental Protection (FDEP) have an operating agreement that identifies which agency will process permits for different types of projects. Generally, the SWFWMD processes residential and commercial developments, while the FDEP processes power plants, wastewater treatment plants and single-family home projects. These agencies regulate water quality and are responsible for issuing surface water management system permits which ensure that new development properly treats stormwater runoff to remove pollutants, protects wetlands and floodplains and reduces the risk of flooding. Rule 40D-4.041, Florida Administrative Code, and amendments thereto, provide conditions for which a permit is required by the

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	SWFWMD. Rule 40D-4.051, Florida Administrative Code, and amendments thereto, provides for activities which are exempt from SWFWMD permitting.
Section 6.07.03.01. Emergency Exemption to Permitting.	These regulations shall not be construed to prevent any act necessary to prevent material harm to or destruction of real or personal property as a result of a present emergency, including but not limited to, fire and hazards resulting from violent storms or hurricanes or when the property is in imminent peril and obtaining a permit is impractical. A report of any emergency action shall be made to the City Building Official, the SWFWMD and/or the FDEP as applicable, by the owner or person in control of the property on which the emergency action was taken as soon as practicable, but no more than ten (10) days following such action. All activities, nevertheless, are to be accomplished in a manner which prevents flooding of adjacent sites and roadways by stormwater runoff.
Section 6.07.04. Stormwater Management Plans and Certificates of Occupancy.	A. Stormwater Management Plan Requirements. 1. Plan submission shall meet the requirements of Section 10.03.00 of this Code. 2. If the development activity is regulated by the SWFWMD, subject to Rule 40D-4.041 or Rule 40D-4.051, Florida Administrative Code (FAC), or the FDEP, the person proposing development or redevelopment in the City shall submit to the City, the stormwater management plan/permit or permit exemption as part of, or attached to, the site plans for the proposed development; 3. The applicant shall provide any additional stormwater related information to the city's engineer if he or she finds it necessary for the proper review of the proposed activity. 4. The plan shall contain a certification that it was prepared by a professional engineer registered in the State of Florida and that the project complies with the terms of the permit. 5. The filing of an application for a permit shall constitute a grant and consent by the property owner for enforcement officials to enter and inspect the project to ensure compliance with the requirements of this Code.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	6. The applicant shall be required to adhere strictly to the plan as approved. Any changes or amendments to the plan must be approved in writing by the agency issuing the permit and by the City. 7. Approval of the stormwater management plan is required prior to obtaining a City building or development permit. B. Certificate of Occupancy. A Certificate of Occupancy may be withheld by the City in cases where it can be shown that the owner/developer has not completed construction consistent with the permit.
Section 6.07.05. Performance Criteria.	A. All stormwater management systems shall be designed to meet a level of service which accommodates a storm with a 24-hour, 25-year frequency as established by the FDOT rainfall charts. B. Peak post-development runoff rates shall not exceed peak pre-development runoff rates. C. Detention structures shall be designed to release runoff to the downstream drainage system over a period of time so as not to exceed the capacity of the existing downstream drainage system. The peak rate of discharge from a site after development or redevelopment shall approximate the peak rate of discharge from the site prior to development or redevelopment as computed for a 24-hour, 25-year frequency storm. D. The volume of runoff from a site after development or redevelopment shall approximate the volume of runoff from the site prior to the development or redevelopment and shall not exceed the latter volume by more than ten percent (10%) for a 25-year, 24-hour storm unless the intent of this recharge provision will be met through detention of the difference between said volumes, in which case said volume difference may be released over not less than a 24-hour, nor greater than a 72-hour, period of time. E. Runoff from higher adjacent or upstream lands shall be considered, and a provision for conveyance of such runoff shall be included in the drainage plan. The drainage system shall not adversely impact downstream owners or adjacent lands.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	F. No site alteration shall cause siltation of wetlands, pollution of downstream wetlands or reduce the natural retention or filtering capabilities of wetlands. G. Structural controls and other Best Management Practices (BMP's) used to reduce pollutants in stormwater discharges shall be operated and maintained so as to function in accordance with the original design or performance criteria. Operation and maintenance shall be done so as to ensure the treatment of stormwater, or reduction in pollutants in stormwater discharges, consistent with appropriate Federal, State or Water Management District rules or permit requirements. H. Runoff shall be treated to remove oil and floatable solids before discharge from the site.
Section 6.07.06. System Design Standards.	A. The design, construction, and performance of all stormwater management systems shall comply with the provisions of Chapter 62-25 (Stormwater Discharge) and Chapter 63-302 (Surface Water Quality) of the Florida Administrative Code (FAC); the requirements of the Southwest Florida Water Management District (SWFWMD), Rules 40D-4 (Individual Resource Permits), 40D-40 (Standard General Environmental Resource Permits) and 40D-400 (Environmental Resource Permit) of the Florida Administrative Code (FAC); the Florida Department of Environmental Protection's (FDEP's) Best Management Practices, and Chapter 373 (Management and Storage of Surface Waters) of the Florida Statutes. Physical structures shall be constructed consistent with Florida Department of Transportation (FDOT) standards. B. The design and construction of the proposed stormwater management system shall be certified as meeting the requirements of this Section by a professional engineer registered in the State of Florida. C. In phased developments, stormwater systems for each integrated phase shall be independently functional unless specific development provisions are approved by the City. D. To the maximum extent practicable, natural vegetation shall be used as a component of drainage design. The manipulation of the

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	water table shall not be so drastic as to endanger the natural vegetation beneficial to water quality. E. The proposed stormwater management system shall be designed to accommodate the stormwater that originates within the development and stormwater that flows onto or across the development from adjacent lands. F. No surface water may be channeled or directed into a sanitary wastewater system. G. All man-made components within a stormwater management system shall be easily accessible for maintenance by streets, public rights-of-way or access easements. H. Dredging, clearing of vegetation, deepening, widening, straightening, stabilizing or otherwise altering natural surface waters shall be minimized. I. Natural surface waters shall not be used as sediment traps during or after development. J. A twenty-five (25) foot wide vegetated buffer shall be retained or created along the shores, banks or edges of all natural or man-made surface waters to prevent erosion and provide filtration of stormwater runoff. K. Retention areas shall be designed to prevent or discourage the breeding and hatching of mosquitoes.

TABLE D-8
CITY OF FROSTPROOF POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Section 6.07.07. Intergovernmental Coordination of Approval.	Prior to development plan approval by the City, the stormwater management plan shall be reviewed, and its approval documented by all other governmental authorities having jurisdiction. Approval by such authorities shall be a mandatory requirement prior to obtaining a building permit from the city. Government agencies which may have authority include: A. Florida Department of Transportation (FDOT); B. Southwest Florida Water Management District (SWFWMD); C. Florida Department of Environmental Protection (FDEP); D. Polk County Board of County Commissioners (BOCC); E. Army Corp of Engineers (ACOE); and F. The Environmental Protection Agency (EPA).
Unified Land Development Code – Article 9 Natural Resource Protection	
Entire Article including Introduction	It is the intent of the City Council, through the regulations of this Article, to protect, maintain and enhance the immediate and long-term health, safety and general welfare of the community by regulating land development activity that has the potential of degrading the natural resources which exist within the city. More specifically, it is the purpose of this Article to create a clear compilation of regulatory standards which implement the environmental goals, objectives and policies of the Frostproof Comprehensive Plan. Natural resources shall be protected from the adverse impacts of development through the following flood damage prevention, wetlands preservation and wellhead protection regulations. All records pertaining to the provisions of this Article shall be open for public inspection and shall be maintained in the Office of the Building Department.
Section 9.01.02. Purpose and Objectives.	A. Purpose It is the purpose of this Section to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: 1. Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

TABLE D-9:
CITY OF HAINES CITY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan	
Chapter 1 Future Land Use Element	1. Requirements for Future Land Use Element goals, Objectives and Policies (c) The element shall contain one or more policies for each objective which addresses implementation activities for the: (1) regulation of land use categories included on the future land use map or map series; subdivisions; signage; and areas subject to seasonal or periodic flooding;
Chapter 8 Infrastructure 5. Drainage	Goal 8.5. Provide adequate protection of existing stormwater management systems and receiving water bodies.
Objective 8.5.1.	Regulation of Stormwater Discharges. The City shall continue to regulate stormwater discharges to prevent flooding of existing and proposed stormwater facilities.
Land Development Regulations - Chapter 14 Flood Protection	
14.1.3. – Intent	The purposes of this chapter and the flood load and flood resistant construction requirements of the Florida Building Code are to establish minimum requirements to safeguard the public health, safety, and general welfare and to minimize public and private losses due to flooding through regulation of development in flood hazard areas to: A. Minimize unnecessary disruption of commerce, access and public service during times of flooding; B. Require the use of appropriate construction practices in order to prevent or minimize future flooding damage; C. Manage filing, grading, dredging, mining, paving, excavation. Drilling operations, storage of equipment or materials, and other development which may increase flood damage or erosion potential; D. Manage the alteration of flood hazard areas, watercourses, and shorelines to minimize the impact of development on the natural and beneficial functions of the floodplain; E. Minimize damage to public and private facilities and utilities. F. Help maintain a stable tax base by providing for the sound use and development of the flood hazard areas; G. Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events.

TABLE D-10:
VILLAGE OF HIGHLAND PARK POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Objective 1 Policy 1.1	Highland Park shall regulate the use of land consistent with the Future Land Use Element and the Future Land Use Map, that in turn shall ensure the compatibility of adjacent land uses, and, at a minimum, shall: e) Regulate land development in areas subject to periodic flooding and provide for drainage and stormwater management.
Policy 3.1	The Village shall identify existing land areas with potential development limitations necessitated by natural conditions and areas where development could adversely affect or be adversely affected by significant natural resources and man-made facilities and features. Control the density and intensity of development within such areas. The following areas of limited development are established in the Future Land Use Element text and map series for the Village of Highland Park: a) Floodplain Protection Areas (depicted on the Floodplains Map); b) Wetland Protection Areas (depicted on the Wetland Areas Map); c) Soils-Limited Areas (depicted on the Soils Map); d) Wellhead Protection Areas (Interim area as described by Policy 3.5. However, if Policy 3.5 is not adopted as a permanent standard, SWFWMD and the Village of Highland Park must further coordinate to determine Wellhead Protection Areas); and e) Historic Areas (depicted on the Future Land use Map).
Policy 3.2	Floodplain Protection Areas are established to indicate areas subject to potential periodic flooding and to limit uses and intensities to those for which the risk of loss would be minimal and which do not alter the natural function of the floodplain. The 100 Year Floodplain Map shall designate as Floodplain Protection Areas those areas classified by the Federal Emergency Management Agency (FEMA) as within the 100-year floodplain. These areas are designated on Floodplain Map in the Future Land Use Element.
Policy 3.3	Wetland Protection Areas, designated by the U.S. Department of Interior on Map 1.3 in the Future Land Use Element, are established to indicate potential wetland areas and to limit uses and intensities to those which would have minimal impact upon the natural functions of the wetland.
Policy 3.6	Wellhead Protection Zones shall prohibit the following storage activities and land uses within the designated 300 ft. radius of potable water wells within its jurisdiction: a) Landfills. b) Facilities for the bulk storage, handling or processing of materials

TABLE D-10:
VILLAGE OF HIGHLAND PARK POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	on the Florida Substance List, with the exception of chlorine that is used for potable water disinfection. c) Activities that require the storage, use or transportation of restricted substances, agricultural chemicals, petroleum products, hazardous toxic waste, medical waste, etc. d) Feedlots or other commercial animal facilities. e) Wastewater treatment plants and percolation ponds. f) Mines; and g) Excavation of intersecting waterways or drainage facilities.
Policy 3.7	The Village of Highland Park shall require that all development proposals be accompanied by evidence that an inventory of wetlands; soils posing severe limitations to construction; unique natural habitats; endangered species of wildlife and plants; and areas prone to periodic flooding has been conducted. The Village shall further require that the extent to which any development or redevelopment is proposed to be placed in/on, to disturb, or to alter the natural functions of any of these resources be identified. Such identification shall occur at a phase in the development review process that provides the opportunity for the Village to review the proposed project to ensure that direct and irreversible impacts on the identified resources are minimized, or in the extreme, mitigated. Where development is determined to encroach upon a resource, Highland Park shall require a specific management plan to be prepared by the developer, which includes necessary modifications to the proposed development, specific setback and buffers, and clustering of development away from site resources, to ensure the protection, preservation or natural functions of the resource. [9J-5.006(3)(c)1,4,6]
Comprehensive Plan – Infrastructure Element	
Policy 2.11	Amend the land development regulations to protect cones of influence. Cones of influence shall be designated as the area within a 3600-foot radius of the wellhead. Proposed incompatible land uses within designated cones of influence shall be prohibited. The use or storage of hazardous materials within designated cones of influence shall be prohibited. [9J 5.011(2)(c)4.]
Policy 4.1	The following shall be the level of service standards for stormwater facilities: a. Drainage Structures: Ability to handle 25-year, 24-hour storm event. b. Stormwater Facilities: 25-year, 24-hour storm event at top of bank or berm. c. Storm sewers: Capacity to handle a 25-year storm event.

TABLE D-10:
VILLAGE OF HIGHLAND PARK POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Policy 4.2	For all new development and redevelopment, post-development peak-discharge volumes and runoff-rates shall not exceed the corresponding pre-development volumes and rates. All development requests, except those for individual single-family dwelling units on a lot of record, minor subdivisions, and minor commercial sites, shall be required to submit engineering plans, prepared by a professional engineer licensed to practice in Florida, for the purpose of providing evidence of compliance with this policy. Single-family dwelling units on existing lots of record, minor subdivisions, and minor commercial sites are not considered to pose a significant amount of adverse impacts with regard to stormwater runoff. However, this does not exempt them from meeting the Level of Service Standards for storm-water management.
Policy 4.3	The volume of stormwater runoff to be treated for a site shall be determined by the type of treatment system. A wet detention treatment system shall treat one inch of runoff from the contributing area. Detention with an effluent filtration system (manmade underdrains), on-line and offline treatment systems shall treat runoff from the first one inch of rainfall; or as an option for projects or project subunits with drainage areas less than 100 acres, the first one-half inch of runoff. In determining the runoff from one inch of rainfall, calculations must be provided to determine the runoff from the directly connected impervious areas separately from any other contributing areas.
Policy 4.4	The Village of Highland Park shall continue to maintain stormwater drainage capacity in its natural drainage system until those are no longer safe, convenient, or economically feasible for community residents.
Policy 4.5	All structures shall have a floor elevation at or above the 100-year flood elevation.
Comprehensive Plan – Conservation Element	
OBJECTIVE 1:	SURFACE WATER RESOURCES - IN COORDINATION WITH THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE VILLAGE OF HIGHLAND PARK SHALL PROTECT AND ENHANCE THE WATER QUALITY AND BIOLOGICAL HEALTH OF LAKE EASY. THE VILLAGE SHALL ENSURE THAT THE TROPHIC STATE INDEX OF LAKE EASY DOES NOT RISE DUE TO THE QUALITY OF STORMWATER RUNOFF FROM THE VILLAGE OF HIGHLAND PARK. (POLICIES SET FORTH IN THE SANITARY SEWER, SOLID WASTE, DRAINAGE, POTABLE WATER, AND NATURAL GROUNDWATER AQUIFER RECHARGE ELEMENT ALSO ADDRESS THIS CONCERN.)
OBJECTIVE 3:	FLOODPLAINS – UPON PLAN ADOPTION, THE VILLAGE OF HIGHLAND PARK SHALL PROTECT THE NATURAL FUNCTIONS OF FLOODPLAINS BY

TABLE D-10:
VILLAGE OF HIGHLAND PARK POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	RESTRICTING ANY DEVELOPMENT IN ANY AREA DESIGNATED AS A FLOODPLAIN.
Land Development Regulations – Article 3 Development Design and Improvement Standards	
Section 3.04.00 Stormwater Management	Treatment of stormwater runoff shall be required for all development, redevelopment and, when expansion occurs, existing developed areas. The stormwater treatment system or systems can be project specific or serve sub-areas within the County. The design and performance of all stormwater management systems shall comply with applicable State Regulations (Chapter 17-25 and Chapter 17-302, Florida Administrative Code) and the rules of the Southwest Florida Water Management District stated in Chapter 40D-4, F.A.C. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 17-302, F.A.C. Steps to control erosion and sedimentation shall be taken for all development.
Land Development Regulations - Article 5 Resource Protection Standards	
5.01.00 Development in Flood-Prone Areas 5.01.01 Purpose and Intent	It is the purpose and intent of this Section to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas.

TABLE D-11:
TOWN OF HILLCREST HEIGHTS POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Objective 1	The Town of Hillcrest Heights will manage future growth and development through the implementation and enforcement of Land Development Regulations.
Policy 1.2	The Town's Land Development Regulations shall address land use, zoning, the subdivision of land, stormwater drainage, signage, parking access, on-site traffic flow, and periodic and seasonal flooding.
Policy 2.6	The developer or owner of any development site shall manage stormwater run-off on-site. Post-development run-off rates must be consistent with the level of service standard established in the Infrastructure Element. Stormwater treatment and disposal facilities shall meet the design and performance standards established in Section 17-25.025, F.A.C. The first inch of stormwater run-off shall be treated on-site, pursuant to Section 17-3.051, F.A.C. Stormwater discharge facilities shall be designed such that the receiving water body shall not be degraded below minimum conditions necessary to assure the suitability of water for the designated use of its classification as established in Chapter 17-3, F.A.C. These standards shall apply to all new development and redevelopment.
Policy 3.1	The Town shall continue to enforce Land Development Regulations which control the density and intensity of development within the following areas of limited development for the Town of Hillcrest Heights: a. Floodplain Protection Areas. Floodplain Protection Areas are established to indicate areas adjacent to Crooked Lake which are subject to potential periodic flooding. Development shall be limited to recreational structures related to Crooked Lake, such as boat docks and other similar structures for which the risk of loss would be minimal, and which do not alter the natural function of the floodplain. The 100 Year Floodplain Map shall designate as Floodplain Protection Areas those areas classified by the Federal Emergency Management Agency (FEMA) as occurring within the 100-year floodplain. b. Soils-Limited Areas. Soils-Limited Areas are established to indicate areas where development may be limited due to poor soil conditions. The Soils Map shall designate as Soils-Limited Areas those areas delineated by the U.S. Soil Conservation Service (SCS) as having "severe limitations" for septic-absorption fields or for the foundations of small buildings without basements.

TABLE D-11:
TOWN OF HILLCREST HEIGHTS POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	c. Wellhead Protection Areas. Wellhead Protection Areas are established to protect existing and future public supply potable water wells from contamination. Wellhead Protection Areas are cones of influence around existing and future public supply to protect potable water wells from contamination. Wellhead Protection Areas are cones of influence around existing or future wellheads which extend into the jurisdiction of Hillcrest Heights, as determined by a professional hydrologist.
Comprehensive Plan – Infrastructure Element	
Policy 6.5	Best management practices for stormwater runoff shall be included in a new development's open space and landscaped areas to reduce maintenance and improve aesthetics.
Comprehensive Plan – Conservation Element	
Policy 1.2	The Town of Hillcrest Heights designates the floodplain of Crooked Lake as being environmentally sensitive.
Policy 1.3	Hillcrest Heights shall conserve, use, and protect its floodplain along Crooked Lake through enforcement of the Town's Land Development Regulations, including zoning, site plan review, buffer zone, and stormwater treatment regulations.
Policy 1.5	The Town of Hillcrest Heights shall abide by the Florida Department of Environmental Protection Best Management Practices program which monitors point source discharges into lakes. The Town shall adopt and enforce the Land Development Regulations that require shoreline buffer zones adjacent to lakes to preserve natural vegetation, and general design and construction standards for on-site stormwater management systems for new development and redevelopment to ensure that post-development runoff rates, volumes, and pollutant loads do not exceed pre-development conditions.
Land Development Regulations - Article 6 Use Districts Chapter 6. Floodplain Management District	
Section 1. Lands to Which this Chapter Applies	These regulations shall apply to all lands within the jurisdiction of the Town of Hillcrest Heights that are depicted on the official zoning map as being a flood hazard district. The flood hazard district shall be considered as an overlay district to existing zoning districts. Uses permitted within the underlying districts shall be permitted provided they conform to the requirements of this chapter.

APPENDIX D: INTEGRATION INTO OTHER PLANNING MECHANISMS

TABLE D-12:
CITY OF LAKE ALFRED POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Policy 1.1.1	Through the application of its Land Development Regulations and the Future Land Use Map Series, the City will encourage and direct development to areas where public facilities and services are available or are projected to be available.
Policy 1.2.3	The City will ensure that development of areas adjacent to U.S. Highway 17/92 shall be in conformance with an agreement between the City of Lake Alfred, Polk County, and the Florida Department of Transportation to mitigate traffic impacts. At a minimum, this interlocal agreement should address access management, facility design options, right of way needs, and on site traffic flow.
Policy 1.9.2	The City, through the implementation of its Land Development Regulations, will ensure that development approvals are consistent with the objectives and policies of the Polk County Hazard Mitigation Strategy, August 1999, as amended. In so doing, the City shall specifically limit the extension of infrastructure to areas of repetitive loss due to natural hazards, especially within any 100-year floodplain or wetland area.
Land Development Regulations	
Sec. 5.5. **Stormwater**	**Applicability.** All development, redevelopment, or expansion of property must manage stormwater runoff in accordance with State Regulations (Chapter 17-25 and Chapter 17-302, Florida Administrative Code) and the rules of the Southwest Florida Water Management District (Chapter 40D-4, Florida Administrative Code). Stormwater discharge facilities shall be designed to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 17-302, Florida Administrative Code. Steps to control erosion and sedimentation shall be taken for all development.
Sec. 7.1. **Development in Flood-Prone Areas**	A. **Title.** These regulations shall be known as the Floodplain Management Regulations of the City of Lake Alfred, hereinafter referred to as "these regulations". B. **Scope.** The provisions of these regulations shall apply to all development that is wholly within or partially within any flood hazard area, including but not limited to the subdivision of land; filling, grading, and other site improvements and utility installations; construction, alteration, remodeling, enlargement, improvement, replacement, repair, relocation or demolition of buildings, structures, and facilities that are exempt from the Florida Building Code; placement, installation or replacement of tanks;

TABLE D-12:
CITY OF LAKE ALFRED POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	placement of recreational vehicles; installation of swimming pools; and any other development. This section excludes those areas within the Green Swamp Area of Critical State Concern (GSACSC). For regulations regarding development in the floodplains in the GSACSC, refer to Section 2.3.3. Green Swamp Overlay District. C. **Intent.** The purpose of these regulations and the flood load and flood resistant construction requirements of the Florida Building Code are to establish minimum requirements to safeguard the public health, safety, and general welfare and to minimize public and private losses due to flooding through regulation of development in flood hazard areas to: 1. Minimize unnecessary disruption of commerce, access and public service during times of flooding; 2. Require the use of appropriate construction practices in order to prevent or minimize future flood damage; 3. Manage filling, grading, dredging, mining, paving, excavation, drilling operations, storage of equipment or materials, and other development which may increase flood damage or erosion potential; 4. Manage the alteration of flood hazard areas, watercourses, and shorelines to minimize the impact of development on the natural and beneficial functions of the floodplain; 5. Minimize damage to public and private facilities and utilities; 6. Help maintain a stable tax base by providing for the sound use and 7. Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events; and 8. Meet the requirements of the National Flood Insurance Program for community participation as set forth in the Title 44 Code of Federal Regulations, Section 59.22. D. **Coordination with the Florida Building Code.** These regulations are intended to be administered and enforced in conjunction with the Florida Building Code. Where cited, ASCE 24 refers to the edition of the standard that is referenced by the Florida Building Code.

TABLE D-13:
TOWN OF LAKE HAMILTON POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Objective 1.6: Land Development Regulations	Manage future growth and development through the preparation, adoption, implementation, and enforcement of Land Development Regulations.
Policy 1.6.2	The adopted Land Development Regulations shall regulate the use of land consistent with the Future Land Use Element and the Future Land Use Map Series, shall ensure the compatibility of adjacent land uses, and, at a minimum, shall: d) Regulate land development in areas subject to periodic flooding and provide for drainage and stormwater management.
OBJECTIVE 2.1	PRESERVE EXISTING WETLAND AREAS SO AS TO PROVIDE NATURAL FLOOD STORAGE AREAS AND MINIMIZE EROSION, FACILITATE THE RECHARGE OF SURFICIAL AQUIFERS, ACHIEVE BIOLOGICAL FILTRATION OF URBAN AND AGRICULTURAL POLLUTANTS, AND PROVIDE NATURAL HABITATS FOR ANIMAL AND PLANT SPECIES.
Policy 2.1.2	Establish zoning regulations to require that development shall be allowed only upon non-flood portions of any property subject to seasonal or periodic flooding, and that development be permitted only if the natural hydrological characteristics of flood-prone areas are maintained.
Policy 2.4.2	Establish standards for stormwater retention and runoff to be utilized in new development.
Comprehensive Plan – Infrastructure Element	
Policy 3.1.2	Provide adequate lake basins and storage areas for the accommodation of 25-year floodwaters without adversely affecting adjacent private lands.
Policy 3.1.6	Best Management Practices for stormwater runoff shall be included in a new development's open space and landscaped areas to reduce maintenance and improve aesthetics.
OBJECTIVE 3.2: PROTECTION OF NATURAL DRAINAGE FEATURES	REGULATE LAND USE AND DEVELOPMENT TO PROTECT THE FUNCTIONS OF NATURAL DRAINAGE WAYS THAT SERVE AS PRIMARY CONVEYANCE SYSTEMS FOR STORMWATER RUNOFF.
Policy 3.3.2	For all new development and redevelopment, post-development peak-discharge volumes and runoff-rates shall not exceed the corresponding pre-development volumes and rates. All development requests, except those for individual single-family dwelling units on a lot of record, minor

TABLE D-13:
TOWN OF LAKE HAMILTON POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	subdivisions, and minor commercial sites, shall be required to submit engineering plans, prepared by a professional engineer licensed to practice in Florida, for the purpose of providing evidence of compliance with this policy. Single-family dwelling units on existing lots of record, minor subdivisions, and minor commercial sites are not considered to pose a significant amount of adverse impacts with regard to stormwater runoff. However, this does not exempt them from meeting the Level of Service Standards for storm-water management.
Policy 3.3.	The volume of stormwater runoff to be treated for a site shall be determined by the type of treatment system. A wet detention treatment system shall treat one inch of runoff from the contributing area. Detention with an effluent filtration system (manmade underdrains), on-line and offline treatment systems shall treat runoff from the first one inch of rainfall; or as an option for projects or project subunits with drainage areas less than 100 acres, the first one-half inch of runoff. In determining the runoff from one inch of rainfall, calculations must be provided to determine the runoff from the directly connected impervious areas separately from any other contributing areas.
Comprehensive Plan – Conservation Element	
OBJECTIVE 2	THE TOWN SHALL INCLUDE IN ITS LAND DEVELOPMENT REGULATIONS, DEVELOPMENT STANDARDS AND MITIGATION PROCEDURES TO CONSERVE, APPROPRIATELY USE, AND PROTECT THE NATURAL FUNCTION OF FLOODPLAINS AND WETLANDS AND TO PROTECT CONSERVATION WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS WITHIN THE TOWN.
Policy 2.9	Development proposals shall be accompanied by evidence that an inventory of wetlands; soils posing severe limitations to construction; unique habitat; endangered species of wildlife and plants; and areas prone to periodic flooding has been conducted. The Town shall further require that the extent to which any development or redevelopment is proposed to be placed in/on, to disturb, or to alter the natural functions of any of these resources be identified. Such identification shall occur at a phase in the development review process that provides the opportunity for the Town to review the proposed project to ensure that direct and irreversible impacts on the identified resources are minimized, or in the extreme, mitigated. Where development is determined to encroach upon a resource, the Town shall require a specific management plan to be prepared by the developer, which includes necessary modifications to the proposed development, specific setback and buffers, and clustering of development away from site

TABLE D-13:
TOWN OF LAKE HAMILTON POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	resources, to ensure the protection, preservation or natural functions of the resource.
Comprehensive Plan – Intergovernmental Coordination Element	
Policy 7.6	The Town will enter into an interlocal agreement with Polk County for joint projects identified in the Town's Stormwater Management Plan and the County's Stormwater Management Plan.
Land Development Regulations - Article 4 Subdivisions	
Sec. 16-270. Suitability of land	Land that is subject to flooding conditions and land that is deemed by the town council based on USGS topographical surveys or other engineering considerations to be subject to flooding shall not be platted for residential occupancy, nor for such other use as may endanger health, life, or property, or aggravate erosion or flood conditions, until the developer provides adequate drainage or other corrective measures.
Land Development Regulations - Article 7 Development in Flood-Prone Areas	
Division 1 Generally Sec. 16-399 – Purpose and Intent	It is the purpose and intent of this article to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas.
Land Development Regulations - Article 8 Resource Protection Standards	
Sec. 16-582. - Purpose and intent.	It is the purpose of this division to maintain water quality and reduce nutrient loading in the town's lakes. In order to achieve this, the standards in this division restrict the amount of clearing or removal of shoreline vegetation and require additional stormwater treatment.

TABLE D-14:
CITY OF LAKE WALES POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Objective 1: Land Development Regulations Policy I.1.1.3	It shall be the goal of the City of Lake Wales to provide a system for orderly growth and development to ensure that the character, magnitude, and location of all land uses fosters a high quality of life that balances a natural, physical, social, and economic environment that meets the needs of the present and future population. d. Regulate development in areas subject to periodic flooding, and provide for drainage and stormwater management;
Objective 3	Protection of Natural, Historical, and Cultural Resources To the maximum extent possible, protect natural, historical, and cultural resources from the negative impacts of development and redevelopment. The land development regulations shall incorporate provisions to protect resources as delineated by the policies of this objective.
Policy I.1.3.2	Floodplain Protection Areas are established to indicate areas subject to potential periodic flooding and to limit uses and intensities to those for which the risk of loss would be minimal and which do not alter the natural function of the floodplain. Floodplain Protection Areas shall be defined as those areas identified by the Federal Emergency Management Agency (FEMA) in its most recent Flood Insurance Study for Lake Wales as within a 100-year floodplain or having a 1% chance of being flooded in any given year. Standards conforming to FEMA requirements for construction in the regulatory floodplains shall be maintained in the land development regulations. (See "Conservation" map in Future Land Use Map Series.) Development within Floodplain Protection Areas shall be discouraged and density/intensity may be transferred from undeveloped floodplain areas to contiguous non-floodplain areas within the same 100-year flood basin. Development or redevelopment within Floodplain Protection Areas shall meet the requirements of the land development regulations and shall not result in post development run-off rates which exceed pre-development run-off rates for storm frequencies at least as stringent as those rates established by the Southwest Florida Water Management District. When there are no reasonable alternatives, encroachment, including fill, new construction, substantial improvements, and other development, shall only be permitted upon certification by a registered professional engineer that encroachments shall not result in any increase in flood levels during occurrence of the 100-year base-flood discharge. Additionally, no new residential lots shall be created that are entirely within the 100-year flood zone. Development within the

TABLE D-14:
CITY OF LAKE WALES POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	floodplain protection areas shall conform to the following criteria: All permits from an agency with jurisdiction shall be approved prior to, or concurrently with, the City issuing the final development order for the development. Impacts shall first be avoided. Secondly, where they cannot be avoided, impacts shall be minimized and shall be mitigated. Impacts where unavoidable and where properly mitigated, as determined by the City of Lake Wales and by agencies having jurisdiction, shall be permitted for the purpose of beneficial use of the property.
Land Development Regulations – Article VI Resource Protection Standards	
Division 1 – Development in Flood Prone Areas (and all under policies)	Sec. 23-601. Statutory authorization, findings of fact, purpose and objectives.

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Policy FLU-1.2G	The City of Lakeland has indicated on its Future Land Use Map (MAP FLU-6)areas where major public facilities needed to support future development can be located within the Public Buildings and Grounds and Institutional Uses PI future land use category so that suitable land is reserved and available. The location of public safety and security facilities such as fire/ambulance stations and community policing sites shall be allowed in all land use categories except Conservation, or Preservation, and shall be regulated by the City's LDC to ensure compatibility with surrounding land uses.
Objective FLU-1.5	Location of future land uses on the Future Land Use Map (MAP FLU-6) has given consideration to natural land development limitations, and significant natural, archaeological, and historic resources will be protected from incompatible development through use of the Future Land Use Map (MAP FLU-6) and following the objectives and policies of this Comprehensive Plan. Policy FLU-1.5A: The City of Lakeland has identified generalized areas with development limitations necessitated by soil conditions, wetlands, hydrology or topography. When development is proposed, the developer will be required to provide specific information and assessments of environmental limitations as part of the project application and review. The City will strictly control development densities and intensities where such limitations are indicated. Policy FLU-1.5B: The City of Lakeland will require proposed developments to provide adequate information regarding soil suitability for the intended uses. … Policy FLU-1.5D: The City of Lakeland has identified environmentally sensitive lands, preservation, and conservation areas on the Future Land Use Map series and will protect such areas from the negative impacts of development. Policy FLU-1.5E: The City of Lakeland has designated potable water wellfields and high aquifer recharge areas on the Future Land Use Map series and will protect such areas from the negative impacts of development.

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	Policy FLU-1.5F: The City of Lakeland will require the developer/owner of any site to be responsible for the on-site management of runoff in a manner which assures that post-development runoff rates, volumes and pollutant loads do not exceed pre-development conditions. The City will use special setbacks and surface water management regulations to prevent deterioration of area waters. … Policy FLU-1.5J: The City of Lakeland will continue to require developers of new or expanded mobile home or recreational vehicle parks to provide adequate emergency shelter space to house the entire project population.
Objective FLU-1.9	Existing land uses and zoning designations inconsistent with the character or proposed future land use of the area will be reduced or eliminated. Inconsistencies with the locally adopted Hazard Mitigation Strategy shall also be reduced where financially feasible. Policy FLU-1.9A: The City of Lakeland will identify, reevaluate, and work toward the elimination of existing land uses inconsistent with the City's character and proposed future land use. Existing non-conforming land uses may remain, with normal maintenance, but will not be allowed to expand or redevelop. Policy FLU-1.9B: The City of Lakeland will identify, reevaluate, and eliminate zoning that is inconsistent with the Future Land Use Map (MAP FLU-6) or other policies within this comprehensive plan. Existing non-conforming land uses may remain, with normal maintenance, but will not be allowed to expand or redevelop.
Objective FLU-1.10	Future growth and development will be managed through the preparation, adoption, implementation, and enforcement of the Land Development Code. Policy FLU-1.10A: The City of Lakeland will continue to enforce and periodically evaluate and update its LDC that contain specific and detailed provisions required to implement the adopted comprehensive plan and which, at a minimum: 1) Provide standards for the subdivision of land;

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	2) Provide standards for the use of land and water consistent with the Future Land Use Element, 3) Ensure the compatibility of adjacent land uses and provide for open space; 4) Protect lands designated for conservation on the Future Land Use Map (MAP FLU-6) and in the Conservation Element; 5) Provide standards for areas subject to seasonal and periodic flooding and provide for drainage and stormwater management; 6) Protect potable water wellfields and aquifer recharge areas; 7) Provide standards for signage; 8) Require noise walls or appropriate noise buffers for new residential developments locating near an existing or planned and funded portion of the Florida Turnpike Enterprise toll road system within the City; 9) Ensure safe and convenient onsite traffic flow and vehicle parking needs; and 10) Provide that development orders and permits will not be issued which result in a reduction of the level of service for the affected public facilities below the level of service standards adopted in the comprehensive plan. Policy FLU-1.10B: The City of Lakeland will continue to enforce and assess for consistency all land development regulations which address the location and characteristics of all land uses in accordance with the Future Land Use Map (MAP FLU-6) and the policies and descriptions of types, sizes, densities, and intensities of land uses contained in this element. Policy FLU-1.10C: The City of Lakeland will, to the extent possible, coordinate its LDC with those of Polk County and seek a more uniform future land use classification system to jointly address the organization of land uses in the common Lakeland Planning Area.
	Green Swamp Area of Critical State Concern (ACSC) Policy FLU-1.14E: The following City of Lakeland future land use categories shall be allowed in the Green Swamp Area of Critical State Concern, ACSC, as per the provisions for each:

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	Lakeland Future Land Uses Allowed in Green Swamp ACSC: a) Agriculture Residential Low, ARL b) Residential Very Low, RVL c) Public Institutional, PI d) Business Park, BP e) Convenience Center, CC f) Recreation, R g) Conservation, C h) Preservation, P All densities are gross densities. All land use categories shall be as defined already in the Future Land Use Element of the *Lakeland Comprehensive Plan* unless further or newly defined below in this Section. Adequate transportation access to serve development shall include paved roadway access and internal paved roads. Floodplain areas shall mean the 100-year floodplain areas as defined by the effective Federal Emergency Management Agency (FEMA) maps/panels. Policy FLU-1.14F: Agricultural Residential Low, ARL. This land use is intended specifically for the Green Swamp ACSC but may be applied in other areas as shown in the "suburban development area" as depicted in MAP FLU-2 Future Land Use Intensity Areas illustration. Allowed density and use: a) Agricultural uses and single-family residential development of up to 1 unit per 10 acres without central water or wastewater, but with stabilized private road or paved public road access. b) Clustering to meet the open space, wetland and/or floodplain protection requirements for the ACSC may allow minimum 40,000 square foot lots in ARL land uses as long as the overall gross density for the property is not exceeded. Policy FLU-1.14G: Residential Very Low, RVL. This land use is intended specifically for the Green Swamp ACSC but may be applied in other areas as shown in the "suburban development area." Allowed density and use: a) Single family residential development at a maximum density of 3 units/acre; central water, central wastewater and adequate transportation access are *required*.

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	b) Agricultural activity such as crop production, silviculture, cattle grazing/pasture uses and aquaculture uses; however, feed lots, poultry farms and similar "noxious" uses shall be prohibited. Policy FLU-1.14H: Conservation, C, and Preservation, P, land uses. In the Green Swamp ACSC, Preservation (P) and Conservation (C) future land uses are intended primarily for passive recreation including trail uses as well as open space uses. As stated in other portions of the Future Land Use Element, the Preservation land use category is intended for publicly-owned sites whereas Conservation land uses may be privately held and both land use categories are intended to protect identified natural resources, including wetland, 100-year floodplain, creek and/or stream features as well as habitat areas (plant and/or animal). There is no underlying density allowed in Preservation. In the Area of Critical State Concern, Conservation (C) future land use areas, a maximum density of one dwelling unit per 20 acres shall be allowed on upland areas (not floodplain or wetland areas). A single primary access road where consistent with City policies and standards including for natural resource protection, and as approved by Public Works Engineering, will be allowed to access the uplands. Any impacts to wetlands for such an access road shall be made only as a last resort and must include proper mitigation measures as approved by applicable regional and state agencies. Level one utility and essential service facilities as defined by the City's LDC and as permitted by the City and applicable federal, state and/or regional agencies are allowed in Conservation land uses but shall not include any prohibited uses listed in this Plan for the Green Swamp ACSC. Any changes to LDC impacting the ACSC shall be subject to DEO review for impacts to the ACSC. Policy FLU-1.14I: Prohibited uses In the Green Swamp ACSC within City of Lakeland, prohibited uses shall include the following as of the date of the adoption of these regulations: a) golf courses b) mining c) electric power generation facilities of any type d) hazardous substances or materials: no substances or materials shall be stored or used except as they would, in such quantity, be permissible for domestic or household purposes

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	e) package wastewater treatment facilities, wastewater treatment residuals and the spreading of sludge from septic tanks f) new schools, private or public g) petroleum pipelines h) wholesale chemical operations i) dry cleaning plants j) chemical research operations k) petroleum related industries and fuel dealers (however, gas stations may be permitted) l) industrial activities as defined in the Federal EPA's National Pollution Discharge Elimination System (NPDES) for Stormwater Associated with Industrial Activity (Cha. 40, CFR, Part 122), with the exception of general construction activities Prior to issuance of a City permit, the developer or their representative for a proposed development within the Critical Area of State Concern shall either provide evidence that the criteria within the permit requirements for all other state, regional or federal permits have been satisfied (including EPA NPDES, and water management district stormwater criteria for preventing erosion and sediment from being discharged offsite) or provide written confirmation of receipt of City notice that all such other permits must be obtained by the developer prior to commencement of development. Policy FLU-1.14J: Services to Non-residential land uses in the Green Swamp ACSC. All non-residential land uses in the ACSC must be served with central water, adequate transportation access and central wastewater service. Policy FLU-1.14K: Septic Systems in the ACSC. Within the ACSC, any necessary septic system permits shall be obtained prior to beginning site development. Septic systems shall be setback a minimum of 75 feet from designated wetlands, 100 feet from the high-water line of water bodies and outside the 100-year floodplain. Land uses which seek to expand utilizing previously approved septic tank systems may do so only where central wastewater is not currently available as per Ch. 381.0065 F.S., and where permissible by the Polk County Health Department. The City endorses and will adopt a supporting resolution to continue to enforce the Polk County Health

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	Department's septic tank inspection program for properties located within the Green Swamp ACSC on any lands annexed by the City. Upon extension of City wastewater service such that it becomes available to serve an area within the ACSC of the City of Lakeland, then septic system use shall be terminated and connection to the City's centralized wastewater system required; the timing of such connection shall be as directed by the City's Director of Water Utilities and any applicable laws governing this issue. Policy FLU-1.14L: Transit District Inclusion Requirement. In order to allow for future transit services and to limit the need for new roadways to properties located in the Green Swamp ACSC, all such properties located near and along the Interstate 4, SR 33 roadways and at the intersection with Tomkow Road, shall submit a voluntary petition for inclusion into the Lakeland Area Mass Transit District (LAMTD) or its future equivalent under the auspices of a regional transportation authority. Also, such petition shall be required prior to issuance of final development plan approval by the City (commercial site plan, subdivision plat, or building permit), for any BP or IAC future land use, or for a residential subdivision of 10 acres or more. It shall be the transit district or authority's option to refuse such petition and to provide regular (fixed route) transit services only when adequate funding allows such services. Policy FLU-1.14M: Open Space and Impervious Surface Areas. Open space lands in ACSC shall protect habitat, shall be permanent with 100% of the area as pervious surface and include wetland, floodplain and/or surface water areas on a property. Plats or site plans shall indicate the portion of land reserved for open space and state that no clearing and no structures of any kind are allowed in the open space area. In the ACSC, no variances or waivers shall be granted for open space provisions. Clustering of residential units is encouraged as a means to meet the open space set aside requirements found below. a) Residential developments in ARL shall provide a minimum of 80% open space. b) Residential developments in RVL shall provide a minimum of 30% open space. And, impervious surfaces shall be limited as follows: a) Single family lots in the Residential Very Low land use

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	category shall not exceed an impervious surface ratio of 50% unless the lots are within a planned unit development that maintains an overall impervious surface ratio of 50% and the required set-aside for open space. b) Commercial development shall not exceed an impervious surface ratio of 60% (i.e., at least 40% of the total property shall remain pervious). c) Development within a BP land use shall not exceed an impervious surface ratio of 70%. Policy FLU-1.14N: Wetland Areas and Transfer Densities. No development is allowed in jurisdictional or other wetlands, except where allowed by the applicable federal, state or regional permitting agencies, and as specified below and within the City's LDC. a) All development shall develop in the non-wetland portion of a property. Platted development within non-jurisdictional wetland areas shall be allowed a transfer density of up to one (1) dwelling unit per 20 acres transferred to contiguous non-wetland areas on the same property. Gross densities on the property may not exceed the maximum for the land use category. Open space and impervious surface limits as per this Section shall also be maintained. Lot sizes shall be as governed by the assigned City zoning and as per the adopted Lakeland LDC. Transfers of density shall be noted on the face of the final plat as a restrictive covenant. b) Wetland areas in the Green Swamp ACSC shall be shown as environmental set-aside areas on all final site plans or subdivision plats. c) No new lots or parcels shall be created which are entirely within a wetland area in the ACSC unless such would result in a taking of private property. If so, one (1) unit will be allowed but shall be required to mitigate wetland impacts. d) Lots or parcels created prior to December 1, 1992 and which are 100 percent wetland areas, shall be allowed up to one dwelling unit with required wetland mitigation measures as approved by state and regional regulatory agencies. e) No disturbance of wetlands within the Green Swamp

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	ACSC is allowed unless authorized or exempted from the regulation by the Florida Department of Environmental Protection, the U.S. Army Corps of Engineers, and the applicable water management district. The appropriate permit or exemption shall be required prior to commencement of development. f) Where impacts to wetlands cannot be avoided, all permits for an agency with jurisdiction shall be obtained prior to the development commencing. An "intent to issue a final development order" may be issued in writing prior to the issuance of said order if pre-approval is required by an agency with jurisdiction. Consideration of wetland impacts shall include, but not necessarily be limited to, the following circumstances where no reasonable alternative exists: 1) To provide access to the site; 2) To provide necessary internal traffic circulation; 3) To provide necessary utility lines; 4) To provide necessary pre-treated stormwater management; 5) For purposes of public safety; 6) To avoid precluding all beneficial use of the property. Policy FLU-1.14O: Floodplain Areas and Transfer Densities. a) Development shall cluster in the non-floodplain portion of a property. Transfer of densities shall be allowed for up to one (1) dwelling unit per 20 acres to contiguous non-floodplain areas under the same ownership or control. Transfers of density shall be noted on the face of the final plat as a restrictive covenant. Gross maximum densities on the property shall not exceed the maximum per acre and open space and impervious surface limits shall be maintained. Lot sizes shall be as governed by the assigned City zoning and as per the adopted Lakeland LDC. Floodplain compensation shall be only as allowed by State environmental review agencies with all agency permits obtained prior to commencement of development. b) No new lots or parcels which are totally within the 100-year floodplain shall be created in the Green Swamp

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	ACSC. If a parcel existing prior to December 1, 1992 has no land outside the 100-year floodplain, then up to 1 dwelling unit per 20 acres shall be allowed and development will be required to provide compensatory storage for flood water displaced from the floodplain. c) A detailed flood insurance study shall be performed for all subdivision proposals and other proposed development with five (5) or more acres of the 100-year floodplain. The study shall be performed in accordance with FEMA guidelines and specifications. Phases of a larger development, if the larger development meets the five (5) acre impact criterion, are not exempt from this requirement. If existing subdivisions are proposed for re-platting, the re-platted portion shall be required to comply with this requirement if the re-platted portion meets the five (5) acre impact criterion. Subdivisions which contain 10 lots or less shall be exempt from these requirements. The construction of a single-family residence on a parcel of land containing five (5) or more acres of 100 year floodplain which is not part of a subdivision or which is part of a subdivision in existence on the effective date of this Section is exempt from this requirement. Policy FLU-1.14P: Xeriscaping, as a landscaping technique, shall be the preferred technique in the area of the City within the Green Swamp ACSC and shall be included in landscape plans for new or redevelopment to reduce water consumption. Xeriscaping is a method of landscaping that conserves water by clustering plants according to similar sunlight and water needs, creating landscape "zones" and minimizing irrigation needs. Where possible, irrigation systems should use stormwater runoff to irrigate landscaped areas and should preserve existing on-site vegetation. Policy FLU-1.14Q: Stormwater Management. Stormwater management shall be done consistent with the City's established level of service policies found in the Infrastructure Element of this Plan. Stormwater management facilities shall not cause a reduction in the flood storage capacity of the 100 year floodplain, shall be designed to accommodate access for maintenance equipment, and shall facilitate regular operational maintenance including under-drain replacement, unclogging filters, sediment removal, mowing and

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	vegetation control. Prior to final plat or site plan approval, the developer shall ensure that a designated responsible entity, approved by the City for the maintenance of the stormwater management system has been established and is listed on the plat or final site plan. Monitoring and operational requirements in the Green Swamp ACSC shall include the following: a) Periodic inspections of the system with a written inspection report to the appropriate water management district and a copy sent to the City of Lakeland Engineering Division (preferably an electronic copy to the City) to ensure that the system is functioning as designed and permitted. b) Inspection reports will be submitted 1 year after construction and every year thereafter to the relevant water management district. c) A registered professional engineer must sign and seal the report certifying the stormwater management system is operational as designed and maintained adequately for that design. d) Pollution abatement requirements shall be the first 1 inch (or 2.5 inches times the impervious area) of runoff for the developed site, or as per the regulations of SWFWMD, with this volume being recovered within 72 hours. e) Recharge Standard: Projects or portions of projects in Most Effective Recharge Areas must retain three inches of runoff from directly connected impervious areas within the project. Applicants may instead demonstrate that the-post-development recharge will be equal to or greater than the pre-development recharge. Most Effective Recharge Areas are those areas with soils classified by the Soil Conservation Service as Type "A" Hydrologic Soil Group. Directly connected impervious areas are those impervious areas which are connected to the surface water management system by a drainage improvement such as a ditch, storm sewer, paved channel, or other man-made conveyance. Stormwater that is retained must be infiltrated into the soil or evaporated such that the storage volume is recovered within 14 days following a storm event.

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	Policy FLU-1.14R: The Lakeland Planning and Zoning Board review shall be required for approval of all site plans and all residential subdivision plans for compliance with the City's rules regarding development in the Green Swamp ACSC. Policy FLU-1.14S: Protection of Listed Species To protect listed species which includes fauna and flora identified by the U.S. Fish and Wildlife Service (USFWS) and/or the Florida Fish and Wildlife Conservation Commission (FWC) literally "listed" by these agencies as being endangered, threatened, and/or species of special concern, the City shall require the following: a) Any residential development consisting of 100 acres or more, more than 10 lots, or any non-residential development in excess of five (5) acres, shall be required to conduct a study for listed species. If it is determined that listed species are located on the site, a habitat management plan must be prepared using guidelines and protocols of the FWC and/or USFWS. Prior to commencement of development, the City must receive a letter from FWC stating that the proposed Management Plan meets the standards placed on Management Plans by the FWC. b) Protected habitat, for the purpose of this Management Plan, shall be defined as habitat for endangered, threatened, and/or species of special concern, and in most cases, the specific boundaries of these areas may not be determined until site-specific field inspections are conducted to verify those boundaries. It shall be the responsibility of the owner and/or developer to submit documentation, exhibits, studies, etc., for the purpose of establishing that properties should not be classified as protected habitat for such species or for notifying the FWC and/or the USFWS of proposed development which affects protected habitat. c) Those properties identified as containing protected habitat shall comply with the following requirements: 1) Development shall be required to locate on the non-protected habitat portions of a development site. Transfer of residential densities shall be permitted from protected habitat areas to contiguous non-protected

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	habitat areas within the same subdivision, subject to the following: i. Residential densities shall be transferred from protected habitat areas to non-protected habitat areas at the underlying density and shall be clustered to the greatest extent possible to protect habitat. Any transfer of density to facilitate clustering shall not result in lot sizes, or areas per dwelling unit less than that required by the City's LDC (the minimum lot/area size shall be exclusive of the wetland area); for lots utilizing septic tanks, the area shall not be less than 40,000 square feet. Portions of lots may be platted into habitat areas and shall not be construed as having disturbed the habitat area for a density-transfer provision so long as that portion of the lot does not include any fill, construction, improvements, or other development, and a restriction is placed upon the plat to prohibit such future actions within habitat areas. ii. All such transfers of density shall be to contiguous property under the same ownership or control and shall only be permitted within a subdivision platted and developed in accordance with the City's LDC. Such transfers shall be noted on the face of the final plat as a restrictive covenant. iii. Commercial and industrial development shall locate on the non-protected habitat portion of a development site. Policy FLU-1.14T: All development, as defined in Section 380.04, Florida Statutes, with the exception of a single-family dwelling unit and accessory uses, shall submit to the City a project narrative describing the proposed development. This narrative shall also address how their

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	development supports the following State objectives in the Green Swamp Area of Critical State Concern: a) Minimize the adverse impacts of development on resources of the Floridan Aquifer, wetlands, and flood-detention areas. b) Protect or improve the normal quantity, quality and flow of ground water and surface water which are necessary for the protection of resources of state and regional concern. c) Protect or improve the water available for aquifer recharge. d) Protect or improve the functions of the Green Swamp Potentiometric High of the Floridan Aquifer. e) Protect or improve the normal supply of ground and surface water. f) Prevent further salt-water intrusion into the Floridan Aquifer. g) Protect or improve existing ground and surface-water quality. h) Protect or improve the water-retention capabilities of wetlands. i) Protect or improve the biological-filtering capabilities of wetlands. j) Protect or improve the natural flow regime of drainage basins. k) Protect or improve the design capacity of flood-detention areas and the water-management objectives of these areas through the maintenance of hydrologic characteristics of drainage basins.
TRANSPORTATION (TRN) GOAL 1:	To provide a safe, efficient, financially feasible, multi-modal transportation system on which fatalities and serious injuries are eliminated (Vision Zero Goal), which is responsive to community needs, is consistent with future land use policies, is environmentally sound, and fosters economic vitality.
Objective TRN-1.1:	Reduce the current total number of crashes and the number of crashes per vehicle miles traveled in support of the Vision Zero goal to eliminate roadway fatalities and serious injuries. Policy TRN-1.1A: The City will monitor accident patterns and high

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	accident locations to identify safety improvements in the transportation system. Policy TRN-1.1B: The City will continue to incorporate optimum traffic safety standards in revised land development regulations. Policy TRN-1.1C: The City will continue to implement a pavement maintenance system which allows all City collector roads to be maintained at the minimum established pavement rating. Policy TRN-1.1D: The City will continue to coordinate and implement safety projects for all transportation modes through its City Traffic Safety Team and participate in the Polk County Community Traffic Safety Team. The City will continue to work with the FDOT and Polk TPO to evaluate and implement safety countermeasures on the State Highway System. Special emphasis will be placed on addressing safety problems at high-crash intersections and corridors.
Policy TRN-1.2A	Transportation projects within the City shall implement our Vision Zero goal, promoting safe and convenient access and travel for all users of the transportation system.
Objective TRN-1.3:	The City will utilize access management standards, traffic signal management and related activities to measurably increase the operating efficiency of the roadway system within the City of Lakeland. … Policy TRN-1.3B: The City will work with the FDOT to ensure that railroad crossing safety and operational improvements are implemented as recommended in FDOT's 2009 Rail Traffic Evaluation Study. … Policy TRN-1.3D: The City will continue coordination with the FDOT and Polk County to ensure that all transportation system management (signalization, turn lane improvements, etc.) and widening projects within Lakeland are designed to operate at maximum safety and efficiency. … Policy TRN-1.3G: The City will coordinate efforts with the FDOT and Polk TPO to integrate Intelligent Transportation System (ITS) measures and Automated/Connected/Electric/Shared (ACES) infrastructure into the Lakeland Regional Advanced Transportation Management System (LRATMS) that are coordinated and consistent with regional traffic

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	management systems installed on Interstate 4 and SR 570 (Polk Parkway). The City will work with FDOT to establish connection points to the Interstate 4 and SR 570 monitoring networks to manage regional traffic flow on the arterial street system in the event a man-made or natural disaster requires partial or full closure of Interstate 4 and SR 570.
Policy TRN-1.7I	The City shall annually review high priority Pathways Segments to determine the feasibility of specific projects for inclusion in the Capital Improvement Plan (CIP). The following subjective measures shall be utilized in the selection of these specific pathways projects, including: a. System connectivity and continuity. This relates to the project's ability to link on- and off-road facilities and support a more seamless non-motorized transportation network between trip origins and destinations. The intent is to avoid ranking of piecemeal projects that may not provide much benefit to system or corridor continuity. b. Assessment of cost feasibility (or cost-benefit), which includes potential right-of-way acquisition and community or business impacts relative to the potential value of the connection. c. Safety Mitigation. The ability of the project to mitigate perceived safety or potential safety problems regardless of crash data history. This information is derived from focus groups, discussions with agency staff, community input and/or professional judgment. d. Mitigation of Obstacles or Barriers. Because barriers are difficult to precisely define and compare equitably, this subjective measure considers the degree to which the project helps overcome barriers, such as a wide highway, fast traffic, an interstate, drainage canal or similar feature. Barriers defined in the Pathways Planning public input process as well as the support documentation for the Parks Connectivity component should be addressed under this criterion.
Objective TRN-1.15	Develop non-capital transportation improvement techniques to maximize the safety and efficiency of the existing transportation system. Policy TRN-1.15A: The City will evaluate the traffic circulation network to examine such issues as the use of emerging traffic operations technologies (including ACES infrastructure), opening platted rights-of-

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	way, and improving signage. Policy TRN-1.15B: The City will give consideration to low cost improvements to the transportation system, including intersection signalization adjustments, signage improvements, and other techniques in its capital budgeting process. Policy TRN-1.15C: Neighborhood and CRA plans will consider the street as a public place, particularly streets with "Community Street" and "Main Street" typologies, where the existing street system is enhanced through various techniques such as streetscaping and traffic calming to encourage the use of non-motorized modes of travel and transit on at least those facilities that operate as collector or local roads. Policy TRN-1.15D: The City will use the FDOT Complete Streets Manual for context classification along with the City's Roadway Typology classification.
Objective CON-1.3	Minimize or mitigate flood hazard in future development proposals. The City will continue to protect and conserve wetlands and wetland areas and ensure that development approved in flood-prone areas is consistent with the functions of natural systems. Policy CON-1.3A: Support the Local Hazard Mitigation Strategy of Polk County by minimizing or mitigating flood hazard in future development proposals. Policy CON-1.3B: Dredging and filling of lands within floodplains will be restricted so as to preserve the natural function of the 100-year floodplain. All proposed development or redevelopment shall be located primarily on the non-floodplain portion of the site and the City shall use gross density provisions given in the Future Land Use Element to encourage development or redevelopment to be clustered on the upland portion(s) of the property. The developer shall provide the City a copy of proposed and final amendments to the FEMA designated floodplain areas (i.e., Letters of Map Amendment or Letters of Map Revision). (i) For proposed development or redevelopment areas that lie within the 100-year floodplain, residential structures shall be required to be elevated and non-residential structures shall be required to be either elevated or flood

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	proofed. Elevations shall be at least 1 foot above the BFE. (ii) Floodplain dredge and fill activity shall require adequate compensation for stormwater management in accordance with City engineering standards and applicable standards of the Southwest Florida Water Management District and the Florida Department of Environmental Protection. (iii) No development activity shall be allowed that will raise the 100-year base flood elevation. (iv) No hazardous materials or waste shall be stored within the 100-year floodplain. (v) Development of property that is entirely within the 100-year floodplain shall be prohibited except where such would result in a "taking" of private property or where already permitted by the appropriate regulatory agency (SWFWMD or FDEP) and consistent with all City development regulations. (vi) Within the Green Swamp Area of Critical State Concern, no new lots shall be created which are entirely within a 100-year floodplain area unless such would result in a taking of private property. In the remainder of the City, lots within the 100-year floodplain shall be discouraged through provisions which allow clustering of lots on the upland portion of a site and reduced lot sizes. Policy CON-1.3C: City of Lakeland LDC will continue to include strict performance standards, criteria, mitigation procedures and land use controls necessary to protect and conserve area wetlands. These regulations shall require the following: • Site plans for new or redevelopment will, at a minimum, identify the location, condition, extent, and function of impacted wetlands on the property, including any jurisdictional wetlands. • Site plans will provide measures to ensure that normal flows and quality of water as well as the natural hydroperiod will be protected to maintain wetlands after development occurs; and, • New development shall be generally clustered away from wetland areas. No commercial, industrial, or residential buildings are allowed within the boundaries of a

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	jurisdictional wetland. However, where alteration of wetlands is necessary as a last resort to prevent an unconstitutional taking of private property, either the restoration of disturbed wetlands will be provided, or additional wetlands will be created to ensure no net loss of wetlands. Policy CON-1.3D: The City of Lakeland will require all developments to undertake measures necessary to ensure that water quantity and quality resulting from the development will not adversely affect nearby wetlands. Specific measures necessary for implementation of this policy are detailed in the City's Natural Resource Protection Regulations. Policy CON-1.3E: The natural functions of wetlands include water storage/flood control, water filtration, groundwater recharge, and habitat for plants and animals, in particular waterfowl. These natural functions shall be protected to the maximum extent possible, in particular where the wetland(s) in question link to larger riverine and/or surface waters. Policy CON-1.3F: City land use compatibility policies and development regulations regarding the location, density, intensity, extent, and type of land uses allowed shall consider the location, size, condition, type, and function of on-site or adjacent wetlands. Policy CON-1.3G: As the City continues to acquire lakefront, wetland, and other natural areas for future recreation and open space uses, preservation and conservation of lakefront and wetlands shall be included in all park development plans.
Policy CON-1.6B:	In assessing its stormwater utility rate structure, the City shall ensure a dedicated funding source to improve surface water quality, maintain or enhance flood control, protect lake-dependent plant and animal species, and meet federal and state water quality mandates.
	Lakeland Certification Agreement with Florida Department of Commerce – Exhibit "E" 11. The City will work with Polk County Emergency Management, the Local Hazard Mitigation Plan Working Group and the Polk County School Board to coordinate information and resources that support public awareness of and access to school-based emergency shelters. This issue shall be included in the review for all proposed new high schools planned

TABLE D-15:
CITY OF LAKELAND POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	within the Lakeland metro area.
Land Development Regulations – Article 6 Natural Resource Protection Standards	
Section 6.2 (and all under policies)	Floodplain Management
Sub-Section 6.2.1	INTENT The purpose of this section is to establish minimum requirements to safeguard the public health, safety, and general welfare and to minimize public and private losses due to flooding through regulation of development in flood hazard areas to: a. Minimize unnecessary disruption of commerce, access and public service during times of flooding; b. Require the use of appropriate construction practices in order to prevent or minimize future flood damage; c. Manage filling, grading, dredging, mining, paving, excavation, drilling operations, storage of equipment or materials, and other development which may increase flood damage or erosion potential; d. Manage the alteration of flood hazard areas, watercourses, and shorelines to minimize the impact of development on the natural and beneficial functions of the floodplain; e. Minimize damage to public and private facilities and utilities; f. Help maintain a stable tax base by providing for the sound use and development of flood hazard areas; g. Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events; and h. Meet the requirements of the National Flood Insurance Program for community participation as set forth in the Title 44 Code of Federal Regulations, Section 59.22.
Sub-Section 6.2.2	APPLICABILITY The provisions of this section shall apply to all development that is wholly within or partially within any flood hazard area as established in Subsection 6.2.2.3 including but not limited to, the subdivision of land; filling, grading, and other site improvements and utility installations; construction, alteration, remodeling, enlargement, improvement, replacement, repair, relocation or demolition of buildings, structures, and facilities that are exempt from the Florida Building Code; placement,

TABLE D-15: CITY OF LAKELAND POLICIES AND REGULATIONS	
Source (Document, Number, Chapter, Section)	**Text/Description**
	installation, or replacement of manufactured homes and manufactured buildings; installation or replacement of tanks; placement of recreational vehicles; installation of swimming pools; and any other development. (Ord. No. 5610, 12-20-16)
	The latest amended Article 6, in its entirety, is included as Exhibit ____. Amendments to LDC Article 6, Mandated by FDEM and FEMA Relating to National Flood Insurance Program were approved by the Lakeland City Commission on September 16, 2024 via Ordinance No. 6056, accessed at the following Web address: https://www.lakelandgov.net/media/20094/6056_ldc24-008.pdf
Sub-Section 10.3	Amendments to LDC Section 10.3, Requiring Signed/Sealed Major Traffic Studies by Engineer and Safety Analyses in support of Vision Zero, were approved by the Lakeland City Commission on September 16, 2024 via Ordinance No. 6057, accessed at the following Web address: https://www.lakelandgov.net/media/20095/6057_ldc24-009.pdf
Land Development Regulations – Article 6 Resource Protection Standards	
6.1 General (and all Subsections)	It is the intent of this article to protect, maintain and enhance the health, safety and general welfare of the community by regulating land development activity with the potential of degrading important natural resources. More specifically, it is the purpose of this article to create a clear compilation of regulatory standards which implement the environmental goals, objectives and policies of the Comprehensive Plan.

TABLE D-16:
CITY OF MULBERRY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Policy 1.4	Environmentally sensitive lands shall be defined as high aquifer recharge areas, public supply potable water wellfield protection areas, wetlands, floodplains, Areas of Critical State Concern as defined by Chapter 380, F.S.; Natural Resources of Regional Significance, as delineated in the Strategic Regional Policy Plan of the Central Florida Regional Planning Council; and natural resources identified by State and Federal agencies. The City will continue to enforce its zoning and site plan review procedures to include development standards that limit the density and intensity of land use in areas where soils or topography are not conducive to development. The City's site plan review process will be used to evaluate soil conditions on a proposed development site and will provide for appropriate design features to protect natural resources and the structural integrity of buildings and other facilities. The City shall require proposed developments to provide adequate information regarding the suitability of the soils for their intended use, in order to protect potable water wellfields and environmentally sensitive land.
Policy 1.6	The City shall depict generalized land uses on the Future Land Use Map and Map Series. The City has determined it appropriate to depict educational uses, public buildings and grounds and other public facilities as one land use category on the Future Land Use Map. The City will depict the following natural resources or conditions on the Future Land Use Map or Map Series: 1) existing and planned public potable water wells and wellhead protection areas; 2) rivers, lakes and floodplains; 3) wetlands; and, 4) minerals and soils.
Policy 1.9	Wellhead protection areas shall be identified and shown on the City's Future Land Use Map in order to prohibit the establishment of new uses from locating within the identified zone of protection that may be a potential source of pollution to the potable water system. The City will prohibit existing uses within the Zone of Protection that use or create hazardous materials (such use is known as a nonconforming use) from being re-established once the use has ceased. Regulations and the procedures for administration of nonconforming uses are adopted within the Unified Land Development Code of the City of Mulberry.
Policy 5.3	The City shall enforce development regulations that limit the location of incompatible uses that use or store hazardous substances in those areas that are determined susceptible to pollution of the City's potable water well fields based on the Polk County Wellhead Protection Area Delineation Project, and the requirements of Chapters 62-521 and 62-555, F.A.C.

TABLE D-16:
CITY OF MULBERRY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Policy 5.4	The City shall regulate development proposed to be located within the floodplains and wetlands as generally designated on the City's Flood Hazard Areas Map and its Wetland Areas Map. The City may approve such proposed development if no significant alteration of functions of the floodplains or wetlands will occur; and if protection is provided for potable water wellfields and environmentally sensitive land.
Objective 7: Land Development Regulations and Urban Form Policy 7.1	(5) Regulate areas subject to periodic flooding;
Objective 8	Coordination with the objectives and programs in Polk County's local mitigation strategy through hazard mitigation actions and in coordination with the countywide Comprehensive Emergency Management Plan, the City will endeavor to become a sustainable community with respect to reducing or eliminating long term risk to life and property from future hazards.
Policy 8.2	The City, through the implementation of its land development regulations, will ensure that development approvals are consistent with the goals and objectives of the Polk County Local Mitigation Strategy, (LMS), as amended. In so doing, the City shall specifically limit the extension of infrastructure to areas of repetitive loss due to natural hazards, especially within any 100-year floodplain or wetland area. Hazard mitigation actions shall be aimed at reducing or eliminating the long-term risk to life and property from future hazards and their effects, building a sustainable community, and breaking the repetitive cycle of injury, property damage and rebuilding caused by disasters.
Comprehensive Plan – Infrastructure Element	
Policy 3.3	Stormwater management facilities shall be designed to accommodate the 25-year, 24-hour design storm to meet the water quality and quantity standards that follow: a. Water Quantity: Peak post-development runoff shall not exceed peak pre-development runoff rates. b. Water Quality: Treatment of stormwater runoff shall be required for all development, redevelopment and, when expansion occurs, existing developed areas. The stormwater treatment system or systems can be project specific, serve sub-areas within the City or be a system to serve the entire City. Regardless of the area served

TABLE D-16:
CITY OF MULBERRY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	and in accordance with Chapter 62-25, F.A.C., the stormwater treatment systems must provide a level of treatment for the runoff from the first one (1) inch of rainfall for projects in natural drainage basins of 100 acres or more, or as an option, for projects or project subunits in natural drainage basins of less than 100 acres, the first one-half (1/2) inch of runoff, from the design storm in accordance with Rule 62-25, F.A.C. in order to meet the receiving water quality standards of Rule 62-302, section 62-302.500, F.A.C. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 62-302, F.A.C. It is intended that all standards in these citations are to apply to all development and redevelopment and that any exemptions or exceptions in these citations, including project size thresholds, do not apply for concurrency determinations. Infill residential development within improved residential areas or subdivisions existing prior to the adoption of this comprehensive plan, must ensure that its post-development stormwater runoff will not contribute pollutants which will cause the run-off from the entire improved area or subdivision to degrade receiving water bodies and their water quality as stated above.
Policy 3.4	The City establishes a stormwater management level of service for existing development equal to a 3-year, 24-hour storm event. Stormwater will be handled by and contained within existing stormwater management facilities.
OBJECTIVE 6: PROTECTION OF NATURAL DRAINAGE FEATURES AND MAN-MADE DRAINAGE STRUCTURES	PROTECT NATURAL DRAINAGE FEATURES, MAN-MADE DRAINAGE STRUCTURES (THE CITY'S LAKES) AND THE ALAFIA RIVER FROM RECEIVING STORMWATER RUNOFF THAT COULD DEGRADE WATER QUALITY IN THE CITY OR DOWNSTREAM FROM THE CITY.
Policy 6.4	The City shall continue to participate in the Federal Flood Insurance Program.
Policy 6.6	The City shall correct all identified stormwater management facility deficiencies. Deficiencies for existing development shall be defined as the inability to manage a 25-year, 24 hour storm event, or contributing to the degradation of the receiving body below minimum conditions necessary to assure the suitability of water for the designated use of its classification as classified by the water management district. The

TABLE D-16:
CITY OF MULBERRY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	expenditure of public funds on stormwater management facility improvements shall be prioritized as follows: to fulfill legal obligations; to prevent further degradation of surface or water bodies; to provide adequate stormwater management facilities for existing development in the City; to provide adequate stormwater management for new development in the City; and to extend municipal stormwater management facilities to areas outside of the City.
Policy 6.8	The City shall not extend stormwater management facilities to new areas if such an extension would exceed the present ability of the City to provide protection from flooding to presently served areas, consistent with the established level of service standard for new stormwater management facilities.
Comprehensive Plan – Conservation Element	
Policy 6.2	The City will utilize the technical expertise and assistance of the Southwest Florida Water Management District when reviewing new developments and redevelopment projects adjoining the 100-year floodplain of the North Prong of the Alafia River; or when reviewing development of any other identified wetland.
Policy 6.3	The wetlands and 100-year floodplains the North Prong of the Alafia River is designated as "environmentally sensitive lands." Its hydrologic function and habitat characteristic shall be protected through the enforcement of land development regulations, including zoning, site plan review, buffer zones, minimum setback requirements, regulation and prohibition of certain uses, and stormwater treatment regulations.
Comprehensive Plan – Intergovernmental Coordination Element	
Policy 5.6	The City will enter into an interlocal agreement with Polk County for joint projects identified in the City's stormwater management plan and the County's Stormwater Management Plan.
Comprehensive Plan – Capital Improvements Element	
Policy 1.1.3	Prioritization of Capital Improvements projects will be based on several criteria, including the elimination of public hazards, the elimination of capacity deficits, and financial feasibility.
Land Development Regulations – Article 3 Development Design and Improvement Standards	
3.05.00 Stormwater Management	Treatment of stormwater runoff shall be required for all development, redevelopment and, when expansion occurs, existing developed areas. The stormwater treatment system or systems can be project specific or

TABLE D-16:
CITY OF MULBERRY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	serve sub-areas within the City. The design and performance of all stormwater management systems shall comply with applicable State Regulations (Chapter 17-25 and Chapter 17-302, F.A.C.) and the rules of the Southwest Florida Water Management District (SWFWMD) stated in Chapter 40D-4, F.A.C. Stormwater discharge facilities shall be designed so as to not lower the receiving water quality or degrade the receiving water body below the minimum conditions necessary to maintain their classifications as established in Chapter 17-302, F.A.C. Steps to control erosion and sedimentation shall be taken for all development.
Land Development Regulations – Article 5 Resource Protection Standards	
5.01.00 Development in Flood-Prone Areas 5.01.01 Purpose and Intent	It is the purpose and intent of this Section to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas.

TABLE D-17:
CITY OF POLK CITY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan –Future Land Use Element	
Policy 2.3	New development and redevelopment shall include site design which provides stormwater detention/retention areas or other approved stormwater management systems to filter out pollutants before entering bodies of water, in conformance to the requirements of DEP and SWFWMD, and the County's stormwater management plan. Development exempted by Chapter 17-25, F.A.C. shall be required to provide stormwater management in accordance with adopted level of service standards. However, infill single-family lots located in residential developments existing at the time of plan adoption shall not be required to manage stormwater onsite, so long as resulting stormwater runoff can be accommodated by regional facilities and will not contribute pollutants which will degrade receiving water bodies and water quality below the standards of Chapter 17-302 F.A.C.
OBJECTIVE 9 PROTECTION OF THE GREEN SWAMP ACSC	IT SHALL BE A OBJECTIVE OF POLK CITY TO PROTECT THE NATURAL REGIONAL RESOURCE KNOWN AS THE GREEN SWAMP AREA OF CRITICAL STATE CONCERN (ACSC); AND TO GOVERN DEVELOPMENT OF THE GREEN SWAMP AS IS THE INTENT OF STATE LAW REGARDING THIS RESOURCE; AND MANAGE THE DEVELOPMENT OF THE RESOURCE SO IT IS COMPATIBLE WITH THE DEVELOPMENT OF POLK CITY; AND ENHANCE, CONSERVE, AND APPROPRIATELY MANAGE THE NATURAL RESOURCE FOR EXISTING AND FUTURE RESIDENTS.
Policy 9.3	Polk City shall adopt development regulations into its Unified Land Development Code to ensure the protection and conservation of environmentally sensitive land within Polk City and within the Green Swamp ACSC.
Policy 9.4	Development shall occur only on land *not* classified as "wet" on any local, regional, state, or national natural resource inventory map.

TABLE D-17:
CITY OF POLK CITY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Policy 10.10.1: FLOODPLAINS	The Future Land Use Map Series shall designate and map as the "Floodplain-Protection Area" overlay: areas of special flood hazard; all lands lying within 100 feet from the top of the bank of a water course; and, those areas classified by the Federal Emergency Management Agency (FEMA) as within the 100-year floodplain. The "Floodplain Areas" shall be amended, at least annually, to include or exclude any areas added or removed from the official FEMA floodplain area maps. Development within a "Floodplain-Protection Area," shall conform to the following criteria: a. Development shall locate on the non-floodplain portions of a development site and density may be transferred from undeveloped floodplain areas to contiguous non-floodplain areas, under the same ownership, within the same platted subdivision, provided: 1. residential densities shall be transferred from the-100-year floodplain to the area outside the 100-year floodplain based on a density of 1 dwelling unit per 10 acres (1 DU/10 AC); and 2. such transfer does not result in lot sizes, or areas per dwelling unit, less than 65 percent (65%) of that required by Polk City's land development regulations (the minimum lot/area size shall be exclusive of the floodplain area) with lots no less than 1 acre. b. Development or redevelopment shall meet the requirements of the Polk City Land Development Code, and shall not: 1. enlarge the off-site floodplain. 2. alter the natural function of the floodplain; nor 3. result in post development run-off rates which exceed pre-development run-off rates for storm frequencies at least as stringent as those rates established by the applicable water management district pursuant to Titles 40C, 40D, and 40E, F.A.C. c. Development and redevelopment shall meet the requirements of the Polk City Land Development Code and as specified below: 1. Riverine Floodplains: Encroachments into the Floodplain, including fill material or structures, shall not be located within a

TABLE D-17:
CITY OF POLK CITY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	distance of the center of the watercourse equal to 0.25 times the width of the area of special flood hazard or 50 feet each side from the center of the stream, whichever is greater, unless certification by a registered professional engineer is provided demonstrating (with supporting technical data) that such encroachments shall not result in any increase in flood levels during the occurrence of the 100-year base-flood discharge. An undisturbed 100-foot-wide wildlife habitat buffer shall be maintained from the ordinary high-water line. This buffer may be disturbed, to the extent necessary, and as approved by DEP, to provide reasonable access to a waterbody, to include the construction of boat ramps, docks, and walkways. 2. Lake Floodplains: Encroachment, including fill, new construction, substantial improvements, and other development, shall be prohibited from the floodplain unless certification (with supporting technical data) by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the 100-year base-flood discharge. An undisturbed 25-footwide wildlife habitat buffer shall be maintained from the ordinary high-water line. This buffer may be disturbed, to the extent necessary, and as approved by DEP, to provide reasonable access to a lake, to include the construction of boat ramps, docks, and walkways. 3. All Other Floodplains: Development shall meet the requirements of the Polk City Land Development Code. d. If, within a parcel, there is no land located outside the 100-year floodplain, then the highest density allowed would be 1 dwelling unit per 20 acres (1 DU/20 AC). e. No parcel shall be created after adoption of this section that consists entirely of 100-year floodplains unless accompanied by a deed restriction which prohibits any future development on the parcel. f. The development criteria listed in Policy 8.10.1 (a), (b) and (c), above, shall be included in Polk City's Land Development Code. g. A detailed flood insurance study shall be performed for all

TABLE D-17:
CITY OF POLK CITY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	subdivision proposals and other proposed development which have five (5) acres or more in the 100-year floodplain. The construction of a single-family residence on a parcel of land containing five (5) or more acres which is not part of a subdivision or which is part of a subdivision in existence on the effective date of this plan is exempt from this requirement. Phases of a larger development, if the larger development meet the five (5) acre criterion, are not exempt from this requirement. If existing subdivisions are proposed for replatting, the replatted portion shall be required to comply with this requirement if the replatted portion meets the five (5) acre criterion. The study shall be performed in accordance with the Flood Insurance Study Guidelines and Specifications for Flood Contractors (FEMA Publication 37 or its equivalent).
Policy 10.10.7: SEPTIC TANKS	In the event Polk City annexes a developed lot with an existing septic tank and the Polk City centralized sewer system is temporarily not available to that developed lot, the following regulations apply until the centralized sewer system becomes available. a. All septic tanks and all drainfields shall be set back a minimum of 75 feet from the furthest upland extent of any wetland and shall require a 100-foot minimum setback from the ordinary high-water line of bodies of water. All septic tanks and drainfields must be located outside all 100-year floodplains. b. The following septic tank inspection and maintenance program established by Polk County shall be applicable to all developed lots using septic tanks annexed into Polk City until centralized sewer system is available to the lot: 1. Septic tanks shall be inspected by a qualified inspector on a regular, recurring basis. The initial inspection schedule shall be once every five years. 2. Data on sludge and scum accumulation should be collected from each tank serviced during the first five-year period. Only those tanks with excess sludge and/or scum accumulation, as defined in Chapter 10D-6, FAC, should be pumped out. 3. Polk City Engineer, or other individual deemed qualified by Polk City, shall review the accumulated data and suggest modifications to the schedule consistent with the results. If the

TABLE D-17:
CITY OF POLK CITY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	data show that few, if any, tanks need to be pumped on a five-year schedule, or if the data show household characteristics that accurately predict those limited households which need more frequent pumping, the schedule should be modified accordingly. 4. In addition to inspecting for sludge and scum accumulation, the septic tank system shall be checked to ensure that the mound, drainfield, and septic tank are in good working order and in compliance with the requirements of Rule 10D-6, FAC. 5. The lot owner shall make all repairs that are necessary to bring the septic tank system into compliance with the requirements of Rule 10D-6, F.A.C.
Policy 10.10.14: SITE ALTERATION	Polk City's Land Development Code shall require that the recharge or storage characteristics of the development site not be significantly altered.
Policy 10.10.15: GREEN SWAMP IMPACT ASSESSMENT STATEMENT	All development, as defined in Section 380.04, FS, with the exception of a single-family dwelling unit and accessory uses, shall complete a Green Swamp Impact Assessment Statement which shall, at a minimum, address the following requirements: a. Floodplain development criteria requirements under Policy 8.10.1, where applicable. b. Wetland development criteria requirements under Policy 8.10.2, where applicable; and c. All development, as defined in Section 380.04, FS, shall be reviewed for consistency with the following objectives: 1. Minimize the adverse impacts of development on resources of the Floridan Aquifer, wetlands, and-flood-detention areas. 2. Protect or improve the normal quantity, quality and flow of ground water and surface water which are necessary for the protection of resources of State and regional concern. 3. Protect or improve the water available for aquifer recharge.

TABLE D-17:
CITY OF POLK CITY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	4. Protect or improve the functions of the Green Swamp Potentiometric High of the Floridan Aquifer. 5. Protect or improve the normal supply of ground and surface water 6. Prevent further salt-water intrusion into the Floridan Aquifer. 7. Protect or improve existing ground and surface-water quality. 8. Protect or improve the water-retention capabilities of wetlands. 9. Protect or improve the biological-filtering capabilities of wetlands. 10. Protect or improve the natural flow regime of drainage basins. 11. Protect or improve the design capacity of flood-detention areas and the water-management objectives of these areas through the maintenance of hydrologic characteristics of drainage basins.
Comprehensive Plan – Infrastructure Element	
Policy 6.7:	The City shall not extend stormwater management facilities to new areas if such an extension would exceed the present ability of the City to provide protection from flooding to presently served areas, consistent with the established level of service standard for new stormwater management facilities.
OBJECTIVE 9: FLOOD CONTROL	IN ORDER TO ENSURE FUTURE LAND USE ACTIVITIES DO NOT ALTER NATURAL DRAINAGE FUNCTIONS, AND TO PROVIDE PROTECTION OF PUBLIC HEALTH, SAFETY AND PROPERTY, THE CITY SHALL ADOPT LAND DEVELOPMENT REGULATIONS ADDRESSING FLOOD PROTECTION AND SURFACE WATER MANAGEMENT BY THE STATUTORY DEADLINE.
Comprehensive Plan – Conservation Element	
Policy 1.2	The development review checklist will ensure that the following issues are adequately addressed by the applicant regarding the development site: soils, including suitability and erosion; topography; drainage; recharge capabilities; floodplain; setbacks; landscaping; stormwater treatment; permitting requirements of the Southwest Florida Water

TABLE D-17:
CITY OF POLK CITY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	Management District, Department of Environmental Protection and U.S. Army Corps of Engineers; air quality; water quality; ecological communities; endangered species; historical and archaeological resources; Green Swamp Area of Critical State Concern; proximity to potable water wells and hazardous waste.
Objective 4: FLOOD CONTROL	IN ORDER TO ENSURE FUTURE LAND USE ACTIVITIES DO NOT ALTER NATURAL DRAINAGE FUNCTIONS, AND TO PROVIDE PROTECTION OF PUBLIC HEALTH, SAFETY AND PROPERTY, THE CITY SHALL ADOPT LAND DEVELOPMENT REGULATIONS ADDRESSING FLOOD PROTECTION AND SURFACE WATER MANAGEMENT BY THE STATUTORY DEADLINE.
Policy 6.1.5.	For areas of severely rated soils: wetlands and 100-year floodplain areas have been designated as conservation. For all other areas of severely rated soils: development in these areas must be limited to no greater than one unit per five acres; for existing, platted areas where historical development patterns preclude this density limitation, aerobic wastewater treatment systems shall be required.
OBJECTIVE 8	TO CONSERVE AND PROTECT THE CITY'S POTABLE WATER SOURCES AND NATURAL AQUIFER RECHARGE AREAS FROM ADVERSE IMPACTS THROUGH IMPLEMENTATION OF LAND DEVELOPMENT REGULATIONS AND INTERGOVERNMENTAL COORDINATION MECHANISMS.
OBJECTIVE 9	TO PROVIDE FOR THE MANAGEMENT OF HAZARDOUS WASTE IN ORDER TO PROTECT ENVIRONMENTAL QUALITY, HEALTH, SAFETY, AND WELFARE OF POLK CITY'S POPULATION, THROUGH THE LAND DEVELOPMENT REGULATIONS ADOPTED BY THE STATUTORY DEADLINE.
Policy 10.1	The City shall classify as Conservation all flood plain areas and wetlands areas, and areas largely characterized by poorly drained wetland soils within the Green Swamp ACSC and outside the Polk City Exemption Area, as depicted on the latest FEMA "Flood Data Maps", the US Fish and Wildlife Services "National Wetlands Inventory Maps" and the SWFWMD "Specific Soils Maps". The developer may provide a specific site survey to delineate all Conservation areas.
Comprehensive Plan – Intergovernmental Coordination Element	
Policy 5.6	The City will enter into an interlocal agreement with Polk County for joint projects identified in the City's stormwater management plan and the County's Stormwater Management Plan.

TABLE D-17:
CITY OF POLK CITY POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Land Development Regulations - Article 5 Resource Protection Standards	
5.01.00 Development in Flood-Prone Areas 5.01.03 Statement of Purpose	It is the purpose of this ordinance to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: (1) Protect human life, health, safety and welfare, (2) Minimize expenditure of public money for costly flood control projects, (3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public, (4) Minimize prolonged business interruptions,

TABLE D-18:
CITY OF WINTER HAVEN POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
Comprehensive Plan – Future Land Use Element	
Objective 1.5	Preserve and manage to the greatest extent possible, the City's natural environment and resources including air, water, soils, plants, wildlife, and climate for the benefit of current and future residents of Winter Haven.
Policy 1.5.4	All new development within areas identified as known or potential natural drainage features, including the shores of the City's lakes, shall be required to inventory all such areas prior to receiving development approval. If natural drainage features and lake shores will be affected by development, protection measures must be identified and implemented by the developer, including necessary modifications to the proposed development, to ensure the preservation and protection of natural drainage features and lake shores.
Comprehensive Plan – Conservation Element	
Conservation Goal	To protect, manage, and enhance the natural resources and environmental quality of Winter Haven.
Goal 3	Protect and enhance local watersheds so that the highest level of ground and surface water quality can be achieved and maintained.
Objective 3.1	Minimize flood damage through the preservation of the functions of floodplains, watersheds, and other natural water storage areas.
Land Development Regulations – Article V. Resource Protection Standards	
Division 5 – Stormwater Management Sec 21-161 Stormwater Management	Stormwater runoff is recognized, both as a valuable natural resource critical to the maintenance of water quantity in the Central Florida lakes, as well as a significant contributor of pollutants which affect the quality of the lake waters. This division is enacted in order to: • Control stormwater runoff and prevent or minimize damage to persons or property which may occur as a result of heavy rainfall; • Define stormwater management control areas and restrict those activities within the areas that are not compatible with sound stormwater management; • Establish runoff limitations in order to ensure suitable treatment and reduction in the amounts of undesirable pollutants discharged to outfalls or receiving waters of those lakes located in the City; • Prevent the installation of improvements which adversely affect stormwater management and drainage patterns; • Implement a program of stormwater management within the City for the continued projection of a vital natural resource; and

TABLE D-18:
CITY OF WINTER HAVEN POLICIES AND REGULATIONS

Source (Document, Number, Chapter, Section)	Text/Description
	• Require the treatment of stormwater from redeveloped sites which otherwise would be exempt from State and regional stormwater treatment requirements. For purposes of treatment of stormwater on redeveloped sites, the word treatment shall be defined as the reduction of the pollutants contained in stormwater through detention, retention, filtration or other physical, chemical or biological processes.
Division 1. – Floodplain Management Sec. 21-255. – Intent and purpose.	It is the purpose of this division to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: Sec. 21-255. – Objectives. (1) Minimize unnecessary disruption of commerce, access and public service during times of flooding. (2) Require the use of appropriate construction practices in order to prevent or minimize future flood damage. (3) Manage filling, grading, dredging, mining, paving, exaction, drilling operations, storage of equipment or materials and other development which may increase flood damage or erosion potential. (4) Manage alteration of flood hazard areas watercourses and shorelines to minimize the impact of devilment on the natural and beneficial functions of the floodplain. (5) Minimize damage to public and private facilities and utilities. (6) Help maintain a stable tax base by providing for the sound use and development of flood hazard area. (7) Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events. (8) Meet the requirements of the National Flood Insurance Program for community participation as set forth in Title 44 Code of Federal Regulations.

APPENDIX E

APPENDIX E – LMS PLAN CROSSWALK

Appendix E includes the completed crosswalk for the draft Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy (LMS).

- LMS Plan crosswalk

2023 Florida Local Mitigation Strategy (LMS) Crosswalk

DESCRIPTION:

The Florida Local Mitigation Strategy (LMS) Crosswalk is informed by the FEMA Local Mitigation Planning Policy Guide (effective April 19, 2023). Each requirement listed below is a required Element of the FEMA Policy Guide. There is a difference in formatting when comparing the FL Crosswalk with FEMA's Policy Guide Elements. This is to prevent the possibility of skipping various components of each FEMA requirement. You will notice the specific FEMA requirement is listed in parenthesis next to each FL Crosswalk Element (e.g., P1 in the FL Crosswalk is equivalent to FEMA Element A1-a). As such, multiple FL Crosswalk Elements may correspond to the same FEMA Element.

INSTRUCTIONS:

Enter the requested information in each field below:
1) In the FL Crosswalk Tab, please identify the "Location in Plan" using the corresponding page numbers for each requirement.
2) In the Jurisdiction Checklist Tab, please add each of the "participating" jurisdictions.

*Please do not edit the following sections: *Met, Not Met, Reviewer Comments* . If revisions are required, the State reviewer will put revisions in the Required Revisions section. As revisions are made, please feel free to add comments about the revisions in the same section. **Do not remove any State comments.**
*Additionally, a Project List Template can be found in a separate tab below.

Jurisdiction:	Polk County	**Title of Plan:**	Polk County 2025 Multi-Jurisdictional Local Mitigation Strategy
Local Point of Contact:	Brian C. Thurston	**Address:**	Emergency Operation Center 1890 Jim Keene Blvd. Winter Haven Florida 33880
Title:	Polk County Emergency Management Program Manager	**Email:**	brianthurston@polk-county.net
Agency:	Polk County Emergency Management	**Phone Number:**	(863) 298-7000

State Reviewers:	**Mitchell Budihas, Angie Odell**
Date Received by FDEM:	**3/10/2025, 4/30/2025**
Date Plan Not Approved:	**3/27/2025, 5/14/2025**
Date Plan APA:	**6/19/2025**
Date Plan Approved:	

Planning Process (FEMA Element A)		Location in Plan	Met	Not Met	Reviewer Comments	Required Revisions
P1 (A1-a)	The plan must document the current planning process.	Section 3	X			
P2 (A1-b)	The plan must list the jurisdiction(s) in the current plan that will seek approval.	Executive Summary, Appendix C	X			
P3 (A1-b)	The plan must list the representative from **each jurisdiction** that will seek approval and how they participated in the planning process. (At a minimum, it must identify the jurisdiction represented and the person's agency and title within the jurisdiction.)	Introduction, Appendix C	X			
P4 (A2)	The plan must provide documentation of an opportunity for stakeholders to be involved in the current planning process. Documentation of this opportunity must identify how **each of the stakeholders** (see below) were presented with this opportunity, as applicable.	Section 3, Appendix C	X			
P5 (A3)	The plan must document how the public had an opportunity to be involved in the current planning process and what that participation entailed.	Section 3, Appendix C	X			
P6 (A4)	The plan must document what existing plans, studies, reports and technical information were reviewed and how they were incorporated, if appropriate, into the development/update of the plan.	Section 3, Appendix D	X			
P7 (A4)	For jurisdictions with structures for which National Flood Insurance Program (NFIP) coverage is available, regulatory flood mapping products are required to be incorporated, if applicable. Participants may use other jurisdiction-specific materials, including non-regulatory flood mapping products, that improve upon NFIP regulatory flood mapping products.	Appendix A	X			

FEMA Guidance Notes:
Document means to provide factual evidence for how the participants developed/updated the plan. Documentation may include narrative descriptions, copies of meeting minutes, sign-in sheets, or newspaper articles. Examples of documentation of public involvement/feedback may include, but are not limited to, narratives, materials from open meetings, screenshots of social media postings and/or interactive websites with drafts for public review and comment, questionnaires or surveys through utility bills, etc.
Involvement means being engaged and actively participating in the development of the plan; providing input and directly providing, affecting or editing plan content as the representative of the participating jurisdiction(s) or organization.
Stakeholders include local and regional agencies involved in hazard mitigation activities; agencies that have the authority to regulate development; neighboring communities; representatives of business, academia, and other private organizations; representatives of nonprofit organizations.
An opportunity to be involved in the planning process means that these stakeholders are invited to be engaged or are asked to provide information or input to inform the plan's content.
Public Participation: The opportunity must occur during the plan's development, meaning prior to the plan's submission for formal review. In addition, the plan must document how public feedback was included throughout the planning process.
Examples for P6: state hazard mitigation plan; local plans (such as comprehensive/master/general land use, economic development, capital improvement, affordable housing, resource management, resilience, etc.); and hazard-specific reports and plans (such as Community Wildfire Protection Plans).

Reviewer Notes

P2/P3. Ensure the list of participating jurisdictions is consistent throughout the Plan and listed fully on the Jurisdiction Checklist tab. Consider adding special districts, state agencies, WMDs, universities, and other eligible entities - any group that will have a project on the project list and apply for HMA grants. Note that if jurisdictions do not participate in the planning process but want to adopt/apply for grants later on, there are additional steps they will need to complete - it is best for them to be included from the beginning.

P4. The specific entities may be defined by each jurisdiction based on the unique characteristics of the local government, including special districts. The purpose of inviting input is to integrate natural hazard risk reduction across all community systems, as well as encourage implementation of mitigation actions.

Community Lifelines: Safety and Security; Food, Hydration, Shelter; Health and Medical; Energy; Communications; Transportation; Hazardous Materials; Water Systems

P6. Element may be met with a narrative of resources utilized (including bullet list) and citations used throughout or a bibliography. See examples in FEMA Guidance Notes section. Gaps and limitations may be addressed as actions in the mitigation strategy, in particular for items that require additional assistance.

P7. Regulatory flood maps are required to be in the Plan. This may be best located in the Risk Assessment section, however, it must be somewhere in the Plan.

Risk Assessment (FEMA Element B)		Location in Plan	Met	Not Met	Reviewer Comments	Required Revisions
R1 (B1-a)	The plan must include a **description** of all natural hazards that can affect the jurisdiction(s) in the planning area and their assets, such as dams, located outside of the planning area.	Section 5	X			
R2 (B1-a)	The plan must provide rationale for the omission of any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area.	Section 5	X			
R3 (B1-b)	The plan must include information on **location** for each identified hazard.	Section 6 and Appendix A	X			
R4 (B1-c)	The plan must provide the **extent** of the hazards that can affect the planning area.	Section 6	X			
R5 (B1-d)	The plan must include information on **previous occurrences** for each hazard that affects the planning area. At a minimum, this includes any state and federal major disaster declarations for the planning area since the last update.	Section 5	X			
R6 (B1-e)	The plan must include the **probability** of future events for the identified hazards that can affect the planning area.	Section 5	X			
R7 (B1-f)	For multi-jurisdictional plans, when hazard risks differ across the planning area and between participating jurisdictions, the plan must specify the unique and varied risk information for each applicable jurisdiction and their assets outside the planning area.	Section 6	X			
R8 (B2-b)	The plan must describe the potential **impacts** on each participating jurisdiction and its identified assets.	Section 6	X			
R9 (B2-a)	The plan must describe the **overall vulnerability** of each participant to the identified hazards.	Section 6	X			
R10 (B2-a)	For plan updates, the risk assessment must meet Element E1-a (Changes in Development).	Section 5	X			
R11 (B2-c)	The plan must address repetitively flooded NFIP-insured structures by including the estimated numbers and types (residential, commercial, institutional, etc.) of repetitive/severe repetitive loss properties for **each jurisdiction**.	Section 4 - Pending documentation from FEMA	X			

FEMA Guidance Notes:
Description means to provide a narrative description or definition.
Location is defined as the unique geographic boundaries within the planning area, or assets that may be affected by the identified hazard. If maps are used, provide sufficient detail and scale to clearly identify the hazard locations within and/or affecting assets owned by the participating jurisdiction(s). If narrative descriptions are used, the must contain enough detail to clearly identify the area(s) that will be affected by the hazard.
Extent is defined as the range of anticipated intensities of the identified hazards. Extent is most commonly expressed using various scientific scales. When using scales, the plan must document how the scale applies to each jurisdiction.
Previous Occurrences should include an emphasis on significant events, as determined by the community.
Probability can be defined as historical frequencies, statistical probabilities, hazard probability maps and/or general descriptors. It must include the effects of future conditions on the type, location, and range of anticipated intensities of identified hazards.
Impacts are the consequences of effects of each hazard on the identified assets. The narrative must include changes in population patterns, and changes in land use and development. Gaps and limitations may be addressed as actions in the mitigation strategy, in particular for items that require additional assistance.
Vulnerability is the description of which assets, including structures, systems, populations, and other assets, are at risk from the identified hazards. The description must include current and future assets (including people) and the risk that makes them susceptible to damage from the identified hazards.
Assets are, but not limited to, people, structures (facilities, lifelines, critical infrastructure); systems (networks and capabilities); natural, historic, and cultural resources; activities that have value to the community.
Changes in development means recent development, potential development, or conditions that may affect the risks and vulnerabilities of the jurisdictions local communties. This can also include changes in local policies, standards, codes, regulations, land use regulations and other conditions.

Reviewer Notes

Jurisdictional risk should be discussed throughout the risk assessment. If variations in extent, probability, impact, vulnerability, etc., are seen throughout the planning area (county and municipalities) then this must be discussed.

R1/R2. Commonly recognized hazards include those found in the State Hazard Mitigation Plan. Identify all the types of hazards that can occur, e.g., the different types of flood hazards (flash, riverine, storm surge, debris flows, ice jams, dam/levee failure, etc.)

R3. Maps may be helpful to meet location, however, provide a more detailed narrative when showing jurisdictional risk. Identify locations/jurisdictions throughout the planning area that are more at risk to the hazard.

R4. Scale or metric must be included in the Plan for each hazard. Look for explanations of how extent differs across jurisdictions as applicable.

R5. If there were no occurrences since the previous update, it must be stated.

R6. General descriptors must have a scale explaining the metrics (e.g., low, medium, high). Probability must include the effects of future conditions, on the type, location, and range of anticipated intensities of identified hazards.

R8. The discussion of impacts should differ or be separate from the vulnerability analysis. Impacts are the consequence of the hazard on the assets found within the planning area (people, property, critical infrastructure, natural resources, etc.).

R9. Vulnerability should explain **why** each participant (jurisdiction) is vulnerable to the hazards. This should include a discussion of current and future assets.

R11. Repetitive loss data should include RL and SRL data and should include the **estimated numbers** and **types** of structure for each jurisdiction.

Mitigation Strategy (FEMA Element C)	Location in Plan	Met	Not Met	Reviewer Comments	Required Revisions

Reviewer Notes

S1 (C1-a)	The plan must describe how the existing authorities, policies, programs, funding, and resources of **each participant** are available to support the mitigation strategy. This must include a discussion of the existing building codes and land use and development ordinances or regulations. Capabilities may be described in a table or narrative.	Section 3, Section 4, Appendix D	X		Great community profile providing a lot of great information to inform public and county of potential hazards and issues.	
S2 (C1-b)	The plan must describe the ability of **each participant** to expand on and improve the capabilities described in the plan (see S1).	Section 4	X			
S3 (C2-a)	The plan must describe participation in the NFIP for **each participant**, as applicable, in accordance with NFIP regulatory requirements (see reviewer notes).	Section 4, Appendix A	X		*The additional column in the table to show the appointee is a nice layout to show the basics.*	
S4 (C3-a)	The plan must include **goals** to reduce the risk of the identified hazards.	Section 7	X			
S5 (C4-a)	The mitigation strategy must include an analysis of a comprehensive range of actions or projects that the participants considered to specifically address vulnerabilities identified in the risk assessment.	Appendix B	X			
S6 (C4-b)	**Each plan participant** must identify one or more mitigation actions the participant(s) intends to implement for each hazard addressed in the risk assessment.	Appendix B	X			
S7 (C5-a)	The plan must describe the criteria used for prioritizing the implementation of the actions. The criteria must include an emphasis on the extent to which benefits are maximized, in relation to the associated costs of the action.	Section 7, Appendix B	X		STAPLEE	
S8 (C5-b)	The action plan must identify who is responsible for administering each action, along with the action's potential funding sources and expected time frames for completion.	Appendix B	X			

FEMA Guidance Notes:

Discussion means a narrative or other materials that provide context on a section of the plan. Describing current capabilities provides a rationale for which mitigation projects can be undertaken to address the vulnerabilities identified in the Risk Assessment.

For C1-b: If participants do not have the ability or authority to expand and/or improve their capabilities, the plan must describe the lack of ability or authority.

For C2-a: The following information must be provided for each participant: adoption of NFIP minimum floodplain management criteria via local regulation; adoption of the latest effective Flood Insurance Rate Map (if applicable); Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs; appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP; and description of how participants implement the substantial improvement/substantial damage provisions of their floodplain management regulations after an event. Simply stating "The community will continue to comply with the NFIP" is not sufficient to meet the requirement.

Goals are broad, long-term policy and vision statements that explain what is to be achieved by implementing the mitigation strategy. The goals must be consistent with the hazards identified in the plan. Goals may be presented as general statements applying to more than one hazard, or they may be itemized to each of the identified hazards.

A mitigation action is a measure, project, plan, or activity proposed to reduce current and future vulnerabilities described in the risk assessment. These actions must be achievable and demonstrate how the mitigation activities reduce the risks identified in the risk assessment.

Analyzing a comprehensive range means considering mitigation alternatives spanning all types of solutions. These may include local plan and regulations, structure and infrastructure projects, natural systems protection, and education and awareness programs.

For C4-a: Actions considered must emphasize reducing risk to existing buildings, structures and infrastructure, as well as limiting risk to new development and redevelopment. Actions should also aim to reduce risk to your local population.

For C5-b: The plan must identify applicable potential funding sources, with details beyond generic terms such as "federal," "state" and/or "local." The plan must provide the **position, office, department, or agency** responsible for implementing/administrating the identified mitigation actions.

Reviewer Notes

S1. Capabilities must be discussed for each participating jurisdiction. Gaps and lack of capability should be discussed as applicable.

S2. Describe the ability of each participating jurisdiction to expand and improve capability throughout the next planning cycle (5-years).

S3. The following information must be provided for each participant.
1. Adoption of NFIP minimum floodplain management criteria via local regulation.
2. Adoption of the latest effective Flood Insurance Rate Map (FIRM), if applicable.
3. Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHAs.
4. Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP.
5. Description of how participants implement the substantial improvement/substantial damage provisions of their floodplain management regulations after an event.

S5. The range of actions considered must be clearly linked to the vulnerabilities and impacts identified in the risk assessment.

S6. Each participating jurisdiction should have a project on the project list. If this is not possible due to lack of capability, consider adding multi-jurisdictional projects, county-wide projects (such as planning/education), or something similar. If that is not feasible, include a narrative for the lack of capability within the Plan.

S8. Include the **position/office/department/agency** responsible for implementing the projects, potential funding sources, and a timeframe for completion. Generic terms should be avoided or defined (e.g., short-term, medium-term, and long-term).

Plan Maintenance (FEMA Element D)		Location in Plan	Met	Not Met	Reviewer Comments	Required Revisions
M1 (D1-a)	The plan must describe how the participant(s) will continue to seek public participation after the plan has been approved and during the plan's implementation, monitoring, and evaluation.	Section 3	X		Community events, meetings, website, and social media	
M2 (D2-a)	The plan must identify how, when and by whom the plan will be tracked for implementation over its five-year cycle (**monitoring**).	Section 3	X		LMS Coordinator, on a continuous basis	
M3 (D2-b)	The plan must identify how, when and by whom the plan will be assessed for effectiveness at achieving its stated purpose and goals (**evaluating**).	Section 3	X		LMS Coordinator, continuous basis	
M4 (D2-c)	The plan must identify how, when and by whom the plan will be reviewed and revised at least once every five years (**updating**).	Section 3	X		LMS Coordinator, annual basis	
M5 (D3-a)	The plan must describe the community's process to **integrate** the plan's data, information, and hazard mitigation goals and actions into other **planning mechanisms**.	Section 3	X		CEMP, PDRP, CRS, County and City Comprehensive plans, CFRPC-SRPP, Floodplain Management Plan	
M6 (D3-c)	A multi-jurisdictional plan must describe **each participant's** individual process for integrating information from the mitigation strategy into their identified planning mechanisms.	Section 3	X			
M7 (D3-b)	The plan must identify the local planning mechanisms where hazard mitigation information/actions may be integrated. The identified list of planning mechanisms must be applicable to the plan participant(s) and not contradict the identified capabilities.	Section 3	X			

FEMA Guidance Notes:

For D1-a: The plan may contain a narrative description or an itemized list of steps, demonstrating the prescribed method that will be followed to obtain future public participation.

Monitoring means tracking the implementation of the plan over time. For example, monitoring may include a system for tracking the status of the identified hazard mitigation actions.

Evaluating means assessing the effectiveness of the plan at achieving its stated purpose and goals.

Updating means reviewing and revising the plan at least once every five years.

Integrate means to include hazard mitigation principles, vulnerability information and mitigation actions into other existing community planning to leverage activities that have co-benefits, reduce risk and increase resilience.

Planning mechanisms refer to the governance structures used to manage local land use development and community decision-making.

For a multi-jurisdictional integration plan, this element may be met with a general narrative description if the process is applicable to each of the plan participants; however, any participant who cannot apply the same process as other plan participants must include their unique process for integration.

Reviewer Notes

M1. Examples of continued public involvement could include periodic presentations on the plan's progress to elected officials, schools or other community groups, annual questionnaires or surveys, public meetings, postings on social media, and interactive websites.

M2/M3/M4. Discuss **who, when, and how** the plan will be **monitored, evaluated, and updated** (five-year update). Can be narrative or itemized list of steps demonstrating the prescribed method that will be followed to monitor the plan after plan approval and during the plan's implementation.

M5. We are looking for the **process** of how each participating jurisdiction integrates information from the LMS Plan into other planning mechanisms (e.g., CEMP, Comprehensive Plan, codes and regulations, hazard plans, resiliency plans, etc.).

M6. Is the process identified in M5 applicable to all participating jurisdictions? This element may be met with a general narrative description if the process is applicable to each of the plan participants; however, any participant who cannot apply the same process as other plan participants must include their unique process for integration.

M7. Related to M5, what are the planning mechanisms that information from the LMS Plan may be incorporated into? A narrative or bullet list will suffice. List planning mechanisms from each jurisdiction along with county plans.

Plan Update (FEMA Element E)		Location in Plan	Met	Not Met	Reviewer Comments	Required Revisions
U1 (E1-a)	The plan must describe changes in development that have occurred in hazard-prone areas and how they have increased or decreased the vulnerability of **each jurisdiction** since the previous plan was approved.	Section 5	X			
U2 (E2-a)	The plan must describe how it was revised due to a change in priorities for **each jurisdiction**.	Section 3	X			
U3 (E2-b)	The plan must describe the status of all hazard mitigation actions in the previous plan by identifying whether they have been completed or not, for each jurisdiction.	Appendix B	X			
U4 (E2-c)	The updated plan must explain how the jurisdiction(s) integrated information from the mitigation plan into other planning mechanisms, as a demonstration of progress in local hazard mitigation efforts. If information from the previous plan was not integrated into other planning mechanisms, this must be stated.	Section 3	X			

FEMA Guidance Notes:

Changes in development means recent development, potential development, or conditions that may affect the risks and vulnerabilities of the jurisdictions or shifts in the needs of the community. This can also include changes in local policies, standards, codes, regulations, land use regulations and other conditions. If no development changes affected the jurisdiction's overall vulnerability, this must be stated with the plan.

Description of Priorities: A description of priorities is defined by the participant(s). If the participant(s) has no change in priorities since the last approval of the mitigation plan, this must be stated. This can be a narrative or with detailed statements in appropriate sections of the plan.

Actions: For actions that are not complete, the plan must state whether the action is no longer relevant or will be included in the updated action plan.

Reviewer Notes

U1. This element is also linked to Element R10 in the risk assessment section. Make sure to discuss change in vulnerability (positive, negative, or none) to hazards from changes in development that has occurred over the last five years (planning cycle).

U2. How was the plan revised and was it due to a change in priority? Examples include new leadership, recent hazard events, input from the public, etc. We are usually referencing the goals and objectives, risk assessment, mitigation strategy, project prioritization method, or similar sections of the plan when looking for this information.

U3. Include information about completed, deleted, or deferred projects from the previous version of the plan.

U4. This element is related to M5 and M7. To meet U4, discuss if any integration of information from the LMS into other planning mechanisms has occurred since the previous update, such as a recent update of the CEMP or in the jurisdictions' codes and ordinances. Think of integration within all participating jurisdictions.

Plan Adoption (FEMA Element F)		Location in Plan	Met	Not Met	Reviewer Comments	
A1 (F1-a)	The jurisdiction must provide documentation of plan adoption, usually a resolution by the governing body or other authority, to receive approval.	Section 8, Appendix G				
A2 (F2-a)	To receive approval, the participants must adopt the plan and provide documentation that the adoption has occurred.	Section 8, Appendix G				

FEMA Guidance Notes:

Jurisdiction Adoption: **At least one** adoption resolution should be transmitted through the State to FEMA for the LMS Plan to be officially approved. The remaining resolutions may be transmitted as they are completed.

Documentation may be provided in the form of meeting minutes, resolutions, signed letter or any other method to demonstrate that official adoption by the participant has occurred.

Participants that submit their adoption documentation separately from the other multi-jurisdictional plan participants will not receive a new expiration date.

Participating jurisdictions that adopt the plan **more than one year** after Approvable Pending Adoption (APA) status has been issued must either: Validate that their information in the plan remains current with respect to both the risk assessment and their mitigation strategy OR Make the necessary updates before submitting the adoption resolution to FEMA.

Reviewer Notes

Ideally, all jurisidictions will formally adopt the Approved Pending Adoption (APA) plan before the current expiration date. This will depend on State review time and required revisions. Jurisdictions must adopt the LMS Plan within one year of APA status. Beyond one year, jurisdictions will need to validate the accurracy of their information within the Plan in order to receive FEMA approval.

High Hazard Potential Dams (FEMA Element G) **Eligibility Requirement for HHPD Grant Program*		Location in Plan	Met	Not Met	Reviewer Comments	Required Revisions
D1 (HHPD1-a)	The plan must describe how the local government worked with the local dam owners and/or the state dam safety agency (FDEP).					
D2 (HHPD1-b)	The plan incorporates information shared by the state and/or local dam owners.					
D3 (HHPD2-a)	The plan describes the **risks and vulnerabilities** to and from HHPDs (included in risk assessment).					
D4 (HHPD2-b)	The plan documents the limitations and describes how to address deficiencies (in the risk assessment).					

Reviewer Notes

These elements are optional, but are an eligibility requirement of the Rehabilitation of High Hazard Potential Dam Grant Program. Consider including this information in your LMS Plan if you have **high** hazard or **significant** hazard dams in the planning area. If there are any gaps or limititations, this should be discussed as applicable.

D5 (HHPD3-a)	The plan addresses how to reduce vulnerabilities to and from HHPDs as part of its own goals or with other long-term strategies. The plan does not need to include a goal specific to HHPDs alone.					
D6 (HHPD3-b)	The plan links proposed actions to reduce long-term vulnerabilities that are consistent with its goals.					
D7 (HHPD4-a)	The plan must describe **specific actions** to address HHPDs (project list).					
D8 (HHPD4-b)	The plan describes the criteria used to prioritize actions related to HHPDs.					
D9 (HHPD4-c)	The plan identifies the position, office, department or agency responsible for implementing and administering the action to mitigate hazards to or from HHPDs.					

FEMA Guidance Notes:

Note: Ensure sensitive and/or personally identifiable information is protected.

Information shared by the state and/or local dam owners includes: inundation maps, EAP, Floodplain Plans, dam breach modeling software, as well as more detailed studies.

Risk and vulnerabilities can include potential cascading impacts of storms, wildfires, etc. on dams that may affect upstream and downstream flooding; potential significant economic, environmental or social impacts, as well as multi-jurisdictional impacts, from a dam incident; location and size of the population at risk, and potential impacts to institutions and critical infrastructure/facilities/lifelines; and/or methodology and/or assumptions for risk data and inundation modeling.

Specific actions include rehabilitating/removing dams; adopting and enforcing land use ordinances in inundation zones; elevating structures in inundation zones; and/or adding flood protection, such as berms, floodwalls or floodproofing, in inundation zones.

APPENDIX G

APPENDIX G – ADOPTING RESOLUTIONS AND LETTERS OF COMMITMENT

Resolutions Adopting the 2025 Polk County Multi-Jurisdictional Local Mitigation Strategy

Following notification of "Approval Pending Adoption" of the Polk County 2025 Multi-jurisdictional Local Mitigation Strategy (LMS) by Florida Division of Emergency Management and Federal Emergency Management Agency, Polk County and its jurisdictions may formally adopt the LMS at advertised public meetings. The LMS Working Group anticipates adoption of LMS by Resolution (See Section VII) by the following:

- Polk County
- City of Auburndale
- City of Bartow
- City of Davenport
- Town of Dundee
- City of Eagle Lake
- City of Fort Meade
- City of Frostproof
- City of Haines City
- Town of Hillcrest Heights
- Village of Highland Park
- City of Lake Alfred
- Town of Lake Hamilton
- City of Lake Wales
- City of Lakeland
- City of Mulberry
- Polk City
- City of Winter Haven

Letters of Commitment Supporting the 2025 Polk County Multi-jurisdictional Local Mitigation Strategy

Following notification of "Approval Pending Adoption" of the Polk County 2025 Multi-jurisdictional Local Mitigation Strategy (LMS) by Florida Division of Emergency Management and Federal Emergency Management Agency, participating jurisdictions may provide a letter of support for the LMS (See Section VII).

- Golden Lakes Community Development
- Johns Hopkins All Children's Hospital
- Polk County Public Schools
- Webber International University

APPENDIX G: ADOPTING RESOLUTIONS AND LETTERS OF SUPPORT

To ensure compliance with Americans with Disabilities Act (ADA) accessibility, this report does not include the documents listed above. Please contact Polk County Emergency Management at 863-298-7000 for assistance.

SAMPLE RESOLUTION _____

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF DUNDEE, FLORIDA ADOPTING THE 2020 POLK COUNTY MULTI-JURISDICTIONAL LOCAL MITIGATION STRATEGY UPDATE.

WHEREAS, areas of Polk County, including the Town of Dundee, are vulnerable to the human and economic costs of natural, technological, and societal disasters; and

WHEREAS, the Town Commission of the Town of Dundee realizes the importance of reducing or eliminating those vulnerabilities for the overall public health, safety, and welfare of the community; and

WHEREAS, a Local Mitigation Strategy is a LMS which presents a unified strategy to building a disaster-resilient community; and

WHEREAS, the Disaster Mitigation Act of 2000 requires each local jurisdiction to have either its own local mitigation strategy or to actively participate in the development and maintenance of multi-jurisdictional mitigation strategy; and

WHEREAS, the Town of Dundee actively participated in the development and maintenance of the Polk County Local Mitigation Strategy as adopted in 2002, 2005, 2010, and 2015; and

WHEREAS, the Town of Dundee has actively participated in the 2020 update to the Local Mitigation Strategy through the Polk County Local Mitigation Strategy Working Group, which has established a comprehensive, coordinated planning process to eliminate or decrease these vulnerabilities; and

WHEREAS, Town of Dundee representatives and staff have identified, justified, and prioritized proposed projects and programs needed to mitigate the vulnerabilities of the Town of Dundee to the impacts of future disasters; and

WHEREAS, the Polk County 2020 Multi-Jurisdictional LMS incorporated these proposed projects and programs into the update that has been prepared and issued for consideration and adoption by the jurisdictions of Polk County; and

WHEREAS, the State of Florida Division of Emergency Management has issued an "Approval Pending Adoption" of the Polk County 2020 Multi-Jurisdictional Local Mitigation Strategy.

NOW, THEREFORE, BE IT RESOLVED, by the Town Commission of the Town of Dundee:

1. The Town Commission of the Town of Dundee hereby accepts and adopts its designated portion of the "Polk County 2020 Multi-Jurisdictional LMS".

2. Agency personnel of the Town of Dundee shall pursue available funding opportunities for implementation of the proposals and projects designated therein.

3. Agencies and organizations within the Town of Dundee will, upon receipt of such funding or other necessary resources, seek to implement proposals contained in the LMS.

4. The Town of Dundee will continue to participate in the updating and expanding of the LMS in future years.

5. The Town of Dundee will encourage businesses, industries, and community groups operating within Polk County to also participate in updating and expansion of the LMS in the years ahead.

6. The Town of Dundee will continue to participate in the furtherance of public involvement opportunities.

INTRODUCED AND PASSED by the Town Commission of the Town of Dundee, Florida, in regular session, this _____ day of _____, 2020.

(Signatures as appropriate for the jurisdiction)

APPENDIX F

APPENDIX F – RELEVANT ARTICLES

Appendix F includes at least one relevant article addressing each of the hazards analyzed for the LMS update.

LOCAL

What to expect: Polk under tornado watch and wind advisory as storm system approaches

Sara-Megan Walsh
Lakeland Ledger

Published 10:53 a.m. ET Jan. 9, 2024 | **Updated 1:50 p.m. ET Jan. 9, 2024**

Polk County is under a tornado watch as a line of severe thunderstorms moves our direction with the potential to create chaos with Polk County's evening rush hour.

The National Weather Service issued a tornado watch for Polk and 20 other counties as a front of storms is expected to work its way through the area Tuesday afternoon between 2 and 6 p.m. Polk had been under a wind advisory for much of the day.

NWS Tampa meteorologist Stephen Shiveley said wind gusts between 30 and 35 mph are likely with some stronger gusts up to 45 mph possible. There is the possibility of isolated tornadoes popping up in Central Florida Tuesday evening, Shiveley said, advising residents should stay alert.

"We have a strong cold front coming through. Ahead of it is a breeze that's warmer, and it's kicking up moisture," he said. "The cold front will bring a squall, or think a strong line of thunderstorms."

Shiveley said most Florida residents should expect severe thunderstorms to impact the area for 30 to 45 minutes. Heavy rainfall is expected of 0.5 to 1.5 inches, with some higher local totals possible.

The system is moving from north to south, coming in from the Midwest. Lakeland residents living north of I-4 should expect to see action around 3 to 4 p.m. while southern edges of Polk in Frostproof should anticipate severe weather between 5 and 6 p.m., Shiveley said.

The National Weather Service has advised drivers to exercise extra caution, especially if operating a high-profile vehicle. Homeowners are advised to take in or secure outdoor objects.

Polk County Public Schools and the Schools of McKeel Academy announced Monday that all after-school activities would be canceled Tuesday.

What's causing the severe storms?

Florida has seen a series of brief but severe thunderstorms over the past two weeks, bringing heavy rains, gusts and pop-up tornadoes to the area.

The Florida Panhandle has already felt the cold front's impact Tuesday morning. The National Weather Service confirmed several tornadoes touched down in the area, including in Panama City, Marianna and Santa Rosa Beach. The storms caused significant damage and several roads are closed, but so far no injuries are reported.

"We're in El Niño season, when we've been in La Niña for the past few years," Shiveley said. "When its La Niña, we tend to have a drier, quieter winter. El Niño is the opposite."

The El Niño is a naturally occurring climate phenomenon that has combined with a low-level jet stream that's lying over Florida, Shiveley said. He compared the jet stream to a street, providing a road map for storms and weather systems to travel or move along.

"Any weather system that develops out West, the system that forms will travel along the street," he said. "Any system forming out west is going right through Florida."

When Florida is dealing with La Niña or a neutral system, most of these severe storm systems pass to the north not impacting the state, Shiveley said.

"Normally this is our quiet season," he said. "It's been more active now than it was during the summer months."

60-foot-deep sinkhole opens in front of Highland City home: PCFR

By FOX 13 News Staff | Published January 20, 2024 12:57pm EST | Polk County | FOX 13 News |

HIGHLAND CITY, Fla. - According to Polk County Fire Rescue, an approximately 15 feet wide by 60 feet-deep sinkhole opened in front of a Polk County home on Saturday.

Officials say the sinkhole is on Royal Crest Drive in Highland City.

Firefighters say the street is open, and the sinkhole does not pose an imminent threat to the county roadway.

According to authorities, PCFR will continue monitoring the situation over the coming days.

Active sinkhole in front of Polk County home growing, county officials say

Family evacuated as hole continues to grow

Sinkhole in front of Polk County home growing
3.1K

POLK COUNTY, Fla. – A family in Polk County has been forced out of their home as a sinkhole that opened in their front yard over the weekend continues to grow, according to **Tampa-based station WFTS.**

The sinkhole is in the front yard of a home in Highland City, that's southeast of Lakeland.

On Sunday **News 6 reported that the sinkhole** was about 15 feet wide and 60 feet deep, but since then county officials say it's 70-80 feet deep.

Crews were working Tuesday to stabilize and then fill the sinkhole. County officials said there is a concern that if the sinkhole grows too close to the roadway neighbors will be displaced.

The family in the home won't be able to return to the house until officials deem it safe to do so, the report said.

County officials say sinkholes are common in this area.

How do sinkholes form?

Florida law defines a sinkhole as “a landform created by subsidence of soil, sediment, or rock as underlying strata are dissolved by groundwater. A sinkhole forms by collapse into subterranean voids created by dissolution of limestone or dolostone or by subsidence as these strata are dissolved.”

Geologically, Florida’s land is made up of porous limestone, a key part of the state’s drinking water system, the Florida aquifer system.

When water like rain flows through the porous limestone, it slowly dissolves the aquifer’s limestone forming a landscape called karst, known for springs, streams and even sinkholes.

In fact, some of Florida’s lakes are actually sinkholes, like Lake Eola in Orlando.

The water flows through the limestone, sometimes collecting in the joints of the stone, but as more limestone dissolves from the water, those joints become wider, weakening the ground support. Eventually, the ground collapses, causing a sinkhole to form.

Lots of things can lead to this happening, **according to meteorologist Samara Cokinos**: flooding, pumping water from the ground, extended droughts or land development are thought to be factors.

Florida is one of the most common states for sinkholes, according to the U.S. Geological Survey.

By Florida law, property insurers are required to cover a home if there is a catastrophic ground collapse caused by a sinkhole, but they are not required to cover less severe

damage, for instance, if a sinkhole somewhere on your property causes the ground to sink slowly, causing cracks to form in the foundation or even the walls. You can purchase a sinkhole coverage rider to help if that happens.

Fog leads to 7 car pile-up in Polk Co.

| Published January 25, 2017 5:25pm EST | News | FOX 13 Tampa Bay |

Image 1 of 5

LAKE WALES (FOX 13) - Thick fog led to dangerous driving conditions across t Bay area Wednesday morning. In Polk County alone, seven accidents with injur were reported.

"We had a lot of crashes, we had some injuries, but fortunately, no deaths," Pol County Sheriff Grady Judd said.

The worst of the accidents resulted in a seven vehicle pile-up. A semi-truck rea ended another tractor-trailer along Westbound State Road 60 in Lake Wales around 6 a.m. The truck jack-knifed and the SUV behind it slammed into it. The a pick-up truck and another semi crashed into the SUV. All that was left was a mangled mess of metal and a miracle.

"It is a blessing that the driver of that vehicle is alive," Judd said Wednesday.

Somehow, the 46-year old driver survived and is in stable condition at the hospital. Two other cars were also involved after barrels of liquid inside the jacl knifed semi rolled out into eastbound lanes and struck the cars.

Judd says this could've easily ended in fatalities. He says it should send a strong message about the danger of driving in fog.

"Normally they tell you one car length per ten miles per hour. And if it's foggy, y should at least double that," he said.

State Road 60 in Lake Wales remained closed for the majority of the day as cre worked to clean up the wreckage.

Polk Perspective: For the future of us all, opt for solar

John Wing Guest columnist
Published 11:05 p.m. ET Feb. 1, 2020

Climate change continues its relentless course of worldwide destruction. Florida is in its crosshairs.

Time has come for us in the Sunshine State to join worldwide efforts to stave off the worst effects of global warming. Florida will be devastated more than any other state in America. Surprisingly, Polk County will be among the worst-affected areas. In coming decades we'll endure more wildfires, threats to agriculture and shortage of well water.

The prime cause of global warming is CO2 emission from power plants that burn coal or natural gas. That CO2 causes atmosphere to absorb more heat

from sunlight. Coal is nearly all carbon, so coal is the worst offender. Natural gas is about half as bad.

Electric companies should phase out both of these fossil fuels, and replace it with industrial-scale solar or wind power.

Already half of America's coal-burning power capacity has closed, and no more coal-fired plants are planned. The wisdom of burning natural gas is being called into question.

Some great news is that solar has become Florida's cheapest source of electric power.

Furthermore, solar power is at its strongest on summer afternoons when we need air conditioning the most, and electric companies are digging deeply into their reserves.

Within the past few years, cost of solar power has plummeted. Solar became less expensive than coal several years ago, and now solar is cheaper than natural gas.

Solar cost will continue to decrease during the coming decade, as solar panels keep getting more efficient and easier to produce. Meanwhile, we push deeper into limited petroleum reserves. Petroleum is humanity's sole source of petro-chemicals, which are the raw material for most plastics and many other essential materials. Before long, petroleum will become too valuable to burn.

Solar is now being selected for most new electric power throughout Florida. Solar may serve well as a replacement for aging gas-burning generators.

Florida Power & Light's "30 by '30" project plans 30 million solar panels by 2030. This could make FP&L America's largest solar power producer. The Tampa Electric Co. (TECO) has launched 10 solar farm projects, totaling 600 megawatts (MW) by next year – enough to power 100,000 homes. You may

have seen TECO's 55 MW solar project between Bartow and Lakeland. TECO now operates large solar farms near Lake Hancock, Bonnie and Payne Creek.

The Florida Municipal Power Agency (FMPA) is building three huge solar farms in Osceola and Orange counties. This project will provide 233 MW of low-cost clean power for a dozen Florida cities. Participating cities only pay for electricity when it's produced – with no up-front cost. FMPA has launched another joint venture, with two solar farms in north Florida, making 149 MW power at even lower cost.

Bartow recently added a solar farm that helped bring residential electric rates from highest to nearly lowest in Florida. Bartow later joined other Florida cities in agreeing to purchase low-cost power from FMPA's first joint-venture solar project.

All aforementioned solar power was justified by bare economics. That new electric power is being generated by solar at lower cost than could have been attained by plants burning natural gas.

A wise first step for utility companies is to re-assess long-term economics of old fuel-burning plants. Replacement of some old coal or natural gas plants with solar farms may provide attractive return on investment.

The next step should be to help Floridians and humanity in general by mitigating damage from climate change.

CO2 emission from burning of fuels is a major cause of global warming. That long-term cost equals a whopping 2 cents to 3 cents per kilowatt hour of electric power. Consider that benefit toward mitigating climate change, in addition to the bare economics. Any new fuel-fired plant becomes a 40-year commitment to emitting CO2.

In Lakeland we face the impending task of replacing the 350 MW capacity of the aging coal-burning McIntosh Unit 3 power plant. Options include solar

farms, natural gas burning, exchange of power through the grid, or a joint-venture arrangement with an FMCA solar project.

The Climate Action Committee of Polk League of Women Voters will ask the City Commission to fully evaluate options. We suggest hiring a well-qualified consulting company to thoroughly evaluate all options for providing the required power capacity.

We join many concerned citizens in asking that mitigation of global warming will be fully and quantitatively considered as an objective, in addition to the bare economics.

John Wing is a member of the Climate Action Committee of the Polk League of Women Voters.

Polk deputies: Diesel spill reported after crash with injuries on SR-60

By FOX 13 News Staff | Published February 13, 2024 9:23pm EST | Polk County | FOX 13 News |

MULBERRY, Fla. - The Polk County Sheriff's Office says injuries were reported in a crash involving a tanker and car.

Officials say deputies are at the scene at SR 60 W at Turner Road in Willow Oak, which is near the Mulberry area.

According to deputies, the tanker was on its side with a diesel spill. The sheriff's office says occupants of the car were injured, but there were no fatalities.

Authorities are asking drivers to avoid the area if possible.

HEALTH OFFICIALS ISSUE BLUE-GREEN ALGAE BLOOM CAUTION FOR LAKE CRAGO

By Pamela Acosta-Torres

February 18, 2022

SHARE THIS PAGE

Facebook

Twitter

Contact:
Pamela Acosta-Torres, Public Information Officer
Pamela.AcostaTorres@flhealth.gov
(863) 578-2146

LAKELAND, FL – The Florida Department of Health in Polk County has issued a Health Caution for the presence of blue-green algae in Lake Crago (Ramp). This is in response to a site visit and water sample taken by the Florida Department of Environmental Protection on 02/15/2022. The public should exercise caution in and around Lake Crago (Ramp).

Blooms have the potential to produce toxins, and what triggers them to begin doing so remains poorly understood. For this reason, it is important to exercise caution, as bloom conditions are dynamic and could change at any time. The Florida Department of Environmental Protection (DEP) collects algae samples from reported bloom locations for toxin analysis. Once completed, the results will be posted on the DEP Algal Bloom Dashboard, and can also be viewed on the Protecting Florida Together website, where you can sign up to be notified of the latest conditions.

Residents and visitors are advised to take the following precautions:

- You should not drink, swim, wade, use personal watercraft, water ski or boat in waters where there is a visible bloom.
- Avoid getting water in your eyes, nose, or mouth
- You should keep pets and livestock away from the waters in this location
- Eating fillets from healthy fish caught in freshwater lakes experiencing blooms is safe. Rinse fish fillets with tap or bottled water, throw out the guts and cook fish well.
- You should not eat shellfish from this location

What are blue-green algae?

Blue-green algae are a type of bacteria that is common in Florida's freshwater environments. A bloom occurs when the rapid growth of algae leads to an accumulation of individual cells that discolor water and often produce floating mats that emit unpleasant odors.

Some environmental factors that contribute to blue-green algae blooms are sunny days, warm water temperatures, still water conditions, and excess nutrients. Blooms can appear year-round but are more frequent in summer and fall. Many types of blue-green algae can produce toxins.

Is it harmful?

Blue-green algae blooms can impact human health and ecosystems, including fish and other aquatic animals.

For additional information on potential health effects of algal blooms, visit floridahealth.gov/environmental-health/aquatic-toxins.

Find current information about Florida's water quality status and public health notifications for harmful algal blooms and beach conditions by visiting ProtectingFloridaTogether.gov. (link opens in a new window) *Protecting Florida Together is the state's joint effort to provide statewide water quality information to prioritize environmental transparency and commitment to action.*

What do I do if I see an algal bloom?

The Florida Department of Environmental Protection collects and analyzes algal bloom samples. To report a bloom to DEP, call the toll-free hotline at 855-305-3903 or report online. (link opens in a new window)

To **report fish kills, contact** the Florida Fish and Wildlife Research Institute at 1-800-636-0511.

Report symptoms from exposure to a harmful algal bloom or any aquatic toxin to the Florida Poison Information Center, call 1-800-222-1222 to speak to a poison specialist immediately.

Contact your veterinarian if you believe your pet has become ill after consuming or having contact with blue-green algae-contaminated water.

DENSE FOG SUSPECTED AS FACTOR IN SIX VEHICLE CRASH NEAR BARTOW EARLY MONDAY MORNING

Investigators from the Polk County Sheriff's Office believe dense fog contributed to an early Monday morning crash, which included six vehicles and closed down the southbound lanes of US 17 (south of Carlton Road) for about seven hours.

The crash occurred at about 6:34 AM, Monday, February 28, 2022. Among the vehicles involved were: a semi with trailer, an ag-worker bus, two pickup trucks, and two sedans, one of which belongs to the PCSO Department of Detention.

The ag-worker bus was carrying 36-passengers at the time of the crash.

Based on evidence and witness statements, it was determined that the semi-tractor and trailer, driven by 35-year old Jeffrey Banks of Orlando, pulled out of a cement facility from the west side of US 17 and crossed the southbound lanes while attempting to make a left turn to travel north. The other five vehicles, which were in the southbound lanes, struck the trailer and/or other vehicles involved.

All but one of the injured victims were treated and released from the hospital. The exception was Eduardo Maldonado, a passenger on the bus, who remains hospitalized with facial injuries, but stable.

Chemical leak at Auburndale Coca-Cola plant forces employees to evacuate, nearby residents to shelter in place

By FOX 13 News Staff | **Published** March 15, 2023 12:07pm EDT | Polk County | FOX 13 News |

AUBURNDALE, Fla. - Polk County Fire Rescue crews have contained an ammonia leak at a Coca-Cola plant in Auburndale.

According to a spokesperson with the city of Auburndale, a 20,000-gallon container at the facility, which is located at 705 Main St, was leaking ammonia Wednesday morning.

The spokesperson added that all employees were evacuated to the perimeter of the facility and there are no reports of injuries.

Residents within a two-block area east of the plant were also asked to shelter in place.

As of Wednesday afternoon, crews were working to clean up the chemical spill.

Wildfire destroys 200 outbuildings, burns more than 650 acres in Polk County

By Ken Suarez and FOX 13 News Staff | Published March 29, 2023 8:14am EDT | Polk County | FOX 13 News |

LAKE WALES, Fla. - A massive wildfire in Polk County that burned nearly 660 acres is 100% contained and is now under investigation, the Florida Forest Service said.

The fire, named the Right Gate Fire, broke out on Tuesday in the area of south Lake Kissimmee and west of the Kissimmee River, and burned 658 acres by Wednesday morning.

The fire sparked in the River Ranch camping area, forcing it to close Tuesday as crews worked to contain the fire. It destroyed 200 outbuildings including sheds, and hand-made structures.

Though the cause of the fire has yet to be determined, on Tuesday, Lakeland District Wildfire Mitigation officials said dry, windy conditions were fueling the fire.

Mid-afternoon Wednesday, property owners were allowed to go back into River Ranch to assess the damage. They had been kept out since shortly after the fire first started.

The structures at River Ranch are uninsurable because the property is so far out, so if property owners lose a building, they have to rebuild it at their own expense.

While fire is no stranger to River Ranch, many property owners accept the reoccurring danger and possible financial loss because they are enamored with the simple outdoor lifestyle.

Karen Browning's camp has burned four times in the last 23 years.

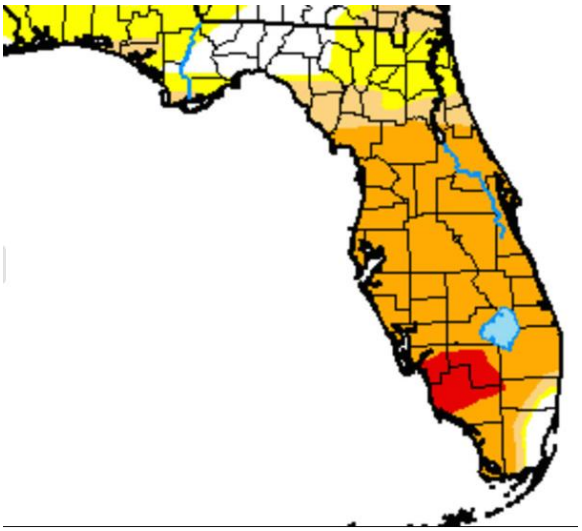
"Look," she said. "Can you go anywhere else in the state of Florida and ride a four-wheeler, ride a buggy, ride anything but a motorcycle, and let your children be children, like they used to be?"

Back in 2017, another fire burned 6,500 acres and took a week to get under control.

Lake Wales and Frostproof in Severe Drought, But Storm May Threaten

Potential For Storm Development in the Gulf Next Week

News Staff Reports | Last updated Apr 08, 2023 1:46pm 0



As lawns wither and trees wilt across the central Florida, weather forecasters are eyeing long-range models showing a significant chance that a rare April tropical or sub-tropical storm could form in the Gulf of Mexico in coming days.

According to the Southeast Regional Climate Center (SERCC), drought conditions over most of the Florida peninsula range from severe to extreme, and most areas are recording the driest start to any year in over a century. So far at the LakeWalesNews.net weather station just south of Lake Wales, less than two inches of rain has fallen since January 1. While this time of year is normally drier than the summer months, normal precipitation would amount to about eight inches through April 6.

Despite the current dry conditions, a lack of spring cold fronts has led to rising water temperatures in the Gulf of Mexico, and a strong upper-level low could provide the trigger for a sudden spin-up to form, according to weather models and forecasters. Weather patterns in the upper atmosphere, generally about three miles above the surface, often drive the formation and movement of tropical systems at the surface.

Models are showing a strong surface low forming. According to forecasters at the National Weather Service in Ruskin, which forecasts the weather for Polk County, that low is expected to "meander" in the Gulf of Mexico before eventually moving northeast, dragging plentiful moisture over the state "that could finally make a dent on the ongoing drought across the state."

If a storm forms, it is much too soon to predict its impacts upon the Lake Wales/Frostproof area. Citrus growers, nurserymen, firefighters and homeowners alike are hoping for rain, but also hoping to avoid any wind impacts.

Polk County remains under a burning ban due to the threat of wildfires. A blaze caused significant damage near River Ranch two weeks ago, burning numerous hunting camps

Brush fire in Mulberry, more than 1,000 acres impacted: PCFR

By FOX 13 News Staff | Published April 14, 2024 6:05pm EDT | Polk County | FOX 13 News |

MULBERRY, Fla. - Firefighters are battling a fire on an estimated 1,200-1,500 acres of private property in Mulberry, according to officials.

Polk County Fire Rescue says they are responding to a brush fire with the help of Florida Forestry Service.

The fire is at 3095 Hwy 640, Mulberry, FL 33860, according to PCFR.

First responders say no structures are in danger and no one has been injured.

A semi-truck hangs over a highway barrier on Polk Parkway East. (Florida Department of Transportation)

TRAFFIC ALERT

Semi crashes over highway barrier on Polk Parkway East

BY SPECTRUM NEWS STAFF | POLK COUNTY
UPDATED 9:20 PM ET MAY. 01, 2024 | PUBLISHED 7:43 PM ET MAY 01, 2024

AUBURNDALE, Fla. — An area of Polk Parkway East at Exit 18 is closed off to traffic after video appeared to show a semi-truck crashed over a highway barrier.

Northbound traffic is currently being detoured onto Old Dixie Highway.

According to Florida Highway Patrol Sergeant Steve Gaskins, the driver lost control of the vehicle and "destroyed 300 feet of guardrail."

Gaskins adds there were no injuries related to the crash.

Editors note: A previous version of this article stated there were injuries. FHP later clarified no one was hurt.

85-acre Lake Wales brush fire mostly contained

| **Updated** May 7, 2020 6:04pm EDT | Lake Wales | FOX 13 News |

LAKE WALES, Fla. - Fire crews in Polk County say an 85-acre brush fire is mostly contained.

The fire is 90% contained according to the Florida Forest Service - Lakeland.

The cause is still under investigation at this time.

The smoldering fire is near Tiger Lake Road in the Lake Wales area. Strong winds out of the north were sending the flames towards Highway 60.

It was not immediately clear if any buildings were threatened, but the view from SkyFOX showed some structures nearby.

FORECAST

Polk County sees hail amid severe weather

by: Leigh Spann
Posted: May 13, 2024 / 03:19 AM EDT
Updated: May 13, 2024 / 07:52 PM EDT

TAMPA, Fla. (WFLA) — Hail rained down on Polk County amid severe weather on Monday.

| 3 tornadoes confirmed in Tallahassee after severe weather; woman killed ›

The county was under a Severe Thunderstorm Warning until 5:45 p.m. The Severe Thunderstorm Warning issued for Highlands County until 7:45 p.m. has expired.

Locations impacted include Poinciana, Lake Wales, Dundee, Lake Hamilton, and Waverly.

The severe weather caused hail to rain down on the area. Two viewers shared photos of hailstones in Haines City.

County Road 640 reopens south of Bartow as crews surround brush fire

By FOX 13 News Staff | **Updated** May 19, 2021 4:56pm EDT | Bartow | FOX 13 News |

BARTOW, Fla. - A brush fire that closed roads in Polk County overnight is now entirely contained, firefighters say.

The fire – dubbed the "Agricola Road Fire" by the Florida Forest Service – began burning south of County Road 640 southwest of Bartow around 4 p.m. Tuesday. They think it may have been started by chains dragging from a trailer.

C.R. 640 was closed during the night but reopened this morning as crews began to contain the blaze. As of 5 p.m., the fire was 100-percent contained after burning 175 acres south of the Mosaic stacks – a slightly smaller footprint than first thought.

Drivers in the area should still use caution because of the potential for smoke and fog, Polk Fire Rescue warned.

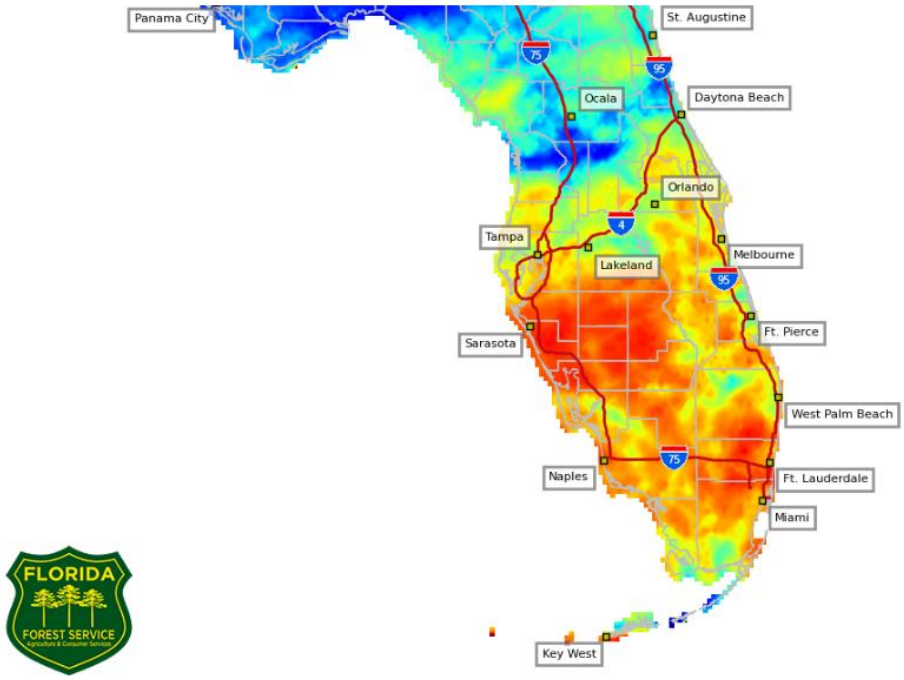
Dry, windy conditions have increased the fire danger across the Bay Area, and with no rain in the forecast, experts say the chance of brush fires will remain high.

Dry Weather Prompts Polk County Burn Ban

The ban prohibits campfires, bonfires, controlled burns and fireworks.

By **Cindy Glover** May 28, 2024

lkldnow
INDEPENDENT NEWS FOR LAKELAND



Florida's fire risk as of May 28, 2024, according to the Keetch-Byram Drought Index. | Florida Forest Service

Polk County fire officials issued a countywide burn ban on Tuesday, citing a high risk of brush fires and uncontrolled fires.

Lakeland and the surrounding areas got a welcome rain shower Tuesday, but it was not nearly enough to make up for weeks of dry weather, according to Polk County Fire Rescue Fire Chief Hezedean A. Smith.

Smith said the county held off issuing the ban as long as possible, but "currently 75% of the ground throughout Polk County is dry. So ultimately we would have to have rain for several days consecutively to penetrate that dry ground."

What is banned: The burn ban prohibits campfires, bonfires, controlled burns and fireworks. Burning trash is always illegal in the city of Lakeland but, while the ban is in effect, it is prohibited everywhere else in the county too.

Drought conditions: Currently, Polk County is averaging over 507 on the Keetch-Byram Drought Index. The KBDI is used by the Florida Forest Service to assess the likelihood and severity of brush fires. The scale considers how much moisture is in the top 8 inches of soil. It begins at zero, reflecting minimal danger, and rises to 800, reflecting extreme danger.

Central Florida only got 1.27 inches of rain in the first three weeks of May, compared with a historic average of 3.39 inches. Last spring was also very dry. Polk County was under a burn ban from Mar. 30 to June 1, 2023.

Areas under the ban: The burn ban applies to all of unincorporated Polk County and the municipalities of Lakeland, Auburndale, Bartow, Dundee, Fort Meade, Frostproof, Haines City, Lake Alfred and Winter Haven.

Penalties: Anyone who violates the burn ban can be fined up to $500 and sentenced to up to 60 days in the county jail.

Haines City firefighters rescue driver trapped under semi on U.S. Highway 27

Provided to The Sun May 29, 2024

Earlier this morning, Haines City Fire Department responded to a major vehicle accident at the intersection of US 27 and SR 544. The incident, which involved a four-door passenger vehicle and a semi-truck, resulted in significant traffic disruptions and a medical evacuation.

At approximately 3:52 AM, Haines City Battalion Chief 1 and Haines City Engine 2 were dispatched to the scene. Upon arrival, they discovered that a passenger vehicle had crashed into the rear of a semi-truck in the middle southbound lane of US 27. The impact caused the vehicle's hood to become lodged underneath the truck, heavily entrapping the lone occupant.

Due to the severity of the situation, Haines City Battalion Chief 1 promptly requested additional support from Haines City Engine 1 and Polk County Fire Rescue Tower 33. The roadway was shut down to facilitate rescue operations, with all three lanes of southbound US 27 and northbound travel being closed to allow for the arrival of Aeromed 5.

Polk County Fire Rescue Medic Rescue 30 assessed the occupant and declared an adult male trauma alert. Haines City Engine 1 established a landing zone at the scene for Aeromed 5, which was dispatched to transport the patient.

Crews from Haines City and Polk County Fire Rescue worked diligently for approximately 45 minutes to extricate the patient from the vehicle. Upon successful extrication, primary patient care was provided by PCFR Medic Rescue 30 before being transferred to Aeromed 5. The patient was then medevacked to a regional medical center for further treatment.

“Our firefighters and rescue teams displayed extraordinary courage and precision in the early hours of this morning,” said Fire Chief Drew Neubrand. “In the face of a complex and dangerous situation, their quick actions and seamless coordination with our partners ensured that the patient received the critical care needed. This incident is a testament to the unwavering dedication and professionalism of our team and the importance of our collaborative efforts in safeguarding our community.”

The Polk County Sheriff’s Office was the investigative agency on the scene and took over the investigation once the immediate rescue operations concluded. The scene was officially turned over to PCSO, and normal traffic flow was gradually restored following the reopening of southbound and northbound travel.

Peaceful protesters gather in Polk County; curfew in effect at 8 p.m.
By Ken Suarez and Catherine Hawley
Updated June 1, 2020 10:51pm EDT
Lakeland
FOX 13 News

LAKELAND, Fla. - Protests in Polk County were peaceful Monday night after a weekend of "civil unrest" on Saturday and Sunday prompted officials to declare a local state of emergency and issue a curfew through early Tuesday morning.

Protesters gathered at Auburndale City Park Monday night to mourn with the nation after the death of George Floyd while he was being arrested by police in Minneapolis, Minnesota. Video of the incident sparked outrage across the country. The officers involved have been fired and one faces a murder charge.

Demonstrators in Auburndale chanted "No justice, no peace" and "I can't breathe" Monday night. Floyd could be heard in the video saying "I can't breathe" and went unconscious minutes later.

"It's time for a change. It's time for, we gotta wake up, it's not fair, it's not right that I have to worry about my future children living in a crazy place like this," Doranny Aquino, of Winter Haven, told the crowd.

The group observed a 10-minute period of silence to recognize the time George Floyd was pinned to the ground.

Police joined the protesters Monday night, expressing their own consternation over Floyd's death.

"What happened, in this case, offends us just as much as it does anyone else," Auburndale Police Chief Andy Ray said. "There's no explanation, it doesn't make any sense to us at all."

Earlier Monday, Sheriff Grady Judd joined Lakeland PD to recap the events in Polk County over the weekend that prompted the curfew and state of emergency.

The Lakeland Police Department said a planned protest Sunday of about 100 people in Munn Park was peaceful and lawful Sunday. The group moved to the police station, which continued with no issues. However, some of those involved split off from the group and began blocking traffic at Florida Boulevard, which turned from citizens expressing their first amendment right to unlawful activity.

Lakeland PD said officers tried to disperse the crowd, but the sheriff's office was called in to help clear the intersection.

Sheriff Judd said there he does not believe Polk County residents were the ones creating problems.

He said there’s a difference between a protester and a rioter and rioting will not be accepted.

“We are going to hunt you down and lock you up if you engage in any criminal conduct."
— Sheriff Grady Judd

Judd said they received information that law enforcement would come under attack at 8 p.m. near Interstate 4 and Highway 27, but the Polk County Sheriff’s Office and Florida Highway Patrol were ready.

Judd said the Highway Patrol did a “marvelous job” helping stop the few who showed up for that alleged effort.

“We are going to hunt you down and lock you up if you engage in any criminal conduct,” Judd said.

Judd said there were rumblings on social media that rioters planned to bring violence into the neighborhoods of Polk County.

“I would tell them, if you value your life, they probably shouldn’t do that in Polk County. Because the people of Polk County like guns, they have guns, I encourage them to own guns, and they’re going to be in their homes tonight with their guns loaded, and if you try to break into their homes to steal, to set fires, I’m highly recommending they blow you back out of the house with their guns. So, leave the community alone,” Judd said.

The sheriff encouraged anyone wishing to express their First Amendment right to free speech to keep the focus on George Floyd, who Judd said was a victim who should be honored.

"All of that ugliness has taken away from what we're united about," the sheriff said. "We're united about the conduct that you saw with George [Floyd]."

Blue-green algae discovered in three Polk County lakes

By Ken Suarez | Published June 1, 2022 5:17pm EDT | Polk County | FOX 13 News |

LAKELAND, Fla. - Another three lakes in Polk County were added to a growing list of places with algae blooms.

The Florida Department of Health just issued an alert for Lake Mattie, Lake Hancock and Lake Crago. This means there were significant levels of blue-green algae discovered in these lakes.

"We just had a recent test on Lake Crago that algae blooms were detected near the boat ramp," Kevin Cook, spokesman for the City of Lakeland said. "However, none of the harmful toxins which impact those with respiratory and breathing problems were detected."

RELATED: Polk County health officials issue blue-green algae alert for Lake Crago

If algae blooms really take hold, the tiny microorganisms produce potentially dangerous toxins that can cause medical problems that include skin irritation and difficulty breathing. When the situation becomes that serious, health officials recommend that people don't fish, water ski, swim or recreate on the lake. They also said to keep dogs and other pets away from the water.

Blue-green algae is naturally occurring in Florida, and blooms are inevitable this time of year.

"It is worse when it is sunny and hot outside," said Pamela Acosta-Torres, spokesperson for the Florida Department of Health in Polk County.

One thing residents can control that encourages algae blooms is run-off with fertilizer. This causes algae to multiply exponentially, and that's why many local counties limit the use of fertilizers that contain nitrogen and phosphorus.

In Polk, Hillsborough, Pinellas and Sarasota counties, you're not supposed to use those fertilizers from now until the end of September. In Hernando, the ban runs from January 1-March 31 and in Pasco, it is year-round.

Residents also aren't allowed to fertilize before it rains.

Fires near River Ranch have burned 4,500 acres but are 50% contained

Paul Nutcher Lakeland Ledger

At least 4,500 acres have been destroyed by brushfires near River Ranch in eastern Polk County in the past two days, but thanks to a little rain and firefighters' efforts, the fire was 50% contained as of Friday afternoon, according to the Florida Forest Service.

Todd Chlanda, a spokesman for the Forest Service, said in a 3 p.m. update on Friday that fire-containment efforts continued through the night and into Friday morning, with "fresh personnel starting their day at 6 a.m."

He said the Forest service currently has eight tractor/plow units, three heavy tractors, eight brush trucks and about 10 support personnel on the fire. He said two task force units are

still committed to the fire, and Polk County FireRescue has units providing structure protection.

Forest Service helicopters made 185 bucket drops on the fire on Thursday.

Chlanda said most of the fire activity is confined to a hunting portion of the area, or a wooded area without camps. He said their investigators are on scene and have begun an investigation into the cause and damage.

Overnight in Auburndale: 5-year-old girl dies crash. Bartow man charged with DUI manslaughter

Chatter on social media on Friday said the main gates to River Ranch had been closed but reopened today. Several members of River Ranch Facebook groups reported a gun club in the area had burned down.

Chlanda confirmed the River Ranch gate had been reopened. He said County Road 630 East is open to local traffic only, as the Forest Service uses it to move firefighting equipment in and out of the area.

75-foot sinkhole forms on private property in Polk County, roads barricaded until further notice: Officials

By Josh Cascio and FOX 13 News staff | **Updated** June 9, 2023 10:17pm EDT | Polk County | FOX 13 News |

LAKELAND, Fla. - Authorities with Polk County are monitoring a 75-foot sinkhole that formed off of Scott Lake Road, just south of Fitzgerald Road in southern Lakeland Friday afternoon.

Officials with the Polk County Sheriff's Office, Polk Fire Rescue and the county were all dispatched to the scene this afternoon. The sinkhole began forming Friday morning, but it continued to grow.

Emergency officials are considering this an active sinkhole, which means it is not done growing yet. Authorities said it was about 75 feet wide and 120 feet deep.

Fire officials said they have notified the three homeowners that are close to the sinkhole of potential evacuations. Currently, there are no mandatory evacuations in place and no structural damage has been reported, fire rescue confirmed.

Polk County deputies are also in the area assisting with traffic on Scott Lake Road. They have completely blocked off those roads and barricaded them to keep drivers away from the area.

The sinkhole isn't currently threatening the roadways, but officials said the vibrations from nearby traffic can cause it to collapse further which is why they closed it off. County officials said the road will remain barricaded off until the sinkhole has been stabilized.

Workers with the developer are the ones currently working to get the sinkhole under control. While Polk County is monitoring the situation, they said the property owner will be largely in charge of fixing the hole because its on private property.

County and fire officials said they will step in if the sinkhole grows further and starts threatening roadways in the area.

Officials believe the sinkhole could be connected to a well that was recently drilled at the site.

"We've been told when the well was being drilled about 180 feet down they broke through a hard layer," Jay Jarvis, the road and drainage director with Polk County, said during an afternoon briefing on the sinkhole. "And then there was pretty much a void down to 300 feet...then they started to see depressions start to occur."

Officials have not said when they expected the sinkhole to be stabilized. Drivers should expect to see barricades up on Scott Lake Road through Saturday. The Polk County Sheriff's Office has urged the public to stay away from the area while crews continue to work.

Neighbors who live nearby and pass by this area every day said they noticed a small hole, but they said it spread extremely quickly.

"Like one day before we saw it forming, but they're building a new neighborhood, so I thought it was part of it. Like a lake or retention pond. And then today, all of this happened, and I was like, 'Oh my gosh, it was a sinkhole,'" Neighbor Sandra Benavidez Carpenter said.

Authorities said the plan is to try and get equipment out to start back filling the hole.

This sinkhole brings back memories from some of a similar situation in Lakeland 17 years ago. The hole that formed Friday is close to the spot where another massive sinkhole swallowed portions of Scott Lake back in June 2006.

That hole damaged a lakefront home and took so much water out of Scott Lake that neighbors could see the bottom of it. The lake lost much of its volume within a few days.

NATIONAL NEWS

‘I’m concerned’: Giant sinkhole in Florida neighborhood prompts shutdown of residential street

by: Rachel Tucker, Staci DaSilva
Posted: Jun 10, 2023 / 12:48 PM CDT
Updated: Jun 10, 2023 / 12:48 PM CDT

POLK COUNTY, Fla. (WFLA) – A massive sinkhole opened up in Lakeland, Florida, on Thursday, prompting efforts to stabilize the surrounding area amid fears the sinkhole could expand.

“It’s a little spooky to be honest with you because this Scott Lake area is a sinkhole area of Lakeland and I’m concerned,” said Jack Hall, a Lakeland resident whose home sits about 40 feet from the hole.

Officials said a well being drilled on a site off Scott Lake Road caused the sinkhole to develop near an underground cavern.

“We assume that those two are somehow connected and basically created the void that then allowed the material above it to basically start breaking through that confining layer,” said Jay Jarvis, the director of roads and drainage in Polk County. “That’s what’s occurring, that’s typically what a sinkhole is.”

The Southwest Florida Water Management District has sent a letter to the permittee ordering a remediation plan be submitted within 30 days.

On Friday, an engineer monitoring the sinkhole said it was approximately 25 feet deep and 80 feet wide. Additional details provided by Polk County officials indicated the hole was “slowly growing” as of Friday.

In a news conference that afternoon, Polk County Sheriff Grady Judd urged residents to avoid the area and to stay away from the sinkhole while crews work to stabilize the area. Polk County Fire Rescue went door-to-door notifying nearby residents of the situation.

“There is no property or structural damage at this time, but three nearby houses could be affected,” Polk County officials wrote Friday.

The sinkhole is not currently affecting the nearby Scott Lake Road, but a portion of the street was shut down out of an abundance of caution.

Dangerous algae blooms found in two Polk County lakes

By: Ginny Reese

Posted at 5:12 PM, Jun 12, 2024

POLK COUNTY, Fla. — The Florida Department of Health in Polk County says to look out for dangerous blue-green algae blooms that were found in two lakes.

The DOH said the algae blooms were present in Lake Hancock — South Central and Scott Lake — West. Additional water sampling is now underway.

No one should drink, swim, wade, or use any personal watercraft, boat, or water ski in the lake where the blooms are visible.

If you come in contact with the algae or discolored and smelly water, make sure you wash your skin and clothing thoroughly with soap. Also, keep your pets out of the harmful waters.

No one should use the lake water to wash dishes or cook. Do not eat any shellfish from the lake where the blooms are. However, healthy fish caught from the lakes are still considered safe to eat. Make sure you wash the fish thoroughly with bottled or tap water.

Man shoots video of landspout destroying barn in Polk County

- A video shows a landspout destroying a barn in Alturas
- Michael Steen said that he shot the video at 5:30 p.m. on July 23
- While the video shows that the landspout only lasted for a few seconds, it still caused major damage to the barn
- According to the National Weather Service, the wind was EF-0 strength

By: Amanda Boettcher

ABC Action News

Posted at 12:05 PM, Jul 24, 2024

DOH-Polk Issues Blue-Green Algae Health Alert for Lake Van - End of Lake Van Road

By Lydia George

July 01, 2024

SHARE THIS PAGE

- Facebook (https://www.facebook.com/sharer/sharer.php?u=https://polk.floridahealth.gov/newsroom/2024/06/DOH-PolkIssuesBlue-GreenAlgaeHealthAlertforLakeVan-EndofLakeVanRoad.html)
- Twitter (https://twitter.com/share?url=https://polk.floridahealth.gov/newsroom/2024/06/DOH-PolkIssuesBlue-GreenAlgaeHealthAlertforLakeVan-EndofLakeVanRoad.html&text=DOH-Polk Issues Blue-Green Algae Health Alert for Lake Van - End of Lake Van Road)

Contact:
Lydia George, Public Information Officer
Lydia.George@flhealth.gov
863-578-2146

Auburndale, Fla. – The Florida Department of Health in Polk County (DOH-Polk) has issued a health alert for the presence of harmful blue-green algae toxins in Lake Van - end of Lake Van Road. The alert is in response to a water sample taken on June 26, 2024. The public should exercise caution in and around Lake Van - end of Lake Van Road.

DOH-Polk advises residents and visitors to take the following precautions:

- Do not drink, swim, wade, use personal watercrafts, or come into contact with waters where there is a visible bloom.
- Wash your skin and clothing with soap and water if you have any contact with algae, or discolored or water that smells unpleasant.
- Keep pets and livestock away from the area to avoid any contact with water. Waters where algae blooms are present are not safe for animals. Pets and livestock should use an alternative source of water when algae blooms are present.
- Do not cook or clean dishes with water contaminated by algae blooms. Boiling the water will not eliminate toxins.
- Eating fillets from healthy fish caught in freshwater lakes experiencing blooms is safe. Rinse fish fillets with tap or bottled water, throw out the guts, and cook fish thoroughly.
- Do not eat shellfish in waters with algae blooms.

The Florida Department of Environmental Protection (DEP) and partners collect algae samples (https://protectingfloridatogether.gov/sites/default/files/documents/2023-1-6_DEP_JourneyMap_Infographic_8-5x14.pdf) (link opens in new window) from reported bloom locations. After samples are analyzed at their laboratory, the toxin results can be viewed on the Protecting Florida Together (https://protectingfloridatogether.gov/) (link opens in new window) or on DEP's Algal Bloom Dashboard (https://floridadep.gov/AlgalBloom) (link opens in new window).

What is Blue-Green Algae?

Blue-green algae are a type of bacteria that is common in Florida's freshwater environments. A bloom occurs when rapid growth of algae leads to an accumulation of individual cells that discolor water and often produce floating mats that emit unpleasant odors.

Blue-green algae blooms can also appear as scum, foam, or paint on the surface of the water in various colors. To learn more about the appearance of algae blooms, visit Protecting Florida Together (https://protectingfloridatogether.gov/education-center/blue-green-algae) (link opens in new window).

Some environmental factors that contribute to blue-green algae blooms are sunny days, warm water temperatures, still water conditions, and excess nutrients. Blooms can appear year-round but are more frequent in summer and fall. Many types of blue-green algae can produce toxins. Blue-green algae may not always be visible as a bloom, but it can still be present in the water.

Is Blue-Green Algae Harmful?

Blue-green algae can produce toxins, which can be harmful to human and pets as well as ecosystems, including fish and other aquatic animals. Sensitive individuals (e.g., children, the elderly and those who are immunocompromised) may still be at risk even at low concentrations and should avoid any exposure.

For additional information on potential health effects of algae blooms, visit DOH's harmful algae blooms webpage (https://www.floridahealth.gov/environmental-health/aquatic-toxins/harmful-algae-blooms/index.html).

Where Can I Find Current Water Status Information?

Current information about Florida's water quality status and public health notifications for harmful algae blooms and beach conditions is available at Protecting Florida Together

For Media Inquiries

863-578-2146 (tel:863-578-2146)

polkcommunications@flhealth.gov (mailto:polkcommunications@flhealth.gov)

NEWSROOM
STATEWIDE ARTICLES

Failed to load statewide news articles

LOCAL ARTICLES

DOH-Polk Issues Blue-Green Algae Health Alert for Lake Van - End of Lake Van Road (https://polk.floridahealth.gov/newsroom/2024/06/DOH-PolkIssuesBlue-GreenAlgaeHealthAlertforLakeVan-EndofLakeVanRoad.html)

DOH-Polk Cautions About Blue-Green Algae at Multiple Lakes (https://polk.floridahealth.gov/newsroom/2024/06/DOH-PolkCautionsAboutBlue-GreenAlgaeatMultipleLakes1.html)

DOH-Polk Hosts HIV Testing Event (https://polk.floridahealth.gov/newsroom/2024/06/DOH-PolkHostsHIVTestingEvent.html)

DOH-Polk Issues Blue-Green Algae Health Alert for Lake Gibson - West (https://polk.floridahealth.gov/newsroom/2024/06/DOH-PolkIssuesBlue-GreenAlgaeHealthAlertforLakeGibson-West.html)

DOH-Polk Issues Blue-Green Algae Health Alert For Lake Van (https://polk.floridahealth.gov/newsroom/2024/05/DOH-PolkIssuesBlue-GreenAlgaeHealthAlertForLakeVan.html)

(https://protectingfloridatogether.gov/) (link opens in new window).

You can subscribe to receive notifications (https://protectingfloridatogether.gov/receive-updates/preference-center) (link opens in new window) when water quality changes in your area.

Where Can I Report Issues Related to Algae Blooms?

- **Algae Blooms:** DEP monitors algae blooms and collects samples for Blooms can be reported to DEP online (https://www.reportalgalbloom.com/) (link opens in new window) or by calling toll-free at 1-855-305-3903.
- **Human Health Impacts:** Report symptoms from exposure to a harmful algae bloom or any aquatic toxin to the Florida Poison Information Center by calling 800-222-1222 to speak to a poison specialist.

Animal Health Impacts: Contact your veterinarian if you believe your pet has become ill after consuming or having contact with blue-green algae contaminated water.

- **Fish Kills:** Dead, diseased, or abnormally behaving fish or wildlife should be reported to the Florida Fish and Wildlife Conservation Commission online (https://app.myfwc.com/FWRI/FishKillReport/Submit.aspx) (link opens in new window) or at 800-636-0511.

If you have other health questions or concerns about blue-green algae blooms, please call DOH-Polk at 863-578-2024.

Last Modified Date: Jul 2, 2024 10:29:25 AM

Last Reviewed Date: Jul 2, 2024 10:29:25 AM

Connect with DOH

(https://www.floridahealth.gov/)

FEATURED PROGRAMS

HealthiestWeight (http://www.healthiestweightflorida.com/)

Tobacco Free Florida (https://www.tobaccofreeflorida.com/)

Related Organizations

- County Health Services (https://www.polk-county.net/health-services)
- Polk County Literacy Guide (https://view.joomag.com/polk-countys-literacy-resource-directory-final-literacy-directory-final/0727130001509992434)

Florida Health Across the State

- State Surgeon General (https://www.floridahealth.gov/about/ssg/index.html)
- State Leadership (https://www.floridahealth.gov/about/ssg/leadership/index.html)
- County Health Department Leadership (https://www.floridahealth.gov/about/ssg/chd-leadership/index.html)

Boards, Councils & Committees (https://www.floridahealth.gov/provider-and-partner-resources/advisory-councils-stakeholder-groups/index.html)

About Florida Health (https://www.floridahealth.gov/about/index.html)

- Accreditation (https://www.floridahealth.gov/about/accreditation/index.html)
- Careers (https://www.floridahealth.gov/about/careers/index.html)
- Public Meeting Notices (https://www.floridahealth.gov/about/sunshine-info/public-meeting-notices/index.html)
- Public Notices (https://www.floridahealth.gov/about/sunshine-info/public-notices/index.html)
- Public Records Requests (https://www.floridahealth.gov/about/sunshine-info/public-records-requests/index.html)
- State Health Improvement Plan (https://floridaship.org/?utm_source=flhealth.gov%26utm_medium=text_linkredirect%26utm_campaign=ship_sha%26
- Annual Regulatory Plans—Florida Department of Health (pdf) (https://www.floridahealth.gov/_documents/annual-regulatory-plan-fdoh.pdf)
- Annual Regulatory Plans—Boards (pdf) (https://www.floridahealth.gov/_documents/annual-regulatory-plan-boards.pdf)

Certificates and Registries (https://www.floridahealth.gov/certificates/index.html)

- Birth Certificates (https://www.floridahealth.gov/certificates/certificates/birth/index.html)
- Death Certificates (https://www.floridahealth.gov/certificates/certificates/death/index.html)
- Divorce Certificates (https://www.floridahealth.gov/certificates/certificates/divorce/index.html)
- Marriage Certificates (https://www.floridahealth.gov/certificates/certificates/marriage/index.html)

Lakeland has an estimate of how much it will cost to clean up its southwest sewage spill

Sara-Megan Walsh
Lakeland Ledger

Published 5:13 a.m. ET July 2, 2024 | **Updated 5:13 a.m. ET July 2, 2024**

Lakeland approved a contract this week for a company to remove about 7,800 tons of soil contaminated by a wastewater force main break in the city's southwest. *Map Provided By City Of Lakeland*

Lakeland officials have gotten an estimate of what it will cost to clean up the source of the foul odor in Southwest Lakeland.

City commissioners unanimously approved spending $947,192 on Monday for Bartow-based A-C-T Environmental and Infrastructure to remove soil contaminated by a wastewater force main break in an undeveloped area north of the Carillon Lakes neighborhood.

A-C-T anticipates it will have to excavate and remove about 7,840 tons of dirt to clean up the city's wastewater spill, according to its June 21 estimate.

"This is unexpected and certainly we did not have this budgeted for..." Commissioner Stephanie Madden said. "We would not know about this if wasn't for our Carillon Lakes neighbors."

In early April, several residents of Carillon Lakes contacted city officials reporting a "sulfuric, natural gas-like odor" floating through the community at various times. Some reported smelling it a early as October 2023, becoming more consistent by March.

Repeated complaints caused the Florida Department of Environmental Protection to send drones into the area to conduct an aerial search. The drones found a possible force main break on a piece of vacant city-owned land, which was confirmed by Lakeland Wastewater Management Division on April 23.

The city found a 12-inch force main primarily used to serve the city's industrial customers ruptured near Gateway Boulevard and Whitten Road. The city initially estimated more than 1,000 gallons of untreated wastewater had been released into the wetlands, according to a Public Notice of Pollution filed with FDEP. "FDEP is requiring a wastewater cleanup effort," City Manager Shawn Sherrouse said Monday morning. "The city has been working with FDEP on cleanup and a sampling plan."

A-C-T has an continuing contract with the city to provide professional environmental, environmental risk and engineering services. So the city reached out to the company for a cost estimate on the removal of non-hazardous petroleum and septic waste-contaminated soil near the area of the break.

The company estimated it will have to remove the top two feet of soil from a roughly 75,000-square-foot area — that's roughly 1.72 acres. It's bigger than the size of a professional football field.

A-C-T said its costs will cover the excavation, transportation and appropriate disposal of the contaminated soil. Its report continues to state "an unknown volume of septic effluent" was released. The Bartow company will then backfill the area with topsoil to level the ground and compact it down.

Sherrouse said it's "imperative" this work begins as quickly as possible as Florida's rainy season gets underway, and heavy rain or flooding in the wetland areas could further delay or complicate the environmental cleanup.

A-C-T has promised that it will use hydrated lime in an effort to assist with odor control in the area while the environmental cleanup is underway. It estimates it will take 15 business days to excavate the area completely, then another 15 days to backfill it.

Sherrouse said the city has been in email contact with the Carillon Lakes Homeowners Association in addition to several individual residents as the efforts to remedy the situation continue.

Sara-Megan Walsh can be reached at swalsh@theledger.com or 863-802-7545. Follow on X @SaraWalshFl.

Florida DEP reports ammonia release at Florida's Natural juice plant in Lake Wales

Lakeland Ledger

Published 1:59 p.m. ET July 11, 2024

Florida's Natural Growers on U.S. 27 in Lake Wales reported a leak of 328 pounds of anhydrous ammonia early Sunday. A spokesman said a mechanical issued resulted in the release of the gas. He described it as an isolated mechanical issue in a remote part of the plant that was quickly identified and contained with no injuries. *Google Maps*

A mechanical problem allowed the release of 328 pounds of anhydrous ammonia Sunday morning at the Florida's Natural Growers plant in Lake Wales, the Florida Department of Environmental Protection reported.

The federal Environmental Protection Agency requires public notices of all releases of 100 pounds of more of ammonia, which is classified as an extremely hazardous substance.

The incident occurred about 5:15 a.m. on Sunday, according to a pollution notice from Florida's DEP. The plant is located at 20205 U.S. 27 in Lake Wales.

Anhydrous ammonia is a form of the gas lacking water. By contrast, household ammonia is about 95% water.

A mechanical issued resulted in the release of the gas, Florida's Natural Growers spokesperson Scott Hart said. He described it as an isolated mechanical issue in a remote part of the plant that was quickly identified and contained with no injuries.

The Lake Wales Police Department and Fire Department responded and confirmed that the area was safe, Hart said.

Florida's Natural Growers is a cooperative that processes citrus fruit for juice products. All information in the pollution notice came from the company, DEP said.

DOH-Polk Issues Blue-Green Algae Health Alerts for Lake Hancock - South Central and Scott Lake - West

By Lydia George

July 12, 2024

SHARE THIS PAGE
Facebook
Twitter

Contact:
Lydia George, Public Information Officer
Lydia.George@flhealth.gov
863-578-2146

Polk County, Fla. – The Florida Department of Health in Polk County (DOH-Polk) has issued health alerts for the presence of harmful blue-green algae toxins in Lake Hancock - South Central and Scott Lake - West. The alerts are in response to water samples taken on July 2, 2024. The public should exercise caution in and around Lake Hancock - South Central and Scott Lake - West.

DOH-Polk advises residents and visitors to take the following precautions:

- Do not drink, swim, wade, use personal watercrafts, or come into contact with waters where there is a visible bloom.
- Wash your skin and clothing with soap and water if you have any contact with algae, or discolored or water that smells unpleasant.
- Keep pets and livestock away from the area to avoid any contact with water. Waters where algae blooms are present are not safe for animals. Pets and livestock should use an alternative source of water when algae blooms are present.
- Do not cook or clean dishes with water contaminated by algae blooms. Boiling the water will not eliminate toxins.
- Eating fillets from healthy fish caught in freshwater lakes experiencing blooms is safe. Rinse fish fillets with tap or bottled water, throw out the guts, and cook fish thoroughly.
- Do not eat shellfish in waters with algae blooms.

What is Blue-Green Algae?

Blue-green algae are a type of bacteria that is common in Florida's freshwater environments. A bloom occurs when rapid growth of algae leads to an accumulation of individual cells that discolor water and often produce floating mats that emit unpleasant odors.

Blue-green algae blooms can also appear as scum, foam, or paint on the surface of the water in various colors. To learn more about the appearance of algae blooms, visit Protecting Florida Together (link opens in new window).

Some environmental factors that contribute to blue-green algae blooms are sunny days, warm water temperatures, still water conditions, and excess nutrients. Blooms can appear year-round but are more frequent in summer and fall. Many types of blue-green algae can produce toxins. Blue-green algae may not always be visible as a bloom, but it can still be present in the water.

Is Blue-Green Algae Harmful?

Blue-green algae can produce toxins, which can be harmful to human and pets as well as ecosystems, including fish and other aquatic animals. Sensitive individuals (e.g., children, the elderly and those who are immunocompromised) may still be at risk even at low concentrations and should avoid any exposure.

For additional information on potential health effects of algae blooms, visit DOH's harmful algae blooms webpage.

Where Can I Find Current Water Status Information?

Current information about Florida's water quality status and public health notifications for harmful algae blooms and beach conditions is available at Protecting Florida Together (link opens in new window). You can subscribe to receive notifications (link opens in new window) when water quality changes in your area.

Where Can I Report Issues Related to Algae Blooms?

- **Algae Blooms:** DEP monitors algae blooms and collects samples for Blooms can be reported to DEP online (link opens in new window) or by calling toll-free at 1-855-305-3903.
- **Human Health Impacts:** Report symptoms from exposure to a harmful algae bloom or any aquatic toxin to the Florida Poison Information Center by calling 800-222-1222 to speak to a poison specialist.

Animal Health Impacts: Contact your veterinarian if you believe your pet has become ill after consuming or having contact with blue-green algae contaminated water.

- **Fish Kills:** Dead, diseased, or abnormally behaving fish or wildlife should be reported to the Florida Fish and Wildlife Conservation Commission online (link opens in new window) or at 800-636-0511.

If you have other health questions or concerns about blue-green algae blooms, please call please call DOH-Polk at 863-578-2024.

Florida Sinkhole Map: Where Have Incidents Been Reported In The State?

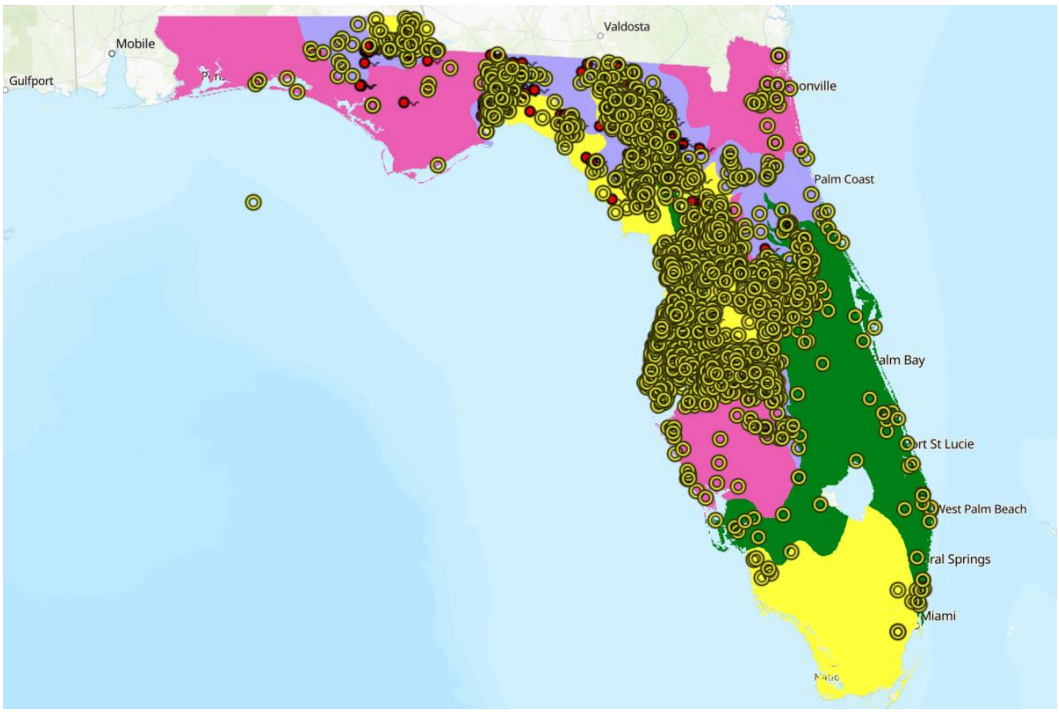
Published Jul 13, 2021 at 11:57 AM EDTUpdated Jul 13, 2021 at 4:24 PM EDT

By **Khaleda Rahman**
National Correspondent
FOLLOW

Sinkholes are a fairly common occurrence in Florida, making it tricky for residents seeking a home safe from the prospect.

Those looking for information about where sinkholes have been reported can check a map maintained by the Florida Geological Survey on the Florida Department of Environmental Protection's (FDEP) website.

However, the agency cautions that the data only documents "subsidence" incidents that have been reported by observers.



A map maintained by the Florida Geological Survey shows where “subsidence” incidents have been reported in Florida. **FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

"The reported incidents tend to cluster in populated areas where they are readily seen and commonly affect roads and dwellings," the FDEP states on a FAQ section about sinkholes on its website.

The website also says that "although the data may contain some true sinkholes, most have not been verified by professionals and are collectively called subsidence incidents."

The U.S. Geological Survey (USGS) says sinkholes commonly occur when the rock below the land surface is limestone, carbonate rock, salt beds, or rocks that can naturally be dissolved by groundwater circulating through them.

The most damage from sinkhole tends to occur in Florida, along with other Southern states including Texas, Alabama, Missouri and Kentucky, according to the USGS.

No part of Florida is completely free of the risk of sinkholes, according to the FDEP, as most of the state is underlain with limestone, although there are regions that are more susceptible to sinkholes.

Sinkholes are particularly common in the Florida counties of Pasco, Hernando and Hillsborough—known collectively as the state's "Sinkhole Alley."

Paul Ivory, who lives in Pasco County, told WFLA that he went outside to cut the grass in his backyard at the weekend and came across a hole that was six or seven feet wide. "I couldn't believe it. I didn't know what... that's a sinkhole. I'm like how did that happen so fast," he told the station.

Ivory believes the heavy rain from Tropical Storm Elsa is to blame, but county officials haven't officially declared it a sinkhole or determined what caused it.

Similar incidents have also been reported in other parts of the state in the days since Elsa wreaked havoc across Florida.

Several holes opened up near a golf course in The Villages at the weekend. Officials originally said they were sinkholes, but later said engineers actually consider them to be "depressions."

Experts initially thought a sinkhole could explain last month's deadly collapse of part of a 12-story condo building in Surfside, the New Civil Engineer reported. However, Miami-Dade Mayor Daniella Levine Cava has said she has seen no evidence of a sinkhole.

The cause of the collapse is still not known, but a 2018 engineering firm's report highlighted several problems with the building.

7 passengers injured in Lakeland train derailment after semi-truck crash: First responders

By FOX 13 News staff | Updated July 14, 2023 10:49pm EDT | Lakeland | FOX 13 News |

LAKELAND, Fla. - Eight passengers were injured after an Amtrak train derailed during a crash involving a semi-truck in Lakeland Friday evening, first responders said.

Authorities rushed to the scene of the crash near US 92 at Canal Avenue. They said the train slammed into the semi-truck, which was parked on the train tracks on Canal Avenue.

Lakeland first responders said the Amtrak train was heading to New York after departing from Miami. The train had also previously made a stop in Tampa before the derailment.

Police say that as the train approached Canal Avenue North, the engineer saw the truck and began blowing the train's horn.

The crossing arms and lights activated, and the driver of the truck Albert Carrazana Bermudez, and his passenger, jumped out of the truck, according to authorities.

Police say Bermudez has been issued a citation for insufficient clearance at a railroad crossing.

Officials said 173 people were onboard the train, including 163 passengers and 10 crews members. Of those who were on board, seven people were taken to an area hospital with non-critical injuries.

Fire crews said 1,600 gallons of diesel fuel was in the front engine compartment which rammed into the semi-truck.

Officials did say fuel did leak from the derailment, but they have not confirmed how much.

The Lakeland Police Department also responded alongside multiple other agencies. Officers are currently assisting in relocating the passengers who were on board.

Officials said the Polk County School Board also helped arrange for school buses to take passengers to the RP Funding Center in Lakeland while they await further transportation.

Initial estimates indicate that damages to the train, tracks, CSX property, cost of cleanup, and losses due to track downtime are estimated to cost between 6 and 10 million dollars, according to officials.

Authorities said the Polk County Sheriff's Office is taking the lead on the crash investigation.

Advisory warns of diesel contamination in Lake Martha

| **Updated** July 16, 2020 11:50am EDT | Winter Haven | FOX 13 News |

WINTER HAVEN, Fla. - Polk County health officials have issued an advisory about apparent fuel contamination in Winter Haven's Lake Martha.

They say diesel fuel from generator storage tanks at nearby Winter Haven Hospital may have flowed into the water.

The Florida Department of Health issued the health advisory to nearby residents regarding dyed diesel in the lake. They say it can cause skin and eye irritation, gastrointestinal issues, and respiratory issues.

Anyone who comes into contact with the water should wash thoroughly, especially before eating or drinking.

Lakefront owners using lake water for irrigation should not irrigate for the next few days.

Lakeland community continues to flood and neighbors are desperate for answers

"This has been one of the most frustrating things I think I've ever been through."

By: Chad Mills

Posted at 10:02 PM, Jul 16, 2024

LAKELAND, Fla. — Four times in eight days. That's how many times a Lakeland mobile home park has flooded recently, according to a group of neighbors that includes Carol Coy.

"It's so hard to see this," said Coy. "This has been one of the most frustrating things I think I've ever been through."

Coy and the others live at Citrus Center Colony, a 55-and-older mobile home community off W. Beacon Road in Lakeland. She and other neighbors say the community has flooded repeatedly over the years, even after routine afternoon showers.

During one rainstorm last June, floodwater seeped into the home of Coy's 73-year-old neighbor.

“I walked over to her house just to see if I could take her blood pressure because she was screaming she was so upset,” she remembered. “Seeing what some of the elderly have gone through, I guess that’s what’s been the most upsetting thing.”

Over the past eight days, there have been four more rounds of localized flooding in low spots of the mobile home park: Monday, July 8; Friday, July 12; Sunday, July 14; and Tuesday, July 16.

Neighbors at Citrus Center Colony continue to contact ABC Action News seeking help. They want a meeting with the mobile home park’s management, Bedrock Communities; they want some of the lowest lying neighbors relocated; and they want Bedrock to fix the infrastructure problems that they think are causing the flooding.

“They need to put bigger pipes in here so that the water flows, so that it doesn’t back up in the middle of the street here,” Coy said.

ABC Action News has sent multiple emails and made multiple phone calls to Bedrock Communities seeking answers. So far, the company has not responded.

According to Kevin Cook, a spokesperson for the City of Lakeland, Citrus Center Colony was built in the 1950s before many modern-day stormwater infrastructure requirements were in place.

“As private property the park would need to build their own retention ponds and stormwater collection. Unfortunately, when the mobile home park was created there weren't stormwater systems that we have today and there were no requirements. Today, a development would be required to include stormwater infrastructure,” Cook wrote, in part.

“The mobile home park owners are responsible for managing the storm water in the park,” Cook continued. “Based on the repeated flooding incidents, the current system is either undersized and/or there are blockages causing the lack of proper drainage.”

Borden Dairy in Winter Haven evacuated after chemical spill

| **Updated** July 29, 2020 9:31am EDT | Winter Haven | FOX 13 News |

WINTER HAVEN, Fla. - A chemical spill occurred at Borden Dairy on Wednesday morning, and employees have since been allowed to return inside.

Teams from Winter Haven Fire Rescue and Polk County Hazardous Materials responded to the incident around 5:40 a.m. They said when they arrived, the spill was already isolated by a Borden Dairy safety team and employees had evacuated the building.

Borden Dairy is located at 1000 6th Street SW in Winter Haven.

After testing, investigators said the liquid turned out to be a combination of sodium hydroxide, sodium hypochloride, sodium polyacrylate, nitric acid, and phosphoric acid.

During the shutdown, one employee had a "slight exposure" officials said, but refused medical treatment. The spill formed a gas cloud that caused the employee to feel ill, they said.

No other injuries were reported.

Authorities say the public is not in danger, and there were no evacuations for the surrounding area.

The events leading up to the chemical spill are still being investigated.

Massive 40-foot by 20-foot sinkhole opens up in Central Florida yard

Published August 5, 2020 8:29am EDT
DeLand
FOX 35 Orlando

Sinkhole swallows tree in DeLand

The homeowner did not even hear the sinkhole open up until he got a call from the Sheriff's Office.

DELAND, Fla. - A massive sinkhole opened up in a yard in Volusia County. The homeowner said that the 40-foot by 20-foot sinkhole even swallowed a big tree.

He also said that he did not even hear the sinkhole open or the tree collapse. He was unaware of the sinkhole until the Sheriff's Office told him.

MORE NEWS: Parents and students battle back-to-school anxiety, here are some warning signs to look out for

"My wife is terrified, every night and everyday she's just terrified of it getting bigger and really affecting our life," homeowner Rosario Rizzo told FOX 35.

He added that there are other smaller sinkholes nearby.

Tune in to FOX 35 Orlando for the latest Central Florida news.

Polk County avoids worst of Idalia. No major damage, but about 11,000 lost power

Paul Nutcher, Gary White and Sara-Megan Walsh Lakeland Ledger

Published 11:27 a.m. ET Aug. 30, 2023 | **Updated 3:40 p.m. ET Aug. 30, 2023**

Polk County avoided major damage from Hurricane Idalia late Tuesday and early Wednesday, and electric crews were quickly restoring power to about about 11,000 customers who lost electricity during the worst of the storm overnight.

People who had hunkered down in Polk County hurricane shelters were starting to go home by 9 a.m. Wednesday – less than two hours after Hurricane Idalia made landfall nearly 200 miles away.

“We had about 130 or so folks in our shelters, and they're in the process of getting them back home this morning,” said Paul Womble, emergency management director for Polk County.

“Our priority today is to get the folks that were in shelters, especially the special need shelters ... and the folks that were in the schools, and make sure they've got a safe place to go back to so they can get the schools checked out and cleaned up and ready for school when they reopen.”

The Polk County Public Schools system reported classes will resume by Friday, according to an online statement by Superintendent Frederick Heid. As planned earlier this week, schools and offices will remain closed Wednesday and Thursday. In all, the district housed 113 hurricane evacuees overnight.

“Polk County has been very fortunate to have been spared the brunt of Hurricane Idalia,” Heid said in the message. “Our thoughts and prayers are with those who are in the direct path of this storm, knowing full well what issues they are facing.

"Although we had minor impacts to our area, we still need time to do a thorough assessment of our school sites to make sure they are ready for students and staff to return," Heid said. "We also need to deactivate our shelters and prepare those schools to resume normal operations."

Once potential tornado watches have ended, which is expected by this afternoon, the district's maintenance staff will start to inspect school sites that were used as shelters to ensure that they have power and did not sustain damage to their roofs or windows.

Checks will be needed to determine whether debris removal is needed or whether there were any impacts from localized flooding or water intrusion.

The school district monitors power outages for several reasons, including potential negative impacts on its information technology network and refrigeration units at its schools.

Live updates: Hurricane Idalia roars over wide swath of Florida; water inundating communities

"Thus far, we have no reported outrages, which is a good indication that we have power at all sites," Heid said.

Brief tornado scares

Womble, at the county's emergency management center, said he has not received any reports of emergencies throughout the county needing first responders on scene from the hurricane.

"We've had no reports of damage or flooding so far," he said just before 10 a.m. Wednesday.

There were some brief scares, however, as the operations center received tornado warnings five times in the early hours of Wednesday. He said some of the rain bands that came across the southeast portion of the county were responsible for the warnings.

"But they were short-lived and did no damage," Womble said. Regarding rain, he said it was minimal so far, but he expected rain to continue throughout the day, so rainfall amounts will be watched closely.

Hurricane Idalia made landfall at 7:45 a.m. near Keaton Beach as a powerful Category 3 storm. Maximum sustained winds were 125 mph when the eye moved onshore, according to the National Hurricane Center.

Earlier Wednesday morning, Idalia briefly reached Category 4 status with 130-mph winds.

The Southwest Florida Water Management District continues to monitor potential flooding along the Peace River Basin, which was heavily flooded last year during Hurricane Ian.

“Right now, the Southeast River Forecast Center predicts on Thursday that the Peace River at Arcadia will enter “Action” stage (near flood stage) and Horse Creek will enter “Minor Flood Stage,” said Susanna Martinez Tarokh, public information officer for SFWMD.

About 11,000 lose power throughout Polk County

Lakeland Electric had 10,019 customers lose power are result of the storm, according to LE spokeswoman Cathryn Lacy. As of 8 a.m., the municipal utility's power outage map showed a handful of outages affecting less than 200 customers. The largest remaining outage affecting about 150 customers off Yates Road in Southwest Lakeland was fixed by 9 a.m.

Lacy said LE's reported power outage numbers could continue to fluctuate throughout Wednesday as Idalia's outer bands of heavy rain and wind pass through the area.

The largest clump of outages remaining in Polk on Wednesday morning were in Duke Energy's service area in an area around Dundee and Lake Hamilton. At 8 a.m., 505 customers were affected. That had diminished to just over 280 by 11 a.m. Ninety others were reported in north Lake Wales around Mountain Lake.

By 11 a.m., TECO's largest outage in Polk County was in Lake Alfred, affecting about 15 customers.

Helping in North Florida

With little reported damage in Polk County from Hurricane Idalia, some electrical workers were preparing to provide relief elsewhere.

Lakeland Electric was sending three line crews and one service crew to Tallahassee on Wednesday to assist in power restorations.

“You are not required, but after receiving help for Ian, Irma, Charlie, Francis and Jeanne, we feel it's our duty to respond accordingly if we're needed, so we're always ready to assist,” Hiers said.

Bartow sent mutual aid crews to Tallahassee after Hurricane Hermine in 2016 and to Quincy, in the Panhandle, after Hurricane Michael in 2018, Hiers said.

The Polk County Sheriff's Office said Wednesday it was sending an "emergency self-contained rescue team" to Levy County to help with search and rescue operations and make service calls.

No significant damage from Hurricane Idalia could be seen Wednesday morning in downtown Lakeland or the southern part of the city.

A City of Lakeland truck was stopped on Beacon Road at Cleveland Heights Boulevard about 9 a.m., as workers in yellow raincoats toiled at a storm drain. Lakeland spokesperson Kevin Cook said that city workers were engaged in routine clearing of storm drains that began Monday and had nothing to do with the hurricane.

the Florida Municipal Electric Association to find out whether they would be assigned to mutual aid efforts elsewhere in Florida, Director Brad Hiers said. If needed, those workers would join employees from Fort Meade and Wauchula to create a team of 12, Hiers said.

“There are a lot of utilities on standby around the state, but if we’re needed, we're ready to go,” Hiers said. “We have our trucks checked out right now in service, and our guys are packed for seven days.”

Hiers said Bartow’s team included five line workers, a tree trimmer and a mechanic. They were prepared to take bucket trucks and digger derrick trucks to provide assistance. Cities are not obligated to supply the association with emergency crews, Hiers said.

As outer bands from Hurricane Idalia brought periodic bursts of heavy rain, a sole woman ran along the Lake Hollingsworth Trail near the Lakeland Country Club. During a lull in the rains, a man could be seen walking two dogs on the trail.

Flooding from Debby prompts evacuations in west Lakeland
By Carla Bayron
Published August 5, 2024 6:30pm EDT
Hurricane Debby
FOX 13 News

Trees, power lines down in Polk County after Debby
Carla Bayron reports

LAKELAND, Fla. - Homeowners are busy cleaning up their yards and neighborhoods after trees and power lines fell from Hurricane Debby's strong winds and heavy rainfall.
Others are finding a place to stay for the night after needing to be evacuated because of flooding.

In the area of Cannon Street and Jensen Avenue in west Lakeland, Polk County deputies checked more than 40 homes and rescued six adults, four children and two dogs from the flooded waters in their swamp buggy.

"It was just coming down in buckets at 6:00 this morning and it was something we've never seen before. It was coming down so heavy," said Starla Yednak.
Yednak's driveway remains impassable. She lives in the Fussels Corner area of Polk County, and her entire backyard flooded to the point she had to rescue 25 of her chickens and her pet tortoise.
"That's all we can do is keep our animals safe," said Yednak. "Just like you keep yourself safe, you have to keep your animals safe too. We're very blessed because we are safe, our home is safe, and our animals may all be in our house, but they're all safe."

Some drivers also stalled in flooded streets, including Reynolds Road near Winter Lake Road. Much – if not all – of the standing water has receded since the morning.

Paul Womble, Polk County's Director of Emergency Management, says the western part of the county received eight or so inches of rain.

"We had, I think, four tornado warnings that occurred yesterday afternoon and even two this morning," said Womble. "No confirmed touchdown or anything like [that], but you know, those high winds brings down power lines and trees."

At a mobile home community in Mulberry, people had to break out the chainsaws to clean up a tree that fell across their road, otherwise they were trapped.
Womble said the power outage numbers were around 8,000 as of Monday morning, and that's way down now.
He added no injuries to people were reported.

Power outages, flooding, reports of tornadoes and storm debris due to Hurricane Debby
Published 10:34 a.m. August 5, 2024

Electric crews rush to restore power in several locations throughout Polk County due to Hurricane Debby
Ledger Staff

Electric crews restoring power in Polk County due to Hurricane Debby.

Ledger Staff

Flooding in the Itchepackesassa area in west Lakeland caused by rains from Hurricane Debby.
Ledger Staff

Flooding in the Itchepackesassa area in west Lakeland caused by rains from Hurricane Debby.

Ledger Staff

Flooding in the Itchepackesassa area in west Lakeland caused by rains from Hurricane Debby.
Ledger Staff

Flooding in the Itchepackesassa area in west Lakeland caused by rains from Hurricane Debby.

Ledger Staff

Rains from Tropical Storm Debby caused flooding in a sports practice area at Lakeland Christian School, near the boundary with the Citrus Center Colony mobile home park.
Gary White

Flooding on West Socrum Loop Road in Lakeland on Monday.

Andy Kuppers

A resident of West Socrum Loop Road in Lakeland wades through floodwaters to check a side of his property.
Andy Kuppers

An old oak tilts on its side on Stuart Avenue as the storms created by Hurricane Debby cross the state in Bartow on Monday.

Ernst Peters/The Ledger

Peace River waters start to rise at the Fort Meade Outdoor Recreation Area as the storms created by Hurricane Debby cross the state Monday.
Ernst Peters/The Ledger

Cars and trucks drive along Lakeland Highlands Road as the storms created by Hurricane Debby cross the state.

Ernst Peters/The Ledger

Flooding along Deeson Road in Kathleen due to Hurricane Debby
Andy Kuppers

Flooding along Deeson Road in Kathleen area brought about by rains from Hurricane Debby. Andy Kuppers

Water dumped by Tropical Storm Debby floods a street in the Citrus Center Colony mobile home park in Lakeland on Monday morning.
Photo By Gary White

Water covers Citronella Street in the Citrus Center Colony mobile home park in Lakeland on Monday morning following a night of rains from Tropical Storm Debby.

Photo By Gary White

A truck passes through deep water on Rangpur Street in the Citrus Center Colony mobile home park Monday morning. Rains from Tropical Storm Debby flooded a few streets in the park, located at 1111 W. Beacon Road.
Photo By Gary White

Flooding caused by rains from Tropical Storm Debby threaten buses parked on the grounds of Lakeland Christian School on Monday morning. The water covered much of a sports practice field on the southern edge of campus, near Citrus Center Colony mobile home park.

Photo By Gary White

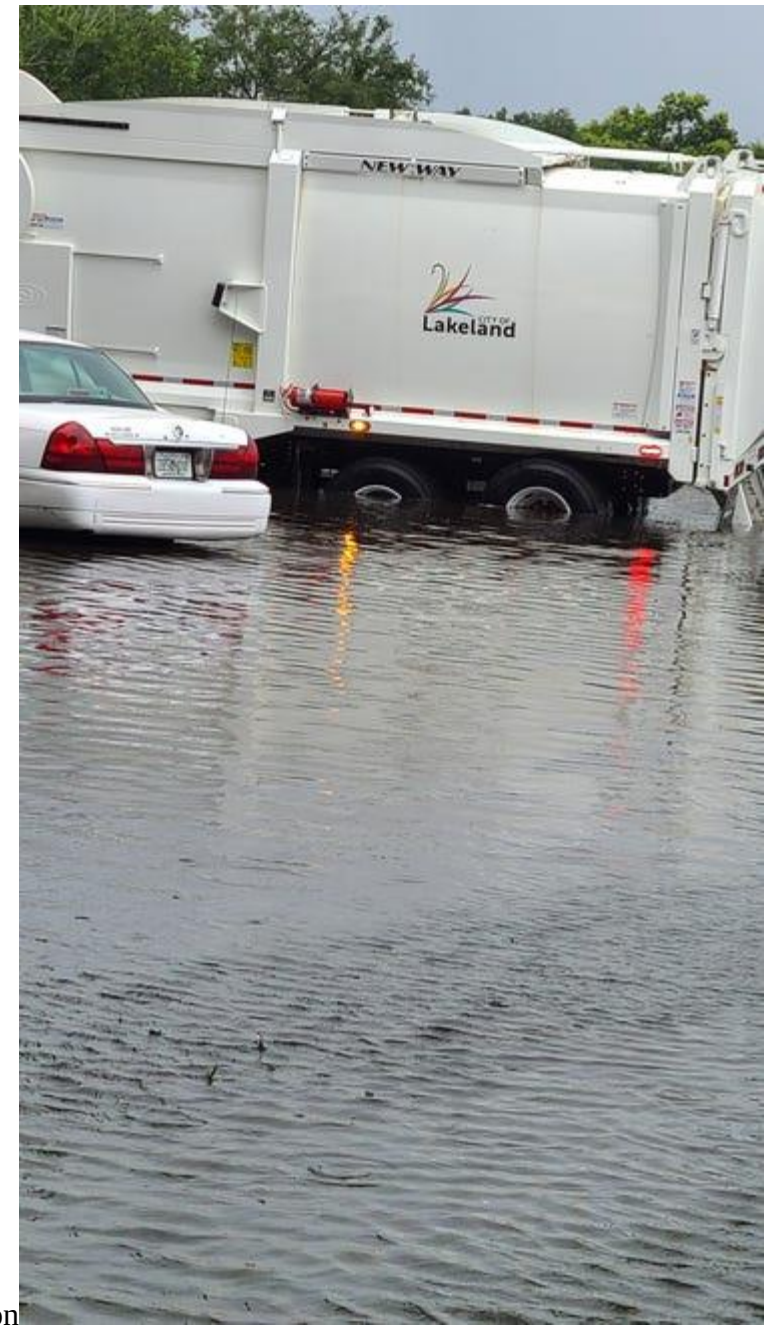
Part of a tree knocked down by the winds of Tropical Storm Debby obstructs East Maxwell Street in Lakeland on Monday morning.
Photo By Gary White

A crew from Lakeland Electric works to remove fallen branches from power lines along the south edge of Dobbins Park on Monday morning. Power was out to some houses in the area for about five hours before being restored in mid-morning.

Photo By Gary White

A Lakeland Electric worker removes fallen branches from power lines along the south edge of Dobbins Park on Monday morning. Crews were out working even as bands from Hurricane Debby continued to dump rain in Lakeland.
Photo By Gary White

At the Lakeland RV Park on Old Combee Road in Lakeland on Monday.



Provided By Holly Ferguson
At the Lakeland RV Park on Old Combee Road in Lakeland on Monday.
Provided By Holly Ferguson

At the Lakeland RV Park on Old Combee Road in Lakeland on Monday.
Provided By Holly Ferguson

How much rain did Hurricane Debby dump on Polk? See what NWS rain gauges say
Lakeland Ledger

While Hurricane Debby didn't pack much wind for Polk County, it was a rain-maker, for sure. The storm, which hit the Florida Gulf Coast near Steinhatchee on Monday morning as a Category 1 hurricane, was making its way through Georgia on Tuesday and expected to dump more than 20 inches on Atlantic cities like Savannah and Charleston.

Monday, several parts of Polk County were experiencing various levels of flooding. Just how much rain fell throughout the county? As predicted the west side of Polk took the brunt and rain numbers got lower heading east.

Here are numbers measured by weather stations throughout Polk County used by the National Weather Service in Tampa Bay, from highest rainfall to the least. All measurements came between midnight and 1 a.m. Tuesday unless otherwise noted.

- Mulberry: at the last measurement at 1 a.m. Tuesday, Mulberry had received 8.03 inches from Hurricane Debby, the most in Polk County.
- Gibsonia in North Lakeland: 7.99
- Highland City, Lakeland: 7.82
- Lakeland south of Crews Lake Drive near Crews Lake Road: 7.49
- Florida Polytechnic: 7.25
- Lakeland, near Crews Lake Drive and Lakeland Highlands: 6.84
- Lakeland, New Jersey Road near Woodlake Park: 6.53
- Lakeland Linder airport: 6.36 (last measured 4:30 p.m. Monday)
- Itchepackesassa, West Lakeland: 5.86
- Winter Haven, near Lake Jessie: 5.35 (last measured 9 p.m. Monday)
- Davenport, Loma Del Sol neighborhood, Ronald Reagan Parkway: 4.88
- Winter Haven Regional airport: 4.8

- Davenport, near U.S. 27 and Student Drive: 4.5
- Polk City/Auburndale: Berkley Charter School: 4.34
- Auburndale, Holt Road west of Inwood: 4.29
- Davenport, Ronald Reagan Parkway and U.S. 27: 3.83
- Bartow Airport: 3.64
- Fort Meade at Peace Creek U.S. 98 bridge: 3.14

50-foot sinkhole forms on Polk County property months after previous 75-foot sinkhole: Officials

By FOX 13 News Staff
Updated September 8, 2023 3:42pm EDT
Lakeland
FOX 13 News

Another sinkhole opens near Scott Lake

Jordan Bowen reports

LAKELAND, Fla. - Nearly three months after a 75-foot sinkhole opened up off of Scott Lake Road, Polk County crews were monitoring another sinkhole that opened up in the same area.

County officials said the recently opened sinkhole is 50-feet wide and 12-feet deep on private property.

SkyFOX: Sinkhole forms on private property in Polk County
FOX 13 News

Polk County Fire Rescue said the north and southbound lanes on Scott Lake Road were closed, but have since reopened. They said the sinkhole is not currently posing a threat to the county roadway or homes.

RELATED: 75-foot sinkhole forms on private property in Polk County, roads barricaded until further notice: Officials

Back in June, authorities were monitoring the 75-foot sinkhole that opened up off of Scott Lake Road, just south of Fitzgerald Road in southern Lakeland.

At the time, officials believed the previous sinkhole could be connected to a well that was drilled at the site.

Blue-green algae bloom found on Lake Henry in Winter Haven, health officials say

By Ken Suarez | Published September 21, 2022 4:12pm EDT | Health | FOX 13 News |

WINTER HAVEN, Fla. - The Florida Department of Health issued a warning because of a potentially dangerous blue-green algae bloom on Lake Henry in Winter Haven.

"When the water gets warmer and the temperature gets warmer and there's abundance of nutrients in the water, it can sometimes cause this kind of algae bloom," Scott Sjoblom with the Florida Department of Health.

The warning advises people not to boat, swim, or fish on the lake. Above all, it said, you shouldn't drink the water. Even though people react differently to blue-green algae exposure, the symptoms can get pretty nasty.

READ: Haines City to pay more than $100,000 to fix aging sewer system linked to major spill

They include possible diarrhea, vomiting, itchy eyes, skin rashes and trouble breathing. If the exposure is high enough, people with underlying conditions can even experience liver failure.

Blooms are more common this time of year and can persist for several weeks. Experts said if you have come in contact with water from Lake Henry and feel ill, see your doctor.

Hurricane Ian (2022)

FORT MYERS BEACH, FLORIDA – OCTOBER 02: In this aerial view, destruction left in the wake of Hurricane Ian is shown on October 02, 2022 in Fort Myers Beach, Florida. Fort Myers Beach sustained severe damage by the Category 4 hurricane which caused extensive damage to the southwest portion of Florida. (Photo by Win McNamee/Getty Images)

Tropical Storm Ian formed Sept. 23, 2022 in the central Caribbean. Ian became a hurricane Sept. 26, 2022, and became a major hurricane before hitting Cuba. Ian then turned to the east and made landfall in southwest Florida as a Category 4 storm, bringing devastating storm surge to the Fort Myers area. Ian moved across the state of Florida and weakened to a tropical storm. It then restrengthened into a Category 1 hurricane before making another U.S. landfall south of Myrtle Beach, South Carolina.

While Ian made landfall in Florida as a Category 4 storm, the National Hurricane Center later said in its report about the storm that Ian did briefly reach Category 5 strength.

Ian has been retired from the list of future storm names.

Some residents still without power in Peace River Village after Hurricane Ian

By Ken Suarez | **Published** October 10, 2022 8:27pm EDT | Bartow | FOX 13 News |

BARTOW, Fla. - Power has been restored for the vast majority of Floridians after Hurricane Ian, but it has not for many people who live in Peace River Village on SR 60 in Bartow, which is still flooded.

Phil Black is one of dozens of residents who is waiting to go back to his old life, with lights, and TV, and air-conditioning.

"We have to wait until the water completely goes down," said Black.

READ: Elderly resident with hurricane damage scammed by unlicensed contractor, Venice police say

City officials told Black and his neighbors it could be awhile. In the meantime, they are being forced to make due even longer.

Black doesn't have a generator.

"We have our windows open and let air flow through," Black said. "But when there is no air flowing, it's humid, very humid and hot."

One of his neighbors confronted another problem caused by the flooding. He almost came nose to nose with an alligator.

MORE: Florida man, 94, found clever way to escape attic after Hurricane Ian floodwaters trapped him inside

"It was right there," said Donnie Saunders. "When it spotted me, it immediately zoomed over to my porch, and was just waiting there."

Fish are also now swimming on the streets where cars used to drive. The park is on the Peace River, so it has flooded before, but never this bad.

Bartow city officials said they can't turn the electric back on until the water recedes, which could be another week, possibly two.

Environmental regulators look into potential pollution from fertilizer manufacturing plant in Polk County

By Briona Arradondo | Published October 25, 2023 11:01pm EDT | Polk County | FOX 13 News |

MULBERRY, Fla. - Florida environmental regulators are looking into a new report of potential pollution from a fertilizer manufacturing plant in Polk County.

Mosaic informed the Florida Department of Environmental Protection on October 20 about an alert from a phosphogypsum stack at its New Wales plant in Mulberry.

"We have on site monitoring equipment that alerted to possible change within pressure within the stack," said Jackie Barron, a public affairs manager at Mosaic. "They sit at different distances and depths and encircle the stack and are very, very sensitive to any sort of seismic activity."

READ: USF College of Marine Science gets $3.2 million grant to develop sargassum forecasting system

A Florida DEP inspection report said regulators are looking into a potential liner tear and unknown amount of process water that was lost.

"Any time you have any kind of liner tear, it is a critical condition notice. So, per that requirement, if we believe that could be something that might be a possibility, we report it out to the state, but we do not know yet for sure," said Barron.

Phosphogypsum is waste that's created as a part of the fertilizer-making process, and it's stored in large piles called stacks. Those stacks have liners that separate it from the ground. Movement in a stack can be a concern because of potential impacts to the environment.

Mosaic said the stack in question is not active, and there's no water stored at the top.

MORE: Tampa Bay area residents urged to conserve water after driest rainy season in more than a decade

"We will look for cause what caused the change in pressure. It could potentially be a liner tear, but we don't know yet. So that is something that we have to confirm," said Barron.

Environmental advocates are pushing for better oversight. A staff attorney for the center for biological diversity sending us a statement saying, "Liner tears are indicative of structural integrity problems, which can lead to more frequent and devastating events. The catastrophe at Piney Point started with a possible liner tear. Better oversight and regulation of this industry is needed now to avert further environmental damage."

Mosaic said residents should not be worried, and they are monitoring the situation.

"The stack is within the zone of capture for a nearby recovery well, so in the event there is a liner tear, water released will be recovered. We immediately notified the state of the circumstances we encountered, and following that, have already done outreach to the local community and other stakeholders," said Barron.

The New Wales plant is the same place where a sinkhole opened up under a gypsumstack in 2016. Mosaic also investigated a possible liner tear underneath a stack in 2022.

Mosaic said workers will have to do some drilling this week to get a better scope of what's going on underneath the stack, and they will also compare that with their monitoring data and keep the state updated.

Train derails in Fort Meade near phosphate plant

By FOX 13 News Staff | Published November 21, 2023 10:19am EST | Polk County | FOX 13 News |

FORT MEADE, Fla. - A train derailed in Fort Meade near the Mosaic phosphate mine in Fort Meade on Tuesday.

At least 10 rail cars were derailed, as shown on SkyFox footage.

A spokesperson with Mosaic told FOX 13 that the rail cars were transporting phosphate rock. No one was injured in the derailment.

According Mosaic, phosphate rock comes straight from the ground, which means it is not processed and won't pose an environmental impact.

This is a developing story. Check back for details.

Gas leak forces residents from Winter Haven nursing home

By FOX 13 News Staff | Updated December 6, 2021 11:34am EST | Winter Haven | FOX 13 News |

WINTER HAVEN, Fla. - Traffic along Cypress Gardens Boulevard was blocked and a nursing home had to be evacuated after a gas leak in Winter Haven Monday morning.

Police say it was around 9 a.m. when a work crew digging along the side of the road hit a gas line outside of the Life Care Center. Winds from Lake Roy were blowing the gas toward the building, prompting the evacuation.

Cypress Gardens Blvd. was closed at that location until about 11:30 while crews worked to secure the scene.

'It's all gone:' Lakeland man survives tornado that wrecked home, cars

By Ken Suarez | Updated December 17, 2020 5:32pm EST | Lakeland | FOX 13 News |

LAKELAND, Fla. - In north Lakeland, Wednesday's tornado skipped down Gibson Shores Drive, hitting one house and missing the next.

Scott Leavitt was just getting home from work when the wind started to pick up. He rushed inside and it happened.

"Everything started shaking," he recalled. "My ears were popping like crazy."

Then part of the roof ripped off and he scrambled.

"It happened so fast," he continued. "I was trying to find a safe place, but what's safe when the whole roof is going away?"

It was a day of heavy lifting and clean up for others on his street as well, along with coming to grips with what happened.

"We lost a shed in the backyard -- a lean-to. Totally lifted flooring and all. And it was anchored down. Went over the power lines and it was thrown across the backyards of the two houses in back of us," Luke Dickerson said.

His daughter and two kids were inside their home when the tornado hit.

"She heard trees falling and metal twisting," he continued. "She took up the two children and put them in the bathtub and stayed in there for about a minute and a half and was terrified."

At least three houses were damaged. A number of others were roughed up a bit.

After ripping through the neighborhood, the EF-1 tornado skipped one street over to the Hilltop Food Market convenience store. It took down a sign and knocked out the air conditioning unit.

"Two customers ran inside the store and hid underneath the shelving and all that," owner Yogi Patel said.

Leavitt is still in shock. His home is gone; his beloved classic Mustang, motorcycle, and truck all trashed.

Meanwhile, his cat Ash is nowhere to be found. He said he feels bad because when he rescued her, he made a commitment to take care of her for the rest of her life, never guessing something like this would ever happen.

"I know things can be replaced, but you work your tail off all your life, and it's all gone in a couple of seconds," he added.

Polk County's emergency management director Paul Womble says they'll have a better handle on the damage tally by Friday.

the Daily Ridge
WINTER HAVEN EDITION
Fast - Factual - Free

the Daily Ridge
WINTER HAVEN EDITION
Fast - Factual - Free

Winter Haven News

Roadway Blocked at Intersection of Thornhill Road and Winter Lake Road in Winter Haven

By **Allison** October 18, 2024 172 0

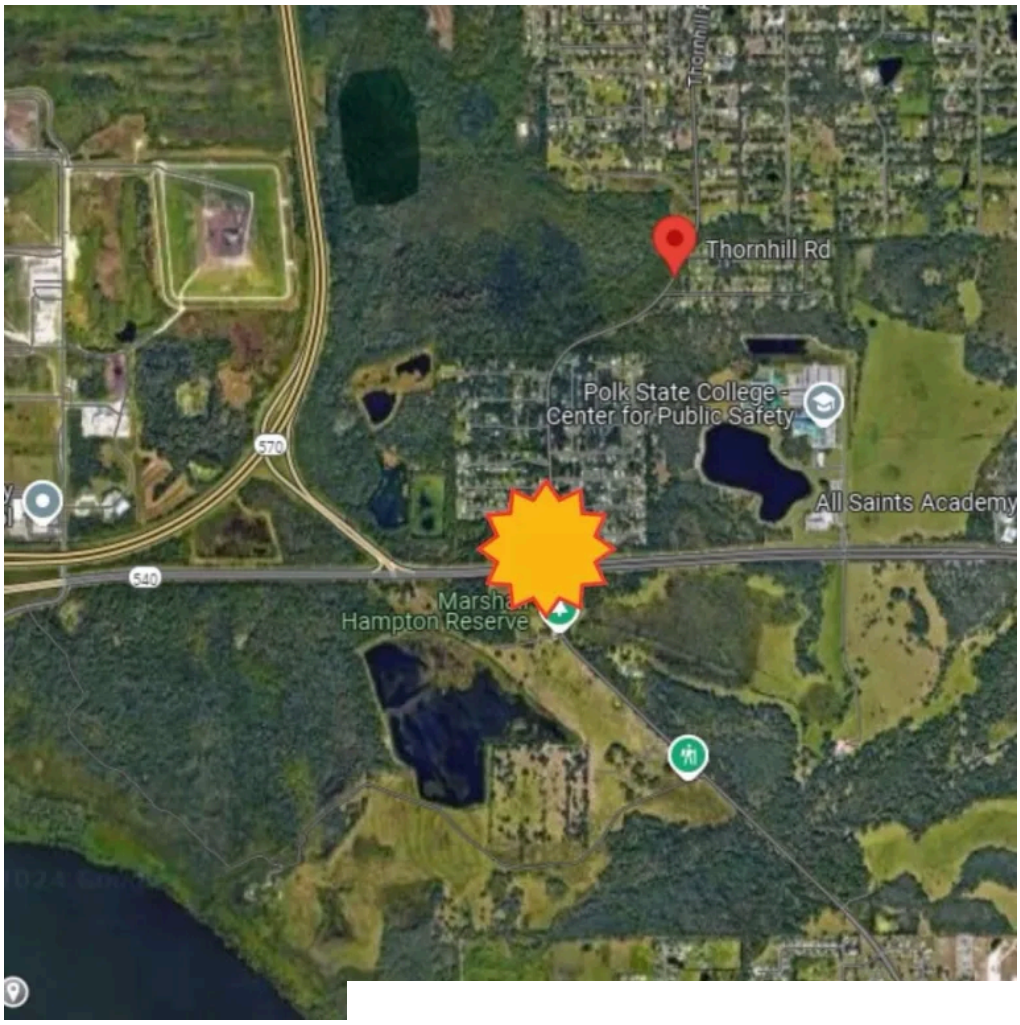
POLK COUNTY TRAFFIC ADVISORY

A partially overturned semi-truck is causing serious traffic delays at the intersection of Thornhill Road and Winter Lake Road in Winter Haven.

At 1:30 PM on October 18, 2024, a semi-truck carrying a large concrete barrier lost its load while making a right turn. The barrier is currently in the roadway, blocking traffic. The east-bound side of the road is now completely closed to allow a crane to remove the barrier blocking the road.

Drivers are looking at delays of up to 5 hours or more for the road to be clear. We encourage everyone to seek alternate routes at this time, until the blockage can be cleared.

Image source Bill Braswell



Allison

See Full Bio ›

The Ledger

LOCAL

Anti-Defamation League documents extremist activity in Polk

Gary White
The Ledger

Published 5:00 a.m. ET Sept. 19, 2022

A report issued Wednesday by ADL, also known as the Anti-Defamation League, claims extremist-related incidents in Florida rose 71% between 2020 and 2021.

ADL, an international Jewish non-governmental organization based in New York, also maintains a H.E.A.T. Map listing incidents that it classifies as representing hate, extremism, anti-Semitism, or terrorism.

The database includes more than 20 incidents occurring in Polk County since 2016. Most are cases of extremist groups distributing what ADL calls propaganda.

'It's not a job': Doula-training program allows local women to help others with births

'This is exciting': Legislative panel awards $6.2 million in local grants for Polk County

The spreadsheet documents 10 incidents in Lakeland since 2016. Most recently, ADL says members of Patriot Front, a white supremacist group, distributed propaganda last December. The group is listed as sharing material in Lakeland on two other occasions in 2021.

Patriot Front has also distributed material in Kathleen, Haines City, Davenport, Lake Alfred and Lake Wales, most recently in February, according to the database. The registry describes the propaganda as containing such messages as “America First,” “Not stolen; conquered” and “For the nation; against the state.”

In January, Patriot Front members reportedly hung a banner on an overpass in Haines City that said “Better dead than red.” ADL says Patriot Front members hung a banner at a soccer complex in Auburndale last December bearing the message, “America First,” and also distributed propaganda.

ADL reports that another white-supremacist group, Identity Evropa, also known as American Identity Movement, has made appearances in Polk County. Members hung a banner saying, “No sanctuary: Build the wall” in Lakeland in May 2018, according to the database.

'An important responsibility': Historic records get modern preservation

The group also reportedly posted flyers near Keiser University in Lakeland in 2017.

The list ascribes several incidents to Goyim Defense League, an anti-Semitic collective. Members distributed propaganda as part of “an anti-Semitic tour” in 2021, ADL reports, with incidents in Winter Haven and Davenport. The literature reportedly included vulgar statements about Jews and their religious practices.

In March 2020, the New Jersey European Heritage Association, an “alt-right” group, distributed propaganda in Lakeland that read: "Open borders is the virus," ADL reported.

Some of the recorded incidents apparently did not involve established groups. In August 2021, a student “affiliated with a religious campus group” harassed two Jewish students at a tabling event, using anti-Semitic and Holocaust-related language, the database says. It does not identify the school.

Vinlanders Social Club, identified as a racist skinhead crew, held a private New Year’s Eve party in Lakeland in 2020, according to the ADL list. Another entry says an anti-Semitic “and conspiracy-filled” letter was faxed to an academic department at Florida Southern College in 2017. The sender is not identified.

In 2019, an unidentified person placed a sign in a residential lawn in Haines City that read “Happy 4th of Jew=Lie,” according to the database.

Gov. DeSantis: Suing federal government over drug plan

The spreadsheet includes one incident of an alleged white supremacist clashing with law enforcement. Deputies with the Polk County Sheriff’s Office fatally shot Francis Perry of Winter Haven in 2016 after he began shooting during a traffic stop. Perry had reportedly told law-enforcement officers he was part of the white supremacist movement, The Ledger reported at the time.

In Wednesday’s release, ADL Center on Extremism documented 207 extremist-related incidents in Florida in 2021, compared to 121 the previous year.

“The dramatic increase was largely fueled by increased distribution of white supremacist propaganda by an interconnected network of extremist groups,” ADL said in a news release. Those groups included existing neo-Nazi and white supremacist groups such as the Goyim Defense League, the New Jersey European Heritage Association, NSDAP and the National Socialist Movement, the report said, as well as newer groups like White Lives Matter, Sunshine State Nationalists and NatSoc Florida.

Did you know: COVID-19 positivity rate drops to 11.3% for Polk. Community spread still considered high

The group’s activities range from propaganda distribution and banner drops to in-person demonstrations, the release said, and are often carefully coordinated with one another.

“Extremist activity is surging across our state, which should be extremely troubling to all,” Sarah Emmons, ADL Florida Regional Director, said in the release. “It’s critical that our leadership, government officials and all Floridians firmly denounce hateful rhetoric and condemn antisemitism and extremism whenever and wherever it occurs and demonstrate allyship towards each other.”

Gary White can be reached at gary.white@theledger.com or 863-802-7518. Follow on Twitter @garywhite13.

ENVIRONMENT

CSX Railcar and Locomotive Collide, Spilling 1,300 Gallons of Diesel Fuel in SW Lakeland

Cleanup was still underway Friday, according to a report filed with the Florida Department of Environmental Protection.

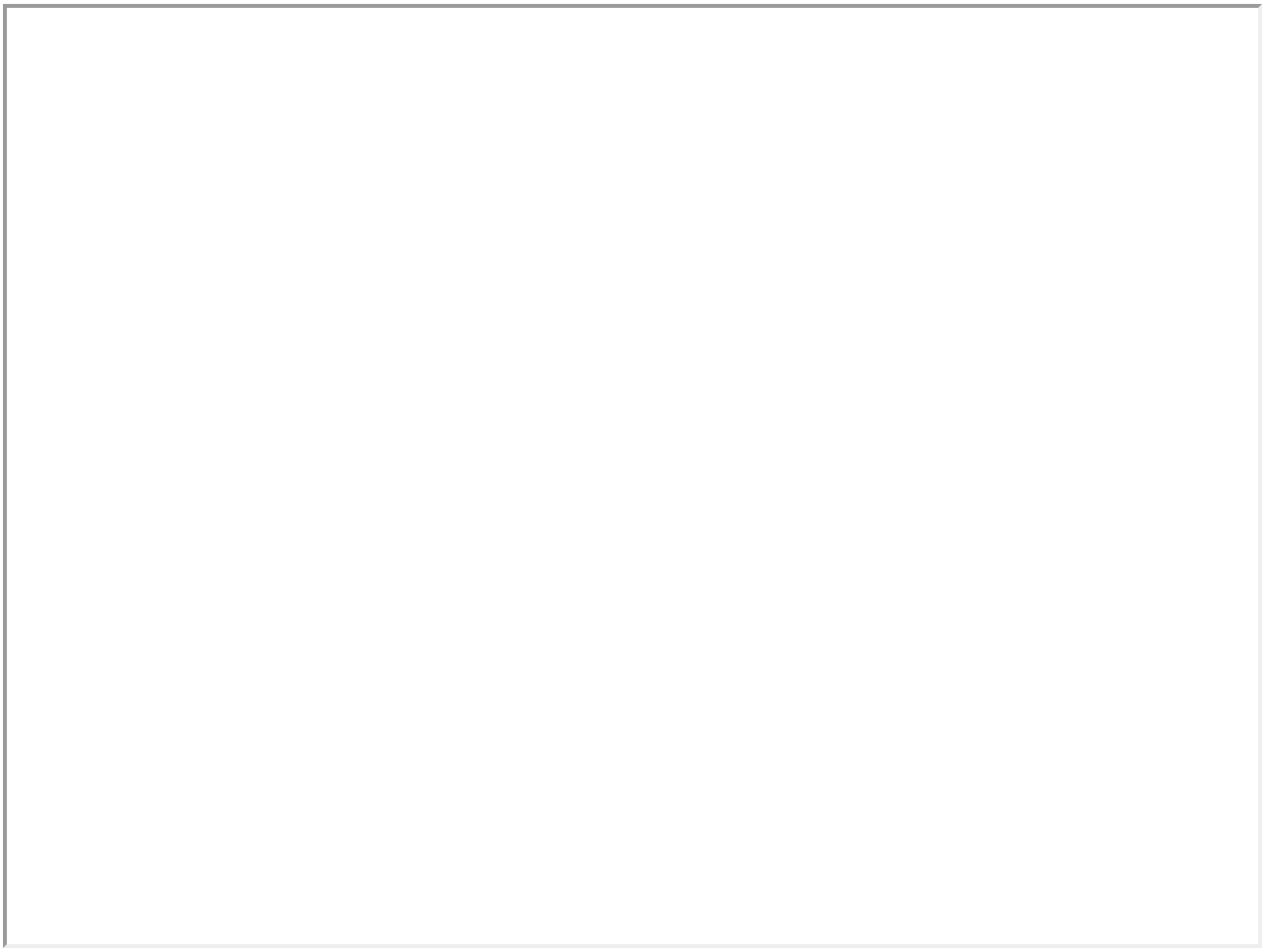
By **Cindy Glover**
April 12, 2024

A photo of a CSX diesel locomotive. | Courtesy of James St. John

About 1,300 gallons of diesel fuel spilled at CSX's Winston Railyard early Tuesday when a railcar and a locomotive collided. The spill happened along Wilkinson Road, about halfway between Old Tampa Highway and the Polk Parkway.

A **pollution notice** filed with the Florida Department of Environmental Protection said the railcar rolled into locomotive CSXT2018, puncturing the locomotive's fuel tank. The incident happened at 2:05 a.m. Tuesday and was reported at 3:39 p.m. Thursday.

"A stained area was observed along the tracks. Some of the diesel was observed to have sheet flowed to the east over a roadway and entered a yard drainage ditch," according the report filed by Hazardous Materials Manager Joshua Dearing.



The report said CSX engaged **Arcadis**, which has offices in Tampa and Orlando, to provide regulatory reporting, source removal oversight and field screening. And **Hull's Environmental Services** "deployed a boom, recovered the remaining fuel from the damaged tank and is conducting source removal activities utilizing a vacuum truck, excavator, skid steer, air mover truck and/or hand tools."

The incident was still listed as active on Friday, but Dearing wrote, "Following waste disposal, a report will be submitted to FDEP."

Calls and emails to CSX were not immediately returned on Friday.

NEWS / **HEALTH**

Florida patients among victims of spate of data hacking

The data of 3.4 million Florida patients has been compromised this year. How are hackers using that data?

illion Tampa General Hospital patients, one of
O | Times]

By **Christopher nnell** *Times staff*
Teghan Simonton *Times staff*

Published July 27, 2023 | Updated July 27, 2023

TAMPA — A criminal group now being pursued by the FBI had access to Tampa General Hospital's computer system for three weeks.

measures. Nonetheless, hackers were still able to download personal data on 1.2 million patients.

The crime is among a spate of recent data breaches affecting Florida patients. HCA Healthcare in July reported that an unauthorized user stole data on about 11 million patients in 20 states, including Florida, and posted it on an online forum. And this week, Johns Hopkins Health System, which runs All Children's Hospital in St. Petersburg, reported the theft of personal information on 310,000 patients, including almost 10,000 from Florida.

Children's Hospital in St. Petersburg, this wee
nt data being stolen. [DIRK SHADD | Times]

Nationwide, e than 50 million patient records were compromised in 2
according to analysis by cybersecurity firm Critical Insight. The records of
than 3.4 million Florida patient have been compromised this year and 36 data breaches are still under investigation, according to the Department of Health and Human Services, suggesting that health care firms will continue to remain a favorite target of hackers.

20/20 Eye Care Network	Business Associate	May 24, 2021	4,142,440 people affected
Florida Healthy Kids Corporation	Health Plan	Jan. 29, 2021	3,500,000 people affected
NationsBenefits Holdings	Business Associate	April 13, 2023	3,037,303 people affected
Lincare Holdings	Healthcare Provider	Oct. 26, 2021	2,918,444 people affected
21st Century Oncology	Healthcare Provider	March 4, 2016	2,213,597 people affected
Dental Care Alliance	Business Associate	Dec. 8, 2020	1,723,375 people affected
North Broward Hospital District (Broward Health)	Healthcare Provider	Jan. 2, 2022	1,351,431 people affected
Mednax Services	Business Associate	Dec. 16, 2020	1,290,670 people affected
UF Health Central Florida	Healthcare Provider	July 30, 2021	700,934 people affected
Florida Orthopaedic Institute	Healthcare Provider	July 1, 2020	640,000 people affected

TEGHAN SIMONTON | Times • Source: U.S. Department of Health and Human Services

The health care sector is perceived as being more vulnerable than those in the , said Joe Partlow, chief technology o puter security guidance to banks, utili among others. Finance firms tend to more in secu measures, in part because of regulations, he said. Health typically includes Social Security numbers and insurance details prized by

”They are a good target,” he said. “They know it’s a good trove of personal data.”

IBM report.

Phishing emails that entice employees to enter log-ons and passwords are still the primary means used by hackers to gain access to computer systems, Partlow said.

Once they have broken in, one tactic is to encrypt or encode data, rendering it unusable until the hospital pays a ransom. At least five U.S. hospitals paid ransoms in 2021 to be able to use their data again, according to a report by Becker's Hospital Review.

The critical mission of hospitals makes them particularly vulnerable to that threat, Partlow said.

These 8 Florida health care organizations had the most data breaches in the past decade.

Eight Florida health entities suffered three or more breaches since July 2013. Fourteen more experienced two breaches. Wellcare Health Plans sustained the most.

Wellcare Health Plans	6 breaches
Aventura Hospital and Medical Center	3 breaches
Florida Blue	3 breaches
Florida Department Of Health	3 breaches
Florida Healthy Kids Corporation	3 breaches
Orlando Health	3 breaches
Sunshine State Health Plan	3 breaches
University of Miami	3 breaches

TEGHAN SIMONTON | Times • Source: U.S. Department of Health and Human Services

Even in cases where ransoms are not extracted, the data stolen from health care providers is still prized by hackers, said Lisa Plaggemier, executive director at National Cybersecurity Alliance, a Washington, D.C., nonprofit that works to educate companies and individuals on internet security and partners with the Department of Homeland Security.

rth and Social Security numbers can b
credit card applications. Criminals ma
as their bank or credit card company
order to extr ven more information.

“Very often people will think to themselves the person has all this data, they mu
be legitimate,” she said.

create an even fuller picture of someone's identity.

Health care firms typically offer complimentary credit monitoring to customers whose data has been compromised, providing a warning every time their credit score is checked. Plaggemier said victims should consider requesting a credit freeze, especially if a child's personal data has been compromised.

"If your kid isn't getting a mortgage anytime soon, you should be putting a freeze on their credit," she said.

Frequent checking of bank and credit card statements and changing of passwords are also good "data hygiene" after a data breach, Plaggemier said.

Not all hacks are motivated by money. Hospitals are also at risk from cyberattacks, which can originate from criminal groups but also nation states, like Russia, China, North Korea and Iran, she said.

At least one cyberattack on a hospital has resulted in a patient death, Plaggemier said. One-quarter of health care facilities that were the target of a ransomware attack reported an increase in mortality rates afterward, a survey of more than 600 health care facilities by the Ponemon Institute found.

"The speed of technology and the speed of bad actors evolving their techniques, you have to be really prepared for it to happen," Plaggemier said. "It's a when not an if."

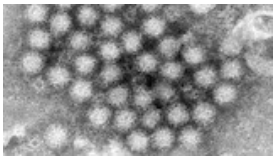
ealth and medicine reporter. He can be reac
nell@tampabay.com.

MORE FOR YOU

Trump vowed to end surprise medical bills. The office working on that just got slashed

Earlier today
• Health

The horrendous norovirus is hitting Florida hard. How to protect yourself.



Earlier today
• Florida

Trump mentioned Florida parent January Littlejohn in his speech. Here's what to know.

Yesterday
• The Buzz on Florida Politics

Measles confirmed in Miami teenager, the first in Florida this year

Yesterday
• Health

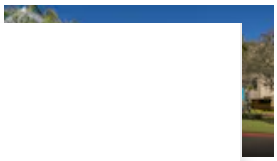
Anesthesia to get a tattoo? A Florida studio mixes medicine and ink.

March 2
• Florida

Florida elderly guardians have little oversight, 'shocking' audit says

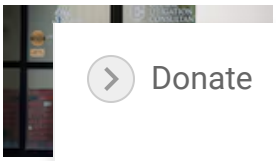
March 2
• Florida

Steinbrenner family makes



• Health

IRS and SEC join FBI in investigation of Govoni and missing trust fund money

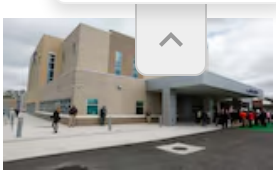


Feb. 27
• Health

Nearly 90 sick with norovirus on Holland America cruise that left Florida

Feb. 26
• Florida

A safe space in a crisis. Inside Tampa General's new behavioral health hospital



Feb. 26
• Health

Tampa Bay Times

Contact

Help Chat Customer Service Submit a News Tip Contact

Account

Digital access Home delivery Newsletters Manage my account Donate Subscriber FAQ

e-Newspaper FAQ e-Newspaper App FAQ

About

Times Publishing Company About us Connect with us Careers

Advertise

Times Total Media Media Kit Place an ad Public Notices Classifieds Best of the Best Local Ads

Champa Bay Shop Hardcover Book Lightning Hardcover Book Photo Reprints Art

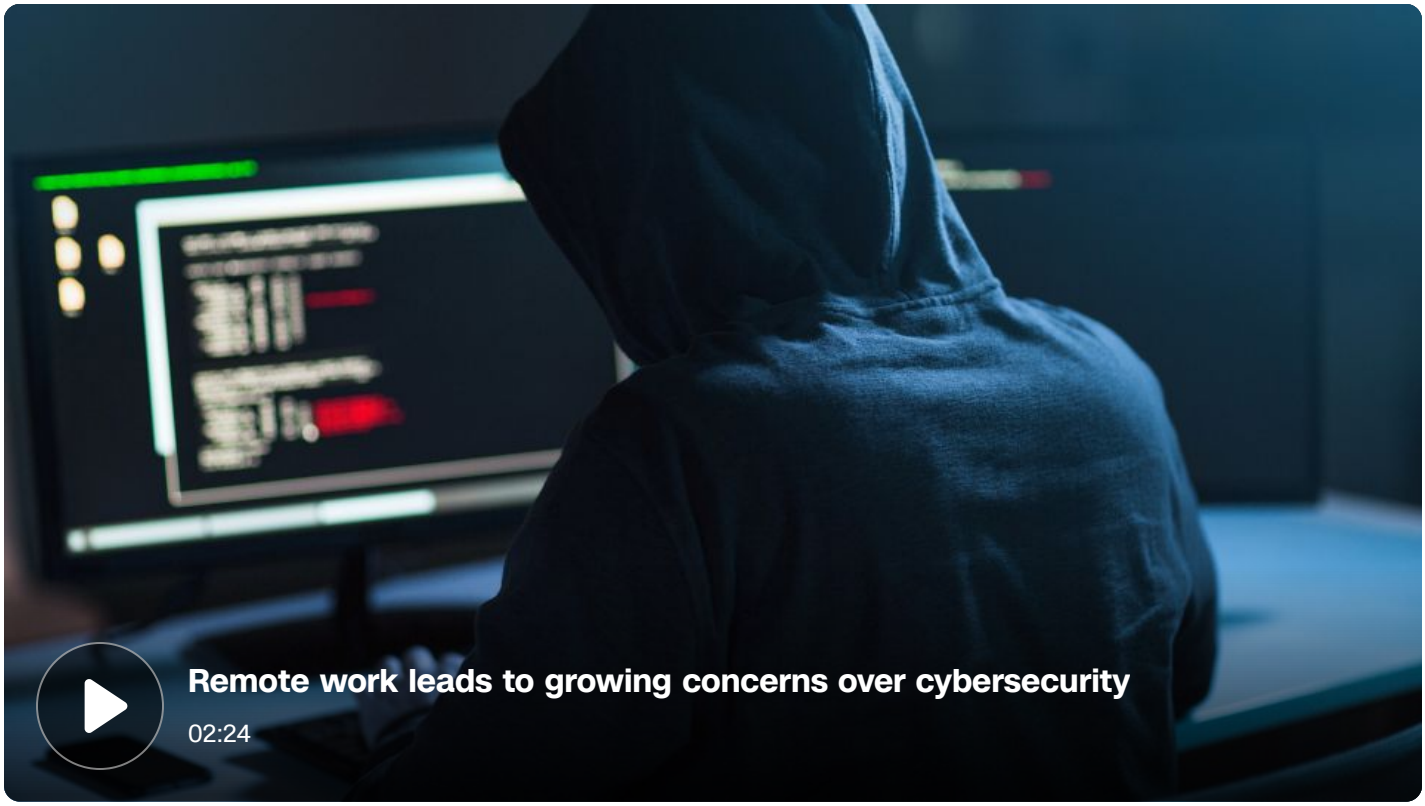
Article Licensing Historic Front Pages Meeting Backgrounds

More

Florida water treatment facility hack used a dormant remote access software, sheriff says

By Alex Marquardt, Eric Levenson and Amir Tal, CNN

5 minute read · Updated 5:03 PM EST, Wed February 10, 2021



(CNN) — A hacker who last week tried to poison a Florida city's water supply used a remote access software platform that had been dormant for months, Pinellas County Sheriff Bob Gualtieri told CNN on Tuesday.

The cyber-intruder got into Oldsmar's water treatment system twice on Friday – at 8 a.m. and 1:30 p.m. – through a dormant software called TeamViewer. The software hadn't been used in about six months but was still on the system.

"How they got in, whether it was through a password or through something else, I can't tell you that," said Gualtieri.

However, Oldsmar's assistant city manager, Felicia Donnelly, told CNN that a password was

However, Oldsmar's assistant city manager, Felicia Donnelly, told CNN that a password was required for the system to be controlled remotely.

RELATED ARTICLE
Someone tried to poison a Florida city by hacking into the water treatment system, sheriff says

TeamViewer, which is based in Germany and has more than half a million customers around the world using commercial licenses, said that there was no indication of suspicious activity.

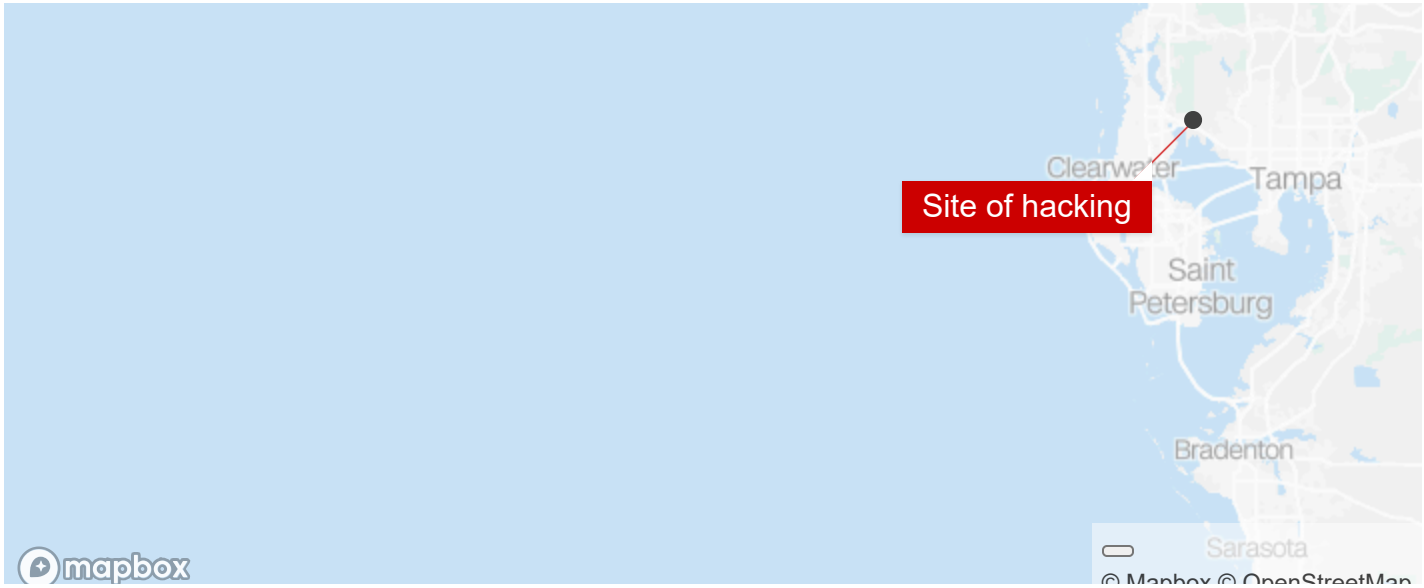
"Based on cooperative information sharing, a diligent technical investigation did not find any indication for suspicious connection activity via our platform," TeamViewer spokesperson Martina Dier told CNN on Wednesday.

Once inside the system, the hacker adjusted the level of sodium hydroxide, or lye, to more than 100 times its normal levels, Gualtieri said. The system's operator noticed the intrusion and immediately reduced the level back. At no time was there a significant adverse effect to the city's water supply, and the public was never in danger, he said.

The identity of the hacker, or hackers, isn't yet known. Gualtieri praised the operator who spotted the attack on Friday and said current and former employees have been interviewed after early consideration of an insider threat. There are currently no suspicions or indications that's the case, he said.

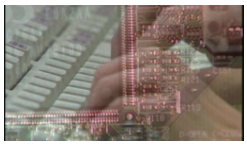
The incident highlights how some critical infrastructure systems are vulnerable to hacking because they are online and use remote access programs, sometimes with lax security.

Vulnerabilities in critical infrastructure systems



Gualtieri said the water treatment facility currently uses a Google Chrome product for remote access. The Oldsmar water treatment system is also using the Windows 7 operating system, which was released in 2009, a source familiar with the investigation said.

The outdated operating system was not the weakness here given that the hacker did not exploit a vulnerability, according to Rob Lee, the CEO of cybersecurity firm Dragos.



RELATED ARTICLE
Concern mounts over government cyber agency's struggle to respond to hack fallout

"There was software that allows remote access that was internet exposed, which means anyone could log in," he said. "To impact industrial systems you don't need exploits. You just need to know how to use the system – in this case a human machine interface that operated the plant."

Remote access software, like TeamViewer and Chrome in Oldsmar's case, are extremely common on infrastructure sites, Lee said. That makes them targets.

"The reality is though for thousands of sites, especially amongst the smaller community members, this same scenario is possible," he said.

Chris Krebs, the former director of the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency, wrote on Wednesday that the Oldsmar hack highlights how dire the challenge is.

"Unfortunately, that water treatment facility is the rule rather than the exception," Krebs wrote in a column for The Hill. "When an organization is struggling to make payroll and to keep systems on a generation of technology created in the last decade, even the basics in cybersecurity often are out of reach."

Importance of remote access software

Lee said this type of attack is precisely what keeps industry experts awake at night.

"It was not particularly sophisticated, but it's exactly what folks worry about, and as one of a very few examples of someone making an attempt to hurt people, it's a big deal for that reason," Lee said.

However, Gualtieri rejected speculation that the attack wasn't sophisticated.

RELATED ARTICLE
The SolarWinds hack is stunning. Here's what should be done

"It could be that somebody somehow compromised the password and the password got out. Or it could be pretty sophisticated where you've got somebody who's doing what intrusion hackers do: looking out there all the time for potential vulnerabilities and administrator credentials," he said.

Gualtieri said the potential danger of an attack like this should prompt a discussion about remote access to software, adding that he'd never seen an attack like this.

"This is a new one for us," the sheriff said.

Damon Small, the technical director of security consulting at NCC Group North America, told CNN that remote access was a key part of critical infrastructure and cautioned against demonizing it.

"Remote access is used all the time. That's not the failure here. The failure was that someone got ahold of it," he said.

Israel reaches out to US investigators

Gualtieri said the county is coordinating with the FBI and US Secret Service, but the county is taking the lead on the investigation, using an in-house lab for the forensic analysis of the attack.

Asked why the Secret Service is involved, Gualtieri pointed to their work on computer fraud and agreed Sunday's Super Bowl in Tampa "certainly has something to do with it," given that the attack happened Friday. The attack was reported to the FBI's Joint Terrorism Task Force, which the Secret Service is a part of, "so they were involved at that point."

RELATED ARTICLE
A crumbling infrastructure puts these Biden Cabinet positions in the spotlight

Israel's National Cyber Directorate (NCD), the cybersecurity government agency, said Wednesday they had reached out to counterparts in the US investigating the Oldsmar hack.

"The Israel National Cyber Directorate has contacted its US equivalents about the case (in

Oldsmar, FL) as part of standard and accepted information-sharing in the cyber field, which is intended to learn from other cases in the world and augment the methods of resistance," the institution said in a statement.

Last April, Israeli water facilities were targeted in an attack that NCD head Yigal Unna described as a "changing point in the history of modern cyber warfare." He said the facilities were targeted in a "synchronized and organized attack aimed at our water systems."

Had the attack been successful, Unna said, it could have caused significant damage to civilian water supplies. He also appeared to suggest the hack targeted chlorine flow into water treatment units, which could have been harmful to public health.

In his May 2020 presentation to an online CyberTech conference, the NCD head did not say who he believed was behind the attack in Israel, but noted it had not been accompanied by the type of ransom demands or attempt to gain financially that would be expected if it had been carried out by cyber criminals.

Green for Trump ...

Trump delays some tariffs on Mexico and Canada for one month

Climate

Weather

Ukraine-Russia War

Israel-Hamas War

Watch

Listen

CNN Underscored

Games

About CNN

CNN US

FOLLOW CNN

Terms of Use Privacy Policy Do Not Sell Or Share My Personal Information Ad Choices Accessibility & CC About

Subscribe Newsletters Transcripts Help Center

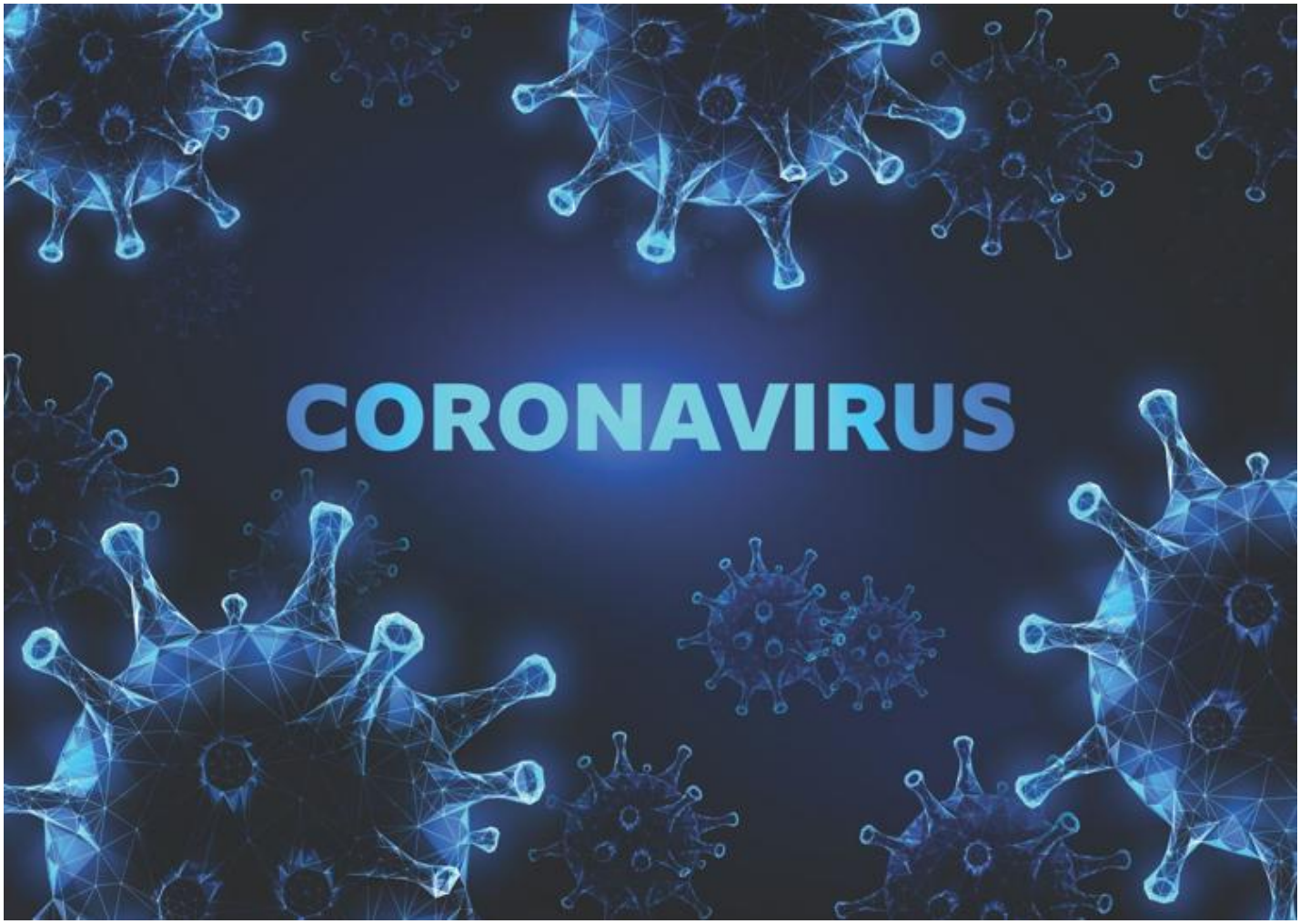
https://www.midfloridanewspapers.com/winter_haven_sun/latest-covid-19-numbers-1st-polk-county-coronavirus-death-confirmed/article_2b10f3f2-7379-11ea-8366-8ffcab59ae16.html

Coronavirus | COVID-19

Latest COVID-19 numbers: 1st Polk County coronavirus death confirmed

A 60-year-old male Polk resident died March 28, the Florida Department of Health confirmed Tuesday.

Sun Staff
Mar 31, 2020



The number of confirmed COVID-19 cases in Florida continues to ascend and the number of cases in Polk County has experienced an increase of its own.

According to numbers released by the Florida Department of Health, as of 11:30 a.m. March 31, Florida had 6,338 confirmed cases and Polk had 73 cases.

The statewide total represents an increase of 634 cases overnight, up from 5,704 at 6 p.m. March 30.

Polk County also had its first death related to coronavirus verified March 31.

“On March 28th, a 60-year-old Polk resident diagnosed with COVID-19 passed away. This is the first COVID-19 death in Polk County,” stated Nicole Riley, the public information officer for the Florida Department of Health in Polk County. “We express our sincere condolences to the person's family and will continue to work with the Department of Health (DOH) and our community partners to prevent the spread of COVID-19.”

There had been 77 deaths in Florida as of 11:30 a.m. Tuesday and 772 cases have resulted in hospitalization.

Polk has had 24 hospitalizations so far related to the virus.

According to the latest report, 20 of Polk’s cases involve residents with Davenport mailing addresses, 19 are residents with Winter Haven mailing addresses, 13 are residents with Lakeland mailing addresses, three are in Lake Wales and two are in Bartow and Haines City, respectively.

Around Florida, the areas with the most cases include Dade County (1,894 cases), Broward County (1,181 cases), Orange County (338 cases) and Hillsborough County (282) — the latter two of which are neighbors to Polk County along the Interstate 4 corridor.

Also adjacent to Polk is Osceola County, which has 103 confirmed cases at this time.

The Ledger

LOCAL

Computer hack at state agency creates nightmare for funeral homes in Polk County

Gary White
Lakeland Ledger

Published 4:55 p.m. ET July 12, 2024

When dealing with bereaved families, funeral directors employ anodyne language and soothing tones.

Michael Williams, a funeral director in Winter Haven, dispensed with his normal decorum as he summarized the situation Florida's funeral homes now confront.

"We're going back to prehistoric times," Williams, a funeral director at James C. Boyd Funeral Home, said in a voice of frustration.

At the least, funeral directors have been plunged back into a pre-modern era, if modern means having the ability to conduct essential tasks on computers.

A ransomware group has reportedly claimed that it hacked into the computer network of the Florida Department of Health and is freezing data until the agency pays an unspecified amount. The department has acknowledged a possible cyber-attack, WFTV reported.

The agency manages official state records, including birth certificates, marriage certificates and death certificates. It is the inability to receive and submit the latter electronically that is causing headaches for funeral homes.

“It’s made everything a lot more difficult and is slowing everything down — the process of getting death certificates for families,” said Bill Schichtel, vice president and funeral director at Heath Funeral Chapel in Lakeland. “But besides that, it's slowing the process down to getting approval to do cremations, because you have to have the death certificate signed by the doctor and approval from the medical examiner and the state before you can do that.”

A statement on the Florida Department of Health website reads: “There is currently a temporary outage of the online Vital Statistics system. As we work diligently to resolve this outage, all county health departments are able to assist the public with Vital Statistics offline.”

The vital records office for Polk County, administered by the state agency, occupies space in the Northeast Government Center in Lake Alfred. Since the state system went offline on June 26, funeral homes have had to send employees to the Lake Alfred office to deliver death forms and later to collect death certificates, Schichtel said.

“From start to finish, everything is very difficult,” said Schichtel, who has worked at the family business since the 1980s. “It’s a slower process. So basically, we've gone back to the dark ages, for the original way you do things.”

Funeral homes are required to obtain death certificates before carrying out cremations, and the lost access to the state’s electronic system is causing delays, Schichtel said. The delays have disrupted some plans for services, he said.

“We had one family that wanted to take their (relative’s) ashes back to, I think, the Dominican Republic, and they were very, very upset,” Schichtel said. “And I understand. They get everything prepared, and they get their flights, and we can't do anything until everything is completed on the doctor side or the medical examiner side. Our hands are tied. We only can go as fast as everybody else can go.”

The delays could cause problems that go beyond inconvenience for family members, Schichtel said.

Tired of irrelevant rants Lake Wales considers new citizen-comment rules: city business up front, others at the end

“I know it's putting a pinch on some of the funeral homes that do not have a lot of cooler space because they're getting overfull because the processing is slowing down,” he said.

Williams, the funeral director at James C. Boyd Funeral Home, displayed exasperation as he talked about the loss of computer access to records.

“This is crazy,” he said. “This is difficult. It's just making things difficult. You're losing money. You lose a resource. It’s a mess because you're hiring people to do a job that we can normally do on a computer, so now there's more manpower that needs to be hired.”

Williams referred to the need to have someone drive to and from the office in Lake Alfred to deliver and retrieve death certificates.

The outage has also affected the Medical Examiner’s Office for the 10th Judicial Circuit, based in Winter Haven. The office has lost access to the Electronic Death Registration System, the state database used to enter death records.

The Medical Examiner’s Office has returned to using fax machines to receive and send records, a spokesperson said. A doctor must review the records before the office issues a cremation authorization number, which a funeral home must receive before carrying out a cremation.

Heath Funeral Chapel is a member of the Independent Funeral Directors of Florida. Schichtel said he is awaiting word from the association about a possible resolution of the problem.

“The worst thing is, there’s no end in sight,” Schichtel said. “This may never end.”

Gary White can be reached at gary.white@theledger.com or 863-802-7518. Follow on X @garywhite13.

The Ledger

NEWS

Polk Tax Collector’s Office hit by 'targeted computer virus'

Kathy Leigh Berkowitz kberkowitz@theledger.com

Published 3:10 p.m. ET June 25, 2020

LAKELAND — For the second day in a row, the Polk County Tax Collector’s Office countywide computer system was down due to a “targeted computer virus,” according to Tax Collector Joe Tedder.

The attack occurred on Tuesday around 2:15 p.m., Tedder said.

“The internal detection utilized by the Tax Collector’s Office limited the scope of the impact,” he said Thursday, adding that no customer sensitive information has been compromised.

The attack came via email, which appeared to have an invoice. When opened, the invoice contained a virus, Tedder said.

The Polk County Sheriff’s Office was alerted regarding the issue.

Tedder said such viruses are not uncommon and noted that all of the department’s computer systems were shut down, including telephones, online processing and service center operations.

“At this time, we have not found evidence of a data breach in our local tax systems,” he said. “Data for driver licenses, motor vehicles, concealed weapons, hunting and fishing licenses were not affected, as that information is housed in separate state computer networks.”

The IT department has worked 20 hours a day for the last two days wiping the Tax Collector computer servers clean and restoring back-up data.

“Additionally, all PCs which are utilized by staff are similarly being wiped clean and restored,” Tedder said.

The full recovery and testing will continue through the weekend. Tedder said the hope is that the Tax Collector’s Office will resume regular business hours on Monday.

Tedder acknowledged that the public is extremely inconvenienced.

“We know that they are frustrated, and we are frustrated as well,” he said.

An 8-line phone system has been patched to help the public get questions answered. Typically, the department runs 50 lines.

“We have staff that are working as best we can helping people as best we can,” Tedder said.

Meanwhile, the kiosks at both the Grove Park and Oak Ridge Publix shopping centers are working and can be used.

People can also visit the state’s website, GoRenew.com, to renew their tag or driver’s license and print out a receipt that will suffice if stopped by law enforcement, Tedder said.

“We apologize for this service outage and hope to resume services in the immediate future,” he added.

Kathy Leigh Berkowitz can be reached at kberkowitz@theledger.com or at 863-802-7558. Follow her on Twitter @kberkowitzthel1.

The Ledger

CORONAVIRUS

Polk County's COVID-19 infection rate continues to rise, Florida Department of Health reports

Gary White
The Ledger

Published 5:01 a.m. ET July 18, 2022

New infections of COVID-19 and the rate of positive test results continue to push upward in Polk County.

The county registered another 3,021 cases for the week of July 8-14, according to a biweekly update released late Friday afternoon by the Florida Department of Health. That indicated an increase of 2.8% from the previous report.

The county's positivity rate climbed to 23%. The state had reported it at 22.1% in the update from July 1.

Previously: Polk County's COVID-19 cases rise 11.2%

Florida COVID cases rise: COVID-19 is on the rise again in Florida, fueled by omicron BA.5 subvariant

BA.5 subvariant dominant in Florida: The BA.5 'ninja' COVID-19 variant is now dominant in Florida. What that means, and what to do

Polk County's positivity rate has only surpassed 20% during the worst waves of the pandemic and had been as low as 2.9% in April. The rate does not include results of home testing.

Statewide, infections rose 5.1% compared to the previous update, with 78,245 new infections recorded. The positivity rate for all testing in Florida spiked to 21.2%, up from 19.4% two weeks earlier.

The Department of Health registered another 772 COVID-related deaths, slightly lower than the figure from the July 1 update. The state has tallied 76,662 deaths since spring of 2020.

The state does not report deaths by county of residence. The federal Centers for Disease Control and Prevention recorded 13 deaths of Polk County residents related to COVID in the week ending Thursday. That indicated a rise of 30% from a week earlier.

Polk County is still rated high for community levels of COVID-19, according to the CDC's COVID Data Tracker.

Insurrection update: Charges added for Polk County Jan. 6 defendants

Did you know: Judge denies 'red-flag' request over gun at a Lakeland high school

The CDC registered 254 hospital admissions for COVID-19 in the previous week, an increase of 27.5% from the previous week. Patients confirmed to have COVID-19 occupied 8.1% of staff, in-patient beds in Polk County hospitals, according to the CDC.

A graphic on the CDC website shows that hospital admissions for COVID-19 have risen steadily in Polk County since early May.

The CDC reported the positivity rate for Polk County at 23.4%, a slight increase from a week earlier.

The CDC's dashboard listed 71.5% of Polk County residents age 5 and older as having received at least one dose of a vaccine, with 61.6% fully vaccinated.

Among fully vaccinated residents, 40.1% have received at least one booster dose, according to the CDC.

Gary White can be reached at gary.white@theledger.com or 863-802-7518. Follow on Twitter @garywhite13.

INVESTIGATORS

Scientists race to save Florida orange juice, citrus industry

Researcher: 'Science is our best chance'

Erik Sandoval, Manager of Content and Coverage

Published: **November 27, 2023 at 6:00 PM**
Updated: **November 27, 2023 at 7:10 PM**

Tags: **University Of Florida, Institute Of Food And Agricultural Sciences, Citrus Industry, Polk County, Lake County, Investigators, Forecasting Change, Climate Change**

POLK COUNTY, Fla. – A small insect that carries a powerful disease is threatening the future of your cold morning glass of Florida orange juice.

Researchers blame **Citrus Greening Disease** for a nearly 80% drop in Florida's citrus production since 2005.

Records show it dropped 60% between 2022 and 2023 alone.

The disease is caused by a bacterium carried by small insects. Infected trees produce small, dry pieces of fruit, and the tree eventually dies.

The drastic drop in production is why the **University of Florida's Institute of Food and Agricultural Sciences**, or UF/IFAS, is working hard to stop the disease's spread.

[EXCLUSIVE: Become a News 6 Insider (it's FREE) | PINIT! Share your photos]

"The orange should be bigger — Florida nice and juicy," said UF Professor Charlie Messina. "They're all green."

Messina is leading a new project called the Crop Transformation Center.

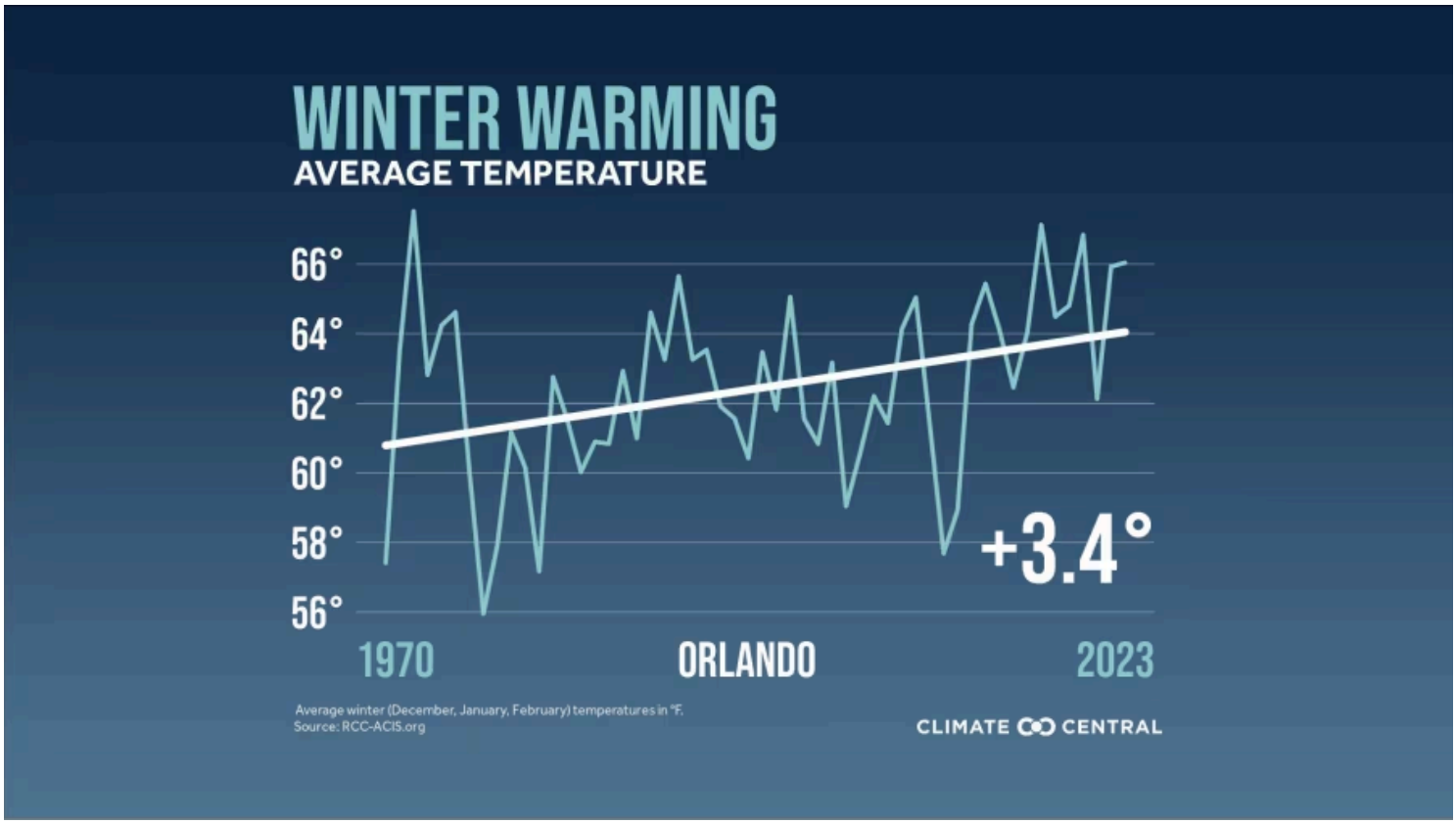
UF President Ben Sasse pledged $2 million to combat Citrus Greening Disease in hopes of shoring up the state's citrus industry.

"I think the industry could disappear in a couple years," Messina said.

Climate Change's Impact

The bacteria that cause Citrus Greening Disease **thrives in temperatures between 60 and 90 degrees**, which describes the average day in Central Florida.

The warming climate, however, is creating longer stretches of those temperatures, and that is not helping.



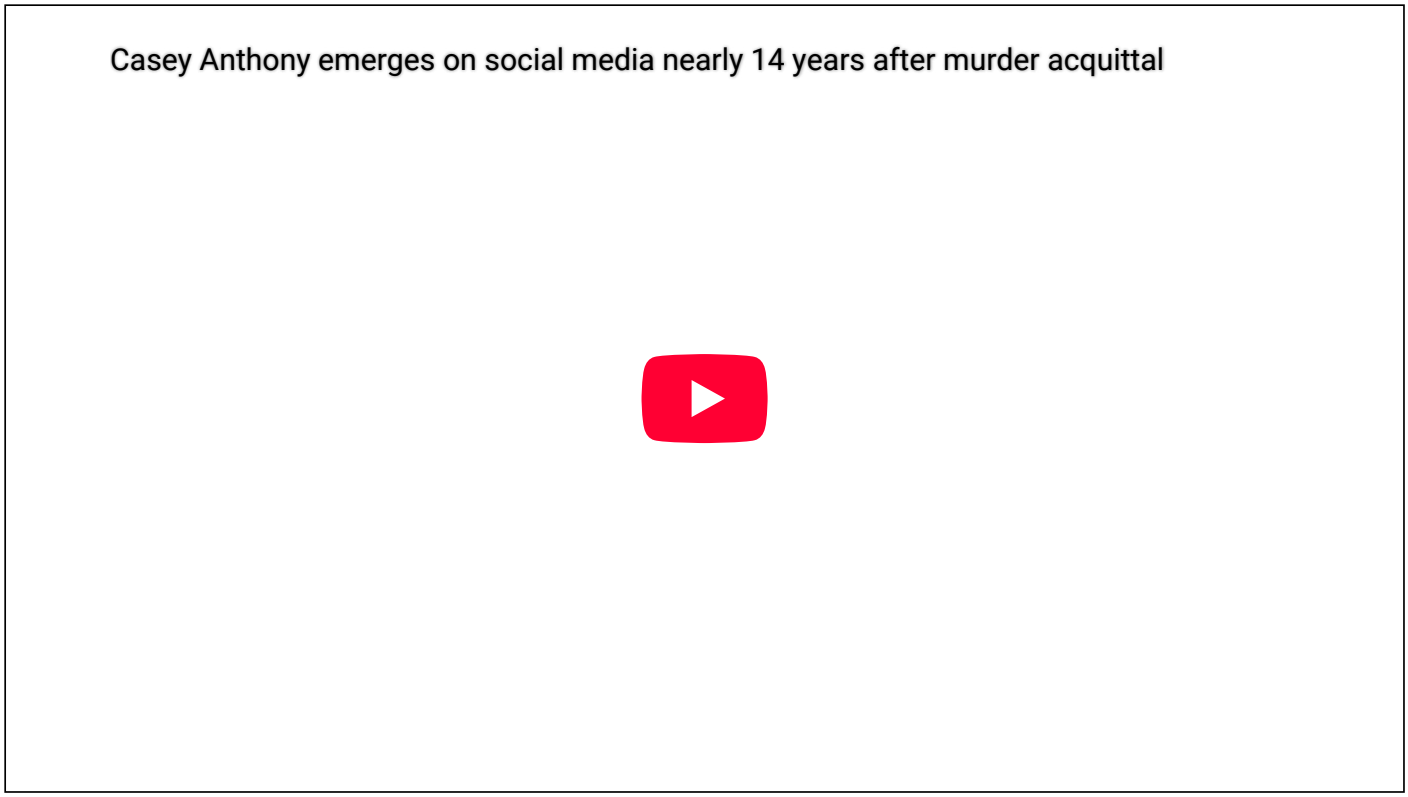
Courtesy: Climate Central (Copyright 2023 by WKMG ClickOrlando - All rights reserved.)

Averting Disaster

UF Professor Fred Gmitter calls what is happening to Florida's citrus industry "a disaster."

"We're really one of the very few places where organized citrus breeding has been taking place in the middle of this disaster," he said.

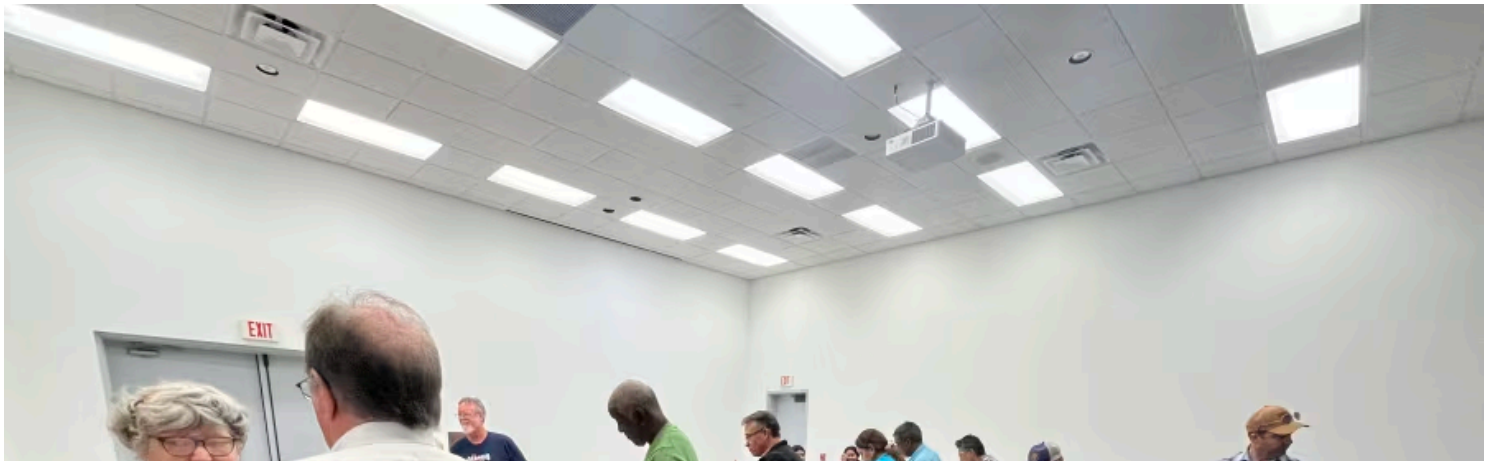
Find more reports from our News 6 Investigators on YouTube:



Gmitter helped to host a gathering of growers at the university's Citrus Research and Education Center in Lake Alfred, where they sampled some of the products of his citrus breeding with the hope that they would plant some of them.

He said he is looking for existing strains of orange trees that are resilient against Citrus Greening Disease, and he has already found a couple.

He said the trick is making sure they still taste good.



Growers from across Florida sample oranges that may resist Citrus Greening Disease at University of Florida's Citrus Research and Education Center in Polk County. (Copyright 2023 by WKMG ClickOrlando - All rights reserved.)

"This tree really held up well against greening," he told News 6 holding up a slice of orange. "There are growers that we would like to have say, 'Let me grow some of this.'"

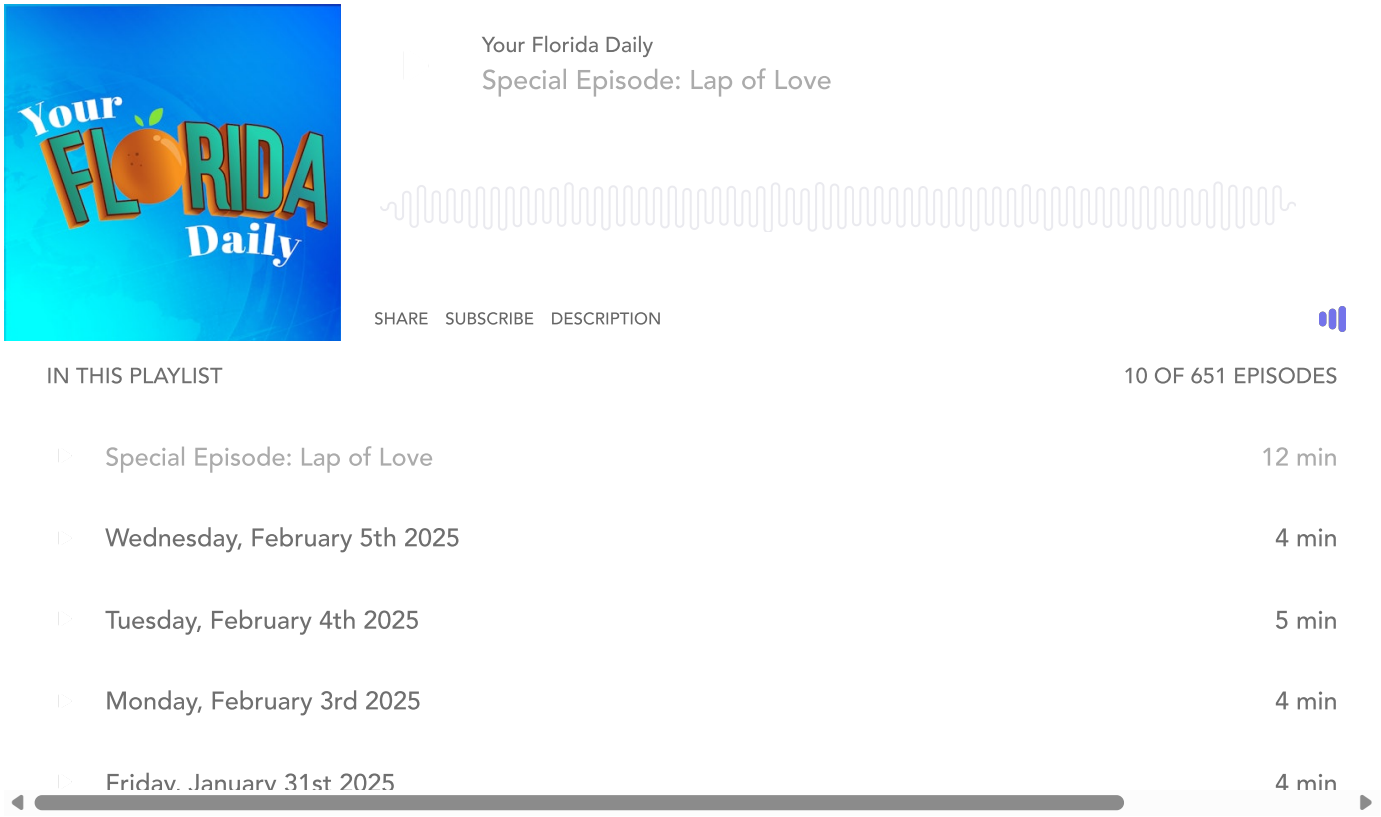
Messina said he is exploring the possibility of editing the genetic makeup of some orange trees to create what amounts to an immunity booster at the cellular level.

A sample of grapefruit available for growers to taste at University of Florida's Citrus Research and Education Center. (Copyright 2023 by WKMG ClickOrlando - All rights reserved.)

He knows he does not have much time to accomplish that.

“The results are really promising from what I see from our cell scientists,” he said. “Science is our best chance.”

Get today’s headlines in minutes with Your Florida Daily:



ABOUT THE AUTHOR

Erik Sandoval
Erik Sandoval joined the News 6 team as a reporter in May 2013 and became a Manager of Content and Coverage in November 2024.

BACK TO TOP

FOLLOW US

GET RESULTS WITH OMNE

Omne
A GRAHAM MEDIA GROUP COMPANY

TV Listings
Email Newsletters
RSS Feeds
Contests and Rules
Contact Us / Follow on Social Media
Careers at WKMG
Closed Captioning / Audio Description
Public File
Current EEO Report
Terms of Use
Privacy Policy
Do Not Sell My Info
FCC Applications
EEO Report
Disability Assistance
Cookie Preferences

If you need help with the Public File, call (407) 291-6000.

At WKMG, we are committed to informing and delighting our audience. In our commitment to covering our communities with innovation and excellence, we incorporate Artificial Intelligence (AI) technologies to enhance our news gathering, reporting, and presentation processes. **Read our article** to see how we are using Artificial Intelligence.

GRAHAM MEDIA GROUP
GRAHAM DIGITAL

Sheriff issues overnight curfew for Polk County

| Updated May 31, 2020 9:59pm EDT | Lakeland | FOX 13 News |

LAKELAND, Fla. - Citing "serious incidents" in Lakeland, Sheriff Grady Judd has issued a countywide curfew for Polk County tonight, starting at 10 p.m.

Police had to use tear gas to corral a small group of protesters at a peaceful demonstration in Lakeland earlier this afternoon after a nearby rally had ended

The initial protest started out in Munn Park and then dispersed. According to witnesses, a small group moved to Lakeland police headquarters and eventually tried to block an intersection. That's when police fired tear gas to break them up

Rioting and skirmishes with police have continued into the night. Video sent to by a viewer shows more tear gas being fired at demonstrators near Dreadnaught Stadium.

In response, Sheriff Judd issued a local state of emergency, including a curfew effective until 5 a.m.

"Serious incidents have occurred in Lakeland and are on-going as of the time of declaring this local state of emergency, including threat of injury to civilians, aggravated assault and or battery to civilian(s), and aggravated assault on law enforcement officers. Thus far, participants are not dispersing as ordered by law enforcement officers and the activity is on-going," the order noted.

The order says residents should stay home, but traveling to and from work or seeking medical care is permitted.