Cook County, Georgia

Hazard Mitigation Plan
2024-2029

Including the Cities of Adel, Cecil, Lenox, and Sparks

This Plan was produced for the Cook County Board of Commissioners
by the Southern Georgia Regional Commission
through funding provided by the Federal Emergency Management Agency
and the Georgia Emergency Management Agency

Effective:
Adopted: February 5, 2024

Contents

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Chapter 1: Introduction to the Planning Process

Summary of changes:

Table 1.1 provides a brief description of each section in this chapter and a summary of changes made.

CHAPTER 1 Section	Updates to Section
I. Purpose, Need, Authority, and Statement of Problem	**Language updated to reflect that this was an update to the existing plan**
II. Local Methodology, Plan Update Process, and Participants	**Language updated to reflect that this was an update to the existing plan**
III. Plan Review, Analysis, and Revision	**The Planning Committee reviewed each section Updates made using national, state, and local data**
IV. Organization of Plan	**Consistent with the original plan**
V. Local Hazard, Risk and Vulnerability (HRV) Summary, Local Mitigation Goals and Objectives	**Updates made using national, state, and local data**
VI. Multi-Jurisdictional Special Considerations	**No significant changes from the original plan**
VII. Adoption, Implementation, Monitoring, and Evaluation	**Evaluation method revised and updated.**
VIII. Community Data	**Updates made using the most recent available national, state, and local data**

Table 1.1: Overview of updates to Chapter 1: Introduction to the Planning Process

Section I. Purpose and Need, Authority, and Statement of Problem

This document is the official plan update to the previous Cook County Pre-Disaster Mitigation Plan Update, as approved by the Georgia Emergency Management Agency (GEMA) and the Federal Emergency Management Agency (FEMA), which took effect on February 18, 2019, and expires on February 18, 2024.

The purpose of this document is to provide an overview of the hazards that may impact Cook County and the Cities of Adel, Cecil, Lenox, and Sparks and to outline the community's plans to mitigate the potential loss of life and damages to property and the economy that could occur with these events. Hazard Mitigation is a means to address and proactively reduce the potential damage caused by natural or man-made disasters.

This Plan is a direct result of research and a planning and public involvement process undertaken by the local government officials, citizens of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks after they formed the Cook County Hazard Mitigation Plan Update Committee (hereafter known as the HMPUC). This Plan is the result of their commitment to reduce the risks of natural hazards and the effects of those natural hazards on their communities. The Cities of Adel, Cecil, Lenox, and Sparks are the only incorporated cities in Cook County.

The Cook County Commission gave authority for the development of this Plan because of their execution of the Grantee-Subgrantee Agreement for the Cook County Hazard Mitigation Grant

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Program (HMGP) Planning Project and by the Cities of Adel, Cecil, Lenox, and Sparks, located within Cook County, through their participation in the planning project.

To initiate an outreach program to neighboring communities, governments, local and regional agencies, and agencies authorized to regulate development, business, and the public, two Public Hearing Notices were published in the legal organ of the local newspaper. In addition, e-mail lists of stakeholders were kept updated, and those on them were informed of meetings through e-mails, letters, and/or telephone calls. Surrounding county EMA Directors were notified of the plan update and invited to participate. Additionally, several area county Hazard Mitigation Plans were being updated simultaneously, and an active meeting list was maintained for scheduling purposes.

Planning Division staff from the Southern Georgia Regional Commission, representing eighteen counties in the region (including Cook County), attended the Cook County meetings. They participated in all aspects of the planning process. They provided a regional perspective in forming the multi-jurisdictional Cook County and the Cities of Adel, Cecil, Lenox, and Sparks Hazard Mitigation Plan.

Through the above efforts, the multi-jurisdictional Cook County and Cities of Adel, Cecil, Lenox, and Sparks Hazard Mitigation Plan was updated, including a comprehensive range of Mitigation Goals, Objectives, and Action Steps (see Chapter 4), which will assist the local governments in emphasizing a more direct approach to Hazard Mitigation. The long-term goal is to reduce potential natural disaster losses to life, property, and the economy through Hazard Mitigation efforts.

Section II. Local Methodology, Plan Update Process, and Participants

A. Overview

This Hazard Mitigation Plan Update encompasses the jurisdictions of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, located in Southern Georgia. Each of these jurisdictions also participated in the previous Hazard Mitigation Plan update. The Southern Georgia Regional Commission provided technical assistance. A local Hazard Mitigation Plan Update Committee (Cook County HMPUC) was formed. The planning effort was undertaken, the final product of which was a Plan Update containing updated Mitigation Goals, Objectives, and Action Steps to reduce or eliminate the potential for loss of life and damage to property and the economy caused by natural disasters (see Chapter 4).

Potential members of the Cook County HMPUC were contacted by telephone or by letter/e-mail concerning their participation on the Committee. Southern Georgia Regional Commission (SGRC) staff provided technical assistance to the Cook County HMPUC. The Cook County HMPUC was comprised of representatives from Cook County and the Cities of Adel, Cecil, Lenox, and Sparks and included representatives from other groups and individuals, as shown below, who attended meetings and/or conducted research:

Jurisdiction	Title	Name
City of Adel	City Clerk	Rhonda Rowe
City of Adel	Assistant Fire Chief	Audie Rowe
City of Cecil	City Clerk	Sherial Byron
City of Cecil	Mayor	James Spencer, Sr.
City of Cecil	Councilwoman	Marsha Miller
City of Sparks	Councilman	Kenneth Sutton
City of Sparks	Fire Chief	Josh Merritt
City of Sparks	Councilman	Fenley Castleberry
Town of Lenox	Public Works Director	Chris Yawn
Cook County	County Manager	Randy Lane
Cook County	EMA Director	Johnny West
Cook County	911 Director	Lamar Ray
Cook County	Public Works Director	Mike Lindsey
Southwell Medical Center	Safety Officer	Michael Moore
DFACS	Operations	Sky Robinson
Cook County Health Department	Nurse Manage	Rebecca Curry
The Rachael House	Owner	Jon Penuel

The Committee held the following meetings, the sign-in sheets of which are included in Appendix E:

- Kick-off public hearing – September 12, 2023
- First workshop – October 12, 2023
- Second workshop – October 23, 2023
- Final public hearing –

Building on the previous Plan, each chapter was reviewed chronologically with updated hazard, risk, and vulnerability data, and previous accomplishments of mitigation strategy efforts.

An open discussion was permitted at all public meetings for suggestions and/or comments regarding the plan update. Also, during general question and answer periods, comments (if any) were noted by the Southern Georgia Regional Commission staff and incorporated into the plan as appropriate.

Copies of the previous Plan were made available at each meeting, while relevant chapters and sections under discussion were photocopied and distributed to those in attendance for comments. Outside of the formal meetings, parts of the plan were e-mailed to specific individuals who could not attend the meetings, and their comments were sought. Copies of the previous Plan and the draft Plan Update document were also available on the Southern Georgia Regional Commission website and from the local EMA and city and county government offices.

For the plan update, the Hazard Mitigation Plan Update Committee (HMPUC) used the prior Hazard Mitigation Plan as a basis, reviewing all chapters and sections and updating them as appropriate using national, state, and local data sources. The HMPUC reviewed the individual

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parts of the prior plan (with an emphasis on the hazards, goals, objectives, and action steps) and updated these elements through open discussion in which updates were noted by SGRC staff, who then used notes from the workshops to create the new Hazard Mitigation Plan document. The Wildfire section was updated using the Georgia Forestry Commission's "Community Wildfire Protection Plan" (see Appendix C). The CWPP was consulted to ensure consistency between the CWPP and HMP, and all action items from the CWPP still relevant were included as action steps in the HMP. Land use descriptions, zoning information, and community services were updated using the current joint Comprehensive Plan for the County and Cities. Other documents used were the local Emergency Operations Plan, the previous Hazard Mitigation Plan, the State of Georgia Hazard Mitigation Plan, and information from the National Climatic Data Center (NCDC). The State Hazard mitigation plan was consulted to ensure the HMP would be consistent with this plan, and data from the NCDC were used to create the Hazard Frequency Table and associated information regarding each hazard, which can be found in Chapter 2. The County recently updated their Flood Ordinance to meet the requirements of the Georgia Department of Natural Resources. Their Flood Insurance Rate Maps (FIRMs) have also been updated.

B. Public Comment and Participation

Publicizing a Public Notice in the legal organ is the legal method of notifying the public and inviting them to meetings.

The public was invited to attend and comment during two public hearings. The "kick-off" public hearing was advertised in the local newspaper (meeting advertisements and sign-in sheets are provided in Appendix E). A second and final public hearing was held on February 5, 2024, advertised in the local newspaper (see Appendix E). Citizens, including staff and members of the HMPUC, were present (see Appendix E). There were no substantive comments. Therefore, there was no need to consider or add public comments.

In addition, an e-mail list of stakeholders was kept up to date, including all attendees who wrote their e-mail addresses on the sign-in sheet at each meeting and any other interested parties. Further reminders of meetings were provided as needed through telephone calls and in-person communication.

<u>Vulnerable Population</u>

Cook County has a large population of elderly individuals and other vulnerable populations that may not receive emergency notifications through existing emergency notification systems. A homeless population residing in various county areas may not receive emergency notifications. Some of these were represented at the workshops. During the first workshop, flyers (brochures) were distributed to hand out to this population. Brochures were also distributed to the Cook County Family and Children Services, Cook County Health Department, the County Commissioner Office, City Halls, libraries, etc. (See attached in Appendix H). The brochures were written in English and Spanish.

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C. Mission and Vision Statements

The HMPUC decided on the following Mission and Vision Statement in the original plan and re-confirmed them in this update to help guide them through the planning process.

Hazard Mitigation Plan Update Committee
Mission Statement

This committee's mission is to make the citizens, businesses, communities, and local governments of Cook County and the cities of Adel, Cecil, Lenox and Sparks less vulnerable to the effects of natural hazards through the practical study of hazard mitigation, hazard risk assessments, wise floodplain management, and a coordinated approach to mitigation policy through state, regional, and local planning activities.

Cook County and the Cities of Adel, Cecil, Lenox, and Sparks
Hazard Mitigation Plan Update Committee
Vision Statement

This committee's vision is to institutionalize a local Pre-Disaster Mitigation ethic through leadership, professionalism, and excellence, thus leading the way to a safe, sustainable way of life for Cook County and the cities of Adel, Cecil, Lenox, and Sparks.

Due to Cook County and the Cities of Adel, Cecil, Lenox, and Sparks being such close-knit communities, the Cook County HMPUC chose to avoid breaking into subcommittees but to address issues as a whole group. Various members of this group had direct knowledge of local infrastructure and agencies, emergency planning, hazard planning, and the operations of major departments and emergency services. Through their efforts, this Plan was developed.
The HMPUC was responsible for identifying natural hazard events and completing a profile, vulnerability assessment, potential loss estimation (see Chapter 2, Appendix A, and Appendix D), and updating the Georgia Mitigation Information System (GMIS) Critical Facilities Inventory (see Appendix F). They were also responsible for reviewing and updating the Mitigation Goals, Objectives, and Action Steps (see Chapter 4), among other responsibilities.

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Section III. Plan Review, Analysis, and Revision

As mentioned above, the prior Hazard Mitigation Plan was used as a basis for the plan update. The Hazard Mitigation Plan Update Committee (HMPUC) reviewed all chapters and sections of the prior plan and updated them as appropriate, using national, state, and local sources. Other documents consulted included:

- The Georgia Forestry Commission's "Community Wildfire Protection Plan" (see Appendix C)
- The current joint Comprehensive Plan for the County and Cities, which includes the five-year Community Work Program
- The Local Emergency Operations Plan
- The State of Georgia Hazard Mitigation Plan
- The local Service Delivery Strategy
- Data from the National Climatic Data Center (NCDC)

After organizing resources, an update of the risk assessment was performed. New forms, worksheets, and data (included in the Appendix) were also completed. Afterward, the Mitigation Goals, Objectives, and Action Steps were reviewed to determine if they would remain the same or be added to, modified, or removed.

All chapters of this Plan have been updated to reflect the new material. See the tables at the beginning of the chapters for further information regarding which items were changed and updated.

Section IV. Organization of the Plan

This Plan focuses on seven natural hazards chosen by the HMPUC that may affect and cause damage to Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. Chapter 2, Chapter 4, and Appendix A are each subdivided into Sections I through VII; these sections reflect the 7 natural hazards chosen. The natural hazards are as follows (in order of priority):

I.	Windstorms/Hailstorms/Lightning
II.	Tornadoes
III.	Hurricanes/Tropical Storms
IV.	Floods
V.	Wildfires
VI.	Extreme Heat
VII.	Drought
VIII.	Severe Winter Weather

Other hazards, such as Avalanches, Coastal Erosion, Coastal Storm, Dam Failure, Earthquake, Expansive Soils, Extreme Heat, Land Slide, SLOSH (Sea, Lake, and Overland Surges from Hurricanes), Tsunamis, and Volcanoes, were examined and determined not to be of sufficient

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significance in the community to warrant their inclusion in the present Hazard Mitigation Planning effort, based on history and available data.
This Plan also contains a HAZUS report (see Appendix G), a comprehensive range of Mitigation Goals, Objectives, and Action Steps (Chapter 4), and information on implementation, monitoring, and plan update and maintenance (see Chapter 6), as well as other FEMA-required items and materials (included in various Chapters, Sections, and Appendices).

Throughout the effective period of this Plan, the County Commissioners and City Council Members will assign staff, as appropriate, to implement the comprehensive range of Mitigation Goals, Objectives, Action Steps, and other pertinent items that are contained in this Plan.

The Cook County and Cities of Adel, Cecil, Lenox, and Sparks Hazard Mitigation Plan exists in one bound volume appended with various papers and documents and a PDF document available on the SGRC website. The planning efforts of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are intended to be ongoing and are to be amended as appropriate.

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Copies of the Plan are on file and may be examined at the County and City government offices, the County Emergency Management Agency, the Southern Georgia Regional Commission office (as well as the SGRC website, www.sgrc.us), and the Georgia Emergency Management and Homeland Security Agency (GEMHSA).

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Section V. Local Hazard, Risk, and Vulnerability (HRV) Summary, Local Mitigation Goals, and Objectives

The HMPUC determined that the hazards established in the previous plan, with the addition of Severe Winter Weather, are most significant threats to the community. However, the priority was changed from the previous plan. A Hazard, Risk, and Vulnerability (HRV) Assessment has been formulated through various information obtained during the planning process. Data has been obtained from online databases, published sources, and personal accounts regarding hazards, their history in the community, and when and where they were active. This summary is provided in Chapter 2.

The Hazard Frequency Table summarizes the community's vulnerability (see Appendix D), and the Inventory of Assets and number of people exposed to each hazard is evaluated in GEMA Worksheet 3A (see Appendix A). Critical Facilities and Critical Infrastructure are also examined regarding the present value and potential losses from natural hazards (see Appendix F).

A description that identifies and analyses a comprehensive range of Mitigation Goals, Objectives, and Action Steps to reduce the effects of each hazard (based on risk assessment findings, with identifiable wide ranges for each jurisdiction) is included in Chapter 4, Sections I-VII. Chapter 6, Section I describes the prioritization of these Mitigation Goals, Objectives, and Action Steps using cost/benefit analysis, STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental), and other criteria. Also, in Chapter 6, there are sections on Implementing the Action Plan (see Section I), Evaluation, Monitoring, updating (see Section II), and Plan Update and Maintenance (see Section III).

Section VI. Multi-Jurisdictional Special Considerations

Cook County has a total land area of 227.16 square miles with a population density of 75.4 people per square mile (US Census data, 2020). As such, specific services, including emergency services, may have large distances to cover when responding to an event, which may negatively influence emergency response times and strain resources. Cook County contains four incorporated cities: Adel (the county seat), Cecil, Lenox, and Sparks.

Cook County Fire Department has one full-time employee and fifty volunteers for the county services. Cook County Fire Department also serves the City of Cecil. The City of Adel has 16 full-time paid firefighters and 20 volunteers and only serves within the city. The cities of Sparks and Lenox has their own volunteer fire departments for their prospective city. The following are the ISO Classes of fire stations in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks.

STATION		ISO RATING
Adel Fire Station #1	213 E Third St	3
Adel Fire Station #2	700 S Elm St	3
Sparks Volunteer Fire Department	113 E Colquitt Ave	5
Chaserville-Massee Volunteer Fire Department	10454 Barneyville Rd	5
Cook County Cecil Volunteer Fire Department	2005 Highway 41	5

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Pine Valley Fire Department Station #1	3576 Highway 76 Station	5
Pine Valley Fire Department #2	5375 McConnell Bridge Rd	5
Cook County Fire Dept N Cook Station	959 Kinard Bridge Rd	5
Cook County SE Cook Station #1	488 Register Road	5
Cook County SE Cook Station #2	4193 Futch Rd	5
Lenox Volunteer Fire Station #1	42 E Central Ave	5
Lenox Volunteer Fire Station #2	65 Brad St	5

Section VII. Adoption, Implementation, Monitoring, and Evaluation

After all plan development workshops were concluded, the draft plan was submitted to all local governments for review. The draft plan was submitted to GEMA and FEMA for review and approval. After their approval, and any recommended changes, a second and final public hearing was held on February 5, 2024, to provide a further opportunity for public comment and review. After this final public hearing, resolutions adopting the plan were passed by the local governments on February 4, 2024 (Cook County), February 5, 2024 (Adel, Lenox, and Cecil), and _____ (Sparks) . Resolutions are available in Appendix E.

The comprehensive range of Mitigation Goals, Objectives, and Action Steps (see Chapter 4), which contains items related to all local governments, will be implemented as soon as possible and/or as funds become available.

All sections of the Plan will be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (website, social media, local newspapers, City Council meetings, County Commission meetings, etc.).

The County Emergency Management Agency will monitor the plan and conduct quarterly telephone interviews with local governments and area agencies to chart their plan's progress. Also, several informal meetings will be held throughout the year to discuss various aspects of the plan. In addition, annual evaluations of the plan will occur on or near the anniversary of the Plan's adoption date. The annual review will assess which of the goals, objectives, and action steps have been achieved; whether those goals, objectives, and action steps still address current and expected conditions; whether the nature or magnitude of risks has changed; whether existing resources are appropriate for implementing the plan; and whether agencies and other parties have participated as initially proposed.

During this annual evaluation, problems (if any) with completing the action steps will be discussed, methods of resolving those problems (if any) will be formulated, the action steps will be updated (if necessary), and new action steps will be developed (if necessary) in response to new problems that have developed throughout the year. If any changes or updates are needed to the other plan sections, these will also be discussed and noted. Critical Facilities and infrastructure changes and updates will also be addressed and added to the online GEMA database as required. New hazards in the area (if any) will be discussed and planned for, and an assessment will be made as to whether the community needs to dictate additions to the plan's materials.

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The primary criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, resulting in savings of life, money, and property. For further details on plan execution, see Chapter 6.

The Plan will be updated by the EMA Director and chosen representatives of all the local governments every five years, as FEMA requires. All sections of this Plan will be updated then. All jurisdictions and relevant stakeholders will review the Plan update. This Hazard Mitigation Plan's requirements will be considered and incorporated into Comprehensive Plans, Capital Improvement Plans, Local Emergency Operations Plans, and all other such Plans, as appropriate. This updating process will be publicly advertised, and public comments will be solicited and incorporated as necessary and proper.

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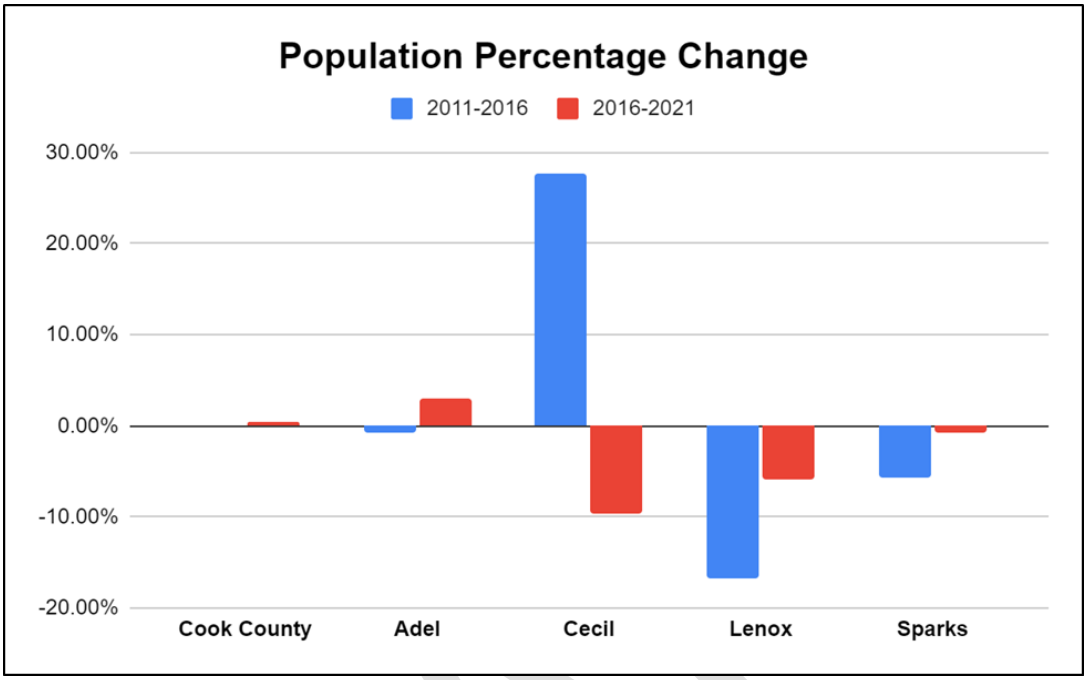
Section VIII. Community Data



According to 2021 U.S. Census Bureau American Community Survey 5-year estimates, the population of Cook County is 17,188, an increase of 0.5% since 2016. The City of Adel's 2021 population is 5,459, a 2.9% increase since 2016. The City of Cecil's 2021 population is 317, a 9.7% decrease since 2016. The Town of Lenox's 2021 population is 786, a 5.9% decrease since 2016. The Town of Sparks' 2021 population is 2,300, a 13% increase since 2016. Cook County had a 0.1% increase in population between 2011 and 2016, while the City of Adel's population decreased by 0.8%, the City of Cecil's population increased by 27.6%, the Town of Lenox's population decreased by 16.7%, and the Town of Sparks' population decreased by 5.7%.

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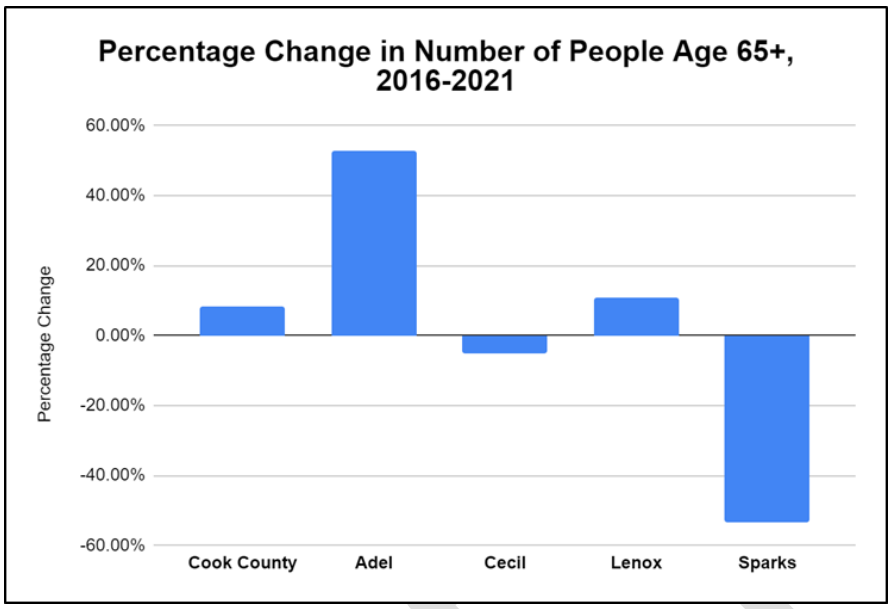
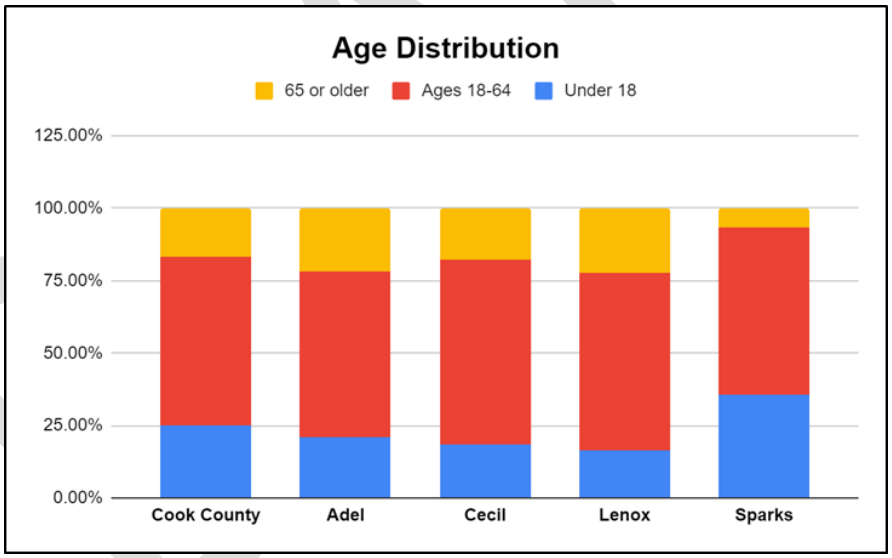
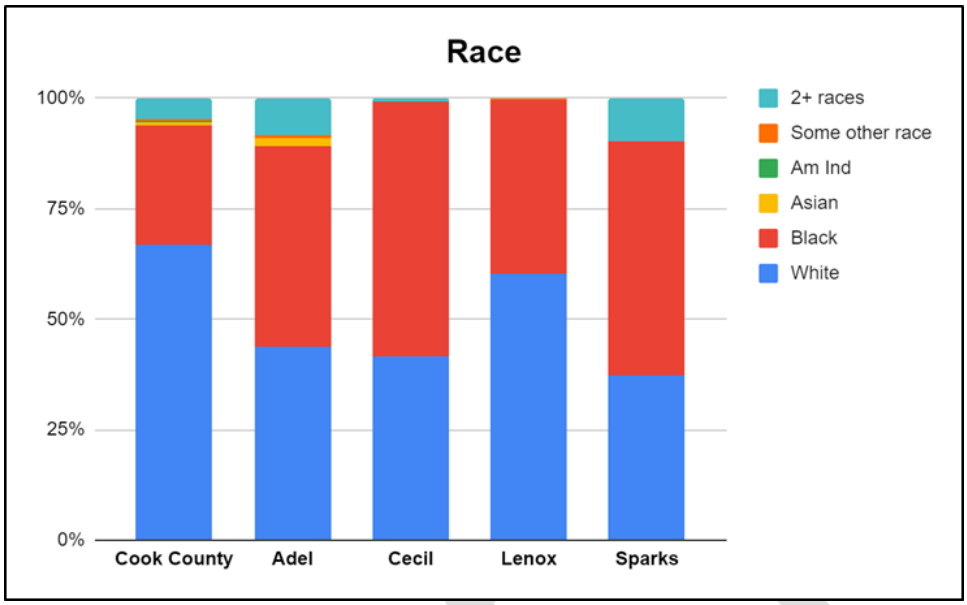


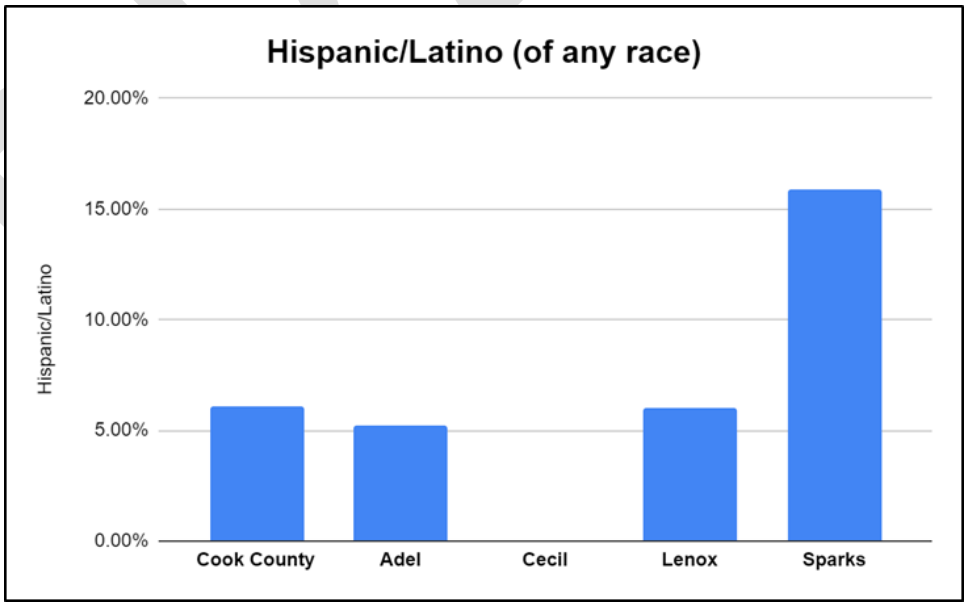
The total number of people aged 65 and older increased in Cook County from 2016 to 2021 (8.03%). The number of people aged 65+ increased in Adel (52.8%), decreased in Cecil (5%), increased in Lenox (10.8%), and decreased in Sparks (53.3%).



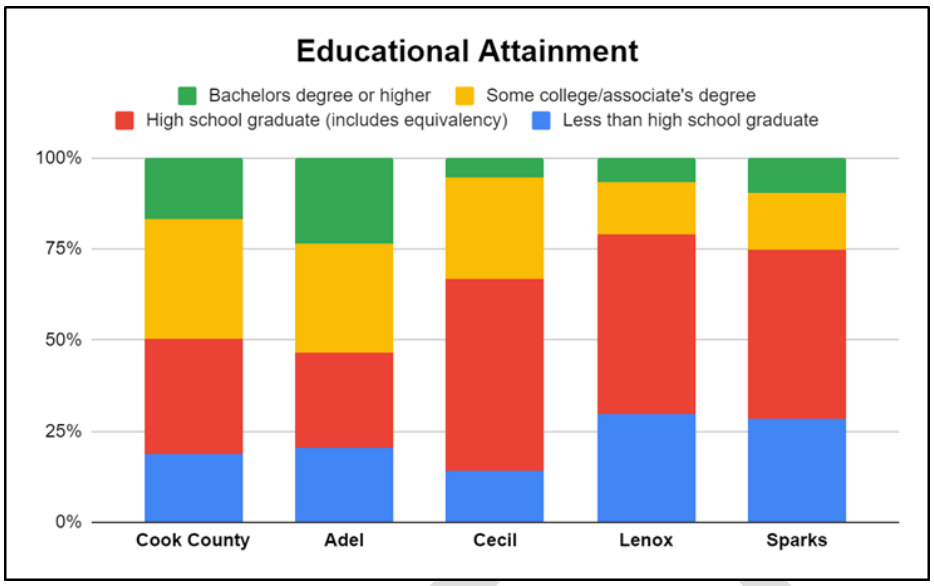
According to 2021 estimates, the age distribution in Cook County is 16.8% over 65, 58.1% ages 18-64, and 25.1% under 18. In the City of Adel, the age distribution is 22% over 65, 57.1% ages 18-64, and 21% under 18. In the City of Cecil, the age distribution is 18% over 65, 63.7% ages 18-64, and 18.3% under 18. In the Town of Lenox, the age distribution is 22.1% over 65, 61.7% ages 18-64, and 16.2% under 18. In the Town of Sparks, the age distribution is 6.7% over 65, 57.6% ages 18-64, and 35.7% under 18. Cook County's population is 51.3% female and 48.7% male, the City of Adel's population is 53.2% female and 46.8% male, the City of Cecil's population is 54.3% female and 45.7% male, the Town of Lenox's population is 44% female and 56% male. The Town of Sparks' population is 56.6% female and 43.4% male.



The population of Cook County is 66.9% White/Caucasian, 26.8% Black/African American, 4.8% two or more races, 0.7% Asian, 0.4% some other race, and 0.4% Native American. The City of Adel's population is 43.7% White/Caucasian, 45.5% Black/African American, 8.3% two or more races, 1.8% Asian, and 0.8% some other race. The City of Cecil's population is 58.7% Black/African American, 42.3% White/Caucasian, and 0.9% two or more races. The Town of Lenox's population is 60.4% White/Caucasian, 39.2% Black/African American, and 0.4% some other race. The Town of Sparks' population is 53.1% Black/African American, 37.3% White/Caucasian, and 9.6% two or more races.



The percentage of the population that is Hispanic/Latino (of any race) is 6.1% in Cook County, 5.2% in the City of Adel, 0% in the City of Cecil, 6% in the Town of Lenox, and 15.9% in the Town of Sparks.



Among persons aged 25 or older in Cook County, 18.6% have no high school diploma, 31.9% are high school graduates (includes equivalency) with no further education, 32.8% have an associate degree or some college, and 16.7% have a bachelor's or higher degree. Among persons aged 25 or older in the City of Adel, 20.4% have no high school diploma, 26.4% are high school graduates (includes equivalency) with no further education, 29.6% have an associate degree or some college, and 23.7% have a bachelor's or higher degree.

Among persons aged 25 or older in the City of Cecil, 14.2% have no high school diploma, 52.5% are high school graduates (includes equivalency) with no further education, 27.9% have an associate degree or some college, and 5.5% have a bachelor's or higher degree. Among persons aged 25 or older in the Town of Lenox, 29.6% have no high school diploma, 49.6% are high school graduates (includes equivalency) with no further education, 14.1% have an associate degree or some college, and 6.7% have a bachelor's or higher degree. Among persons 25 or older in the Town of Sparks, 28.5% have no high school diploma, 46.5% are high school graduates (includes equivalency) with no further education, 15.4% have an associate degree or some college, and 9.6% have a bachelor's degree or higher.

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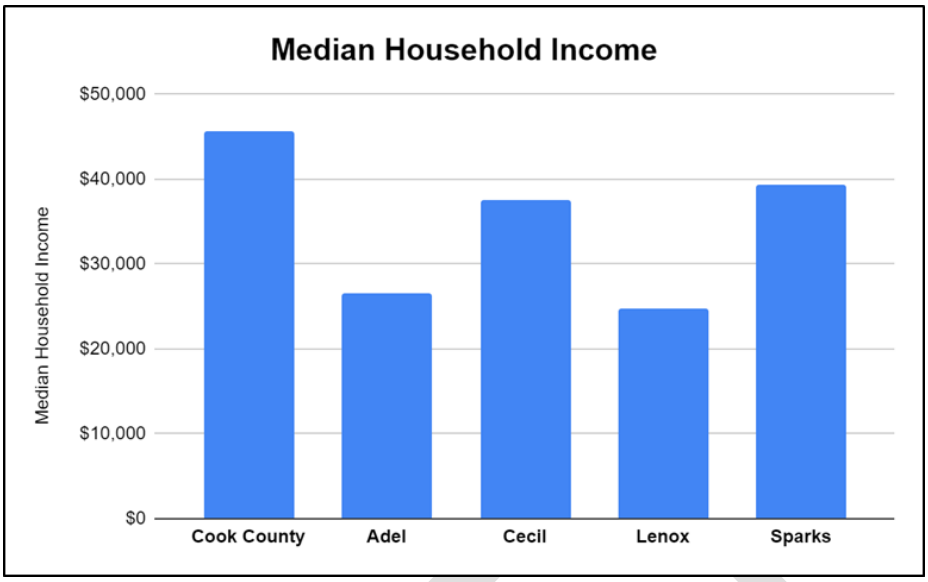

As of 2021 (US Census Bureau American Community Survey 5-year estimates), the median household income is $45,702 in Cook County, $26,535 in the City of Adel, $37,500 in the City of Cecil, $24,732 in the Town of Lenox, and $39,375 in the Town of Sparks.

Source: U.S. Census Bureau (www.census.gov)

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Chapter 2: Local Natural Hazard, Risk, And Vulnerability (HRV) Summary

Summary of changes:

During the plan update process, the HMPUC reviewed the hazards that may affect the community and their priority. This updated plan includes seven existing natural hazards and a new one. The order of priority has been changed. Table 2.1 gives a brief description of each section in this chapter and a summary of changes made.

Chapter 2 Section	**Updates to Section**
I. Windstorms/Hailstorms/Lightning	Updated data and information; edited for clarity
II. Tornadoes	Updated data and information; edited for clarity
III. Hurricanes/Tropical Storms	Updated data and information; edited for clarity
IV. Floods	Updated data and information; edited for clarity
V. Wildfires	Updated data and information; edited for clarity
VI. Extreme Heat	Updated data and information; edited for clarity
VII. Drought	Updated data and information; edited for clarity
VIII. Severe Winter Weather	NEW

Table 2.1: Overview of updates to Chapter 2

Six of these hazards constitute an equal threat to all geographic areas of the community. The remaining two, flood and wildfire, are the only hazards for which the level of risk varies geographically within the county. Floods and wildfires are limited to smaller areas (see Chapter 2 and Appendix A). Cook County is entirely within Wind Hazard Zone 2 (see Chapter 2).

Other hazards, such as Avalanches, Coastal Erosion, Coastal Storm, Dam Failure, Earthquake, Expansive Soils, Extreme Heat, Land Slide, SLOSH (Sea, Lake, and Overland Surges from Hurricanes), Tsunamis, and Volcanoes, were examined and determined not to be of sufficient significance in the community to warrant their inclusion in the present Hazard Mitigation Planning effort, based on history and available data.

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Section I. Windstorms/Hailstorms/Lightning

A. Identification of Hazard

The HMPUC has chosen the threat of Windstorms/Hailstorms/Lightning as the fourth most likely hazard to occur and cause damage in the community, based on experience, the FEMA-described methodology, and other factors. Historic data have been examined from various sources, including the National Climatic Data Center (see Appendix F), and from local history and personal accounts, to determine the frequency of events.

Wind is categorized, according to its strength and severity, using the Beaufort Wind Scale, developed in 1805 by Sir Francis Beaufort of the U.K. Royal Navy. The Beaufort Wind Scale is shown in the table below. (Source: http://www.spc.noaa.gov/faq/tornado/beaufort.html)

Beaufort Wind Scale

Force	Wind (Knots)	Wind (Mph)	World Meteorological Organization (WMO) Classification	Appearance of Wind Effects	
				On the Water	On Land
0	Less than 1	Less than 1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1-3	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes
2	4-6	4-7	Light Breeze	Small wavelets, crests glassy, no breaking	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	8-12	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps	Leaves and small twigs constantly moving, light flags extended
4	11-16	13-18	Moderate Breeze	Small waves 1-4 ft. becoming longer, numerous whitecaps	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	19-24	Fresh Breeze	Moderate waves 4-8 ft taking longer form, many whitecaps, some spray	Small trees in leaf begin to sway
6	22-27	25-31	Strong Breeze	Larger waves 8-13 ft, whitecaps common, more spray	Larger tree branches moving, whistling in wires
7	28-33	32-38	Near Gale	Sea heaps up, waves 13-19 ft, white foam streaks off breakers	Whole trees moving, resistance felt walking against wind
8	34-40	39-46	Gale	Moderately high (18-25 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	Twigs breaking off trees, generally impedes progress
9	41-47	47-54	Strong Gale	High waves (23-32 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility	Slight structural damage occurs, slate blows off roofs

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10	48-55	55-63	Storm	Very high waves (29-41 ft) with overhang crests with white densely blown foam, heavy rolling, lowered visibility	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	64-72	Violent Storm	Exceptionally high (37-52 ft) waves, foam patches cover sea, visibility more reduced	Very rarely experienced; accompanied by widespread damage
12	64+	73+	Hurricane	Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced	Devastation

Thunderstorms NOAA defines thunderstorms as rain showers during which thunder is heard. The following are some of the most common thunderstorm types:
(Source: http://www.nssl.noaa.gov/education/svrwx101/thunderstorms/types/)

- **Single-cell thunderstorms**, often called "popcorn" convection, are small, brief, weak storms that grow and die within an hour or so. They are typically driven by heat on a summer afternoon. Single-cell storms may produce brief heavy rain and lightning.
- A **multi-cell storm** is a common type of thunderstorm in which new updrafts form along the leading edge of rain-cooled air (the gust front). Individual cells usually last 30 to 60 minutes, while the system may last for many hours. Multicell storms may produce hail, strong winds, brief tornadoes, and/or flooding.
- A **squall line** is a group of storms arranged in a line, often accompanied by "squalls" of high wind and heavy rain. Squall lines tend to pass quickly and are less prone to produce tornadoes than supercells. They can be hundreds of miles long but are typically only 10 or 20 miles wide.
- A **supercell** is a long-lived (greater than 1 hour) and highly organized storm feeding off an updraft (a rising current of air) that is tilted and rotating. This rotating updraft - as large as 10 miles in diameter and up to 50,000 feet tall - can be present as much as 20 to 60 minutes before a tornado forms. Scientists call this rotation a mesocyclone when it is detected by Doppler radar. The tornado is a very small extension of this larger rotation. Most large and violent tornadoes come from supercells.

Hail is a form of precipitation that occurs when updrafts in thunderstorms carry raindrops upward into extremely cold areas of the atmosphere, where they freeze into balls of ice. Hail can damage aircraft, homes and cars, and can be deadly to livestock and people. Hail is usually pea-sized to marble-sized, but big thunderstorms can produce big hail.

Hail size is estimated by comparing it to a known object. Most hailstorms are made up of a mix of sizes, and only the very largest hail stones pose serious risk to people caught in the open. The following are some common size measurements.
(Source: http://www.nssl.noaa.gov/education/svrwx101/hail/):

- Pea = 1/4-inch diameter
- Marble/mothball = 1/2-inch diameter

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- Dime/Penny = 3/4-inch diameter
- Nickel = 7/8 inch
- Quarter = 1 inch — hail quarter size or larger is considered severe
- Ping-Pong Ball = 1 1/2 inch
- Golf Ball = 1 3/4 inches
- Tennis Ball = 2 1/2 inches
- Baseball = 2 3/4 inches
- Teacup = 3 inches
- Grapefruit = 4 inches
- Softball = 4 1/2 inches

Lightning is a giant spark of electricity in the atmosphere or between the atmosphere and the ground. In the initial stages of development, air acts as an insulator between the positive and negative charges in the cloud and between the cloud and the ground; however, when the difference in charges becomes too great, this insulating capacity of the air breaks down, and there is a rapid discharge of electricity that we know as lightning. Lightning most often strikes during thunderstorms but can strike many miles from the center of the storm or can even strike in areas not covered by a storm (this phenomenon is known as a "bolt from the blue").

According to NOAA (http://www.lightningsafety.noaa.gov/), lightning strikes the United States about 25 million times a year. Although most lightning occurs in the summer, people can be struck at any time of year. Lightning kills an average of 47 people in the United States each year, and hundreds more are severely injured.

Lightning can strike in any place at any time but, contrary to popular myth, is not attracted to metal. Tall, isolated structures with a pointy shape are most likely to be struck by lightning. When thunder and lightning are present, the best course of action is to seek shelter inside a robust building. Sheltering under a tree increases the risk of getting struck by lightning and is more dangerous than being out in the open. Most cars protect their occupants from lightning because they have metal roofs and sides; contrary to popular myth, it is not the car's rubber tires that protect the occupants. When sheltering inside a building, one should avoid metal objects (metal doors, plumbing, electronics, etc.). (Source: http://www.lightningsafety.noaa.gov/myths.shtml)

Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are all equally vulnerable to the effects of lightning.

B. Profile of Events, Frequency of Occurrences, Probability

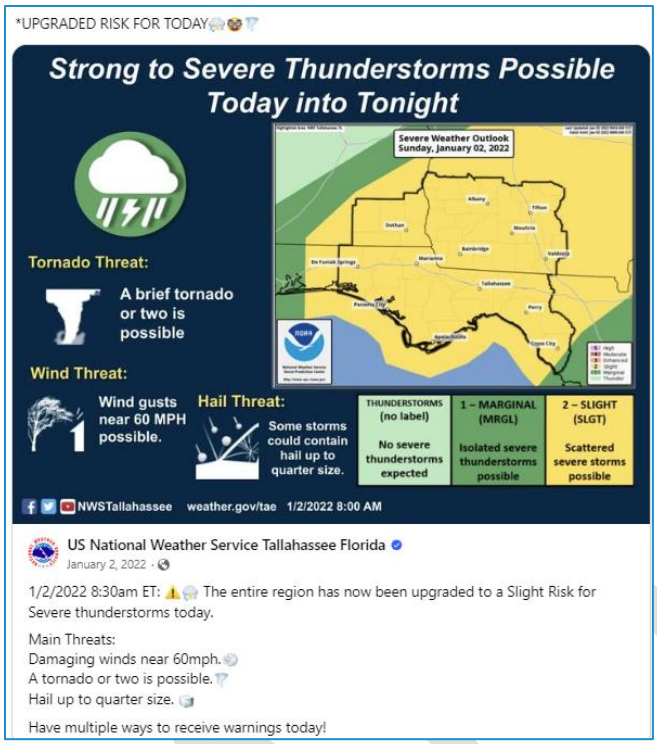
According to the NOAA Storm Events Database (see Appendix F), there are 105 reports of Windstorms/Hailstorms/Lightning occurring in Cook County (including the Cities) between 01/01/1950 and 07/09/2023. The Historic Recurrence Interval is 0.58 years. This is a 172.60% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 5.1, the past 20-year frequency is 4.05, and the past 50-year frequency is 0.88 (see the Hazard Frequency Table in Appendix D).

A lightning event happened on August 11th, 2015, in which ten cows were killed when a pine tree they were standing under was struck by lightning; a hailstorm was on April 20th, 2015, in which nickel-sized hail caused damage to automobiles; and there was a lightning event on July 13th, 2017, in which a church was damaged.

Since the previous Hazard Mitigation Plan was completed, 33 Windstorms/Hailstorms/Lightning events have been recorded by NOAA through July 9th, 2023.

According to Risk Factor, there have been 81 recorded wind events in Cook County, with the most severe event being the hurricane that occurred in 1894.

Although the most complete available data was used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.


*UPGRADED RISK FOR TODAY
Strong to Severe Thunderstorms Possible Today into Tonight
Severe Weather Outlook Sunday, January 02, 2022
Tornado Threat:
A brief tornado or two is possible
Wind Threat:
Wind gusts near 60 MPH possible.
Hail Threat:
Some storms could contain hail up to quarter size.
THUNDERSTORMS (no label)
No severe thunderstorms expected
1 – MARGINAL (MRGL)
Isolated severe thunderstorms possible
2 – SLIGHT (SLGT)
Scattered severe storms possible
NWSTallahassee weather.gov/tae 1/2/2022 8:00 AM
US National Weather Service Tallahassee Florida
January 2, 2022 ·
1/2/2022 8:30am ET: The entire region has now been upgraded to a Slight Risk for Severe thunderstorms today.
Main Threats:
Damaging winds near 60mph.
A tornado or two is possible.
Hail up to quarter size.
Have multiple ways to receive warnings today!


Isolated Severe Storms Late This Afternoon-Tonight
Severe Weather Outlook Sunday, January 09, 2022
Tornado Threat:
A brief tornado is possible in the strongest storms.
Wind Threat:
A few storms could contain 40-60 mph wind gusts.
Storms will begin to move into the area late this afternoon and this evening. Severe chances will diminish late tonight as storms move east and weaken.
THUNDERSTORMS (no label)
No severe thunderstorms expected
1 – MARGINAL (MRGL)
Isolated severe thunderstorms possible
NWSTallahassee weather.gov/tae 1/9/2022 4:00 AM
US National Weather Service Tallahassee Florida
January 9, 2022 ·
[1/9/22, 4 am ET] Showers and thunderstorms will move into the region late this afternoon into tonight with isolated severe weather possible. The threat should diminish late tonight.
#alwx #gawx #flwx

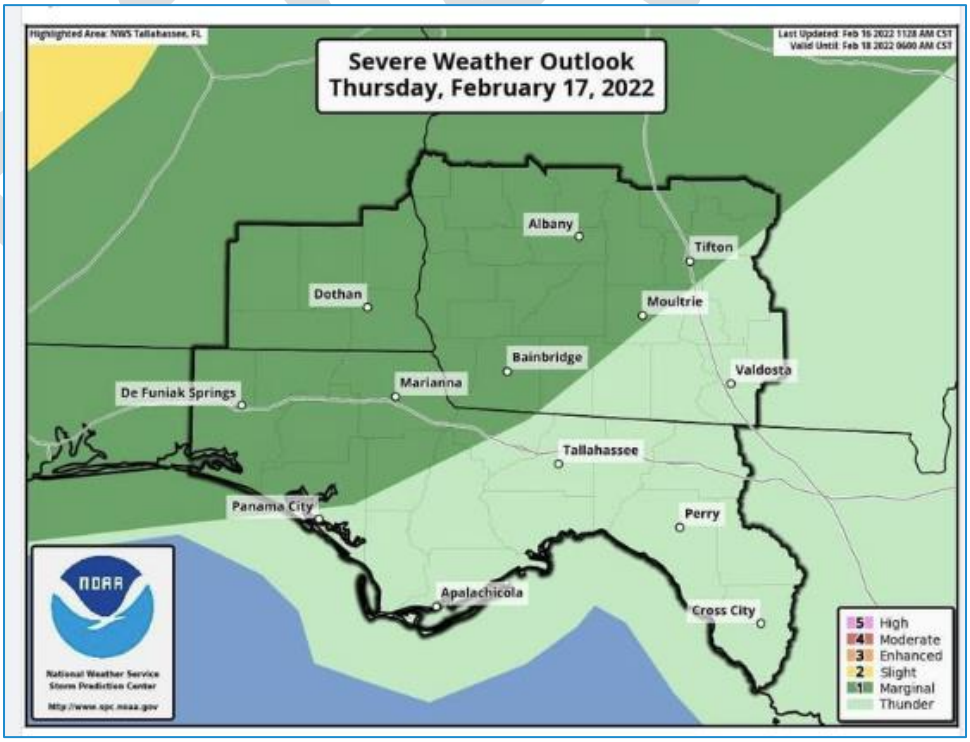
US National Weather Service Tallahassee Florida
January 9, 2022 ·

3:10pm ET Jan 9 - Much of the thunderstorm activity is well off to our west currently. However, there are a few storms beginning to develop across southern AL, and the western FL Panhandle. We'll see a gradual uptick in coverage in a few hours as storms move east. With the afternoon update of the severe weather outlook, a slight (level 2 of 5) risk now extends into a small portion of our forecast area, the marginal (level 1 of 5) risk was shifted east slightly. However, as storms begin to move into GA and the FL Big Bend late tonight/early-Monday storms should begin to weaken. Please stay aware of the weather conditions this evening.

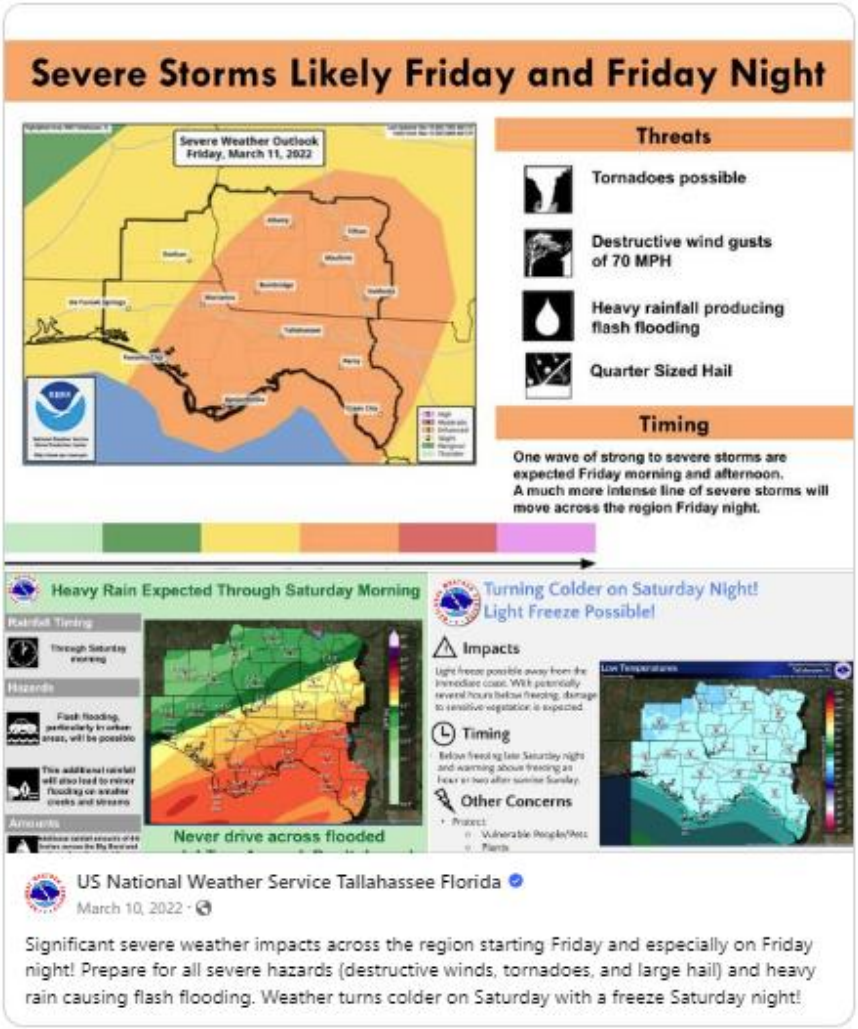
US National Weather Service Tallahassee Florida
January 14, 2022 ·

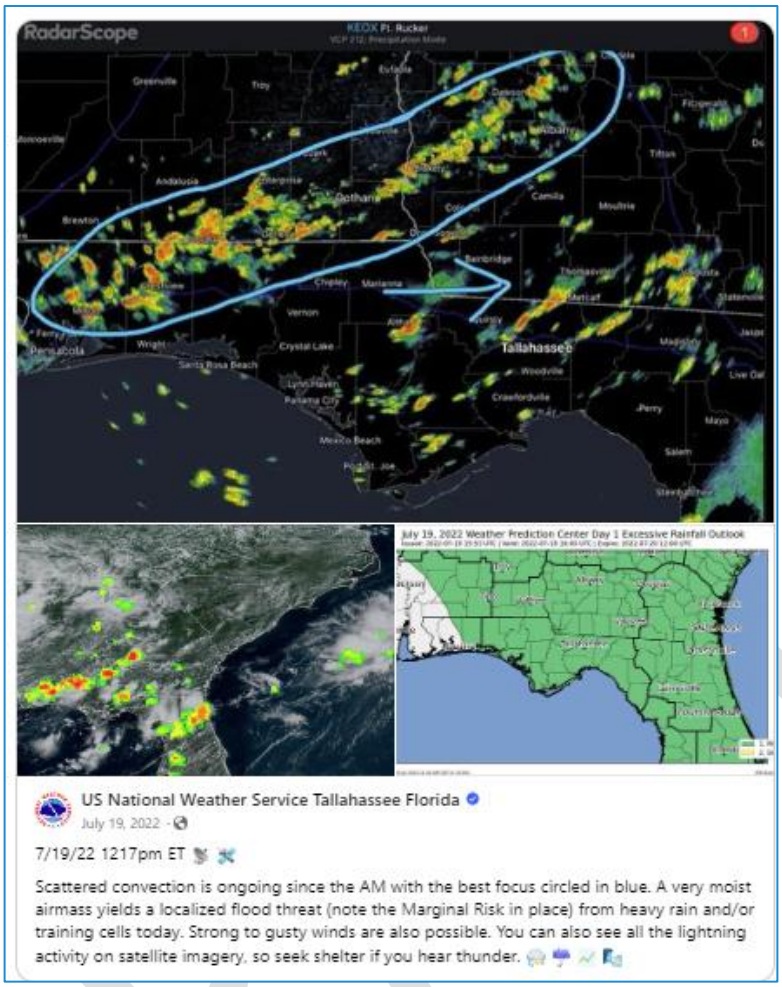
A few severe storms will be possible Saturday night through Sunday morning so stay weather aware!
Hazards:
Damaging Wind
Potential for a few tornadoes
High surf and dangerous rip currents
Gale force gusts over the marine area


Isolated Severe Storms Possible This Evening Into Sunday Morning
Severe Weather Outlook
Saturday, January 15, 2022
Hazards:
A few brief tornadoes will be possible.
A few storms could contain 40-60 mph wind gusts.
Timing:
This Evening into
Wind Advisory
Flood Threat
US National Weather Service Tallahassee Florida
January 15, 2022
(1/15/2022) 5:00AM Update for MLK Weekend Storm System.
[1/3] A marginal risk for severe weather still exists for regions south of I-10 in Florida for tonight into Sunday morning. Greatest threats still remain to be strong gusty winds and a few brief tornadoes.
[2/3] Strong winds of 20-30 mph with higher gusts up to 40 mph are expected behind the cold front late tonight and into Sunday morning. This may lead to unsecured objects blowing around, as well as, tree limbs being blown down and possibly causing power outages.
[3/3] Strong onshore winds ahead of and behind the cold front will lead to 2-4 feet of inundation from the Franklin to Dixie county coastline tonight into Sunday. Additional moderate flooding possible during Sunday afternoon high tide (2pm ET) in Taylor/Dixie County.


Severe Weather Outlook
Thursday, February 17, 2022
Albany
Tifton
Dothan
Moultrie
Bainbridge
Valdosta
De Funiak Springs
Marianna
Tallahassee
Panama City
Perry
Apalachicola
Cross City
5 High
4 Moderate
3 Enhanced
2 Slight
1 Marginal
Thunder
National Weather Service
Storm Prediction Center


Cook County Fire Department / Emergency Management Agency EMA
March 10, 2022 ·
⚠️Our area has been upgraded to an ENHANCED risk level (3 out of 5) for FRIDAY'S severe weather event. Hazards could include strong gusty damaging winds, a few tornados are possible and hail. HAVE A PLAN! Have multiple ways to receive weather warnings. Secure yard furniture and trampolines, they could be relocated with the gusty winds or tornado. Be prepared for the weather to change fast. We will update if we receive further information on FRIDAY'S weather event.
Enhanced risk
1 2 3 4 5
hazards
some cities in risk
Tallahassee, FL | Albany, GA
Jacksonville, FL | Montgomery, AL
SPC Severe Weather Outlook
Friday, 11 March 2022


Severe Storms Likely Friday and Friday Night
Severe Weather Outlook
Friday, March 11, 2022
Threats
Tornadoes possible
Destructive wind gusts of 70 MPH
Heavy rainfall producing flash flooding
Quarter Sized Hail
Timing
One wave of strong to severe storms are expected Friday morning and afternoon. A much more intense line of severe storms will move across the region Friday night.
Heavy Rain Expected Through Saturday Morning
Never drive across flooded
Turning Colder on Saturday Night!
Light Freeze Possible!
Impacts
Timing
Other Concerns
US National Weather Service Tallahassee Florida
March 10, 2022 ·
Significant severe weather impacts across the region starting Friday and especially on Friday night! Prepare for all severe hazards (destructive winds, tornadoes, and large hail) and heavy rain causing flash flooding. Weather turns colder on Saturday with a freeze Saturday night!


RadarScope
KEOX Ft. Rucker
Tallahassee
Pensacola
July 19, 2022 Weather Prediction Center Day 1 Excessive Rainfall Outlook
US National Weather Service Tallahassee Florida
July 19, 2022 -
7/19/22 1217pm ET
Scattered convection is ongoing since the AM with the best focus circled in blue. A very moist airmass yields a localized flood threat (note the Marginal Risk in place) from heavy rain and/or training cells today. Strong to gusty winds are also possible. You can also see all the lightning activity on satellite imagery, so seek shelter if you hear thunder.

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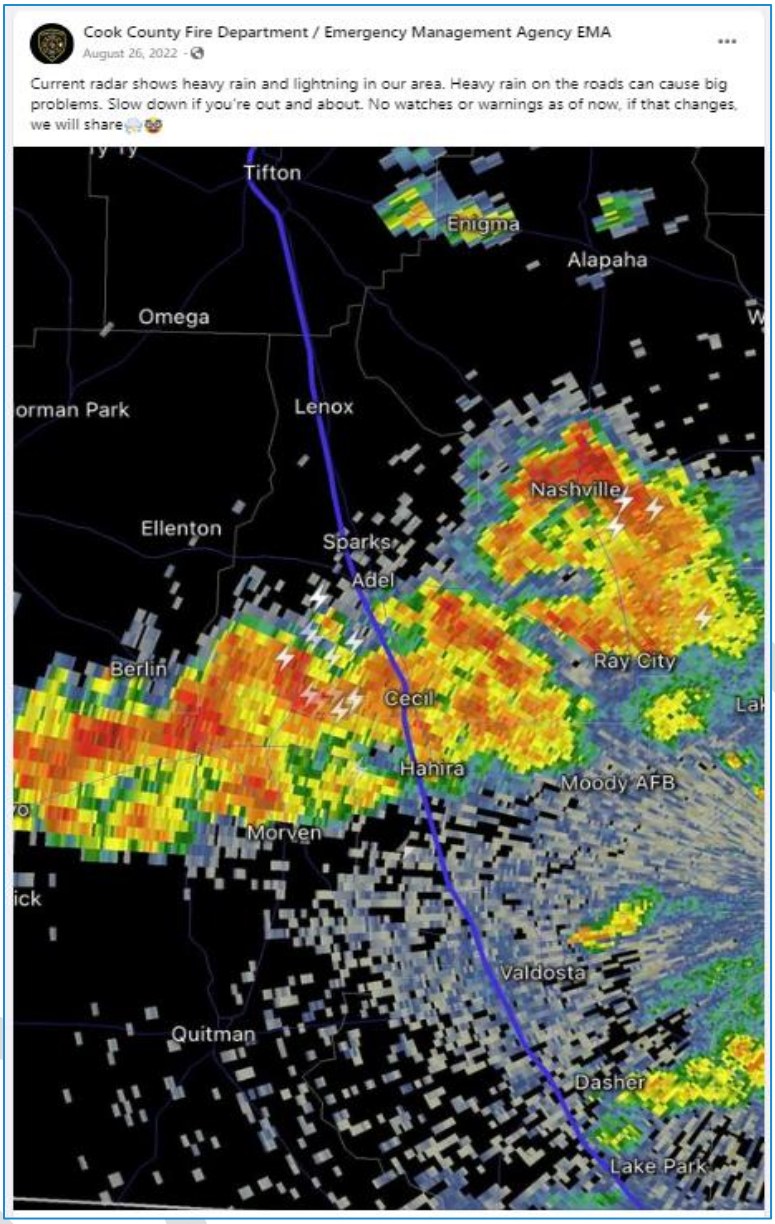

Cook County Fire Department / Emergency Management Agency EMA
August 26, 2022
Current radar shows heavy rain and lightning in our area. Heavy rain on the roads can cause big problems. Slow down if you're out and about. No watches or warnings as of now, if that changes, we will share
Tifton
Enigma
Alapaha
Omega
Lenox
Nashville
Ellenton
Sparks
Adel
Berlin
Ray City
Cecil
Hahira
Moody AFB
Morven
Valdosta
Quitman
Dasher
Lake Park

US National Weather Service Tallahassee Florida
January 2 ·

1/2 1:45pm ET - ⚠️ Severe Weather Threat Tuesday & Wednesday ⚠️

Timing:
➡️ Isolated storms Tuesday afternoon
➡️ Main line Tuesday night to Wednesday afternoon

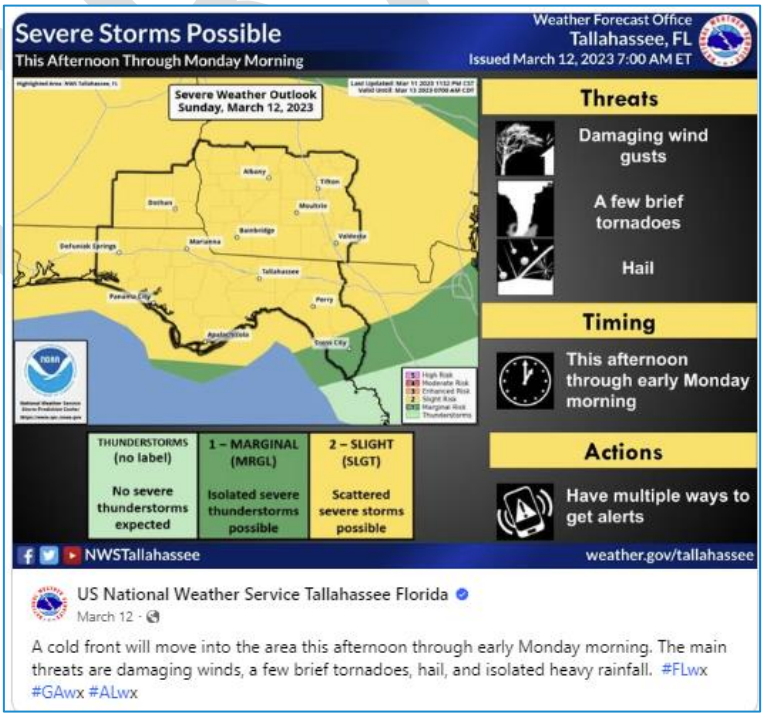
Threats:
🌪️ A few tornadoes, some possibly strong
💨 Damaging Winds
🧊 Large hail

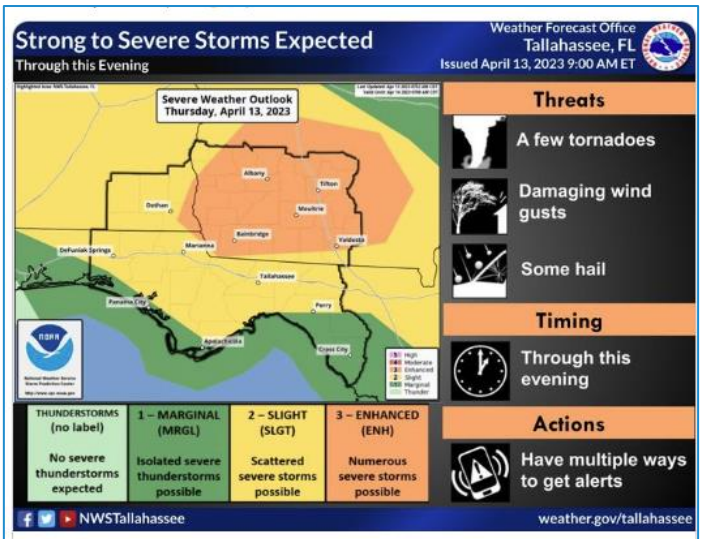
➡️ Note: Threat may increase for Wednesday

Stay tuned to the latest forecast and be sure you have multiple ways to receive warnings Tuesday and Wednesday.

DRAFT


Peak Wind Gusts Today
Strongest winds likely in the afternoon hours
Weather Forecast Office
Tallahassee, FL
Issued: March 03, 2023 5:00 AM ET
These gusts do not include potential gusts from thunderstorms
What:
• Sustained winds of 20 - 30 mph
• Peak gusts of 40 to 55 mph
When:
• Winds begin increasing during the mid-morning hours.
• Strongest gusts likely in the afternoon.
Today's Severe Weather Outlook
Weather Forecast Office
Tallahassee, FL
Issued: March 03, 2023 5:00 AM ET
Severe Weather Outlook
Friday, March 03, 2023
Threats
Locally damaging (60 mph) wind gusts
A tornado or two is possible
Timing
This afternoon
US National Weather Service Tallahassee Florida
March 3 ·
Strong wind gusts of 40-55 mph are expected to bring impacts to the region today with scattered downed trees and power lines, as well as hazardous beach and marine conditions. In addition, isolated severe storms are possible. The strongest winds are expected this afternoon. #flwx #alwx #gawx

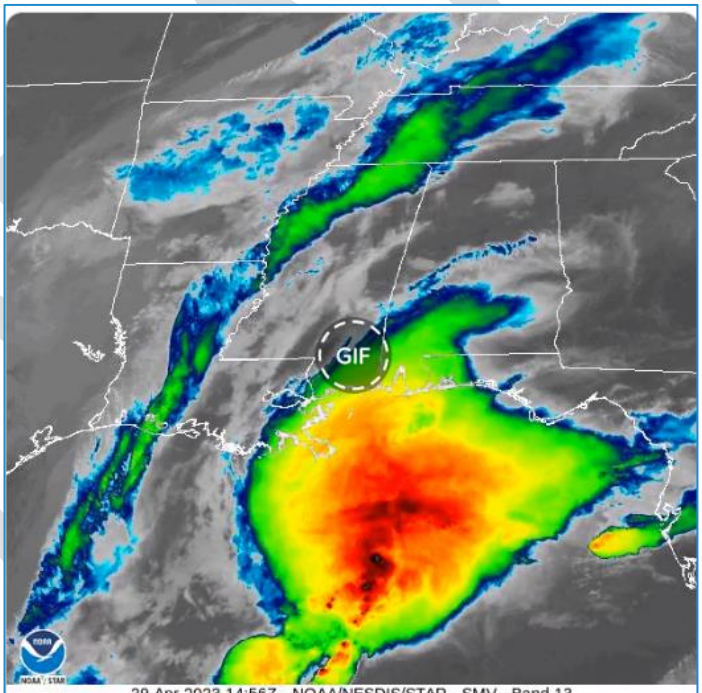

Severe Storms Possible
This Afternoon Through Monday Morning
Weather Forecast Office
Tallahassee, FL
Issued March 12, 2023 7:00 AM ET
Severe Weather Outlook
Sunday, March 12, 2023
Threats
Damaging wind gusts
A few brief tornadoes
Hail
Timing
This afternoon through early Monday morning
Actions
Have multiple ways to get alerts
THUNDERSTORMS (no label)
No severe thunderstorms expected
1 – MARGINAL (MRGL)
Isolated severe thunderstorms possible
2 – SLIGHT (SLGT)
Scattered severe storms possible
NWSTallahassee
weather.gov/tallahassee
US National Weather Service Tallahassee Florida
March 12 ·
A cold front will move into the area this afternoon through early Monday morning. The main threats are damaging winds, a few brief tornadoes, hail, and isolated heavy rainfall. #FLwx #GAwx #ALwx



US National Weather Service Tallahassee Florida
April 13 ·

⚠ 9AM ET/8 AM CT FORECAST UPDATE ⚠
(April 13, 2023)

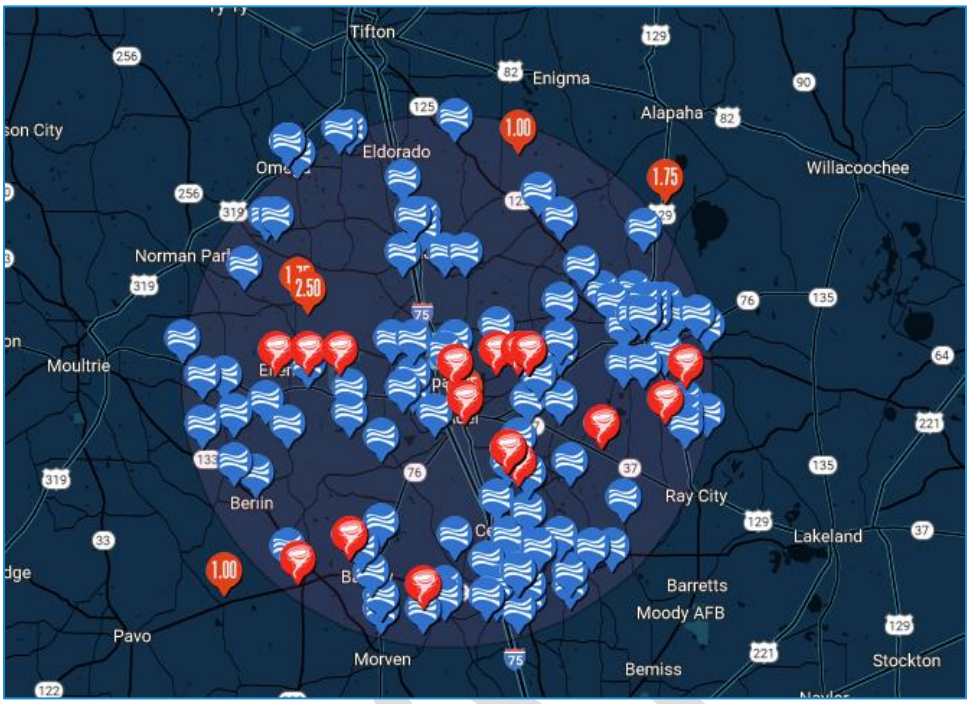
The tornado threat for late this morning and afternoon is increasing across SW GA where there is now an Enhanced Risk of severe weather (level 3 of 5) today. Ensure you have multiple ways to receive warnings through the day!



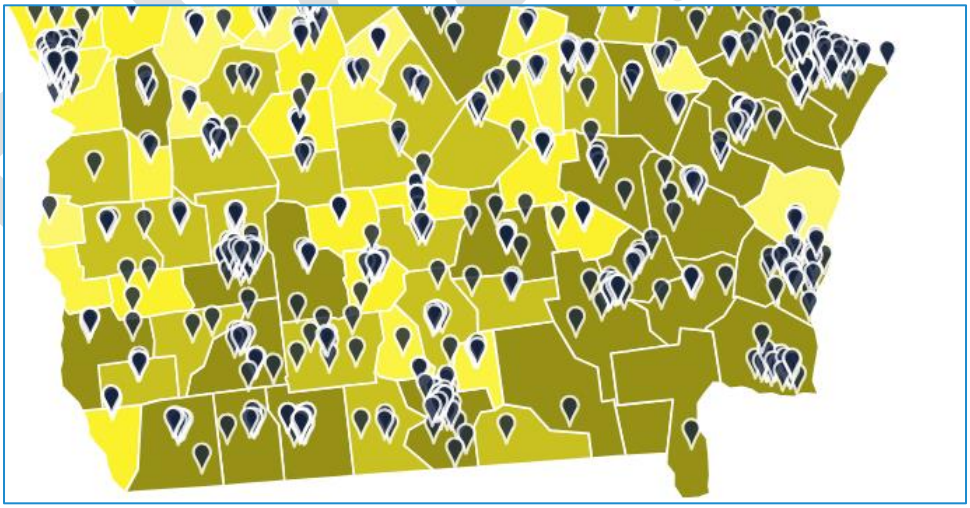
US National Weather Service Tallahassee Florida
April 29 ·

1120 AM ET update: A cluster of severe thunderstorms is moving east across the Gulf. The northern end of a windy squall line will move onshore Dixie and Taylor Counties mid-late this afternoon. It could reach as far northwest as a line from Mexico Beach to Tallahassee to Tifton. Prepare for damaging wind gusts! Be ready to quickly head indoors.

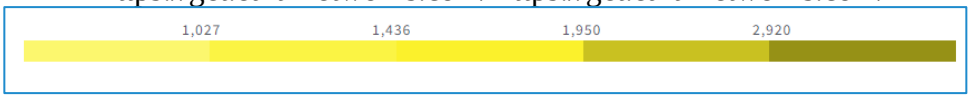
1.00-Inch Hail Report at 9:45 A 04/24/2021. 8 Mi NW DIME/QUARTER SIZE HAIL IN LENOX (COOK COUNTY).



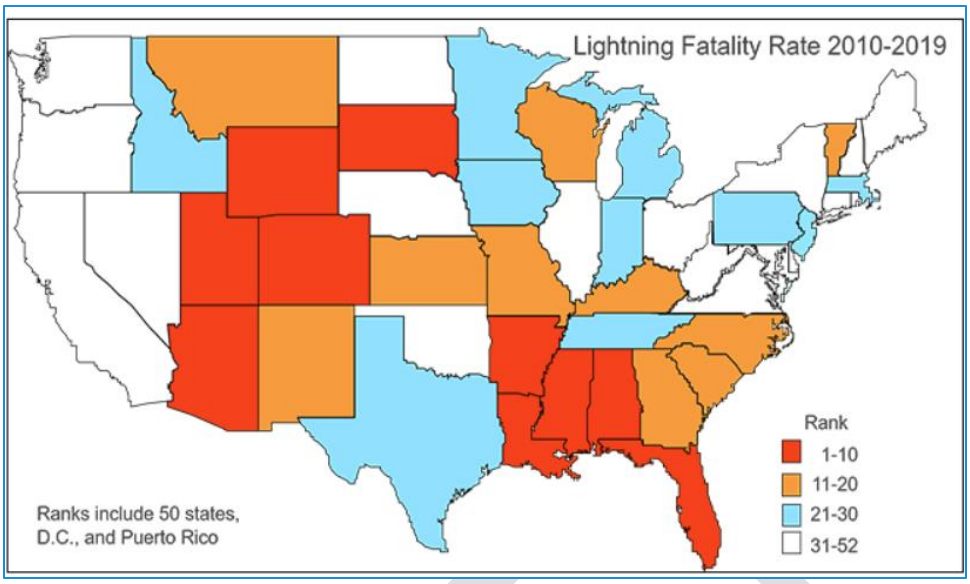
In 2019 there were 1,206 lightning strikes in Cook County and 2.5M+ in Georgia.



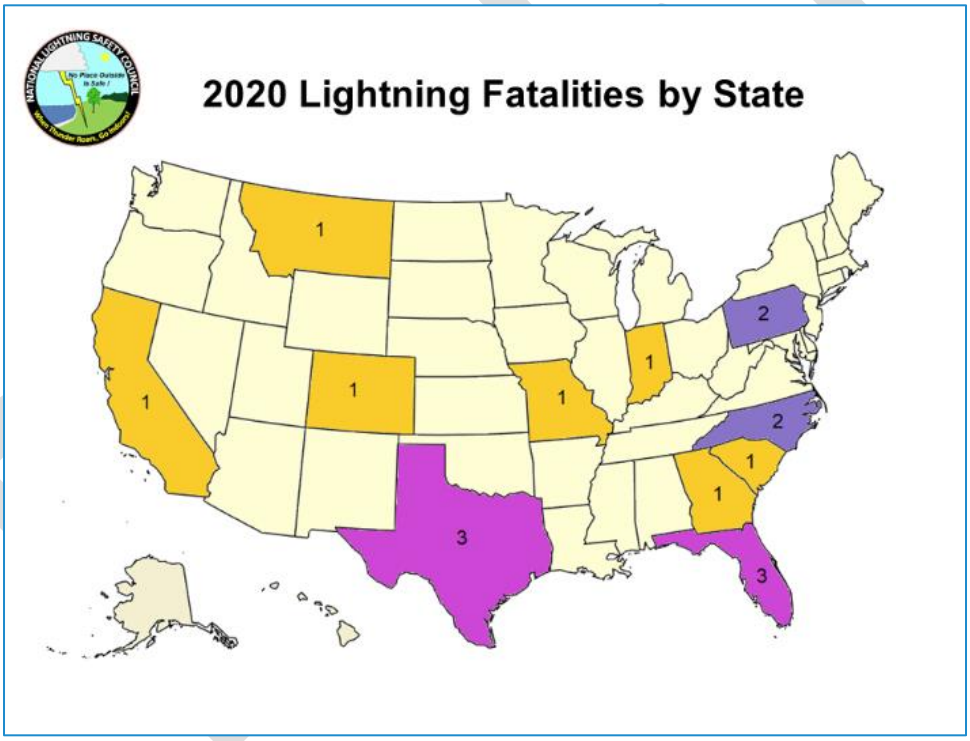
https://get.earthnetworks.com/ https://get.earthnetworks.com/



https://get.earthnetworks.com



https://Activerain.com



C./D. Inventory of Assets Exposed and Potential Loss

An estimated 100% of the Residential property (7,506 of 7,506) in Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard, with a total value of $955,196,000. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,922 of 2,845) in the community may be affected, with a total value of $716,747,972. The values are based on the most

recent available tax roll data for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, provided by the Cook County Tax Assessor's Office.

Damage to crops is not considered in the above estimates. According to the most recent estimate (2022) available on the University of Georgia's GeorgiaData website (www. https://caed.uga.edu/), the total farm gate value of agricultural production in Cook County is $147,587,977.40 in the State of Georgia.

According to the inventory database reports and maps, all of the 58 Critical Facilities and Infrastructure for Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard. The total value of these Critical Facilities is $198,051,152.

E. Land Use and Development Trends

According to 2021 U.S. Census Bureau American Community Survey 5-year estimates, the population of Cook County is 17,188, an increase of 0.5% since 2016. The City of Adel's 2021 population is 5,459, a 2.9% increase since 2016. The City of Cecil's 2021 population is 317, a 9.7% decrease since 2016. The Town of Lenox's 2021 population is 786, a 5.9% decrease since 2016. The Town of Sparks' 2021 population is 2,300, a 13% increase since 2016.

Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) has zoning regulations. All jurisdictions have mandatory building and fire codes that a building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the construction codes mandatory as the Georgia State Minimum Standard Codes. (SEE CHAPTER 4, REGULATORY TOOLS/PLANS FOR ADOPTED CODES).

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

Lightning may happen at any place and time, any place, and no difference in severity is expected between Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. However, the impact may be more severe in places with higher population density due to more people being in danger, and other impacts associated with higher population density. No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

Lightning can cause damage anywhere, at any time, throughout Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, especially during thunderstorms. Where lightning strikes cannot be predicted, and residents may not have time to seek shelter. The cost of the damage and potential loss of life may be higher if the event strikes populated areas as opposed to more sparsely populated or unpopulated areas.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

DRAFT

Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

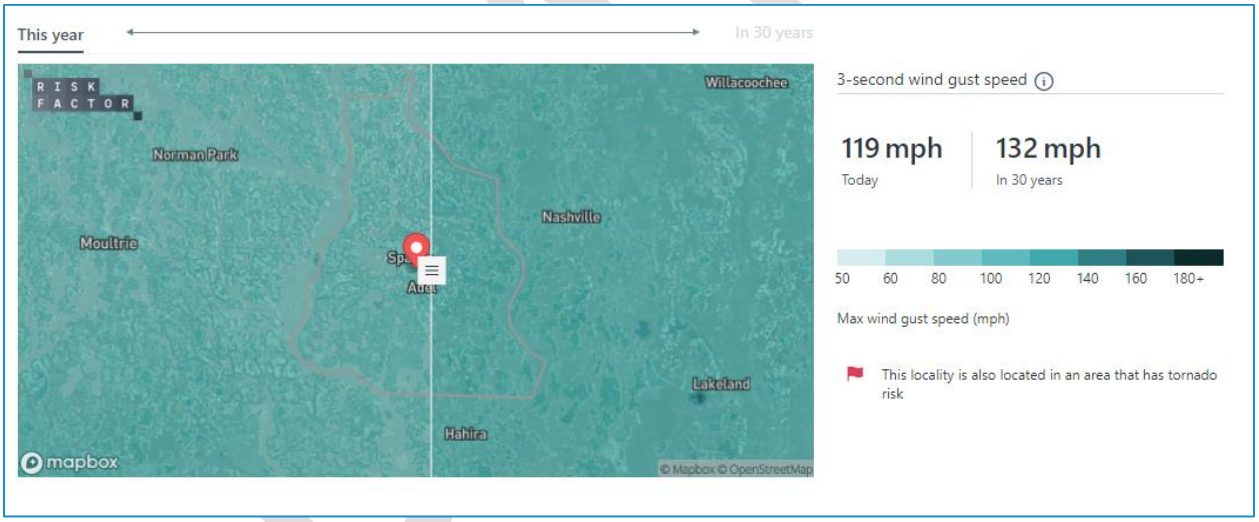
H. Impacts from Future Conditions

Wind

Cook County has a severe risk for the speed of a hurricane, tornado, or severe storm wind impacting it. It is the most at risk from hurricanes. The average maximum wind speeds in Cook County are higher now than they were 30 years ago, and 95% of homes in Cook County have at least some risks.

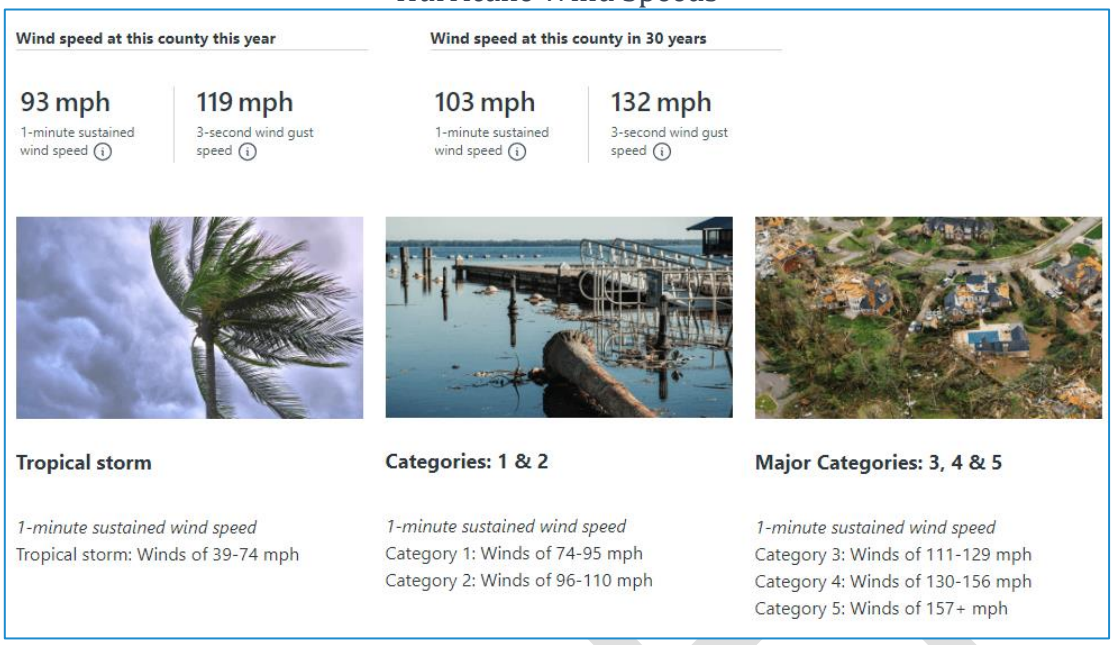
Other than damaging properties, severe wind events can knock down trees or scatter debris that can cause harm to anyone outside during an event, or cut off access to utilities, emergency services, transportation, and may impact the overall economic well-being of an area.

If an exceedingly rare windstorm (a 1-in-3,000-year storm event) occurred today, it could cause wind gusts of up to 119 mph to reach Cook County. A hurricane of this severity has a 1% chance of occurring at least once over the next 30 years. In 30 years, an event of this same likelihood would show increased wind gusts of up to 132 mph due to a changing environment.

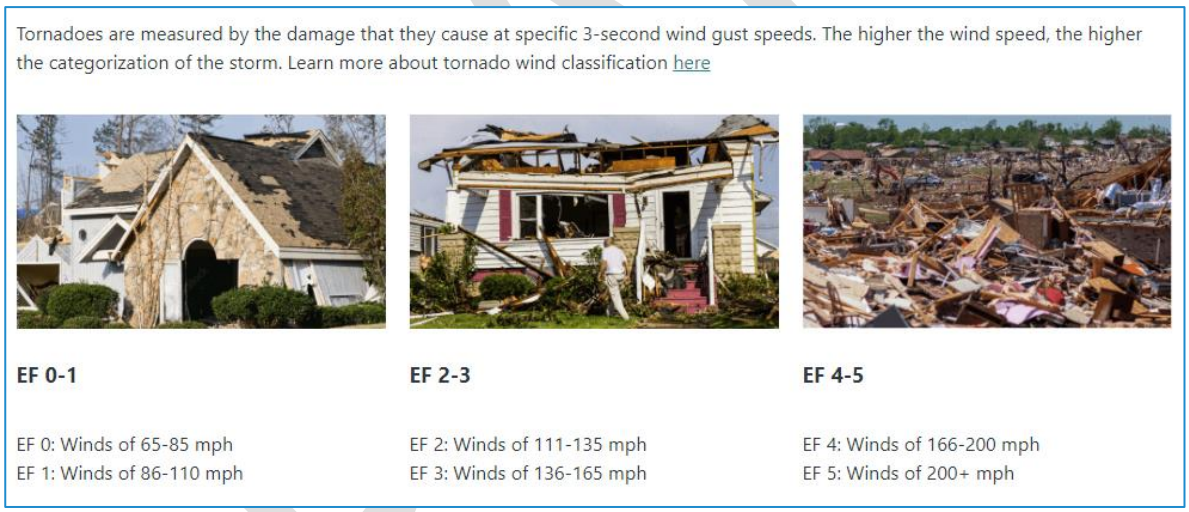


The potential for damage from high-speed wind can make it difficult to communicate ahead of a major storm. Rating systems were developed by experts so that the public would be able to better understand how to harden against, prepare for, and respond to hurricanes and tornadoes.

Hurricane Wind Speeds



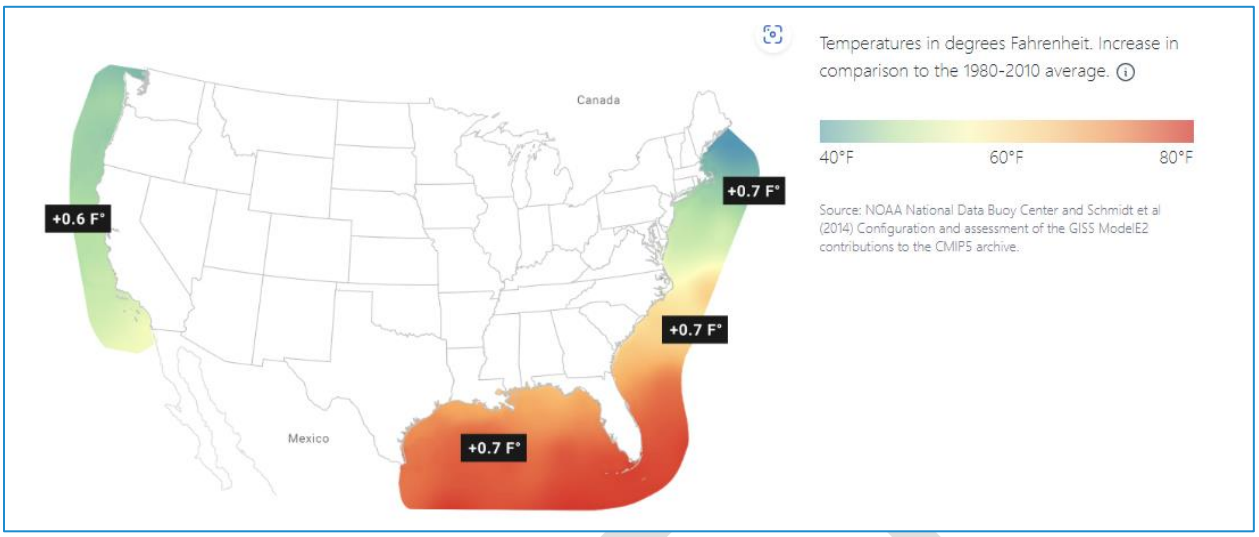
Tornado Wind Speeds



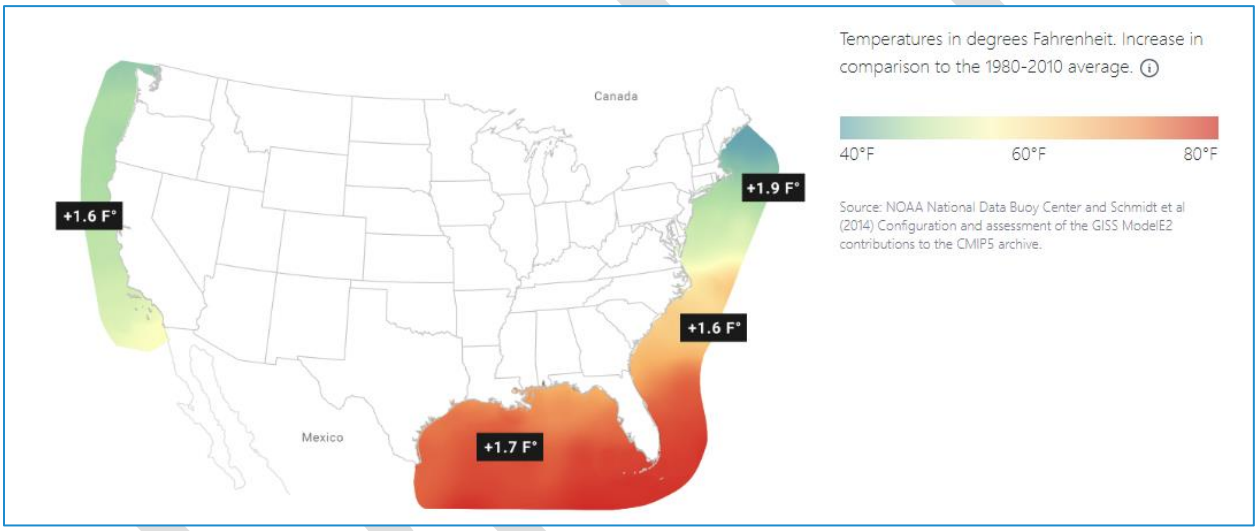
An area's wind vulnerability is primarily determined by its topography, surface roughness, and proximity to the sea. There are several factors that can exacerbate the effects of wind across an area, including the angle of incidence between a house and the onrushing winds. Damage may occur to roofs, walls, and windows in structures. Common vulnerability to wind damages includes, but are not limited to:

A changing environment means warmer seas, new weather patterns, and stronger storms. As the atmosphere warms, there is more energy available for storms to create high-intensity winds. A warmer atmosphere also means warmer oceans, which feeds storms that develop out at sea and make their way towards land.

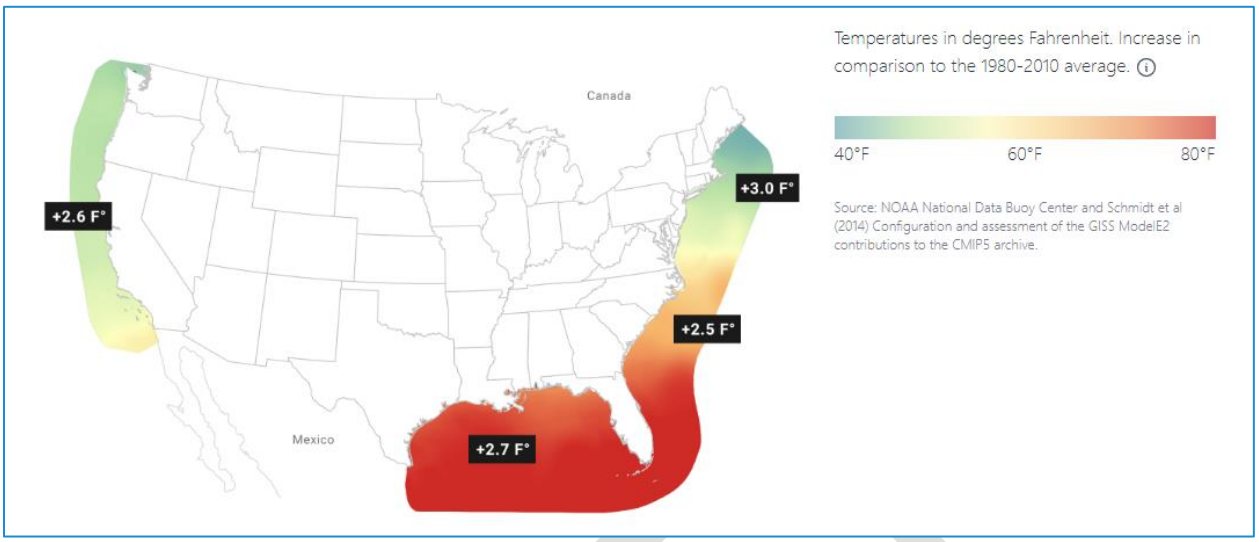
This Year



In 15 Years



In 30 Years



Hail

Hailstorms are expected to change due to the warming climate. It is anticipated that the low-level moisture and convective instability will increase, raising the chance of hailstorms and forming more significant storms. The melting height will rise and enhance hail melt, increasing the average size of surviving hail. However, efforts to understand the effects of climate change on hail are complicated by the small scale and rarity of hailstorms.

In the United States, hailstorms cause more property damage than tornadoes, and their toll is rising fast. Climate change may make the trend more prominent. The U.S. property losses from tornadoes over the decade from 2010-2020 were around $14.1 billion (about $43 per person in the US) (about $43 per person in the US). Hail losses now average from $8 billion (about $25 per person in the US) (about $25 per person in the US) to $14 billion (about $43 per person in the US) (about $43 per person in the US) annually, or $80-140 billion per decade (*Insurance Information Institute*). This far outpaces the loss from tornadoes. The most disruptive hailstorms occur in the Great Plains and High Plains, where there are larger cities, such as Dalla-Fort Worth and Denver.

Nature localizes hail-producing thunderstorms, and there is a little database on these storms. Even though hailstorms may lessen in the southeast over the next decade, the storms are expected to produce large hail.

The following is from a study published on February 9, 2021 (https://www.nature.com)

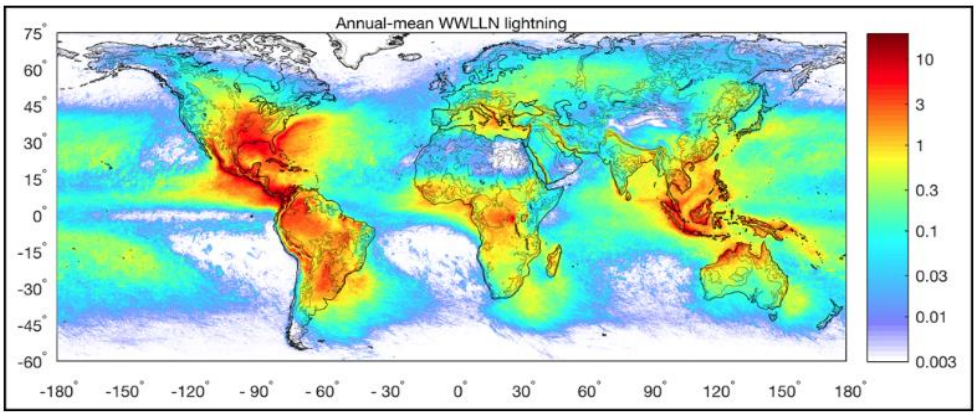
- Efforts to understand the effects of climate change on hail are complicated by the small scale and relative rarity of hailstorms, which make hail hard to observe and model.
- Climate change affects low-level moisture and convective instability, microphysical processes and vertical wind shear, all of which are relevant to hail formation and properties.
- A scarcity of hail observations and high-resolution modelling studies, and gaps in the understanding of physical processes, contribute to the current high uncertainty around the effects of climate change on hailstorms worldwide.

- General indications based on observations and modelling are of overall hailstorm frequency increasing in Australia, slightly increasing in Europe and decreasing in East Asia and the USA.
- In most regions, hailstorm severity is expected to increase with climate change.
- Long-term observations and high-resolution modelling are crucial to understanding the effects of climate change on hailstorms. Future studies should focus on furthering process understanding and improving proxy relationships.

Lightning

Lightning frequency is changing as the climate is changing. It will strike far more frequently in the world with climate change. In recent years, the measurements of lightning have become more extensive. Lightning is still hard to monitor for climate, and satellite instrument services still need improvement.

At any given time, about 45 flashes of lightning occur every second on the Earth. Seasonally, the rate can vary from 10% to 20% across timescales.



Number of lightning strokes accumulated for the years 2008–2017, presented as strokes per year per square kilometer on a 0.1° × 0.1° global grid. Data are from the World Wide Lightning Location Network, and the map is an upgrade of the 0.25° × 0.25° global climatology published by *Virts et al.* [2013].

According to David Romps, an atmospheric scientist at the University of California, Berkley, lightning also triggers about half of the wildfires in the United States. As stated, a warmer atmosphere can hold more moisture, which is one of the key ingredients for triggering a lightning strike. Lightning strikes kill a few dozen people each year.

Observations show that taller clouds generate more lightning, and lightning frequency is based on thunderclouds. Lightning forms when a spark travels from a cloud's positively or negatively charged area to an area with the opposite charge.

Section II. Tornadoes

A. Identification of Hazard

The threat of tornadoes has been chosen by the HMPUC as the second most likely hazard to occur and cause damage in the community, based on experience, the FEMA-described methodology, and other factors. Historical data have been examined from various sources, including the National Climatic Data Center (see Appendix F), and local history and personal accounts, to determine the frequency of events. For further information, see the HAZUS Report in Appendix G.

A tornado is defined by NOAA (http://www.nssl.noaa.gov/education/svrwx101/tornadoes/) as a narrow, violently rotating column of air that extends from the base of a thunderstorm to the ground. Because wind is invisible, it is hard to see a tornado unless it forms a condensation funnel of water droplets, dust, and debris. Tornadoes are the most violent of all atmospheric storms.

About 1,200 tornadoes hit the U.S. yearly. A tornado watch is issued when weather conditions are favorable for tornadoes. During a tornado watch, residents are advised to watch and prepare for severe weather and stay tuned to NOAA Weather Radio to know when warnings are issued. A tornado warning is issued when a tornado has been reported by spotters or indicated by radar, and there is a serious threat to life and property to those in the path of the tornado. When a tornado warning is issued, residents must act immediately to find safe shelter. A warning can cover parts of counties or several counties in the path of danger.

The Enhanced Fujita Scale, implemented by the National Weather Service in 2007, is used to assign a tornado a rating based on estimated wind speeds and related damage. The wind speeds associated with the EF ratings are shown in the table below. Because of the difficulty of measuring wind speeds inside a tornado, wind speeds are estimated based on the type of damage that occurs; more information is available on the NOAA website at http://www.spc.noaa.gov/faq/tornado/ef-scale.html.

ENHANCED FUJITA WIND DAMAGE SCALE
(Source: http://www.spc.noaa.gov/faq/tornado/ef-scale.html)

EF Number	3-Second Gust	Damage
EF-0	65 to 85 mph	Light damage. Some damage chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
EF-1	86 to 110 mph	Moderate Damage. The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
EF-2	111 to 135 mph	Significant Damage. Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; high rise windows broken and blown in; light-object missiles generated.

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EF-3	136 to 165 mph	Severe Damage. Roofs and walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
EF-4	166 to 200 mph	Devastating, damage. Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown, and large missiles generated.
EF-5	Over 200 mph	Incredible damage. Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile-sized missiles fly through the air over 100 m (109 yards); trees debarked; steel reinforced concrete structures badly damaged.

Tornadoes may occur at any time of year, although the peak "tornado season" for the Southern Plains is from May to early June. Tornadoes can occur due to inclement weather, a passing front, or as part of thunderstorms or hurricane/tropical storm events. Tornadoes can occur at any time of the day or night, but according to NOAA, most tornadoes occur between 4:00 and 9:00 p.m. The path and severity of a tornado cannot be determined in advance. The best defense is to heed tornado warnings and seek appropriate shelter when a tornado has been sighted in the area or when conditions conducive to a tornado are present.
(http://www.nssl.noaa.gov/education/svrwx101/tornadoes)

Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are all vulnerable to the effects of tornadoes. According to NOAA (https://www.ncdc.noaa.gov/climate-information/extreme-events/us-tornado-climatology), an average of 30 tornadoes occurs per month in Georgia.

B. Profile of Events, Frequency of Occurrences, Probability

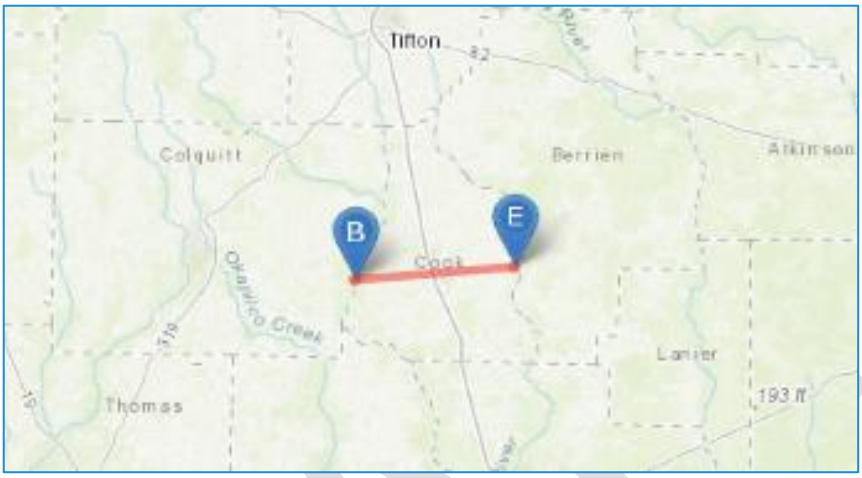
According to the NOAA Storm Events Database (see Appendix F), there are 17 reports of tornadoes occurring in Cook County (including the Cities) between 01/01/1950 and 01/22/2023. The Historic Recurrence Interval is 4.29 years. This is a 23.29% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.7, the past 20-year frequency is 0.27, and the past 50-year frequency is 0.34 (see the Hazard Frequency Table in Appendix D).

January 22, 2017, an EF-3 tornado swept about 35 manufactured homes into a pile of rubble at the far end of the Sunshine Acres mobile home park. Seven people lost their lives. The tornado then went on to destroy about two-thirds of a brick home on Val Del Road, collapsing into two walls and removing most of the second story. Another home built of concrete blocks was destroyed. A nearby farm had several concrete anchors for a large metal structure pulled from the ground. Maximum winds were estimated near 140 mph.

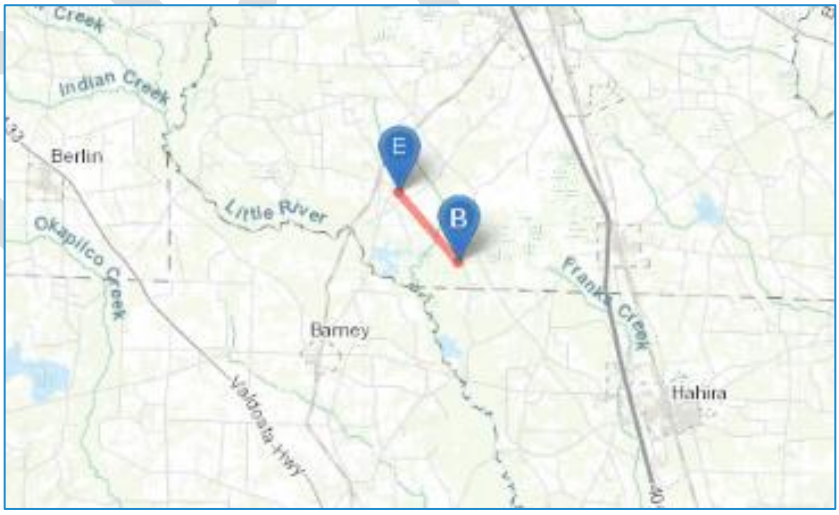
Since the previous HMP, there have been four tornadoes reported in Cook County.

On April 4, 2020, a tornado caused some minor roof damage to a home on McConnell Bridge Road before flipping a small plane upside down at the Cook County Airport. The tornado crossed I-75 at the Adel, GA exit, damaging several billboards and tall signs. In downtown Adel, the tornado ripped off large sections of two warehouses on 3rd Street belonging to the Adel Ice

Company. Many trees were toppled onto homes near East 9th and 10th Streets. Winds were estimated to be 95-100 mph in Adel. The tornado continued eastward, snapping a few trees on GA Highway 37 East and in the Indian Creek Road subdivision. The tornado then snapped trees on Register Road and significantly damaged a large shed before lifting. It should be noted that a large swath of straight-line wind damage occurred to the south of the tornado track along much of its length from the Langdale Parkway in Colquitt County through Cecil, GA and eastward into northwestern Lanier County. These winds were estimated to be 90-95 mph in Cecil.

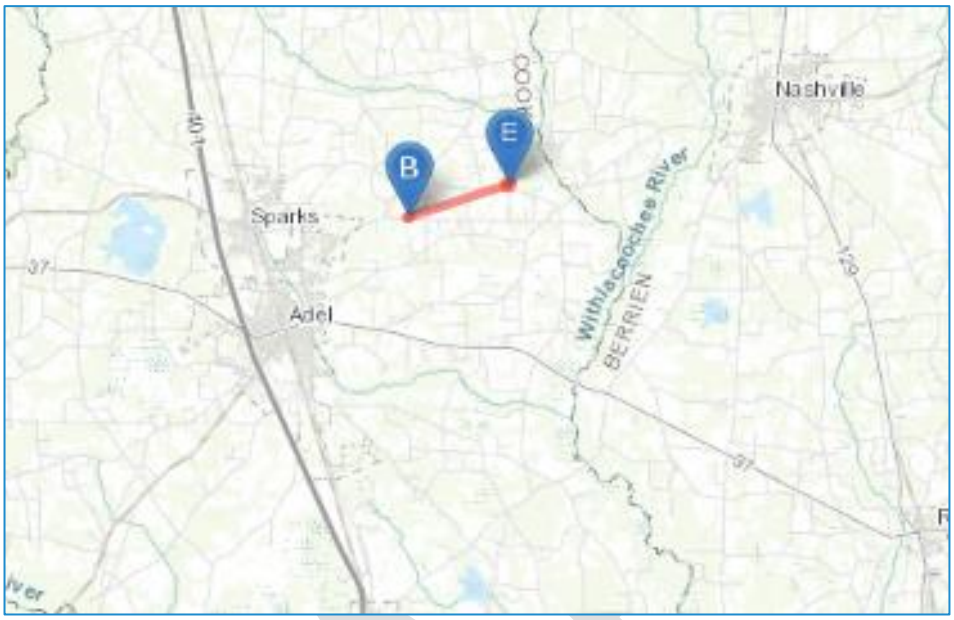


On September 16, 2020, a brief tornado touched down in farther southern Cook County. Only damage to trees was reported with no structural damage. A dual-pol tornadic debris signature was observed on radar. This tornado was rated EF0.



On December 30, 2021, An NWS survey team determined an EF-1 tornado with maximum winds of 90 mph occurred northeast of Adel, GA on Thursday, December 30. The tornado initially touched down on Boone Road, west of Rowan Road where it snapped multiple trees. As the tornado crossed Rowan Road, it caused roof damage to several homes and outbuildings. In addition, several outbuildings were destroyed near this location. The tornado continued to track

northeast and eventually lifted north of the intersection of Lonnie Grimsley Road and Tarrant Road. The tornado was on the ground for approximately 2.2 miles.



On January 22, 2023, an EF-2 tornado touched down six years to the exact date a deadly EF-3 tornado (01/22/2017) claimed the lives of seven people in Cook County. The tornado began west of Interstate 75 before crossing through portions of Adel, GA, in Cook County. The first significant structural damage consistent with EF2 intensity was done to a single-family home-style building on W Mitchell St between I-75 and N Elm St. Half of the structure was shifted off its slab and bolted foundation. Adjacent mini trailers were also flipped in addition to sheets of metal lofted about a hundred feet from the property. The second location of EF2 damage was off US Highway 41 and South Ave near Carr Dr, where a large metal structure building was shifted off its bolted foundation. Some steel beams were also ripped off, with a couple lofted to a nearby residential area. Multiple large trees on the property had their trunks snapped, while others were uprooted. Numerous damaged/fallen trees, some uprooted, had snapped and twisted trunks in a residential neighborhood along Kent Dr. Several of these trees fell on top of a few homes. The damage in that area was consistent with EF1 intensity. Continued tree damage was observed throughout the county's east side, along with a series of knocked-over centerline irrigation pivots. The tornado destroyed a motorhome and snapped several trees along Joiner Rd before lifting near the Cook County/Berrien County border. Max winds were estimated at 115 mph.

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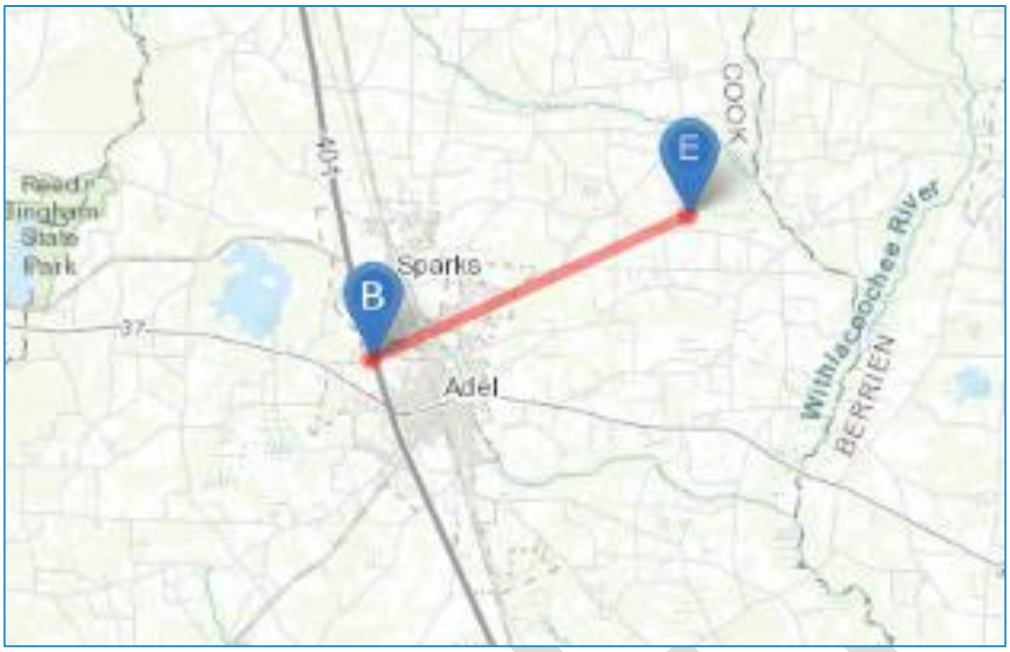
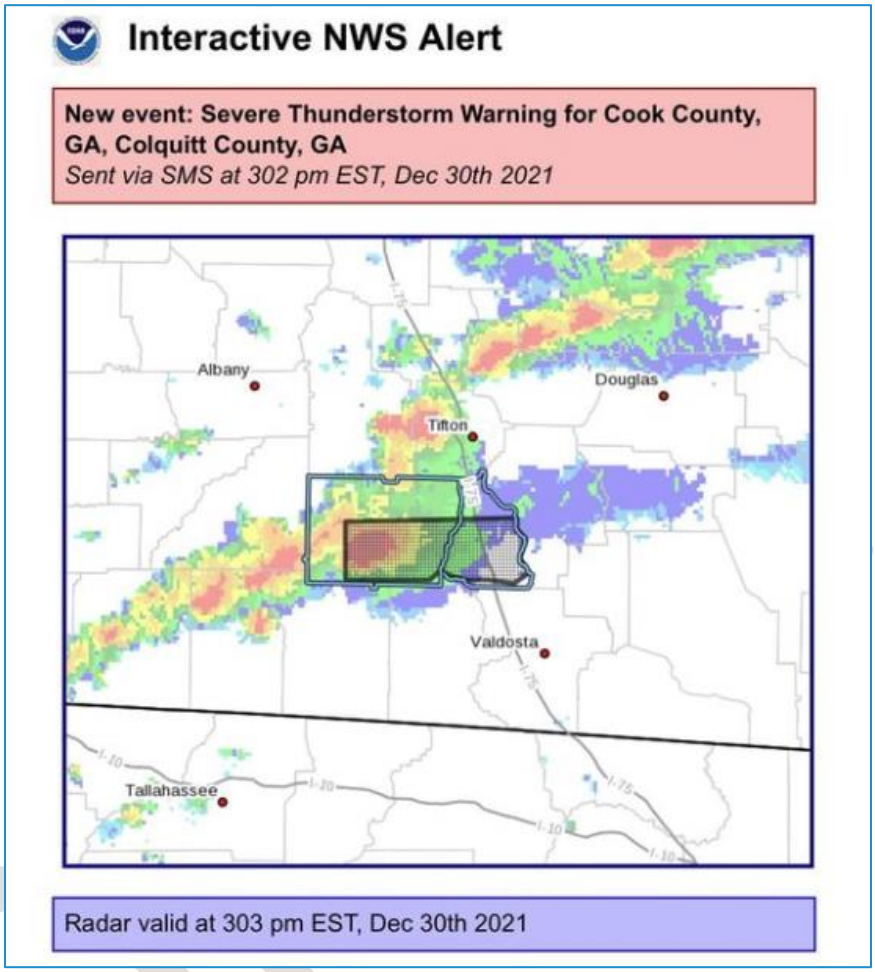
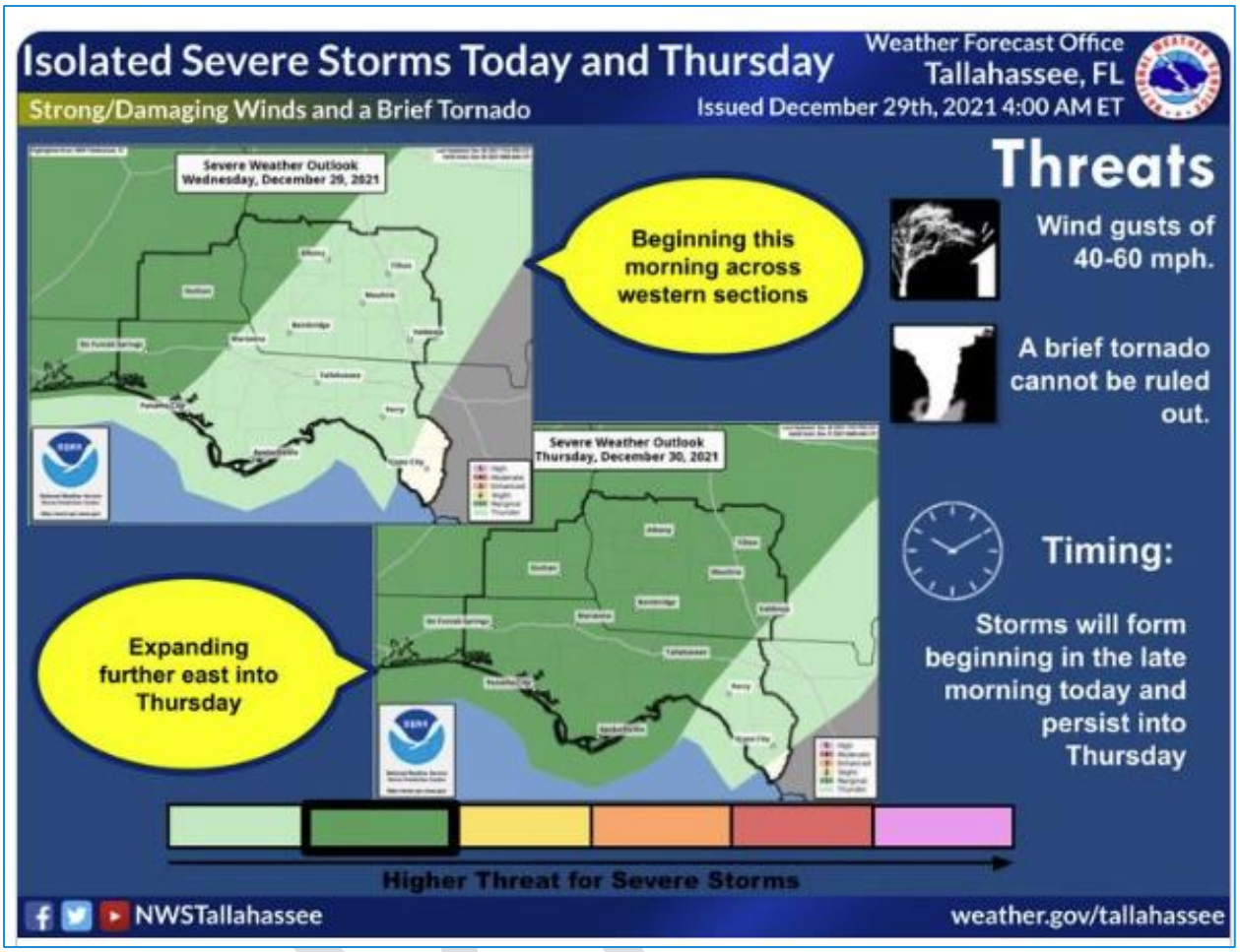


01/22/2023

Miscellaneous tornado events below

On December 30, 2021, severe weather producing a lot of rain, wind, and an EFO tornado rolled into Cook County in the afternoon hours and left downed trees and debris in the eastern and central portions of the county.




Isolated Severe Storms Today and Thursday
Weather Forecast Office
Tallahassee, FL
Strong/Damaging Winds and a Brief Tornado
Issued December 29th, 2021 4:00 AM ET
Severe Weather Outlook
Wednesday, December 29, 2021
Beginning this morning across western sections
Severe Weather Outlook
Thursday, December 30, 2021
Expanding further east into Thursday
Threats
Wind gusts of 40-60 mph.
A brief tornado cannot be ruled out.
Timing:
Storms will form beginning in the late morning today and persist into Thursday
Higher Threat for Severe Storms
NWSTallahassee
weather.gov/tallahassee

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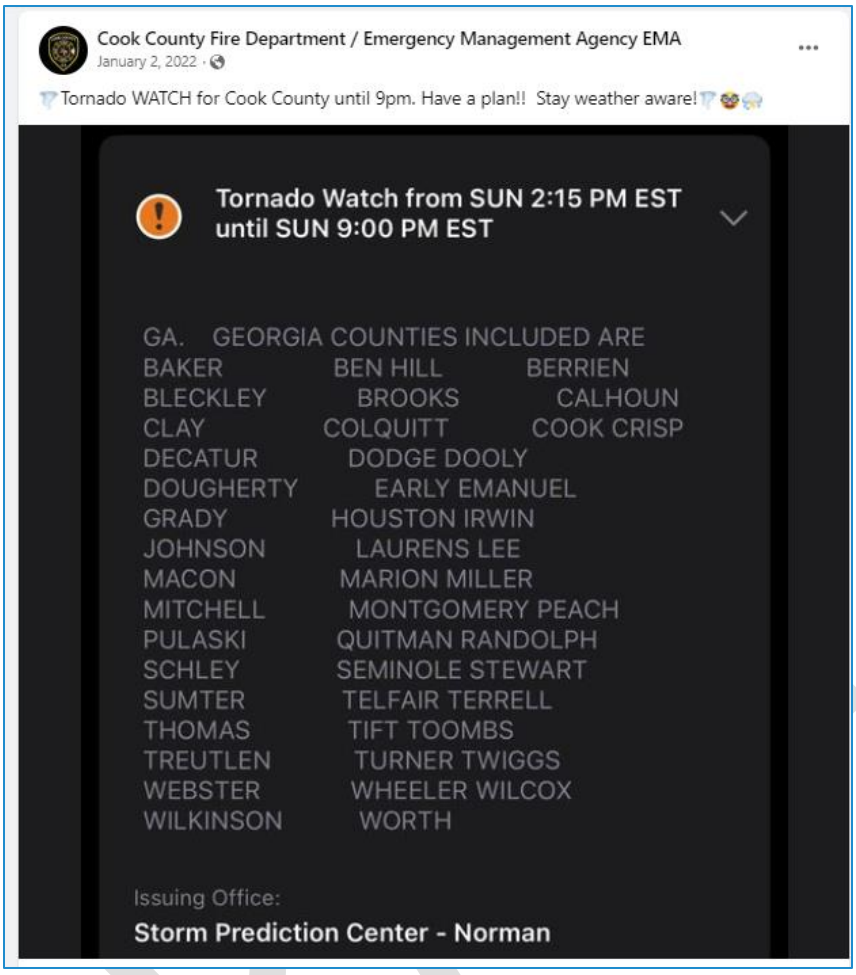
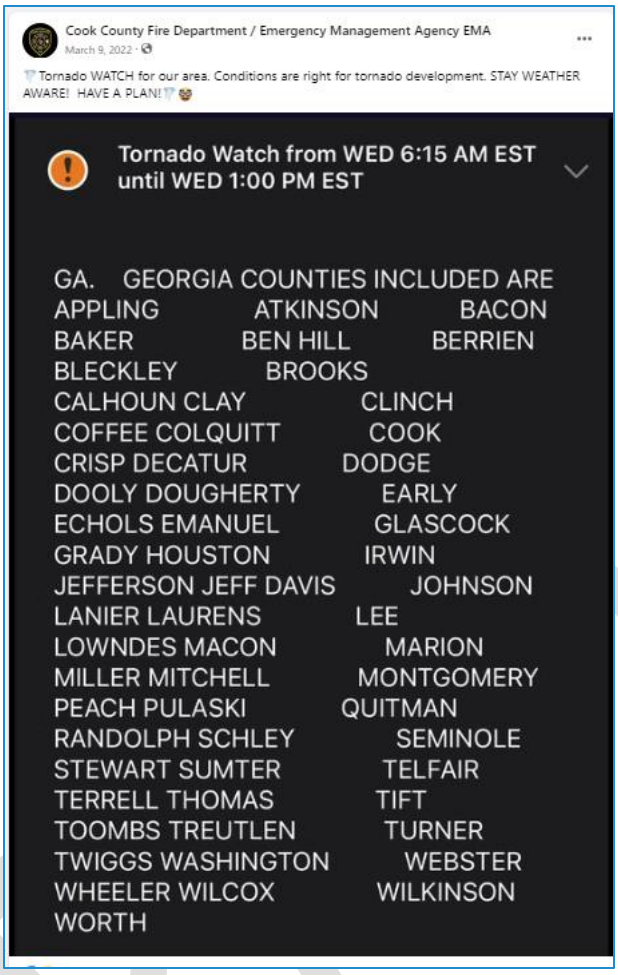
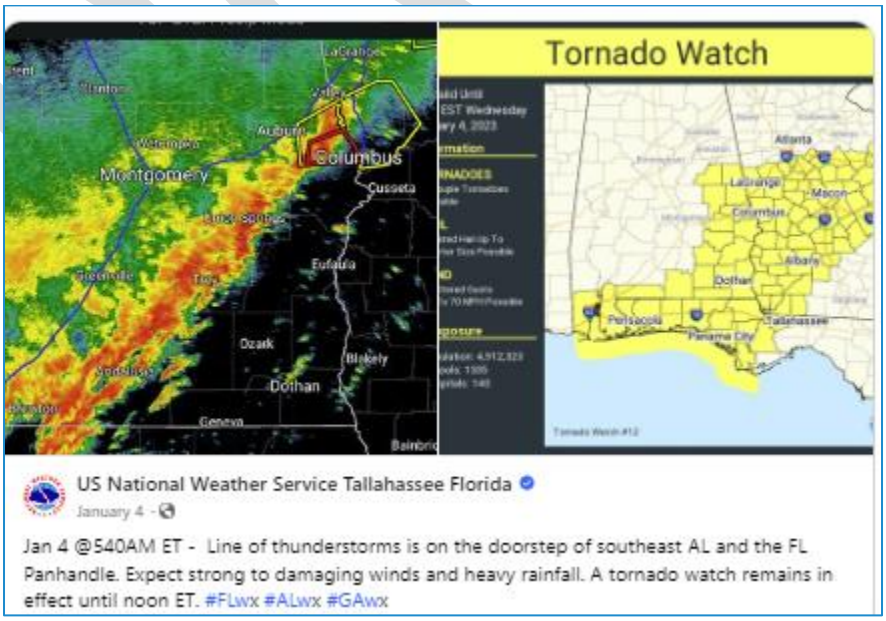

Cook County Fire Department / Emergency Management Agency EMA
January 2, 2022 ·
Tornado WATCH for Cook County until 9pm. Have a plan!! Stay weather aware!
Tornado Watch from SUN 2:15 PM EST until SUN 9:00 PM EST
GA. GEORGIA COUNTIES INCLUDED ARE
BAKER BEN HILL BERRIEN
BLECKLEY BROOKS CALHOUN
CLAY COLQUITT COOK CRISP
DECATUR DODGE DOOLY
DOUGHERTY EARLY EMANUEL
GRADY HOUSTON IRWIN
JOHNSON LAURENS LEE
MACON MARION MILLER
MITCHELL MONTGOMERY PEACH
PULASKI QUITMAN RANDOLPH
SCHLEY SEMINOLE STEWART
SUMTER TELFAIR TERRELL
THOMAS TIFT TOOMBS
TREUTLEN TURNER TWIGGS
WEBSTER WHEELER WILCOX
WILKINSON WORTH
Issuing Office:
Storm Prediction Center - Norman

DRAFT


Cook County Fire Department / Emergency Management Agency EMA
March 9, 2022
Tornado WATCH for our area. Conditions are right for tornado development. STAY WEATHER AWARE! HAVE A PLAN!
Tornado Watch from WED 6:15 AM EST until WED 1:00 PM EST
GA. GEORGIA COUNTIES INCLUDED ARE
APPLING ATKINSON BACON
BAKER BEN HILL BERRIEN
BLECKLEY BROOKS
CALHOUN CLAY CLINCH
COFFEE COLQUITT COOK
CRISP DECATUR DODGE
DOOLY DOUGHERTY EARLY
ECHOLS EMANUEL GLASCOCK
GRADY HOUSTON IRWIN
JEFFERSON JEFF DAVIS JOHNSON
LANIER LAURENS LEE
LOWNDES MACON MARION
MILLER MITCHELL MONTGOMERY
PEACH PULASKI QUITMAN
RANDOLPH SCHLEY SEMINOLE
STEWART SUMTER TELFAIR
TERRELL THOMAS TIFT
TOOMBS TREUTLEN TURNER
TWIGGS WASHINGTON WEBSTER
WHEELER WILCOX WILKINSON
WORTH


Know Where to Go
When Sheltering from a Tornado
Top floor rooms DO NOT protect you.
If you have no basement, move to an interior room with no windows.
Exterior rooms and rooms with windows DO NOT protect you.
NO PLACE OUTSIDE is safe from a tornado.
Quickly move to your basement and bring your emergency supply kit.
weather.gov/tornado

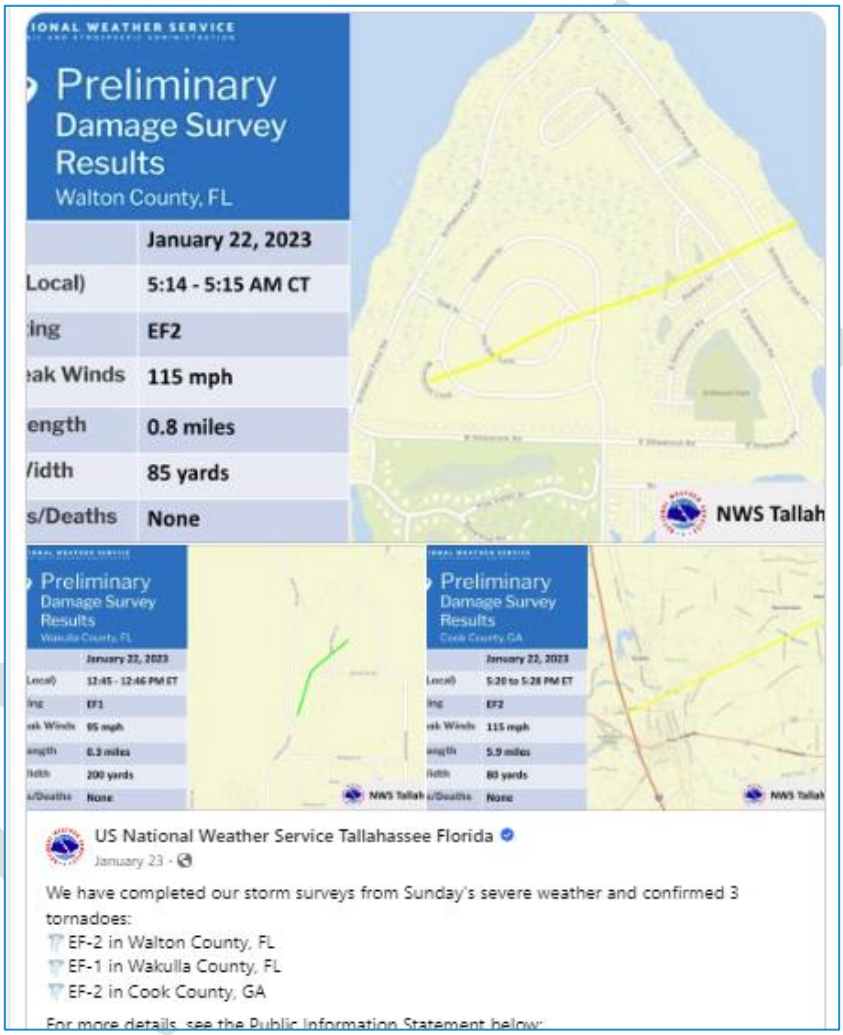

TORNADO
SAFETY
FOR YOUR APARTMENT
For an apartment or university dormitory, go to lowest possible floor and into central room.
Crouch under an indoor stairwell or in an interior windowless hallway.
Cover your head and neck to protect yourself from falling debris.
For more information, visit:
weather.gov/tornado


Tornado Watch
Montgomery
Columbus
Cusseta
Eufaula
Ozark
Dothan
Geneva
Atlanta
Macon
Albany
Pensacola
Tallahassee
Panama City
US National Weather Service Tallahassee Florida
January 4 -
Jan 4 @540AM ET - Line of thunderstorms is on the doorstep of southeast AL and the FL Panhandle. Expect strong to damaging winds and heavy rainfall. A tornado watch remains in effect until noon ET. #FLwx #ALwx #GAwx

Cook County Fire Department / Emergency Management Agency EMA
January 12 ·

Although we are not currently under any watches or warning, the cold front that is rapidly approaching our county. This system has produced very destructive tornadoes today. Please have multiple ways of getting severe weather alerts. Please keep those affected communities in your thoughts and prayers.

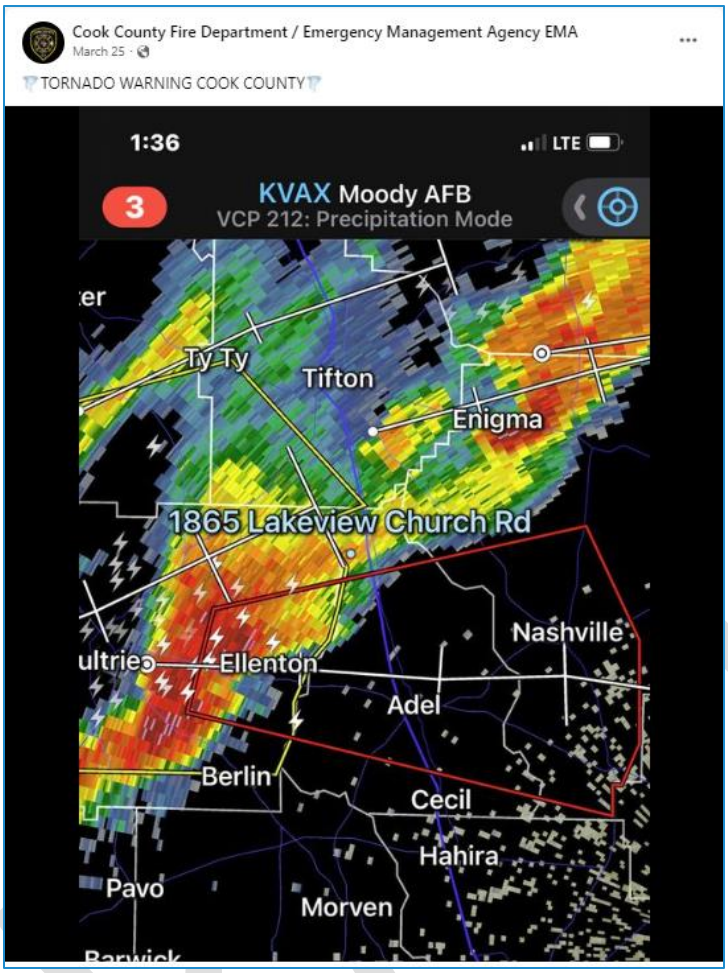
CODE RED is a system that is tied in with the National Weather Service and is FREE to Cook County Residents. Click on the County website link attached and scroll to the bottom and click on the CODE RED link and answer a few simple questions. Just that easy and its free. You will get warning alerts, as well as other alerts that are county generated for your specific location.



US National Weather Service Tallahassee Florida
January 23 ·

We have completed our storm surveys from Sunday's severe weather and confirmed 3 tornadoes:
EF-2 in Walton County, FL
EF-1 in Wakulla County, FL
EF-2 in Cook County, GA

For more details, see the Public Information Statement below:


Cook County Fire Department / Emergency Management Agency EMA
March 25 ·
TORNADO WARNING COOK COUNTY
1:36
LTE
3
KVAX Moody AFB
VCP 212: Precipitation Mode
Ty Ty
Tifton
Enigma
1865 Lakeview Church Rd
Nashville
Ellenton
Adel
Berlin
Cecil
Hahira
Pavo
Morven

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Cook County Fire Department / Emergency Management Agency EMA
April 3 ·
A tornado WATCH is in effect for Cook County until 5pm
TORNADO
WATCH
Be Prepared! Tornadoes are possible in and near the watch area. Review and discuss your emergency plans and check supplies and your safe room. Be ready to act quickly if a warning is issued or you suspect a tornado is approaching. Acting early helps to save lives! Watches are issued by the Storm Prediction Center for counties where tornadoes may occur. The watch area is typically large, covering numerous counties or even states.
COOK COUNTY
EMERGENCY MANAGEMENT
COOK COUNTY EMERGENCY MANAGEMENT AGENCY
https://cookcountyga.us/departments-and-offices/emergency-management-agency/

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The National Weather Service in Tallahassee has issued a

* Tornado Warning for...
Central Cook County in south central Georgia...
Northwestern Berrien County in south central Georgia...
Northeastern Colquitt County in south central Georgia...
Southern Tift County in south central Georgia...
Southeastern Worth County in south central Georgia...

* Until 615 PM EDT.

* At 531 PM EDT, a severe thunderstorm capable of producing a tornado was located 7 miles north of Norman Park, or 11 miles southeast of Sylvester, moving southeast at 40 mph.

HAZARD...Tornado and ping pong ball size hail.

SOURCE...Radar indicated rotation.

IMPACT...Flying debris will be dangerous to those caught without shelter. Mobile homes will be damaged or destroyed. Damage to roofs, windows, and vehicles will occur. Tree damage is likely.

* This dangerous storm will be near...
Norman Park around 540 PM EDT.
Omega around 545 PM EDT.
Lenox around 600 PM EDT.
Adel and Sparks around 605 PM EDT.

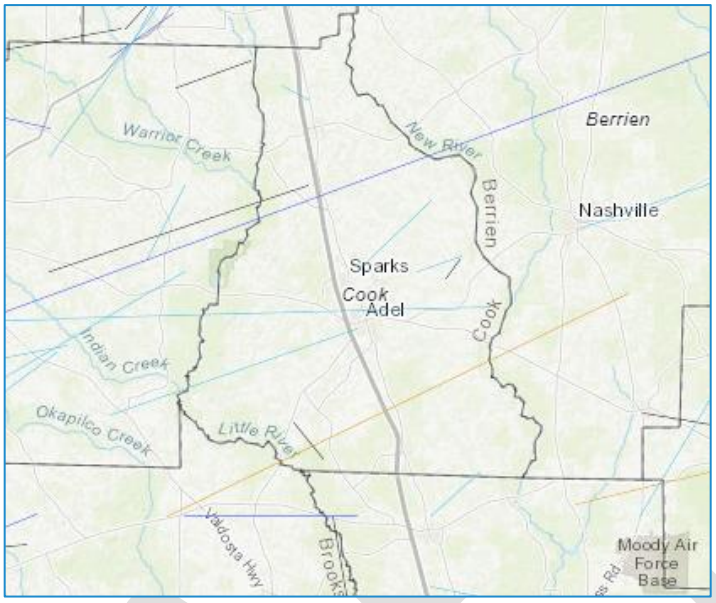
Other locations impacted by this tornadic thunderstorm include Cool Spring, Eldorado, Fender, Staunton, Scooterville, Barneyville, Crosland, Laconte, Flat Ford and Wagon Wheel.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

TAKE COVER NOW! Move to a basement or an interior room on the lowest floor of a sturdy building. Avoid windows. If you are outdoors, in a mobile home, or in a vehicle, move to the closest substantial shelter and protect yourself from flying debris.

Although the most complete available data was used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

Tornado Tracks, 1950 - 2017



C./D. Inventory of Assets Exposed and Potential Loss

An estimated 100% of the Residential property (7,506 of 7,506) in Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard, with a total value of $955,196,000. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,922 of 2,845) in the community may be affected, with a total value of $716,747,972. The values are based on the most recent available tax roll data for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, provided by the Cook County Tax Assessor's Office.

Damage to crops is not considered in the above estimates. According to the most recent estimate (2022) available on the University of Georgia's GeorgiaData website (www. https://caed.uga.edu/), the total farm gate value of agricultural production in Cook County is $147,587,977.40 in the State of Georgia.

According to the inventory database reports and maps, all of the 58 Critical Facilities and Infrastructure for Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard. The total value of these Critical Facilities is $198,051,152.

In a Hypothetical Tornado Scenario of an EF3 tornado, the tornado passed through Adel (the predominate historical tornadoes paths). The wind speeds, widths, and lengths of the path were modeled on the Fujita-Scale guidelines. Table 12 below shows the tornado path width and expected damages:

Table 12: Tornado Path Widths and Damage Curves

Enhanced Fujita Scale	Path Width (feet)	Maximum Expected Damage
EF5	2,400	100%
EF4	1,800	100%
EF3	1,200	80%
EF2	600	50%
EF1	300	10%

Damage from a tornado is more intense within the center of the damage path, decreasing damage away from the center. Figure 12 below shows the damage zones of this EF3, Table 13 and Figure 13 shows the damages zones (path), and Figure 14 shows the damage curve buffer zones.

Figure 12: EF Scale Tornado Zones

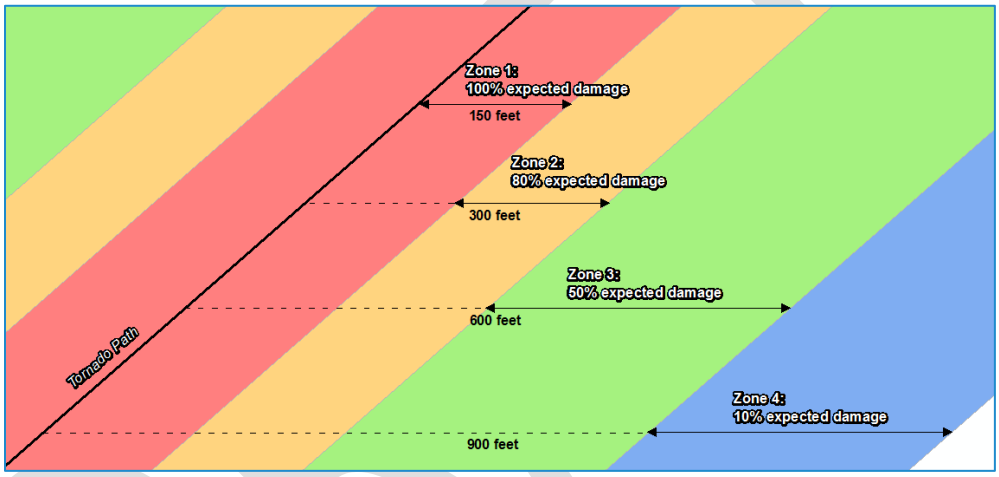


Table 13: EF3 Tornado Zones and Damage Curves

Zone	Buffer (feet)	Damage Curve
1	0-150	80%
2	150-300	50%
3	300-600	10%
4	600-900	0%

Figure 13: Hypothetical EF3 Tornado Path

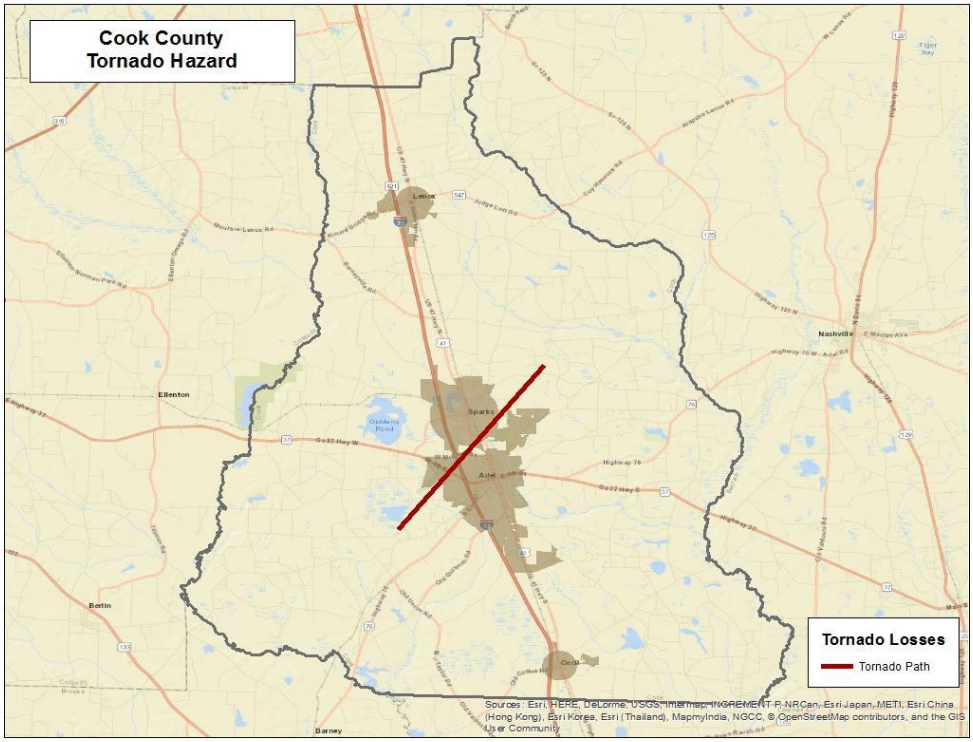
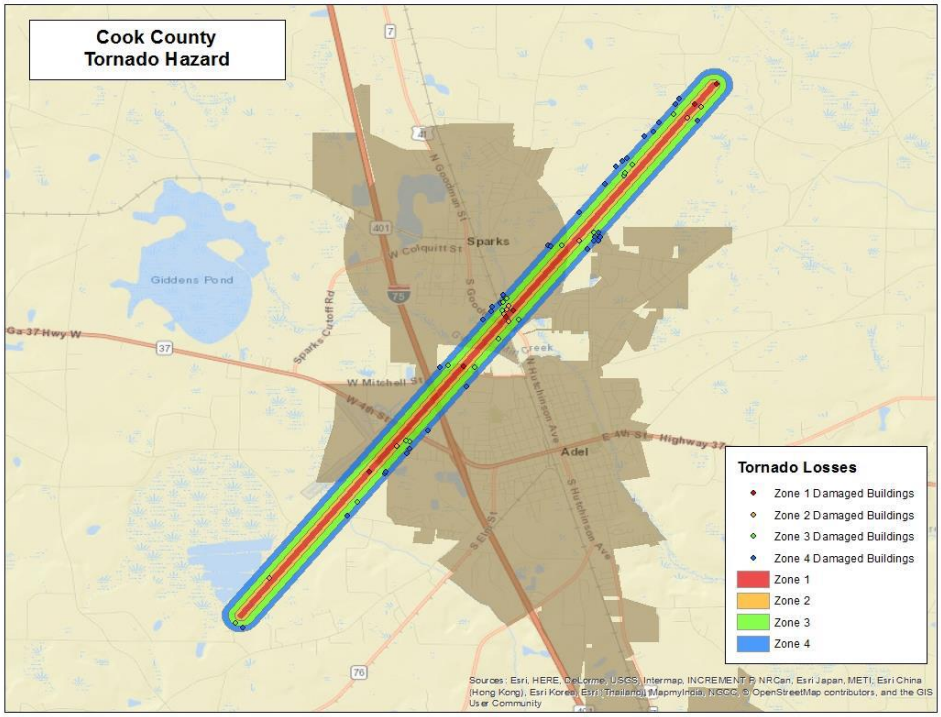


Figure 14: Modeled EF3 Tornado Damage Buffers



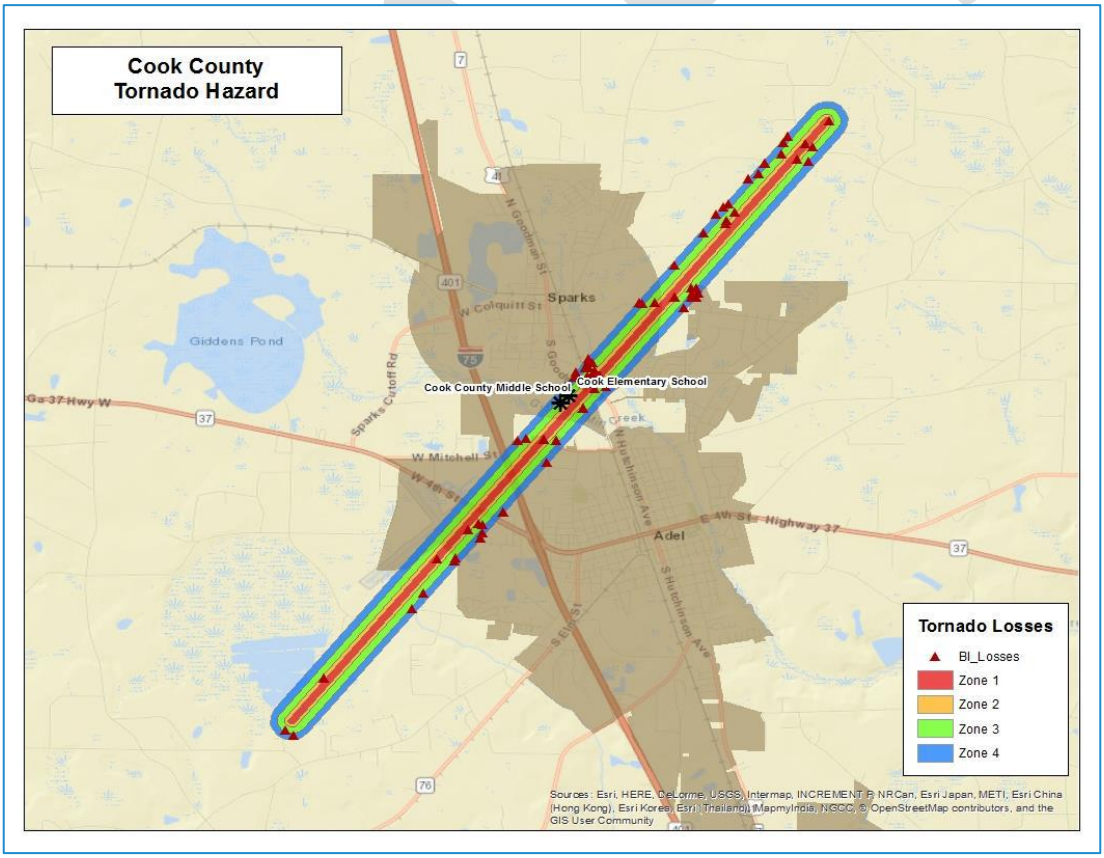
Approximately 107 buildings could be damaged by an EF3 tornado. Estimated losses would be approximately $14.3 million. Th results of the damage are listed below:

Table 14: Estimated Building Losses by Occupancy Type

Occupancy Classification	Buildings Damaged		Building Losses
Commerical	9	$	10,510,263
Educational	7	$	1,478,037
Industrial	10	$	1,231,853
Religious	1	$	-
Residential	80	$	1,032,283
Total	**107**	**$**	**14,252,436**

There were no essential facilities located within 900 feet of the modeled tornado path. There were 2 essential facilities located within the tornado path that would suffer minor damage. Figure 15 shows the modeled damage to Essential Facilities.

Figure 15: Modeled Essential Facility Damage in Cook County



(See Appendix G. HAZUS Report for more information on this scenario)

E. Land Use and Development Trends

Typically, mobile/manufactured homes are most vulnerable to tornado damage. The homes can turn over during strong winds. Even mobile homes with tie-down systems cannot withstand the force of tornado winds. Mobile home residents are always advised to seek refuge in storm shelters or with other people in traditional homes.

Tornadoes can have incredible destructive wind force, and their impact on any home can be devastating. Manufactured homes are more vulnerable to the damage compared to site-built houses due to the following factors:

- ◊ Anchoring: Manufactured homes are typically anchored to the ground using straps or piers. In high winds, these anchoring systems may not provide sufficient stability, leading to structural damage or complete destruction.
- ◊ Lightweight Materials: Manufactured homes often use lightweight materials for cost-effectiveness. These materials may not withstand tornado-force winds, resulting in significant damage.
- ◊ Lack of Basements: Most manufactured homes lack basements or reinforced safe rooms, which are common features in traditional homes for seeking shelter during storms. However, there are very few homes with basements in South Georgia, because of the water table.

According to 2021 U.S. Census Bureau American Community Survey 5-year estimates, the population of Cook County is 17,188, an increase of 0.5% since 2016. The City of Adel's 2021 population is 5,459, a 2.9% increase since 2016. The City of Cecil's 2021 population is 317, a 9.7% decrease since 2016. The Town of Lenox's 2021 population is 786, a 5.9% decrease since 2016. The Town of Sparks' 2021 population is 2,300, a 13% increase since 2016.

Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) has zoning regulations. All jurisdictions have mandatory building and fire codes that a building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the construction codes mandatory as the Georgia State Minimum Standard Codes. (SEE CHAPTER 4, REGULATORY TOOLS/PLANS FOR ADOPTED CODES).

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

Tornadoes tend to follow a straight path regardless of natural features or political boundaries, and no difference in severity is expected between Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. However, the impact may be more severe in places with higher population density due to more people being in danger, more people needing to evacuate, more debris from damaged buildings, and other impacts associated with higher population density. In areas with many mobile homes, the damage can be more severe. (SEE CHAPTER 4 FOR ADOPTED CODES).

DRAFT

G. Overall HRV Summary of Events and Their Impact

Tornadoes can cause damage anywhere, at any time, throughout Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. They can form quickly, and residents may not have time to find adequate shelter, or else adequate shelter facilities may not be available. The cost of the damage and potential loss of life may be higher if the event strikes populated areas as opposed to more sparsely populated or unpopulated areas, or if it strikes areas with many mobile homes.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

H. Impacts from Future Conditions

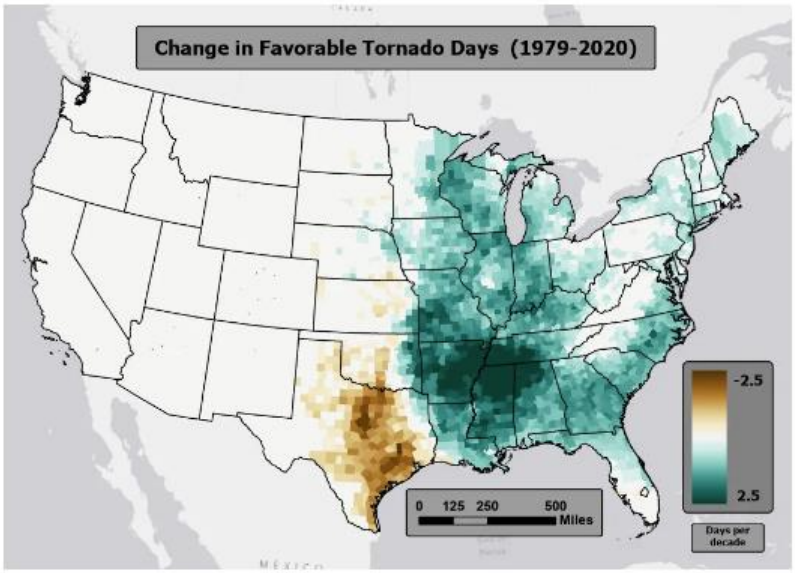
The eastward shift of tornadoes has not been conclusively linked to climate change. However, sea surface temperatures across the Gulf of Mexico and the Atlantic are increasing. This could be due to the La Niña climate pattern bringing warmer-than-average conditions to the Southern U.S., to the above-average water temperatures of the Gulf of Mexico, to the warm winter weather that is increasingly common as the planet heats up. This helps to generate warm, humid surface air feeding into severe thunderstorms across the central and eastern U.S. More people are more vulnerable in the southeast because there are more manufactured homes in the Southeast than anywhere else.

Most likely, southeastern tornadoes tend to strike at night when people are asleep, and the tornadoes are less visible. Increasing populations also add to the vulnerability. A 2017 analysis found that average tornado's yearly impacts and vulnerability could be 6 to 36 times higher by 2100 compared to 1940, depending on location. The biggest projected increase is in the mid-south region from eastern Arkansas to the Appalachians.

Springtime days will have enhanced tornado-supportive wind shear, which could also increase the number of tornadoes. A major new study published in 2023, focusing on 15-year blocks within the 21st century, found that rotating supercell storms may become more frequent overall while becoming increasingly frequent in late winter and early spring and less frequent from midsummer toward early autumn. The study also reinforced the eastward shifts discussed above. https://yaleclimateconnections.org

John T. Allen, a professor of meteorology at Central Michigan University, wrote in a *USA Today* opinion column that while ties to climate change are still uncertain, there appears to have been an "eastward shift in tornado frequency" and increasing frequency of tornadoes in outbreaks over the past few decades. "Climate projections for the late 21st century have suggested that the conditions favorable to the development of the severe storms that produce tornadoes will increase over North America, and the impact could be greatest in the winter and fall," he added. NOAA's National

Severe Storms Laboratory said that the U.S. is likely to see more tornadoes in the winter and fewer in the summer as national temperatures rise above the long-term average.



Change in favorable tornado days between 1979 and 2020, in days per decade. Image: Victor Gensini

Between the lines: Tornado trends, such as a shift in their geographic distribution, and increased variability from year to year, are what scientists expect to see in a warming world, according to Gensini.

- Projections show an increase in major outbreaks in the mid-South and Southeast in particular, he said.
- Harold Brooks, senior scientist at the National Severe Storms Laboratory in Oklahoma, who also studies tornadoes and climate change, told Axios that the increase in days with favorable conditions for tornadoes in the South and Southeast already stands out as a climate-related signal.
- Gensini compared tornado attribution today to the steroids era of baseball. Pinning an individual home run on steroid use is difficult, he said, but in the aggregate the trends are evident.
- He said the right question to ask now may be whether anyone can prove that climate change *is not* influencing tornadoes and the environment in which they form.

Section III. Hurricanes/Tropical Storms

A. Identification of Hazard

The threat of hurricanes/tropical storms has been chosen by the HMPUC as the third most likely hazard to occur and cause damage in the community based on experience, the FEMA-described methodology, and other factors. Historical data have been examined from various sources, including the National Climatic Data Center (see Appendix F), and local history and personal accounts, to determine the frequency of events. For further information, see the HAZUS Report in Appendix G.

Hurricanes and tropical storms are both types of tropical cyclones. Tropical cyclones are the general term used for all circulating weather systems over tropical water.[1] Tropical cyclones are destructive and can cause great damage and loss of life. They are divided into four major types: Hurricanes, Tropical Storms, Tropical Disturbances, and Tropical Depressions.

A hurricane, also known as a typhoon, is defined by NOAA's National Hurricane Center (http://www.nhc.noaa.gov/aboutgloss.shtml) as a tropical cyclone in which the maximum sustained surface wind (using the U.S. 1-minute average) is 64 kt (74 mph or 119 km/hr) or more. The term hurricane is used for Northern Hemisphere tropical cyclones east of the International Dateline to the Greenwich Meridian. The term typhoon is used for Pacific tropical cyclones north of the Equator west of the International Dateline.

A tropical storm is defined as tropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1-minute average) ranges from 34 kt (39 mph or 63 km/hr) to 63 kt (73 mph or 118 km/hr).

A tropical disturbance is a discrete tropical weather system of apparently organized convection -- generally 100 to 300 nmi in diameter -- originating in the tropics or subtropics, having a non-frontal migratory character, and maintaining its identity for 24 hours or more. It may or may not be associated with a detectable perturbation of the wind field.

A tropical depression is a tropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1-minute average) is 33 kt (38 mph or 62 km/hr) or less.

The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 categorization based on the hurricane's intensity at the indicated time. The scale provides examples of the type of damage and impacts in the United States associated with winds of the indicated intensity. The following table shows the scale broken down by winds:

[1] A tropical cyclone is defined by NOAA as "a warm-core non-frontal synoptic-scale cyclone, originating over tropical or subtropical waters, with organized deep convection and a closed surface wind circulation about a well-defined center. Once formed, a tropical cyclone is maintained by the extraction of heat energy from the ocean at high temperature and heat export at the low temperatures of the upper troposphere. In this they differ from extratropical cyclones, which derive their energy from horizontal temperature contrasts in the atmosphere (baroclinic effects)." (http://www.nhc.noaa.gov/aboutgloss.shtml)

SAFFIR-SIMPSON HURRICANE SCALE
(Source: NOAA http://www.nhc.noaa.gov/aboutgloss.shtml)

Category	Wind Speed	Damage
1	74 - 95	Very dangerous winds will produce some damage
2	96 - 110	Extremely dangerous winds will cause extensive damage
3	111 - 129	Devastating damage will occur
4	130 - 156	Catastrophic damage will occur
5	> 156	Catastrophic damage will occur

The official Atlantic hurricane season (which includes Gulf Coast and East Coast hurricanes) is June 1 through November 30, but hurricanes and tropical storms may also occur outside of those dates. Whether the hurricane/tropical storm is a short-term event, or a long-term event depends on many factors, including category, strength, speed, and impact of other weather systems, including fronts and wind patterns.

Because of their location, Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are vulnerable to severe hurricanes/tropical storms forming in both the Atlantic Ocean and the Gulf of Mexico. Also due to location, hurricanes may degrade into tropical storms, tropical depressions, or tropical disturbances by the time they reach this area. These may or may not contain tornadoes or hail. In some cases, tropical storms, depressions, or disturbances may never reach hurricane strength before reaching the shore. The effects vary depending on the hurricane/tropical storm's severity and the event's duration.

B. Profile of Events, Frequency of Occurrences, Probability

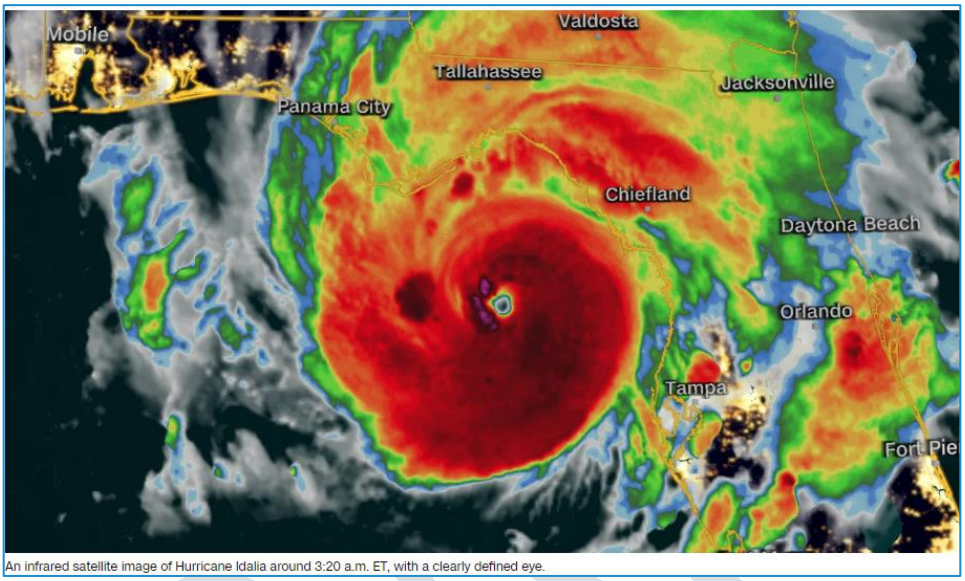
The most severe event was the hurricane, which occurred in 1894. The hurricane was recorded as a Category 3 tropical storm with 1-minute sustained wind speeds up to 121 mph and 3-second wind gusts up to 155 mph. It is unknown how many properties were impacted in Cook County.

Since the previous Hazard Mitigation Plan was completed, 2 Hurricane /Tropical Storm events have occurred and were recorded by NOAA. On October 10, 2018, Hurricane Michael started as a weak tropical system in the Caribbean. It moved into the Gulf of Mexico and intensified into a major hurricane as it moved into the Florida Panhandle. It had catastrophic winds across Florida and Georgia and damaged timber and agricultural communities. In Georgia alone, estimated damages were as follows: Cotton $300-$900 million, Vegetables $480 million, Pecans $560 million, Poultry $25 million, Peanuts $10-$20 million, and Timber $1 billion (about $3 per person in the US).

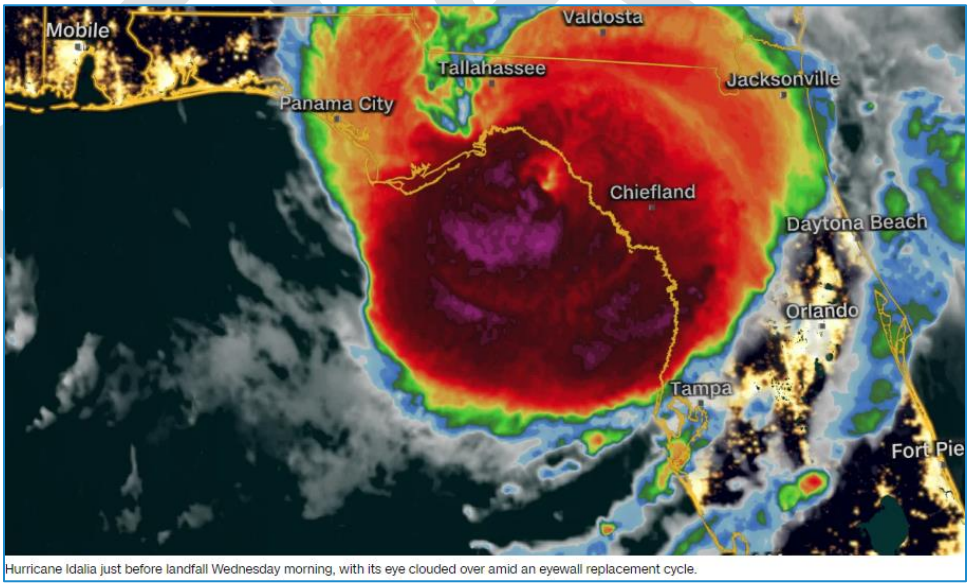
On November 10, 2022, Tropical Storm Nicole moved across the Florida Peninsular and turned northwestward across the Florida Big Bend into southern Georgia. Wind and rain impacts were minimal. No flooding was reported, and wind damage consisted mainly of a few trees down with sporadic power outages.
Besides these events, one additional Hurricane event occurred on August 30, 2023 (Hurricane Idalia), which has not yet been recorded in the NCDC database, bringing the total to 9 events between 01/01/1950 and 08/30/2023. This storm caused heavy rains and winds, power outages,

downed trees and damage to homes and businesses. Many residents in Adel and Lenox were also without running water for a while. Hurricane Idalia hit the west coast of Florida, continuing through the Big Bend at 125 mph and continued through Georgia, which included Cook County. This brings the total to 9 reports of Hurricane/Tropical Storms occurring in Cook County.

Hurricane Idalia



An infrared satellite image of Hurricane Idalia around 3:20 a.m. ET, with a clearly defined eye.



Hurricane Idalia just before landfall Wednesday morning, with its eye clouded over amid an eyewall replacement cycle.

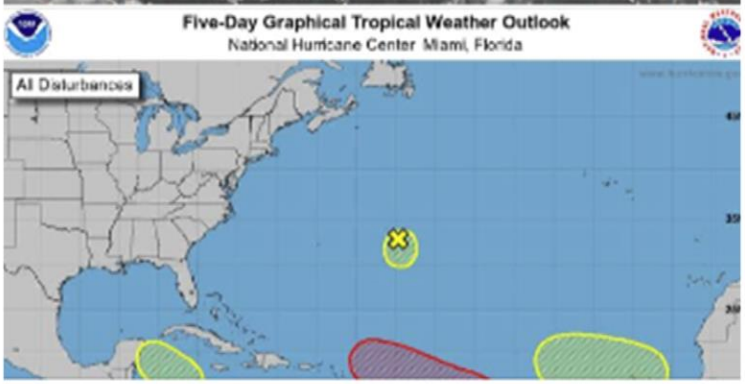
According to the NOAA Storm Events Database (see Appendix F), and the recent storm on 08/30/23, there are 11 reports of Hurricanes/Tropical Storms occurring in Cook County (including the Cities) between 01/01/1950 and 08/30/2023.

The Historic Recurrence Interval is 9.71 years. This is a 15.28% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.6, the past 20-year frequency is 0.55, and the past 50-year frequency is 0.22 (see the Hazard Frequency Table in Appendix D).

DRAFT

Cook County Fire Department / Emergency Management Agency EMA
August 28, 2022

We now have an area of high certainty of development out in the Atlantic. If you haven't done an thinking on this season's hurricane activity (or lack of activity) these deserve a thought and possibly a plan. When you have a plan of action, the situation is less stressful and less dangerous.



NOAA NWS National Hurricane Center
August 28, 2022

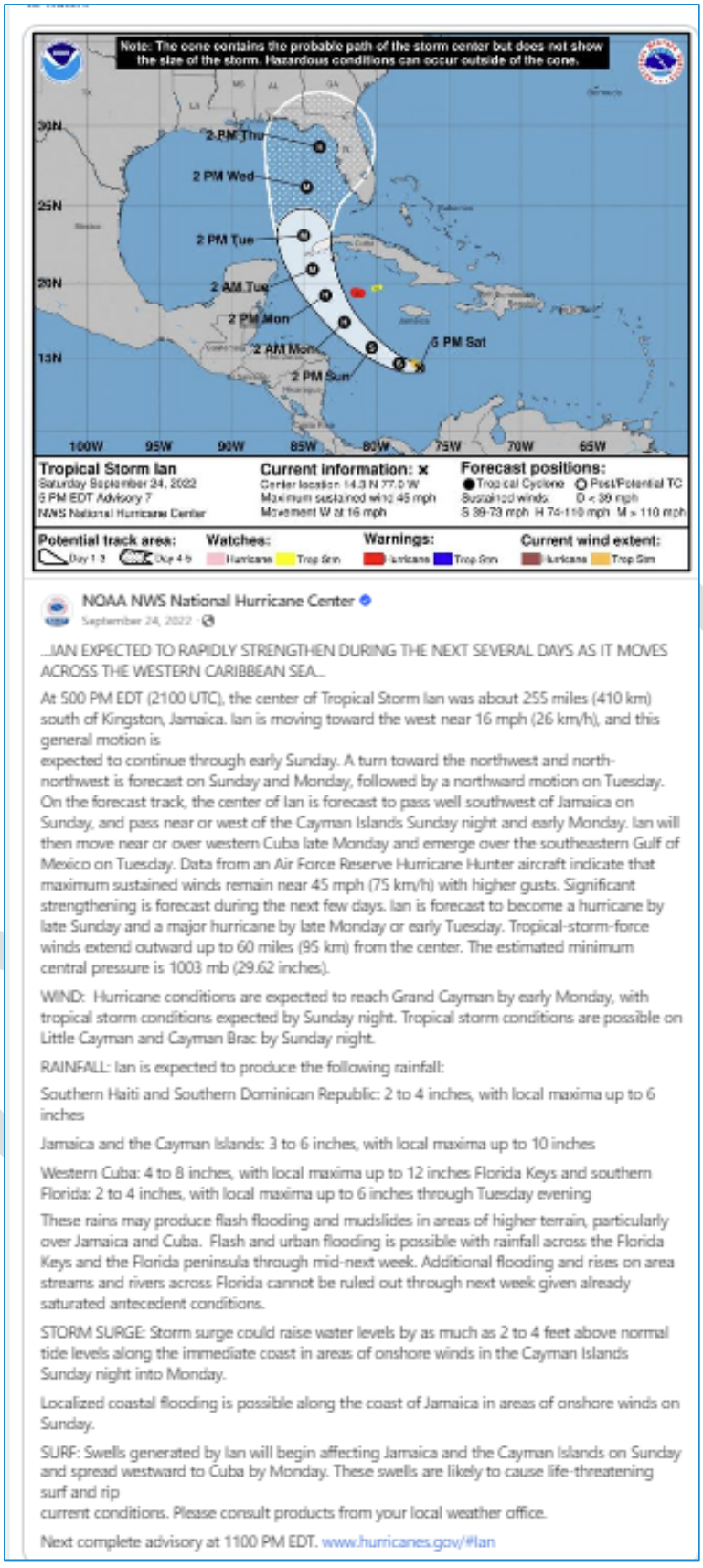
Para el Atlántico Norte... Mar Caribe y el Golfo de México:

El centro del Atlantico Tropical:
Un area amplia y alargada de baja presion esta localizada sobre el centro del Oceano Atlantico tropical. Aunque la actividad de aguaceros y tormentas electricas asociadas han aumentado un poco desde ayer, actualmente carece de organizacion. Se espera que las condiciones ambientales esten generalmente conducentes para un desarrollo gradual, y es probable que una depresion tropical se forme mas tarde esta semana mientras se mueve hacia el oeste y luego oeste noroeste a cerca de 10 mph, hacia las aguas al este de las Islas de Sotavento. Tirene una probabilidad baja (30 por ciento) de formacion en las proximas 48 horas y un probabilidad alta (70 por ciento) de formacion en los proximos 5 dias.

Atlantico Central:
Un sistema pequeno de baja presion localizado cerca de 600 millas al este de Bermuda continua produciendo actividad de aguaceros ocasionales, desorganizadas. Se espera que los vientos fuertes en los niveles altos y aire seco limiten el desarrollo significativo de este sistema mientras se mueva sobre el Atlantico central durante los proximos dias y es probable que la baja presion se disipe para mediados de semana. Tiene una probabilidad baja (10 por ciento) de formacion en las proximas 48 horas y en los proximos 5 dias.

Noroeste del Mar Caribe:
Una vaguada de baja presion pudiera desarrollarse sobre el noroeste del Mar Caribe durante mediados de la semana. Las condiciones ambientales pudieran contribuir a algun desarrollo lento de este sistema mientras se mueve generalmente hacia el oeste noroeste sobre el noroeste del Mar Caribe y hacia la
Peninsula de Yucatan de Mexico. Tiene una probabilidad casi cero de formacion en las proximas 48 horas y una probabilidad baja (20 por ciento) de formacion en los proximos 5 dias.

Este del Atlantico Tropical:
Se pronostica que una onda tropical se aleje de la costa oeste de Africa el lunes o lunes en la noche. Algun desarrollo gradual de este sistema es posible luego de eso mientras se mueve generalmente hacia el oeste a traves del extremo este del Atlantico tropical. Tiene una probabilidad casi cero de formacion en las proximas 48 horas y una probabilidad baja (20 por ciento) de formacion en los proximos 5 dias.



NOAA NWS National Hurricane Center
September 24, 2022

...IAN EXPECTED TO RAPIDLY STRENGTHEN DURING THE NEXT SEVERAL DAYS AS IT MOVES ACROSS THE WESTERN CARIBBEAN SEA...

At 500 PM EDT (2100 UTC), the center of Tropical Storm Ian was about 255 miles (410 km) south of Kingston, Jamaica. Ian is moving toward the west near 16 mph (26 km/h), and this general motion is
expected to continue through early Sunday. A turn toward the northwest and north-northwest is forecast on Sunday and Monday, followed by a northward motion on Tuesday. On the forecast track, the center of Ian is forecast to pass well southwest of Jamaica on Sunday, and pass near or west of the Cayman Islands Sunday night and early Monday. Ian will then move near or over western Cuba late Monday and emerge over the southeastern Gulf of Mexico on Tuesday. Data from an Air Force Reserve Hurricane Hunter aircraft indicate that maximum sustained winds remain near 45 mph (75 km/h) with higher gusts. Significant strengthening is forecast during the next few days. Ian is forecast to become a hurricane by late Sunday and a major hurricane by late Monday or early Tuesday. Tropical-storm-force winds extend outward up to 60 miles (95 km) from the center. The estimated minimum central pressure is 1003 mb (29.62 inches).

WIND: Hurricane conditions are expected to reach Grand Cayman by early Monday, with tropical storm conditions expected by Sunday night. Tropical storm conditions are possible on Little Cayman and Cayman Brac by Sunday night.

RAINFALL: Ian is expected to produce the following rainfall:

Southern Haiti and Southern Dominican Republic: 2 to 4 inches, with local maxima up to 6 inches

Jamaica and the Cayman Islands: 3 to 6 inches, with local maxima up to 10 inches

Western Cuba: 4 to 8 inches, with local maxima up to 12 inches Florida Keys and southern Florida: 2 to 4 inches, with local maxima up to 6 inches through Tuesday evening

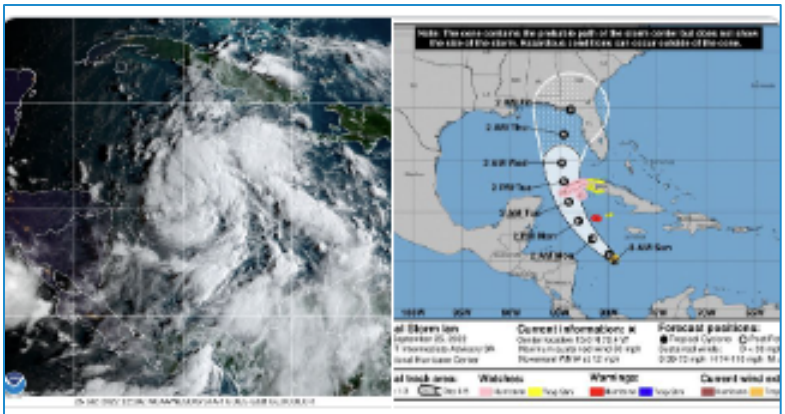
These rains may produce flash flooding and mudslides in areas of higher terrain, particularly over Jamaica and Cuba. Flash and urban flooding is possible with rainfall across the Florida Keys and the Florida peninsula through mid-next week. Additional flooding and rises on area streams and rivers across Florida cannot be ruled out through next week given already saturated antecedent conditions.

STORM SURGE: Storm surge could raise water levels by as much as 2 to 4 feet above normal tide levels along the immediate coast in areas of onshore winds in the Cayman Islands Sunday night into Monday.

Localized coastal flooding is possible along the coast of Jamaica in areas of onshore winds on Sunday.

SURF: Swells generated by Ian will begin affecting Jamaica and the Cayman Islands on Sunday and spread westward to Cuba by Monday. These swells are likely to cause life-threatening surf and rip
current conditions. Please consult products from your local weather office.

Next complete advisory at 1100 PM EDT. www.hurricanes.gov/#Ian



NOAA NWS National Hurricane Center
September 25, 2022

...IAN FORECAST TO BEGIN RAPIDLY STRENGTHENING LATER TODAY...

...RISK OF SIGNIFICANT WIND AND STORM SURGE IMPACTS INCREASING FOR WESTERN CUBA...

At 800 AM EDT (1200 UTC), the center of Tropical Storm Ian was about 320 miles (550 km) south-southeast of Grand Cayman. Ian is moving toward the west-northwest near 12 mph (19 km/h). A turn toward the northwest at a similar forward speed is expected later today, followed by a turn toward the north-northwest on Monday and north on Tuesday. On the forecast track, the center of Ian is forecast to pass well southwest of Jamaica today, and pass near or west of the Cayman Islands early Monday. Ian will then move near or over western Cuba Monday night and early Tuesday and emerge over the southeastern Gulf of Mexico on Tuesday. Maximum sustained winds are near 50 mph (85 km/h) with higher gusts. Rapid strengthening is forecast to begin later today. Ian is expected to become a hurricane later today or tonight and reach major hurricane strength by late Monday or Monday night before it reaches western Cuba. Tropical-storm-force winds extend outward up to 60 miles (95 km) from the center. The estimated minimum central pressure is 1001 mb (29.56 inches) based on NOAA Hurricane Hunter dropsonde data.

WIND: Hurricane conditions are expected to reach Grand Cayman by early Monday, with tropical storm conditions expected by tonight. Tropical storm conditions are possible on Little Cayman and Cayman Brac by tonight or early Monday. Hurricane conditions are possible within the hurricane watch area in Cuba by Monday night or early Tuesday, with tropical storm conditions possible by late Monday. Tropical storm conditions are possible within the tropical storm watch area in Cuba Monday night and Tuesday.

RAINFALL: Tropical Storm Ian is expected to produce the following rainfall:

Jamaica and the Cayman Islands: 3 to 6 inches, with local maxima up to 8 inches.

Western Cuba: 4 to 8 inches, with local maxima up to 12 inches.

Florida Keys to the southern and western Florida Peninsula: 2 to 4 inches, with local maxima up to 6 inches through Wednesday morning.

These rains may produce flash flooding and mudslides in areas of higher terrain, particularly over Jamaica and Cuba. Flash and urban flooding is possible with rainfall across the Florida Keys and the Florida peninsula through mid week. Additional flooding and rises on area streams and rivers across northern Florida and parts of the Southeast cannot be ruled out, especially in central Florida given already saturated antecedent conditions.

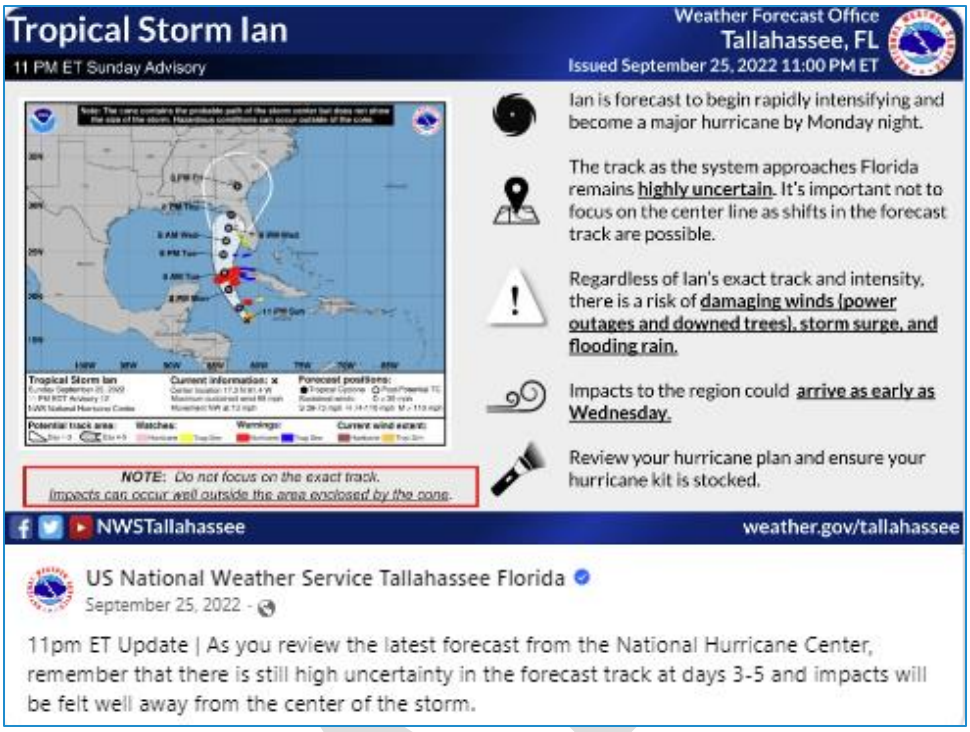
STORM SURGE: Storm surge could raise water levels by as much as 9 to 14 feet above normal tide levels along the coast of western Cuba in areas of onshore winds in the watch area Monday night and early Tuesday.

Storm surge could raise water levels by as much as 2 to 4 feet above normal tide levels along the immediate coast in areas of onshore winds in the Cayman Islands Sunday night into Monday.

Localized coastal flooding is possible along the coast of Jamaica in areas of onshore winds on Sunday.

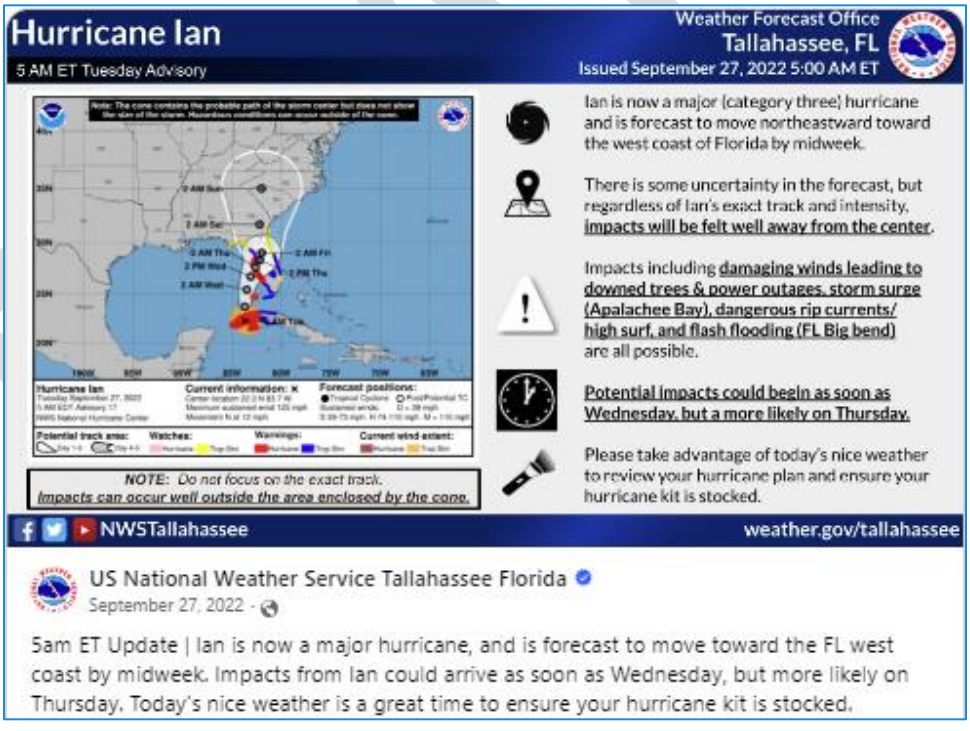
SURF: Swells generated by Ian are affecting Jamaica and will spread to the Cayman Islands later today. Swells will then spread northwestward to the southwestern coast of Cuba and the coasts of Honduras, Belize, and the Yucatan Peninsula of Mexico Monday and Monday night. These swells are likely to cause life-threatening surf and rip current conditions. Please consult products from your local weather office.

Next complete advisory at 1100 AM EDT. hurricanes.gov/#Ian



US National Weather Service Tallahassee Florida
September 25, 2022 -

11pm ET Update | As you review the latest forecast from the National Hurricane Center, remember that there is still high uncertainty in the forecast track at days 3-5 and impacts will be felt well away from the center of the storm.



US National Weather Service Tallahassee Florida
September 27, 2022 -

5am ET Update | Ian is now a major hurricane, and is forecast to move toward the FL west coast by midweek. Impacts from Ian could arrive as soon as Wednesday, but more likely on Thursday. Today's nice weather is a great time to ensure your hurricane kit is stocked.

NOAA NWS National Hurricane Center

September 26, 2022

...IAN FORECAST TO CONTINUE RAPIDLY STRENGTHENING...
...CONDITIONS IN WESTERN CUBA TO DETERIORATE THIS EVENING AND TONIGHT WITH SIGNIFICANT WIND AND STORM SURGE IMPACTS EXPECTED...

At 1100 AM EDT, the center of Hurricane Ian was located about 100 miles west of Grand Cayman. Ian is moving toward the northwest near 13 mph (20 km/h). A north-northwestward motion is expected to begin later today, followed by a northward motion on Tuesday with a slightly slower forward speed. A turn toward the north-northeast with a further reduction in forward speed is forecast on Wednesday. On the forecast track, the center of Ian is expected to pass near or west of the Cayman Islands today, and near or over western Cuba tonight and early Tuesday. Ian will then emerge over the southeastern Gulf of Mexico on Tuesday, pass west of the Florida Keys late Tuesday, and approach the west coast of Florida on Wednesday into Thursday.

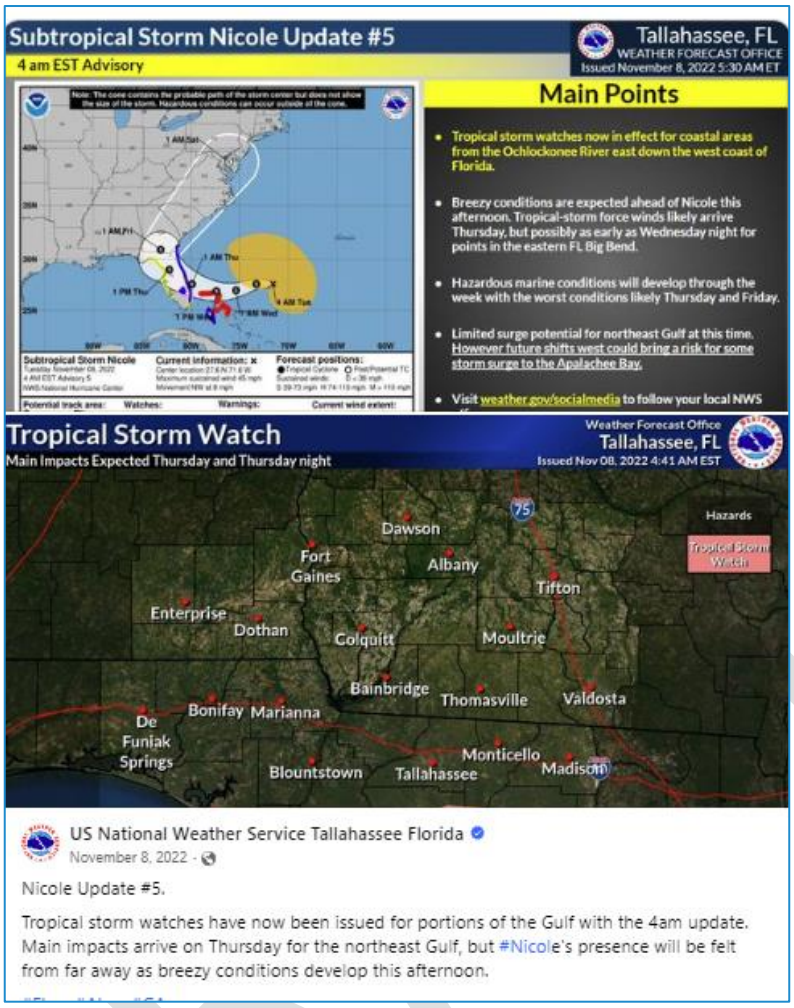
Maximum sustained winds have increased to near 80 mph (130 km/h) with higher gusts. Rapid strengthening is expected during the next day or so, and Ian is forecast to become a major hurricane tonight or early Tuesday when it is near western Cuba and remain a major hurricane over the southeastern Gulf of Mexico on Wednesday.

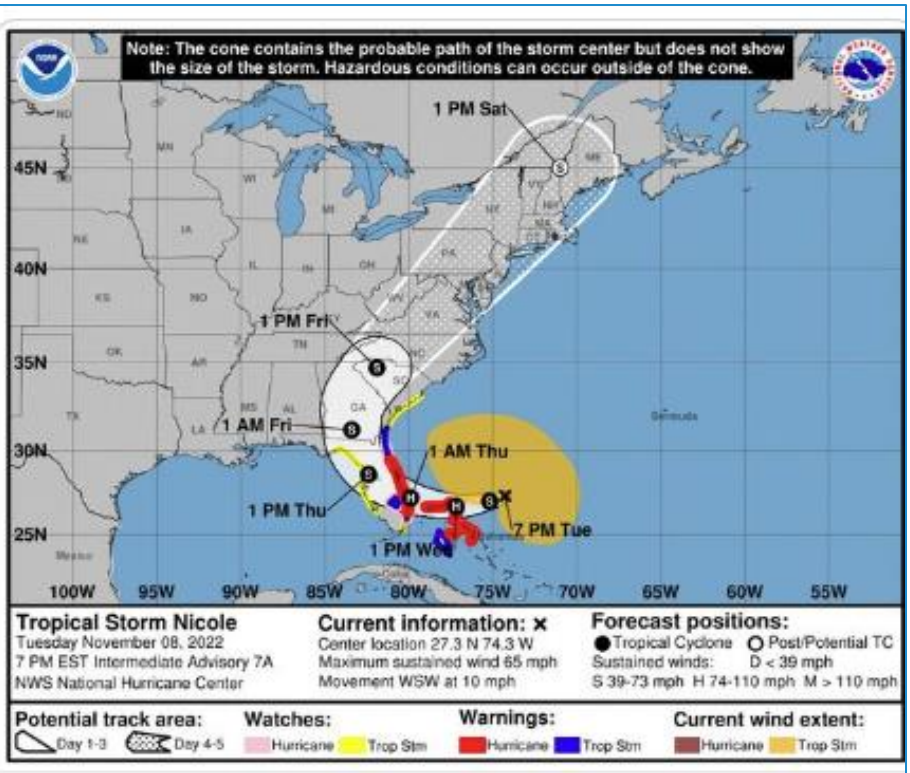
Hurricane-force winds extend outward up to 25 miles (35 km) from the center and tropical-storm-force winds extend outward up to 115 miles (185 km).

The minimum central pressure based on Air Force and NOAA Hurricane Hunter aircraft data is 980 mb (28.94 inches).

Visit the National Hurricane Center website at hurricanes.gov for additional forecast information on Ian.

The next intermediate advisory will be at 2:00 PM EDT, followed by the next complete advisory at 5:00 PM EDT.


Subtropical Storm Nicole Update #5
4 am EST Advisory
Tallahassee, FL
WEATHER FORECAST OFFICE
Issued November 8, 2022 5:30 AM ET
Main Points
Tropical storm watches now in effect for coastal areas from the Ochlockonee River east down the west coast of Florida.
Breezy conditions are expected ahead of Nicole this afternoon. Tropical-storm force winds likely arrive Thursday, but possibly as early as Wednesday night for points in the eastern FL Big Bend.
Hazardous marine conditions will develop through the week with the worst conditions likely Thursday and Friday.
Limited surge potential for northeast Gulf at this time. However future shifts west could bring a risk for some storm surge to the Apalachee Bay.
Visit weather.gov/socialmedia to follow your local NWS
Tropical Storm Watch
Main Impacts Expected Thursday and Thursday night
Weather Forecast Office
Tallahassee, FL
Issued Nov 08, 2022 4:41 AM EST
Hazards
Tropical Storm Watch
Dawson
Fort Gaines
Albany
Tifton
Enterprise
Dothan
Colquitt
Moultrie
Bainbridge
Thomasville
Valdosta
Bonifay
Marianna
De Funiak Springs
Monticello
Blountstown
Tallahassee
Madison
US National Weather Service Tallahassee Florida
November 8, 2022 ·
Nicole Update #5.
Tropical storm watches have now been issued for portions of the Gulf with the 4am update. Main impacts arrive on Thursday for the northeast Gulf, but #Nicole's presence will be felt from far away as breezy conditions develop this afternoon.



NOAA NWS National Hurricane Center
November 8, 2022 -

...NICOLE LIKELY TO BECOME A HURRICANE BY WEDNESDAY...

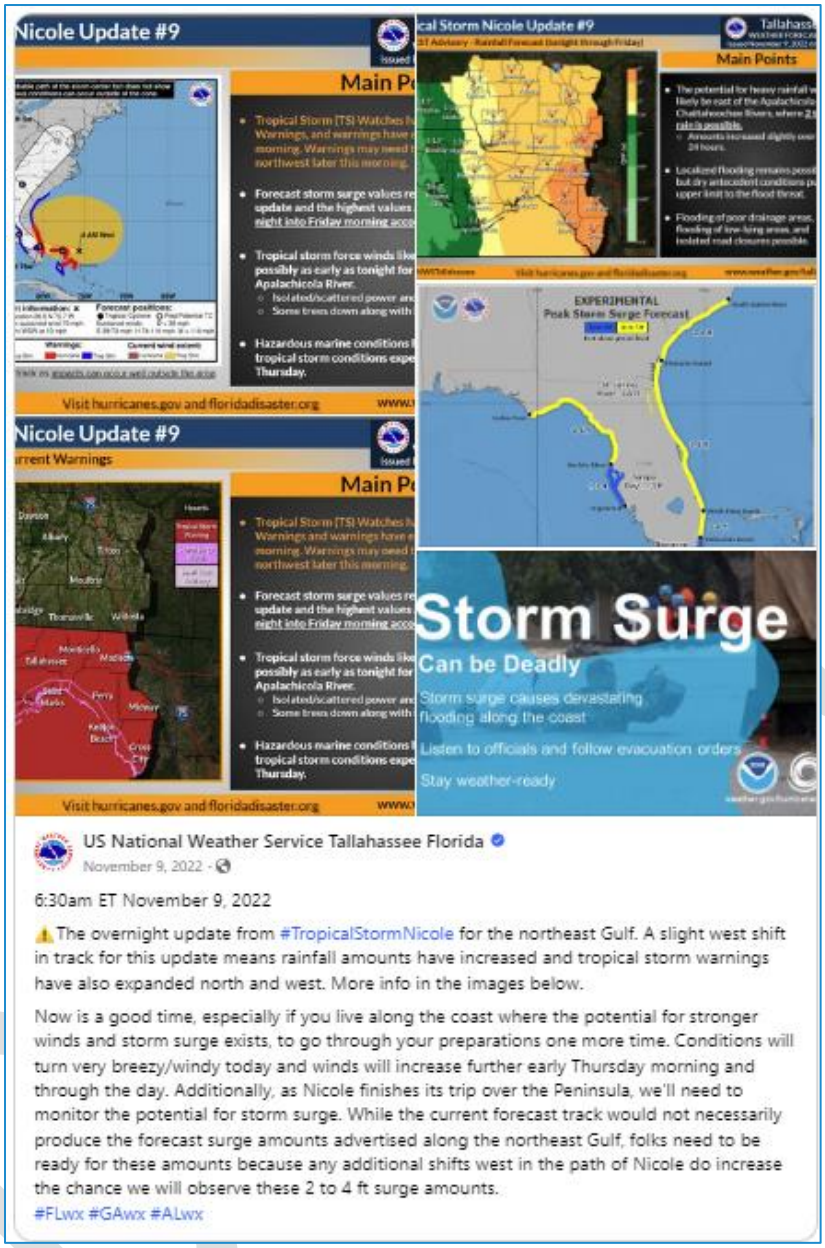
At 700 PM EST (0000 UTC), the center of Tropical Storm Nicole was about 250 miles (400 km) northeast of the northwestern Bahamas. Nicole is moving toward the west-southwest near 10 mph (17 km/h). A west-southwestward motion is expected through early Wednesday. A westward to west-northwest motion is forecast to begin later on Wednesday, followed by a turn toward the northwest and north-northwest on Thursday and Thursday night. On the forecast track, the center of Nicole will approach the northwestern Bahamas tonight, move near or over those islands on Wednesday, and approach the east coast of Florida within the hurricane warning area Wednesday night or early Thursday. Nicole's center is then expected to move across central and northern Florida into southern Georgia Thursday and Thursday night.

Maximum sustained winds are near 65 mph (100 km/h) with higher gusts. Some strengthening is expected during the next day or so, and Nicole is forecast to become a hurricane by Wednesday when it is near the northwestern Bahamas, and remain a hurricane when it reaches the east coast of Florida.

Nicole is a large tropical cyclone. Tropical-storm-force winds extend outward up to 380 miles (610 km) from the center. The minimum central pressure reported by a NOAA Hurricane Hunter aircraft is 984 mb (29.06 inches).

Next complete advisory at 1000 PM EST.
For the latest information, please visit: www.hurricanes.gov/#Nicole


10pm update on TS Nicole
cal Storm Nicole Update #8
EST Advisory
Tallahasse
WEATHER FORECA
Issued November 8, 2022 10
Main Points
Changes from the previous advisory:
Storm Surge Watch expanded west to include
Pass for 2-4ft of inundation.
Storm surge potential could still expand farther w
a western shift in the track of Nicole.
Tropical-storm force winds likely arrive Thursday,
possibly as early as Wednesday night for points m
east of the Apalachicola River.
Hazardous marine conditions develop tonight wit
worsening conditions expected Wednesday & Thu
Rainfall amounts ranging from 2-4in across the so
Big Bend. Amounts of 1-2in possible west of the
Apalachicola River. Isolated higher amounts possi
o not focus on the exact track as impacts can occur well outside the
osed by the cone
NWSTallahassee
Visit hurricanes.gov and floridadisaster.org
www.weather.gov/tall
Tropical Storm and Storm Surge Watches
Forecast Rainfall Amounts
US National Weather Service Tallahassee Florida
November 8, 2022 -
11/8/22 #TropicalStormNicole 10PM ET Advisory Update
Main change in this update is the expansion of the Storm Surge Watch to the west towards Indian Pass. Tropical Storm force winds and heavy rain are most likely to arrive on Thursday.
#FLwx #GAwx



US National Weather Service Tallahassee Florida
November 9, 2022 ·

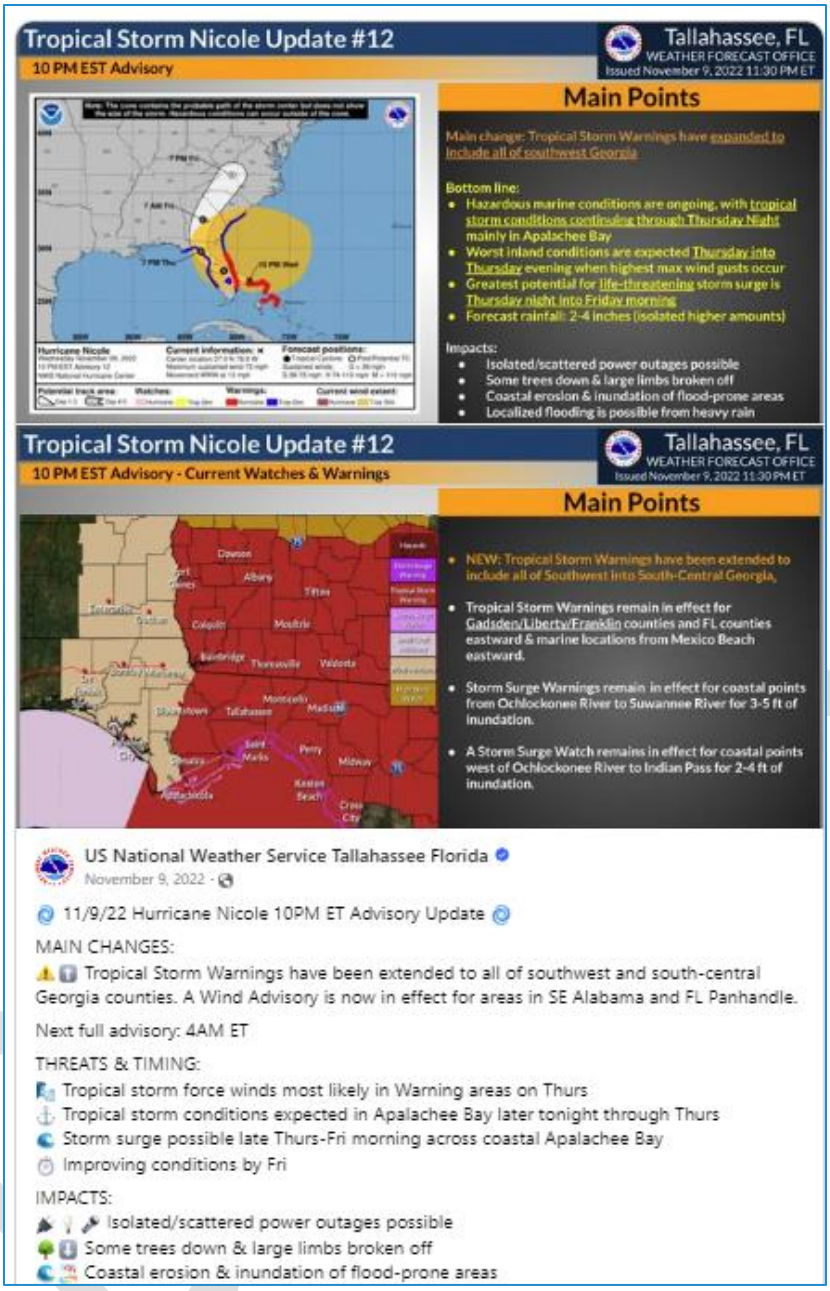
6:30am ET November 9, 2022

⚠️The overnight update from #TropicalStormNicole for the northeast Gulf. A slight west shift in track for this update means rainfall amounts have increased and tropical storm warnings have also expanded north and west. More info in the images below.

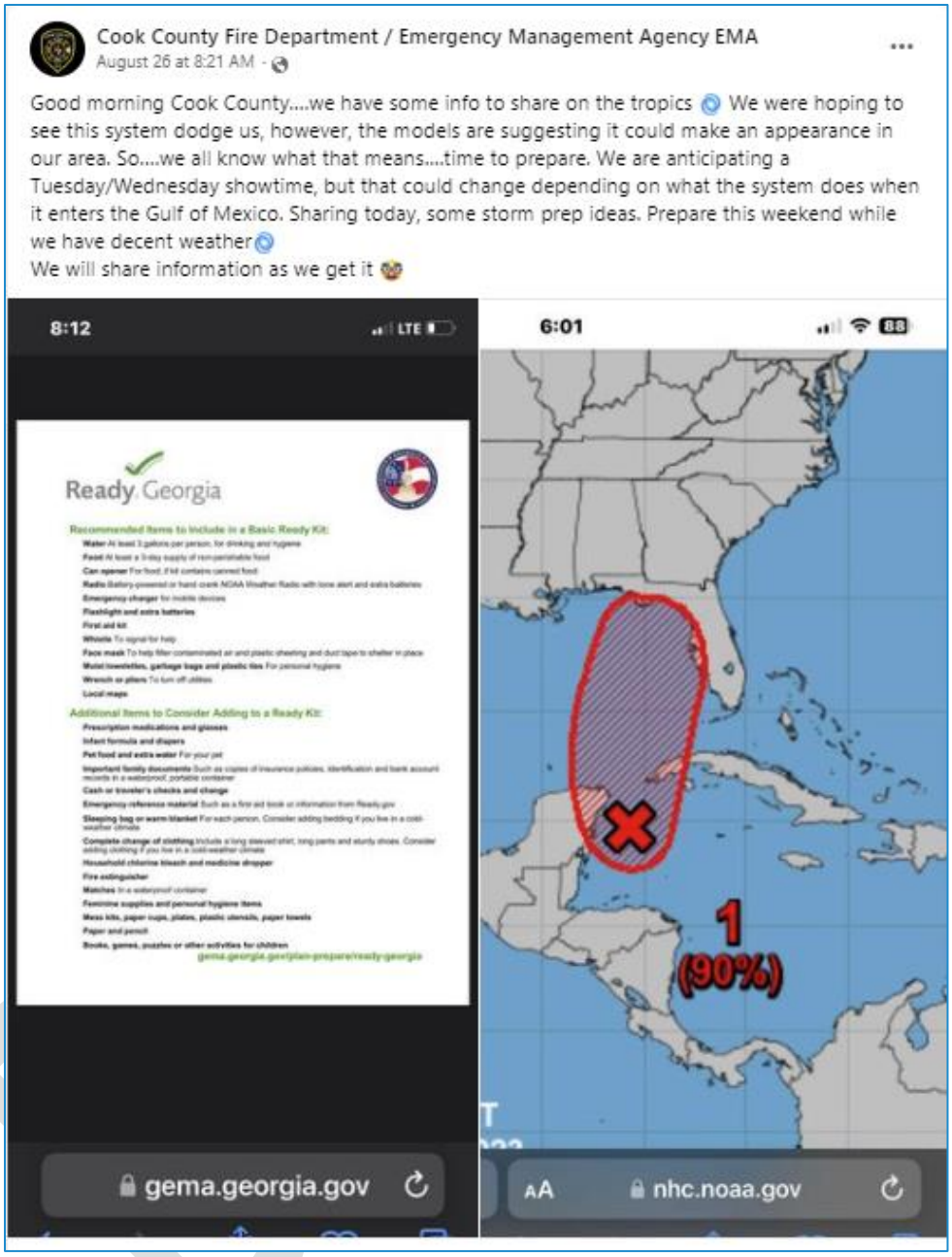
Now is a good time, especially if you live along the coast where the potential for stronger winds and storm surge exists, to go through your preparations one more time. Conditions will turn very breezy/windy today and winds will increase further early Thursday morning and through the day. Additionally, as Nicole finishes its trip over the Peninsula, we'll need to monitor the potential for storm surge. While the current forecast track would not necessarily produce the forecast surge amounts advertised along the northeast Gulf, folks need to be ready for these amounts because any additional shifts west in the path of Nicole do increase the chance we will observe these 2 to 4 ft surge amounts.

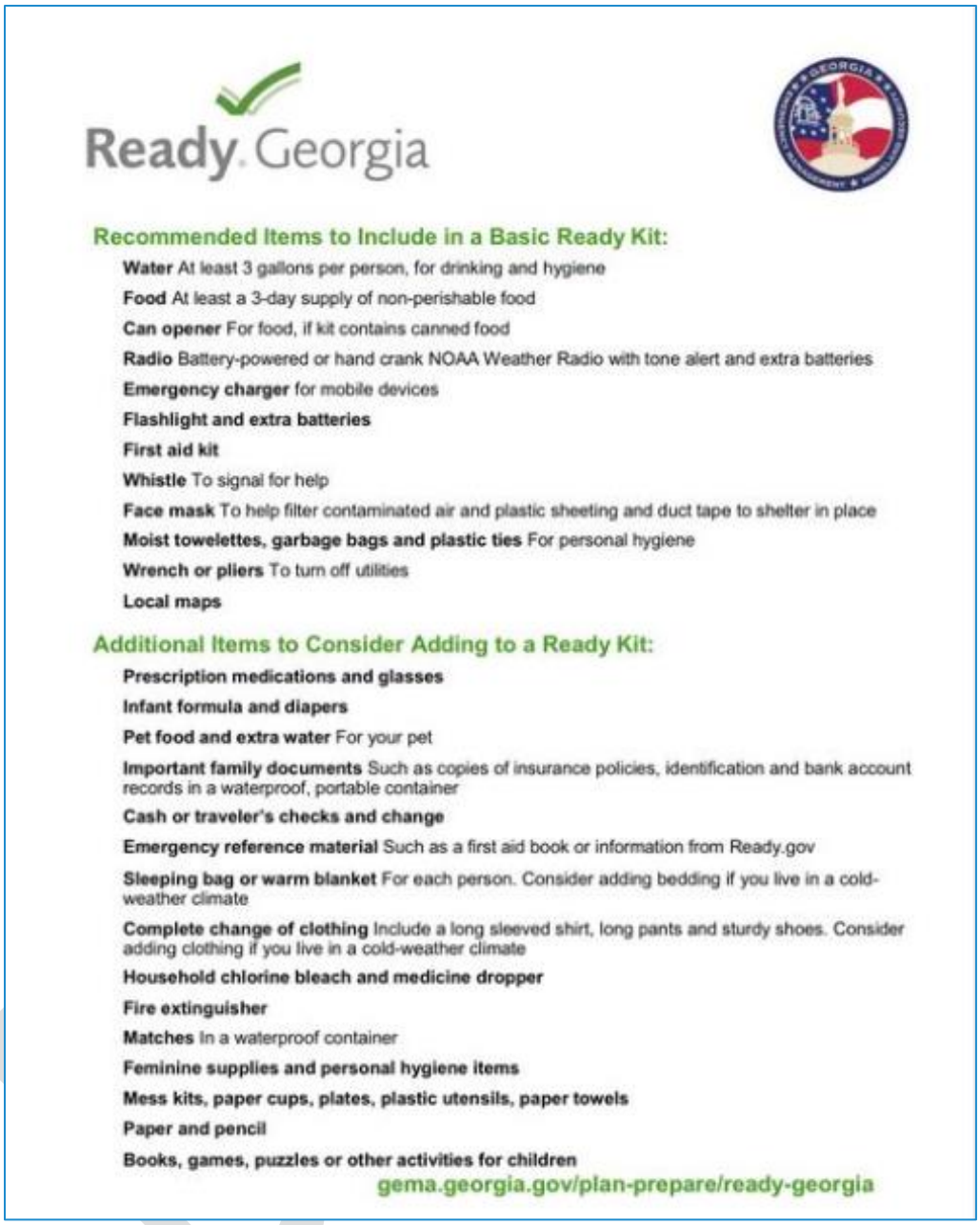
#FLwx #GAwx #ALwx


cal Storm Nicole Update #11
ST Advisory
Tallahasse
WEATHER FORECA
Issued November 9, 2022 5:
Main Points
Main change: Tropical Storm Warnings have expande
further into southwest Georgia
Bottom line:
Breezy conditions will continue to precede Nicole
tonight with gusts of 20-30 mph.
Hazardous marine conditions are ongoing, with tr
conditions expected tonight mainly in Apalachee
Worst inland conditions are expected Thursday in
Thursday evening when highest max wind gusts o
Greatest potential for life-threatening storm surg
Thursday night into Friday morning
Forecast rainfall: 2-4 inches (isolated higher amou
Impacts:
Isolated/scattered power outages possible
Some trees down & large limbs broken off
Coastal erosion & inundation of flood-prone a
Localized flooding is possible from heavy rain
Current information:
Forecast positions:
Watches:
Warnings:
Current wind extent:
NWSTallahassee
Visit hurricanes.gov and floridadisaster.org
www.weather.gov/tall
cal Storm Nicole Update #11
Main Points
cal Storm Nicole Update #11
Main Points
US National Weather Service Tallahassee Florida
November 9, 2022 ·
11/9/22 Tropical Storm Nicole 4PM ET Advisory Update
MAIN CHANGES:
Tropical Storm Warnings have been extended to include more south-central Georgia counties.
Next full advisory: 10PM ET
THREATS & TIMING:
Tropical storm force winds most likely in Warning areas on Thurs
Tropical storm conditions expected in Apalachee Bay tonight & Thurs
Storm surge possible late Thurs-Fri morning across coastal Apalachee Bay
Improving conditions by Fri
IMPACTS:
Isolated/scattered power outages possible
Some trees down & large limbs broken off
Coastal erosion & inundation of flood-prone areas


Tropical Storm Nicole Update #12
10 PM EST Advisory
Tallahassee, FL
WEATHER FORECAST OFFICE
Issued November 9, 2022 11:30 PM ET
Main Points
Main change: Tropical Storm Warnings have expanded to include all of southwest Georgia
Bottom line:
Hazardous marine conditions are ongoing, with tropical storm conditions continuing through Thursday Night mainly in Apalachee Bay
Worst inland conditions are expected Thursday into Thursday evening when highest max wind gusts occur
Greatest potential for life-threatening storm surge is Thursday night into Friday morning
Forecast rainfall: 2-4 inches (isolated higher amounts)
Impacts:
Isolated/scattered power outages possible
Some trees down & large limbs broken off
Coastal erosion & inundation of flood-prone areas
Localized flooding is possible from heavy rain
Tropical Storm Nicole Update #12
10 PM EST Advisory - Current Watches & Warnings
Tallahassee, FL
WEATHER FORECAST OFFICE
Issued November 9, 2022 11:30 PM ET
Main Points
NEW: Tropical Storm Warnings have been extended to include all of Southwest into South-Central Georgia,
Tropical Storm Warnings remain in effect for Gadsden/Liberty/Franklin counties and FL counties eastward & marine locations from Mexico Beach eastward.
Storm Surge Warnings remain in effect for coastal points from Ochlockonee River to Suwannee River for 3-5 ft of inundation.
A Storm Surge Watch remains in effect for coastal points west of Ochlockonee River to Indian Pass for 2-4 ft of inundation.
Dawson
Albany
Tifton
Moultrie
Thomasville
Valdosta
Tallahassee
Madison
Perry
Midway
Keaton Beach
US National Weather Service Tallahassee Florida
November 9, 2022 -
11/9/22 Hurricane Nicole 10PM ET Advisory Update
MAIN CHANGES:
Tropical Storm Warnings have been extended to all of southwest and south-central Georgia counties. A Wind Advisory is now in effect for areas in SE Alabama and FL Panhandle.
Next full advisory: 4AM ET
THREATS & TIMING:
Tropical storm force winds most likely in Warning areas on Thurs
Tropical storm conditions expected in Apalachee Bay later tonight through Thurs
Storm surge possible late Thurs-Fri morning across coastal Apalachee Bay
Improving conditions by Fri
IMPACTS:
Isolated/scattered power outages possible
Some trees down & large limbs broken off
Coastal erosion & inundation of flood-prone areas


cal Storm Nicole Update #13
ST Advisory
Tallahasse
WEATHER FORECA
Issued November 10, 2022
Main Points
Main change: Tropical Storm Nicole is now inland ove
Peninsula. Tropical Storm Warnings are in effect thro
Friday Morning.
Bottom line:
Hazardous marine conditions are ongoing, with tr
storm conditions continuing through tonight mair
Apalachee Bay
Worst inland conditions are expected today throu
evening when highest max wind gusts are expecte
occur
Greatest potential for life-threatening storm surg
tonight into Friday morning
Forecast rainfall: 2-3 inches (isolated higher amou
Impacts:
Isolated/scattered power outages possible
Some trees down & large limbs broken off
Coastal erosion & inundation of flood-prone a
Localized flooding is possible from heavy rain
1 PM Fri
1 AM Fri
4 AM Thu
Storm Nicole
Current information:
Forecast positions:
Watches:
Warnings:
Current wind extent:
o not focus on the exact track as impacts can occur well outside the area
by the cone
NWSTallahassee
Visit hurricanes.gov and floridadisaster.org
www.weather.gov/tall
cal Storm Nicole Update #13
Main Points
cal Storm Nicole Update #13
Main Points
US National Weather Service Tallahassee Florida
November 10, 2022 -
11/10/22 Tropical Storm Nicole 4AM ET Advisory Update
MAIN CHANGES:
Tropical Storm Nicole is now inland over the FL Peninsula. TS Warnings are in effect
through Friday Morning.
Next full advisory: 10AM ET
THREATS & TIMING:
Tropical storm force winds most likely in Warning areas this afternoon through tonight
Tropical storm conditions expected in Apalachee Bay through the day today
Storm surge possible late tonight into Friday morning across coastal Apalachee Bay
Improving conditions by Fri
IMPACTS:
Isolated/scattered power outages possible
Some trees down & large limbs broken off
Coastal erosion & inundation of flood-prone areas
#FLwx #GAwx #ALwx


Cook County Fire Department / Emergency Management Agency EMA
August 26 at 8:21 AM
Good morning Cook County....we have some info to share on the tropics We were hoping to see this system dodge us, however, the models are suggesting it could make an appearance in our area. So....we all know what that means....time to prepare. We are anticipating a Tuesday/Wednesday showtime, but that could change depending on what the system does when it enters the Gulf of Mexico. Sharing today, some storm prep ideas. Prepare this weekend while we have decent weather
We will share information as we get it
8:12
LTE
Ready Georgia
Recommended Items to Include in a Basic Ready Kit:
Additional Items to Consider Adding to a Ready Kit:
gema.georgia.gov
6:01
1
(90%)
AA
nhc.noaa.gov



Ready. Georgia

Recommended Items to Include in a Basic Ready Kit:

Water At least 3 gallons per person, for drinking and hygiene

Food At least a 3-day supply of non-perishable food

Can opener For food, if kit contains canned food

Radio Battery-powered or hand crank NOAA Weather Radio with tone alert and extra batteries

Emergency charger for mobile devices

Flashlight and extra batteries

First aid kit

Whistle To signal for help

Face mask To help filter contaminated air and plastic sheeting and duct tape to shelter in place

Moist towelettes, garbage bags and plastic ties For personal hygiene

Wrench or pliers To turn off utilities

Local maps

Additional Items to Consider Adding to a Ready Kit:

Prescription medications and glasses

Infant formula and diapers

Pet food and extra water For your pet

Important family documents Such as copies of insurance policies, identification and bank account records in a waterproof, portable container

Cash or traveler's checks and change

Emergency reference material Such as a first aid book or information from Ready.gov

Sleeping bag or warm blanket For each person. Consider adding bedding if you live in a cold-weather climate

Complete change of clothing Include a long sleeved shirt, long pants and sturdy shoes. Consider adding clothing if you live in a cold-weather climate

Household chlorine bleach and medicine dropper

Fire extinguisher

Matches In a waterproof container

Feminine supplies and personal hygiene items

Mess kits, paper cups, plates, plastic utensils, paper towels

Paper and pencil

Books, games, puzzles or other activities for children

gema.georgia.gov/plan-prepare/ready-georgia


Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.
1 PM Thu
1 PM Wed
1 PM Tue
1 AM Tue
1 AM Mon
1 PM Mon
4 PM Sat
1 PM Sun
35N
30N
25N
20N
100W
95W
90W
85W
80W
75W
70W
65W
Tropical Depression Ten
Saturday August 26, 2023
4 PM CDT Advisory 1
NWS National Hurricane Center
Current information:
Center location 21.1 N 86.1 W
Maximum sustained wind 30 mph
Movement: Stationary
Forecast positions:
Tropical Cyclone
Post/Potential TC
Sustained winds:
D < 39 mph
S 39-73 mph H 74-110 mph M > 110 mph
Potential track area:
Day 1-3
Day 4-5
Watches:
Hurricane
Trop Stm
Warnings:
Hurricane
Trop Stm
Current wind field estimate:
Hurricane
Trop Stm

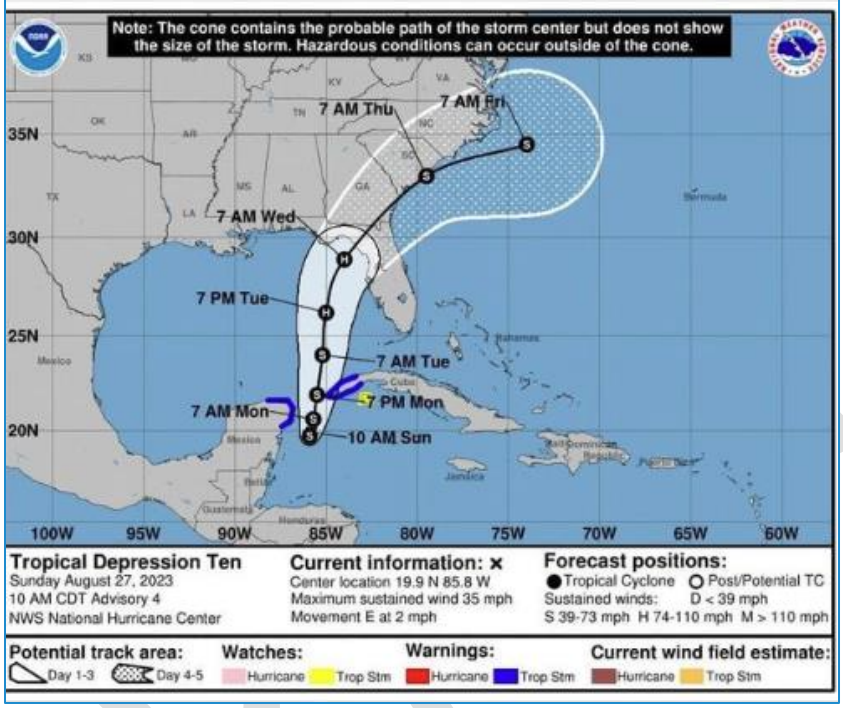
DRAFT

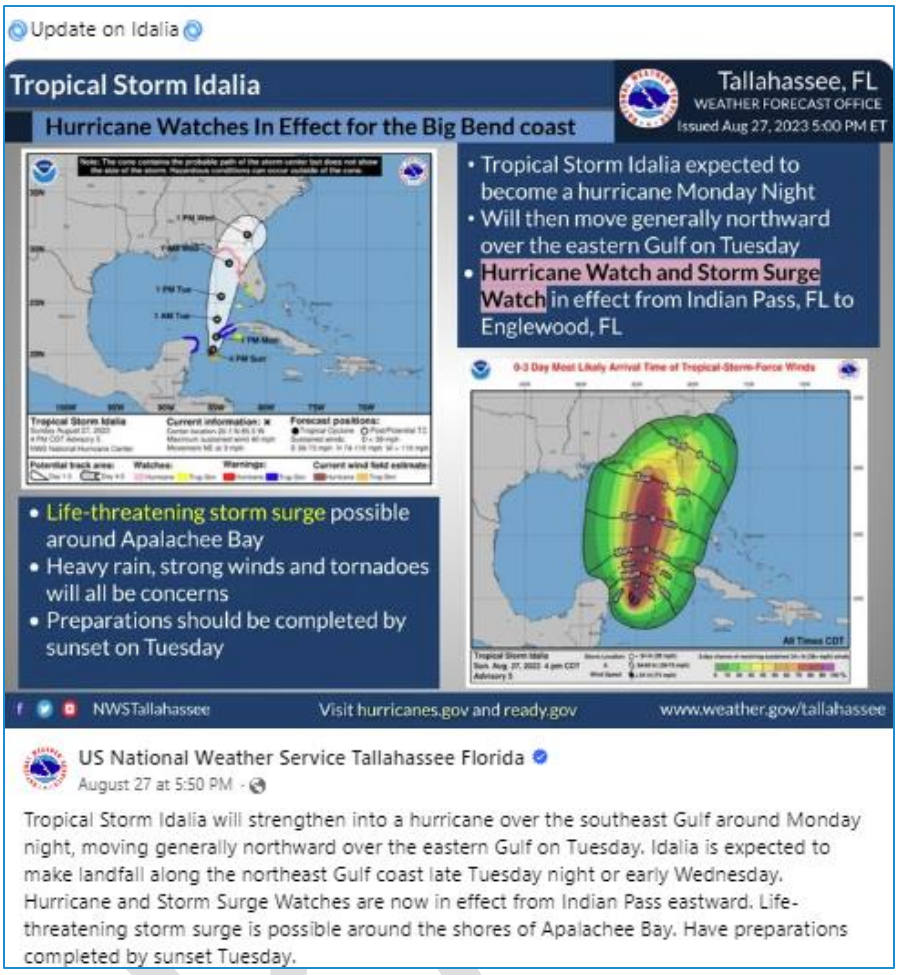
11am update

As quick as this post was posted, received an update....we have a named storm...."Idalia" has reached 40mph winds which puts her as a Tropical Storm.

The 11am update bumped the track slightly to the east again, which is good for our area. This prediction by the National Hurricane Center was calculated using computer models and it is likely to continue to change as the system evolves. It could move in any direction within the "cone".

Our area is still within the "cone" so we should continue to prepare. As this storm grows and intensifies, it's track most likely will move several more times. ALWAYS HAVE A PLAN!





US National Weather Service Tallahassee Florida
August 27 at 5:50 PM ·

Tropical Storm Idalia will strengthen into a hurricane over the southeast Gulf around Monday night, moving generally northward over the eastern Gulf on Tuesday. Idalia is expected to make landfall along the northeast Gulf coast late Tuesday night or early Wednesday. Hurricane and Storm Surge Watches are now in effect from Indian Pass eastward. Life-threatening storm surge is possible around the shores of Apalachee Bay. Have preparations completed by sunset Tuesday.

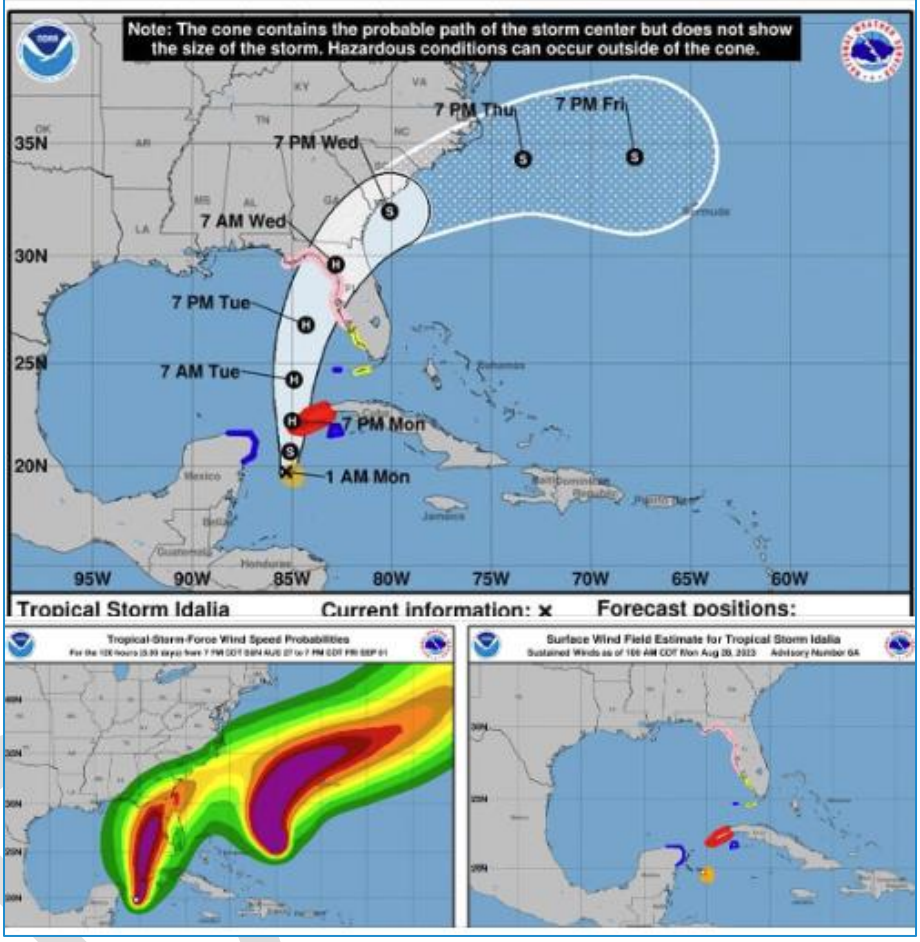
DRAFT

Idalia update

She has shifted again (thankfully) and is expected to reach a CAT3 status at landfall. Our neighbors to our south will have a very serious situation when she gets there.

The impacts of a direct hit from Idalia have lessened according to the new path forecast by the NHC. We are NOT saying the threat is gone! Heavy rain and 20-30mph winds are still expected for our area.

The threat of extreme weather is decreasing for our area. We are carefully watching this storm, it is changing rapidly! We will continue to share info as we get it



US National Weather Service Tallahassee Florida
August 28 at 12:25 PM ·

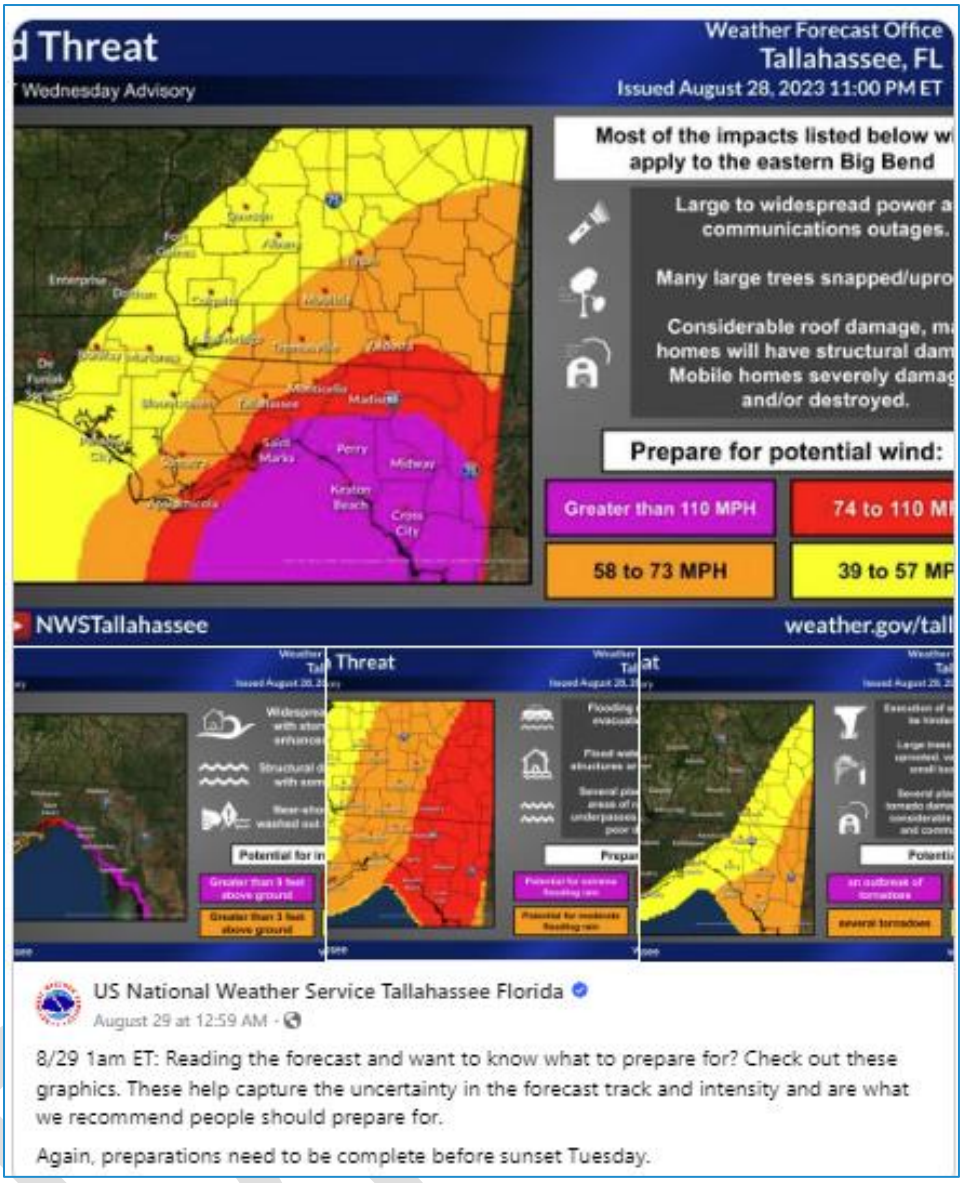
August 28th 11am Advisory

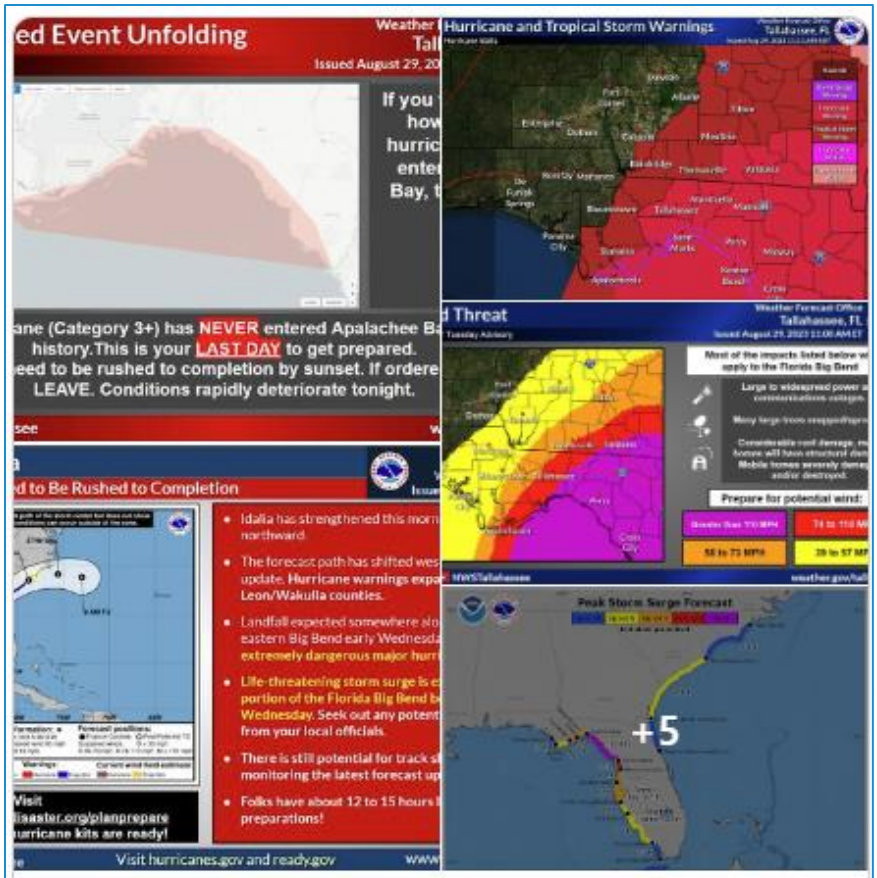
11am Aug 28th - Update from the National Hurricane Center. #Idalia remains a tropical storm, and aside from a slight westward shift in the forecast track, most of the forecast remains the same. It is now starting to move north and rapid strengthening is expected on Tuesday.

Preparations along the Panhandle and Big Bend need to be started today if you have not begun. Additionally, impacts will be felt well beyond the center of the storm so it's not the time to let your guard down despite any forecast changes from 24 hours ago.

Main impacts will begin late Tuesday night with the main event being on Wednesday. Preparations should be complete by Tuesday evening as rain and tornado potential should begin to increase by that time across the area.

The wind and storm surge will be the most significant impacts from #Idalia. The storm surge impacts will be significant and life threatening. Listen to the advice of emergency management. If ordered to evacuate, follow their instructions. Doing so, could save your life.


d Threat
Weather Forecast Office
Tallahassee, FL
Wednesday Advisory
Issued August 28, 2023 11:00 PM ET
Most of the impacts listed below w
apply to the eastern Big Bend
Large to widespread power a
communications outages.
Many large trees snapped/upro
Considerable roof damage, m
homes will have structural dam
Mobile homes severely damag
and/or destroyed.
Prepare for potential wind:
Greater than 110 MPH
74 to 110 MI
58 to 73 MPH
39 to 57 MP
NWSTallahassee
weather.gov/tall
Threat
US National Weather Service Tallahassee Florida
August 29 at 12:59 AM
8/29 1am ET: Reading the forecast and want to know what to prepare for? Check out these graphics. These help capture the uncertainty in the forecast track and intensity and are what we recommend people should prepare for.
Again, preparations need to be complete before sunset Tuesday.



US National Weather Service Tallahassee Florida

August 29 at 11:36 AM -

11am UPDATE August 29, 2023 for #Idalia from the NWS in Tallahassee and the National Hurricane Center.

Hurricane Idalia will likely be an unprecedented event for many locations in the Florida Big Bend. Looking back through recorded history, NO major hurricanes have ever moved through the Apalachee Bay. When you try to compare this storm to others, DON'T. No one has seen this.

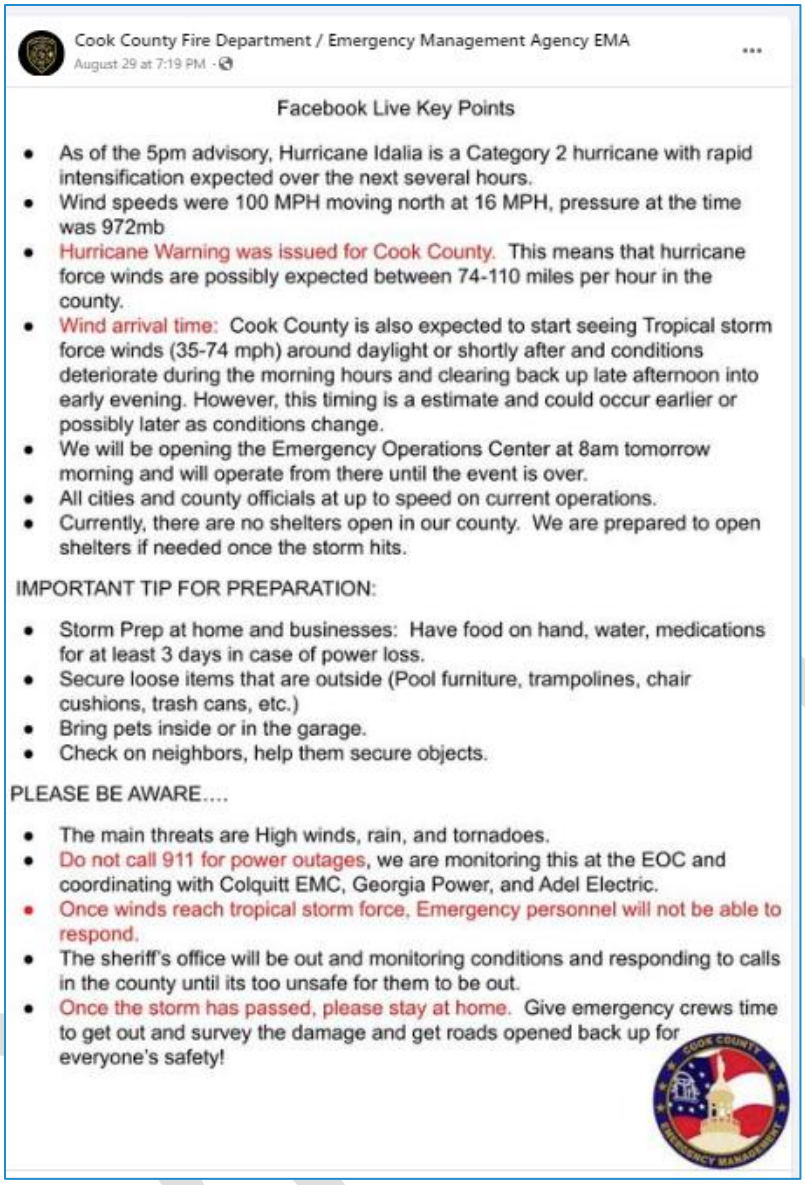
Idalia is strengthening and rapid intensification is still forecast to occur today and into landfall sometime Wednesday morning. A slight west shift in the track did occur but users are reminded to not focus on the center, impacts will occur over a large area.

Every storm brings different impacts and Idalia is no exception. Here is what you should be prepared for in terms of the wind threat. Strongest winds are likely beginning early Wednesday morning, spreading inland through the day. You have less than 15 hours to finish prep.

Heavy rainfall and the potential for tornadoes are forecast as well. The threats for these hazards will be greatest generally along and east of where Idalia will travel. Rain begins to move in tonight and the tornado threat will increase early Wednesday morning.

Finally the surge threat. If you are ordered to evacuate, do NOT take that order lightly. Life threatening surge will begin to develop later tonight and especially on Wednesday morning and afternoon as Idalia moves in. These values will likely make escape routes impassable.


d to Be Rushed to Completion
Idalia continues to strengthen and
intensify this evening.
The forecast path shifted west aga
Hurricane warnings expanded no
storm warnings expanded north a
Landfall expected somewhere alon
Bend early Wednesday morning as
dangerous major hurricane.
Life-threatening storm surge is ex
portion of the Florida Big Bend be
Wednesday. Seek out any potentia
from your local officials.
Expect tropical/hurricane conditi
tonight into early Wednesday mo
and spread inland through the da
Folks need to rush to complete pr
Visit
isaster.org/planprepare
urricane kits are ready!
Visit hurricanes.gov and ready.gov
Warnings in Effect
Tallahassee
Dawson
Fort Gaines
Albany
Tifton
Enterprise
Dothan
Colquitt
Moultrie
Bainbridge
Thomasville
Valdosta
Bonifay
Marianna
De Funiak Springs
Monticello
Madison
Blountstown
Tallahassee
Panama City
Saint Marks
Perry
Sumatra
Midway
Keaton Beach
Apalachicola
Cross City
d Threat
Tallahassee, FL
Prepare for potential wind:
Peak Storm Surge Forecast
e Threat
Tallahassee, FL
+5
Potential for inundation of:
US National Weather Service Tallahassee Florida
August 29 at 5:45 PM
5pm - August 29 #Idalia Update. Another slight shift west in the track with this update has meant an expansion of warnings into portions of Georgia. Besides a slight west expansion of higher surge values, forecast impacts have largely remained the same.
With the shift west in track, we've seen rainfall amounts shift west with this advisory. Most folks should be ready for rainfall amounts of 5 to 8 inches, especially along and east of the center. Isolated higher amounts possible! A flood watch is in effect among other hazards.
There were small changes in the threats/impacts. Mostly w/storm surge potential and rainfall potential due to the slight westward shift in the track this evening. Please see these graphics and finish your preparations for these potential impacts TONIGHT!



Cook County Fire Department / Emergency Management Agency EMA
August 29 at 7:19 PM

Facebook Live Key Points

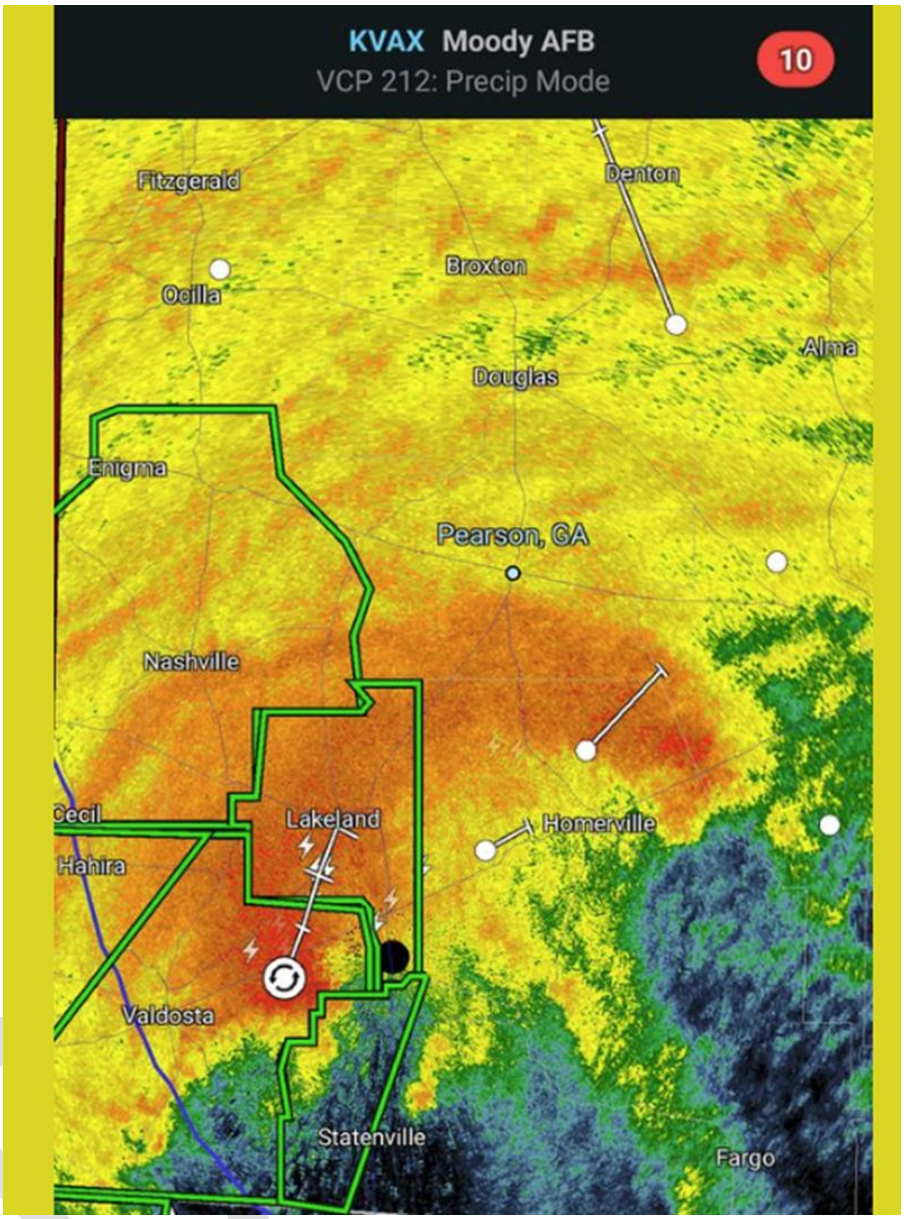
- As of the 5pm advisory, Hurricane Idalia is a Category 2 hurricane with rapid intensification expected over the next several hours.
- Wind speeds were 100 MPH moving north at 16 MPH, pressure at the time was 972mb
- Hurricane Warning was issued for Cook County. This means that hurricane force winds are possibly expected between 74-110 miles per hour in the county.
- Wind arrival time: Cook County is also expected to start seeing Tropical storm force winds (35-74 mph) around daylight or shortly after and conditions deteriorate during the morning hours and clearing back up late afternoon into early evening. However, this timing is a estimate and could occur earlier or possibly later as conditions change.
- We will be opening the Emergency Operations Center at 8am tomorrow morning and will operate from there until the event is over.
- All cities and county officials at up to speed on current operations.
- Currently, there are no shelters open in our county. We are prepared to open shelters if needed once the storm hits.

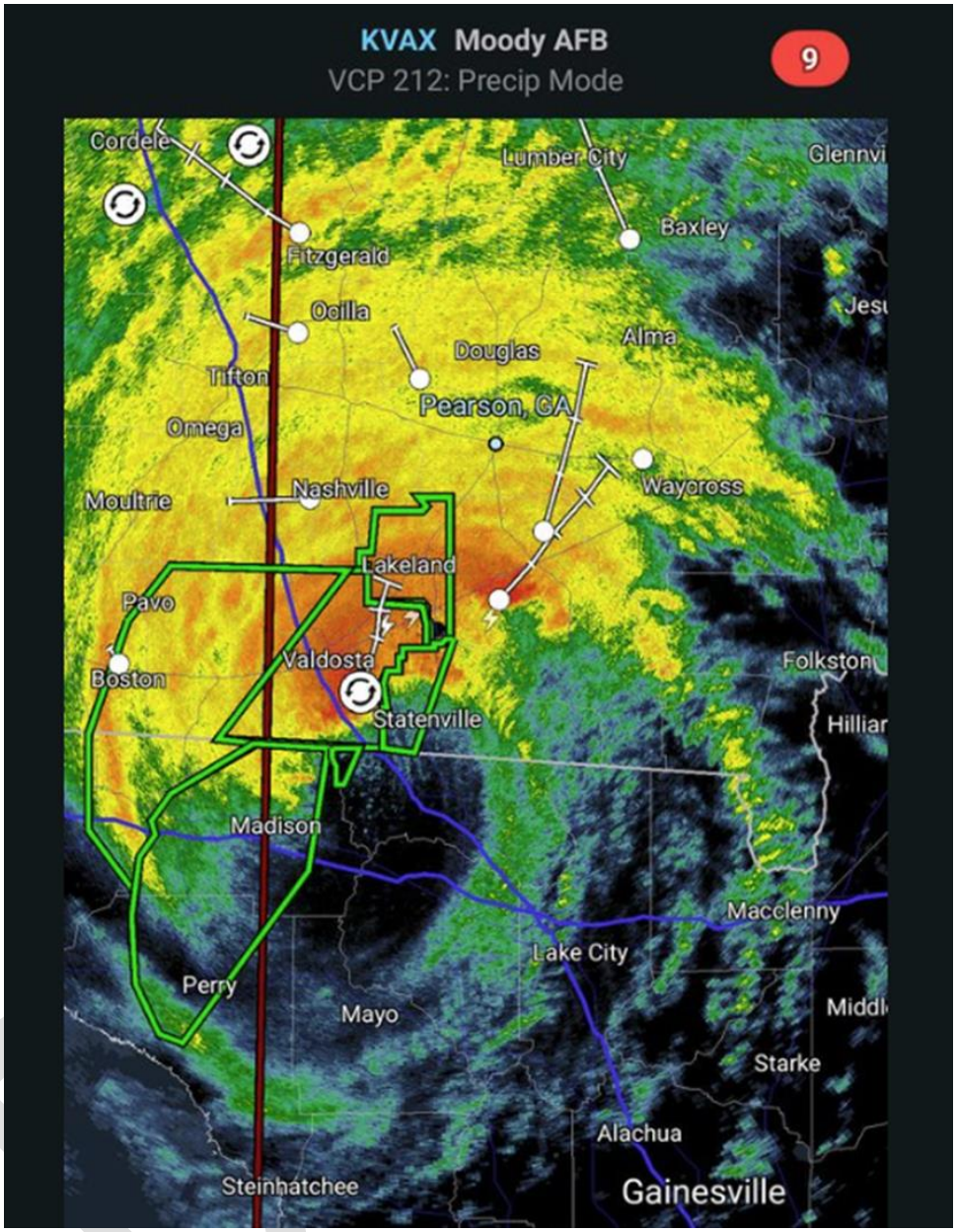
IMPORTANT TIP FOR PREPARATION:

- Storm Prep at home and businesses: Have food on hand, water, medications for at least 3 days in case of power loss.
- Secure loose items that are outside (Pool furniture, trampolines, chair cushions, trash cans, etc.)
- Bring pets inside or in the garage.
- Check on neighbors, help them secure objects.

PLEASE BE AWARE....

- The main threats are High winds, rain, and tornadoes.
- Do not call 911 for power outages, we are monitoring this at the EOC and coordinating with Colquitt EMC, Georgia Power, and Adel Electric.
- Once winds reach tropical storm force, Emergency personnel will not be able to respond.
- The sheriff's office will be out and monitoring conditions and responding to calls in the county until its too unsafe for them to be out.
- Once the storm has passed, please stay at home. Give emergency crews time to get out and survey the damage and get roads opened back up for everyone's safety!


KVAX Moody AFB
VCP 212: Precip Mode
10
Fitzgerald
Denton
Broxton
Ocilla
Alma
Douglas
Enigma
Pearson, GA
Nashville
Cecil
Lakeland
Homerville
Hahira
Valdosta
Statenville
Fargo


KVAX Moody AFB
VCP 212: Precip Mode
9
Cordele
Fitzgerald
Lumber City
Baxley
Glennvi
Ocilla
Douglas
Alma
Tifton
Pearson, GA
Omega
Wayeross
Moultrie
Nashville
Lakeland
Pavo
Valdosta
Boston
Statenville
Folkston
Hilliar
Madison
Macclenny
Lake City
Perry
Mayo
Starke
Alachua
Steinhatchee
Gainesville

Cook County Fire Department / Emergency Management Agency EMA
August 30 at 9:09 AM ·

For anyone needing shelter in the Lenox area.

Chase Daughtrey
August 30 at 8:53 AM ·

NOTICE: The Family Life Center at Lenox Christian Fellowship, North Rentz Street, Lenox, Georgia is open to anyone needing shelter today. Per the church, be sure to bring whatever provisions you or your family may need. We pray for God's protection over our community today.


Cook County Fire Department / Emergency Management Agency EMA
August 30 at 3:16 PM
Update: Please continue to shelter in place! We have many trees down across roads! Lots of power lines down! Some trees have power lines on them. Staying off roads will help ensure the safety of our citizens, crews, and first responders as they work after the storm.
Strong Wind Gust will continue for our county for about another hour. Please stay home if possible and stay safe!
HURRICANE
IDALIA


Cook County Fire Department / Emergency Management Agency EMA
August 30 at 2:15 PM
Hurricane Idalia Notice - 8/30/23
1:30 PM
Roads are currently impassable.
Cook County Emergency Management is encouraging individuals to continue to shelter in place. It is imperative to stay off the roads until further notice due to down trees and power lines.
- Judge Chase Daughtrey
Cook Co Community Response Committee
August 30 at 1:31 PM

Colquitt Electric Membership Corporation
August 30 at 5:26 PM ·

Hurricane Idalia Update 8/30 - 5:30 PM

A Message from our President/CEO

My fellow members,

I provided information on a previous post that may have given the wrong impression, so please allow me to explain.

We currently have outages across our service territory: https://colquitt.datacapable.com/map/

Moultrie District (Colquitt & Brooks Counties) - 11,724
Tifton District (Tift, Cook and Berrien Counties) - 15,887
Valdosta District (Lowndes and Brooks Counties) - 29,289

We are working in all counties to assess and repair damage so we can restore power to all of our members.

As a hurricane that journeyed from the gulf to the southern part of our system, the first area impacted was Brooks and Lowndes Counties. The more severely damaged areas of our system happen to be Brooks and Lowndes Counties. In no way does that mean we are not concerned about outages in every county, because we are! We have a complicating factor in Lowndes County currently. During a normal outage, we have electric service provided by high voltage transmission lines that feed power into our substations and then we carry and distribute that power throughout our system. Currently in Lowndes County, over 1/2 of our substations are not receiving that high voltage transmission power. We are waiting on Georgia Power and Georgia Transmission to make those repairs to the transmission lines before we can do our part in that area.

Please know that we are doing all we can to restore power to every member that has been affected by Hurricane Idalia no matter what county you are in. We appreciate your patience and your prayers as we navigate this restoration effort.

Sincerely,

Danny Nichols
President/CEO


Cook County Fire Department / Emergency Management Agency EMA
September 7 at 8:43 PM
Cook County was approved for FEMA category A and B assistance by President Biden. More information coming.
THE WHITE HOUSE
WASHINGTON
WHITEHOUSE.GOV
President Joseph R. Biden, Jr. Approves Georgia Disaster Declaration | The White

DRAFT

C./D. Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are equally vulnerable to hurricanes/tropical storms. Cook County has a wind hazard score of 2 (91-100 mph gust). A map of the wind hazard score and critical facilities is provided in Appendix A.

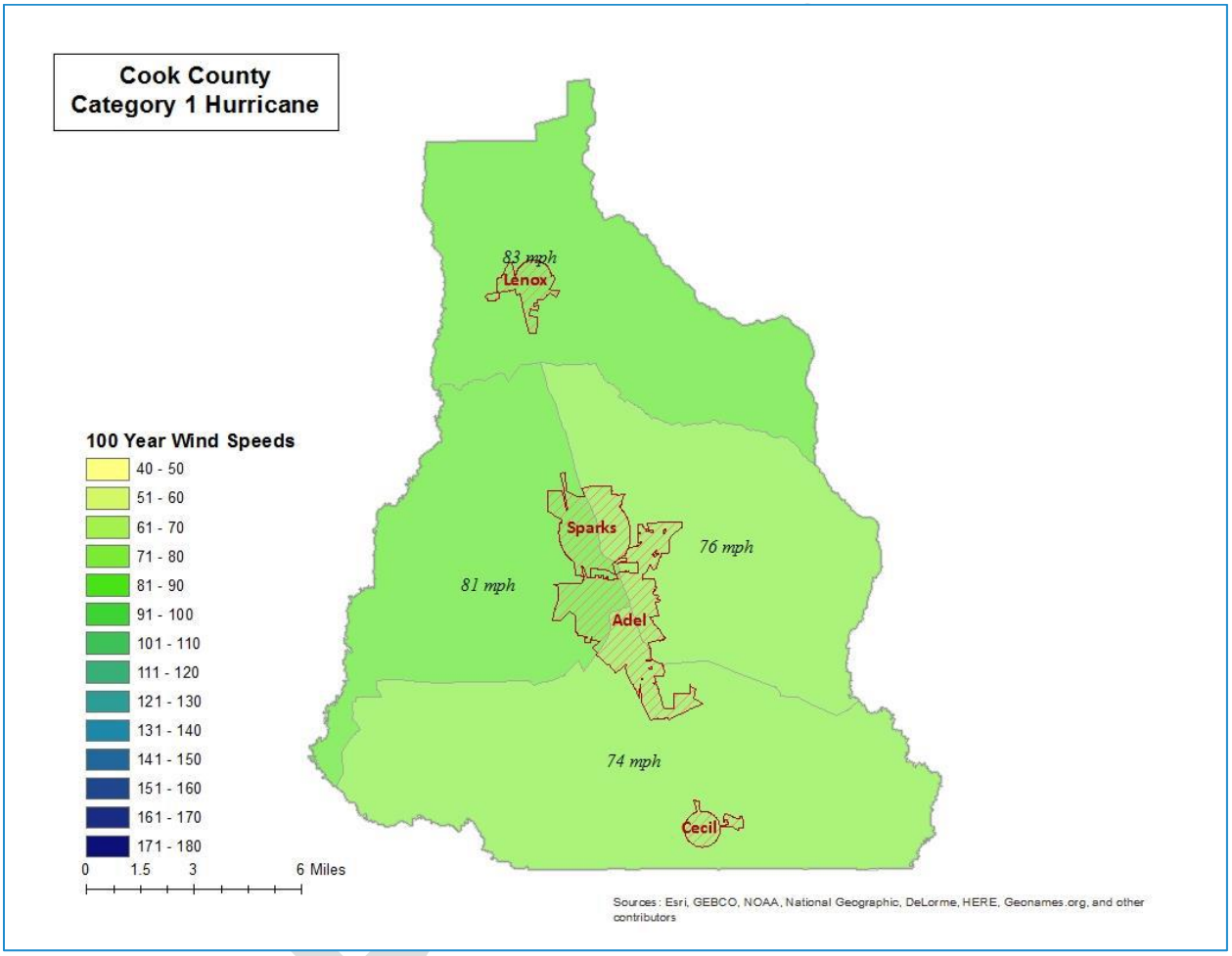
An estimated 100% of the Residential property (7,506 of 7,506) in Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard, with a total value of $955,196,000. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,922 of 2,845) in the community may be affected, with a total value of $716,747,972. The values are based on the most recent available tax roll data for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, provided by the Cook County Tax Assessor's Office.

Damage to crops is not considered in the above estimates. According to the most recent estimate (2022) available on the University of Georgia's GeorgiaData website (www. https://caed.uga.edu/), the total farm gate value of agricultural production in Cook County is $147,587,977.40 in the State of Georgia.

According to the inventory database reports and maps, all the 58 Critical Facilities and Infrastructure for Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard. The total value of these Critical Facilities is $198,051,152.

Below is the scenario of a model Category 1 hurricane, which is a 1% chance storm event: with maximum winds of 83 mph:

Figure 3: Wind Speeds by Storm Category



The report shows that the cost to rebuild damaged structures may significantly impact the community. The loss ratio is shown below, with the building losses as a percentage of the total building replacement cost. Figure 4 below illustrates the loss ratios, and Figure 5 shows the Hurricane Wind Damage results and the number of buildings damaged, costs, and economics loss: Loss Ratio.

Figure 4: Hurricane Wind GBS Loss Ratios

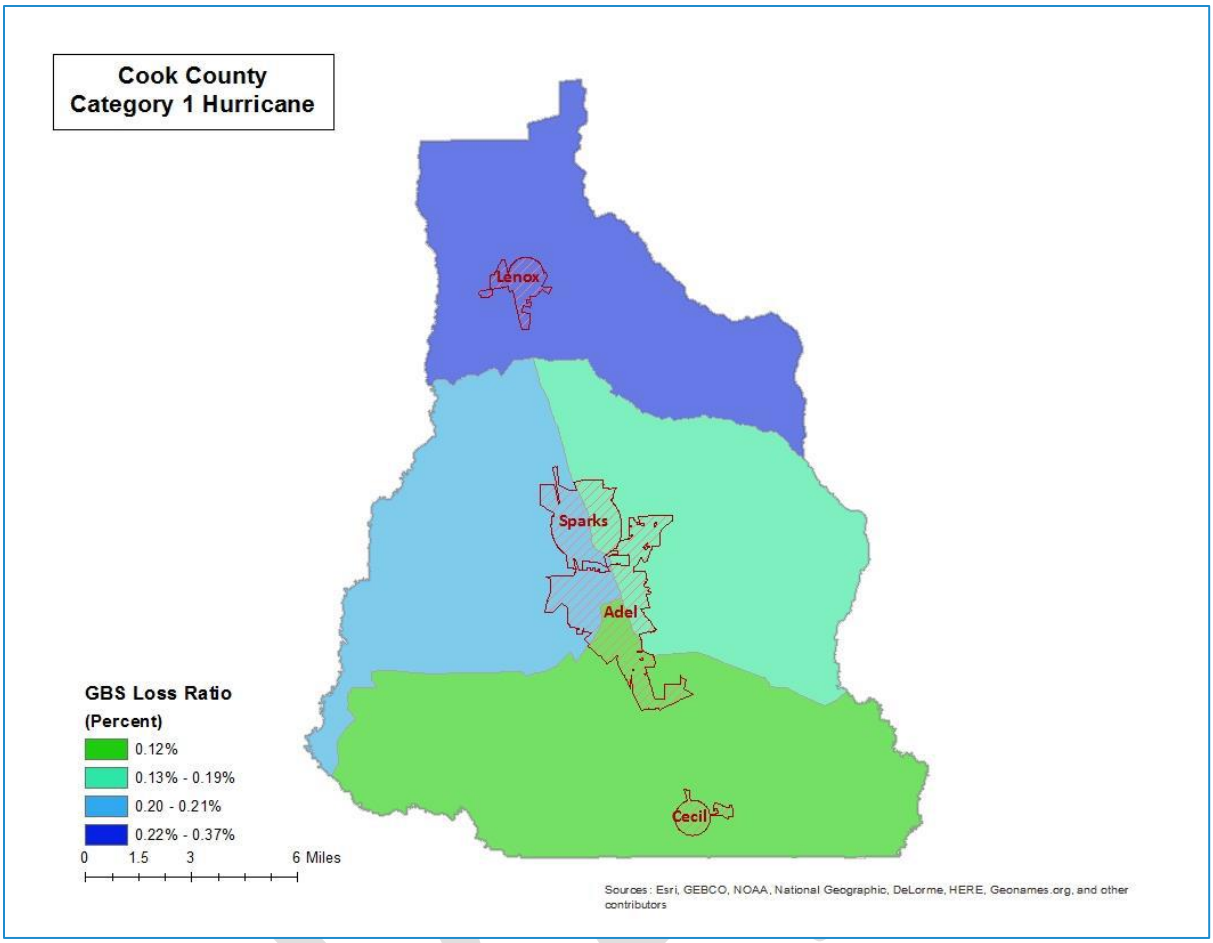


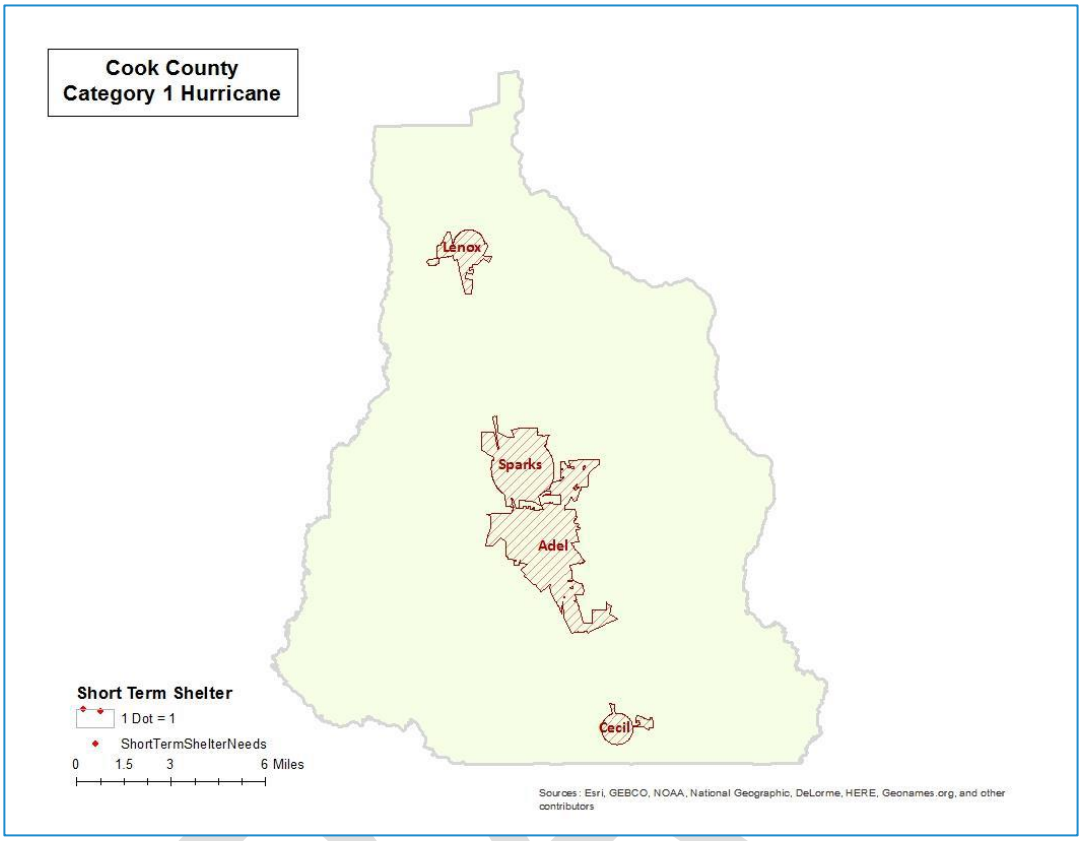
Table 5: Hurricane Wind Building Damage

Storm Classification	Number of Damaged Buildings	Building Damages	Total Economic Loss	Loss Ratio
Category 1	106	$ 3,256,280	$ 4,317,790	0.20%

23 essential facilities would be vulnerable to this storm event with a possibility of significant consequences. They may be moderately or severely damaged by the winds.

Classification	Number
EOC	1
Care	1
Fire	12
Police	5
School	4
Total	**23**

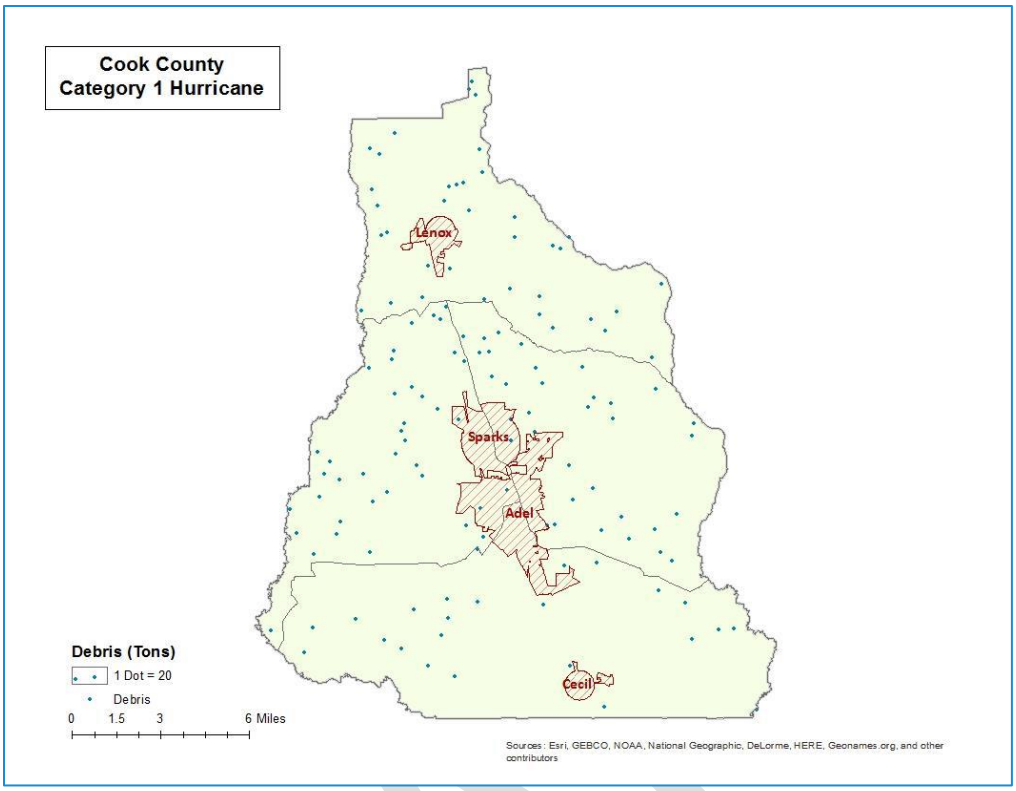
Figure 5: Hurricane Wind Shelter Requirements



The amounts of debris generated from the wind is estimated below for the following:

- Reinforced Concrete and Steel Debris
- Brick and Wood and Other Building Debris
- Tree Debris

Table 8 shows the tons of debris generated. Figure 6 shows the distribution of the debris. Each dot represents 20 tons of debris within the census tract in which it is located. The dots are randomly distributed within each census tract and therefore do not represent the specific location of debris sites.



(See Appendix G. HAZUS Report for more information on this scenario)

E. Land Use and Development Trends

According to 2021 U.S. Census Bureau American Community Survey 5-year estimates, the population of Cook County is 17,188, an increase of 0.5% since 2016. The City of Adel's 2021 population is 5,459, a 2.9% increase since 2016. The City of Cecil's 2021 population is 317, a 9.7% decrease since 2016. The Town of Lenox's 2021 population is 786, a 5.9% decrease since 2016. The Town of Sparks' 2021 population is 2,300, a 13% increase since 2016.

Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) has zoning regulations. All jurisdictions have mandatory building and fire codes that a building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the construction codes mandatory as the Georgia State Minimum Standard Codes. (SEE CHAPTER 4, REGULATORY TOOLS/PLANS FOR ADOPTED CODES).

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

Hurricane/tropical storm events are usually area-wide, and no difference in severity is expected between Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. However, the impact may be more severe in places with higher population density due to more people being in danger, more people needing to be evacuated, more debris from damaged buildings, and other impacts associated

with higher population density. In jurisdictions without building codes and inspections, structures not built to code may be especially vulnerable to strong winds and other hazards.

Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are members of the National Flood Insurance Program (source: https://www.fema.gov/cis/GA.html). Cook County and the Cities of Adel, Cecil, Lenox, and Sparks do not participate in the Community Rating System (CRS) program. As of 2017, they were not eligible, according to FEMA (source: http://www.fema.gov/library/viewRecord.do?id=3629).

G. Overall HRV Summary of Events and Their Impact

Hurricanes/tropical storms can cause damage anywhere, at any time, throughout Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. They are usually preceded by some watch or warning well in advance. The cost of the damage and potential loss of life may be higher if the path of the hurricanes/tropical storms covers populated areas instead of more sparsely populated or unpopulated areas.

The Cook County HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 4.

Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

H. Impacts from Future Conditions

If an exceedingly rare windstorm (a 1-in-3,000-year storm event) occurred today, it could cause wind gusts of up to 119 mph to reach Cook County. A hurricane of this severity has a 1% chance of occurring at least once over the next 30 years. In 30 years, an event of this same likelihood would show increased wind gusts of up to 132 mph due to a changing environment.

Average maximum wind speeds in Cook County are higher now than they were 30 years ago, and 95% of homes in Cook County have at least some risks. A hurricane with gusts up to 119 mph has a 1% chance of occurring at least once over the next 30 years in Cook County. Wind gusts would likely show increased wind gusts of up to 132 mph due to the changing environment.

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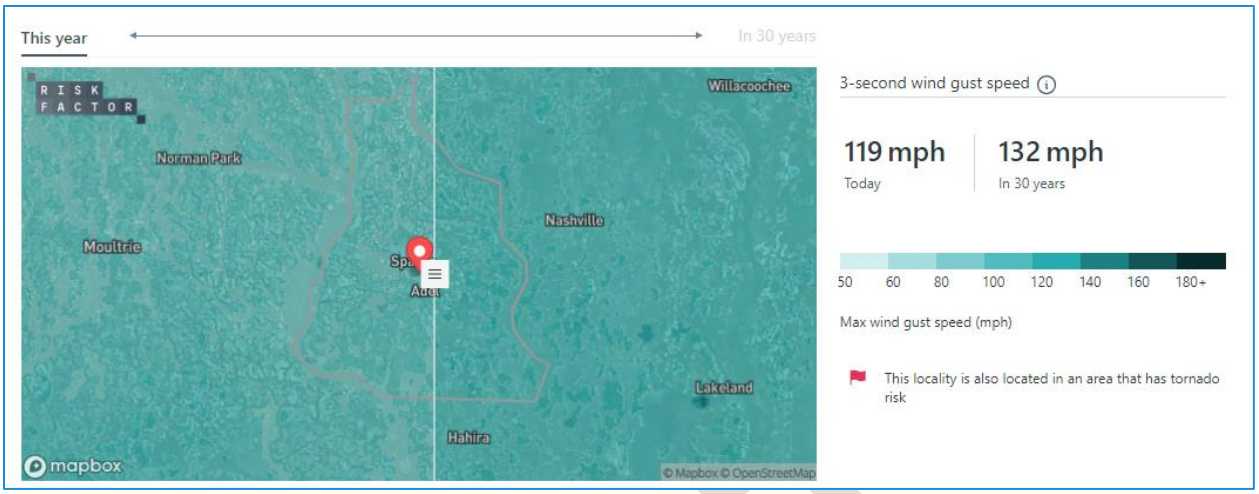
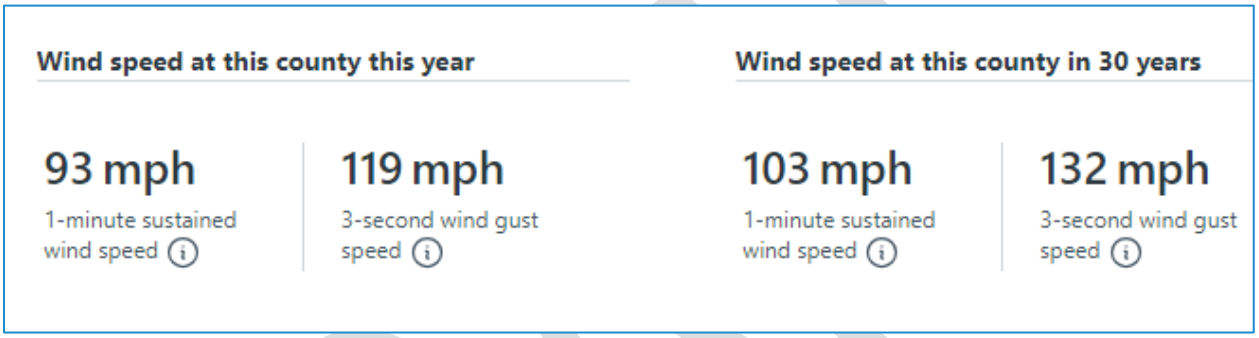
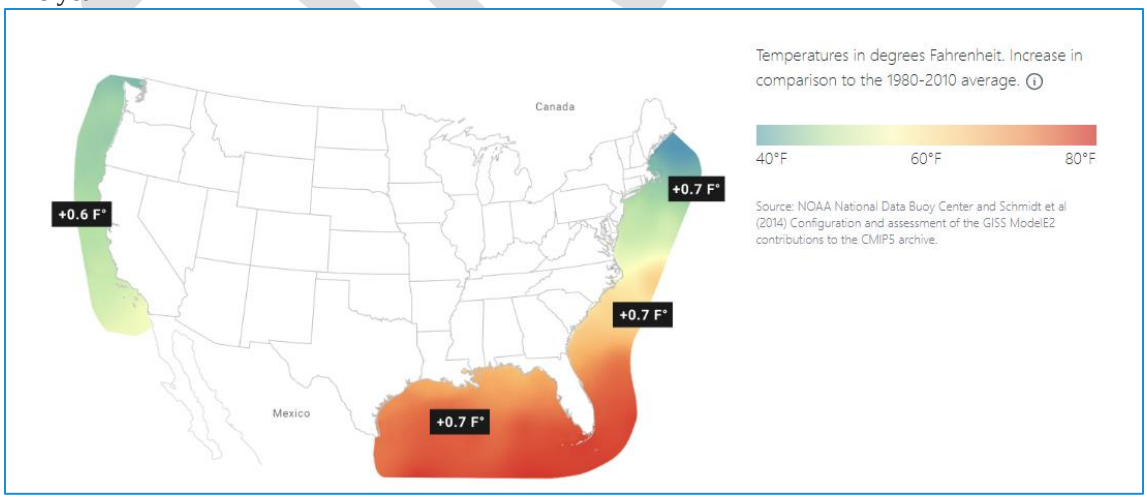


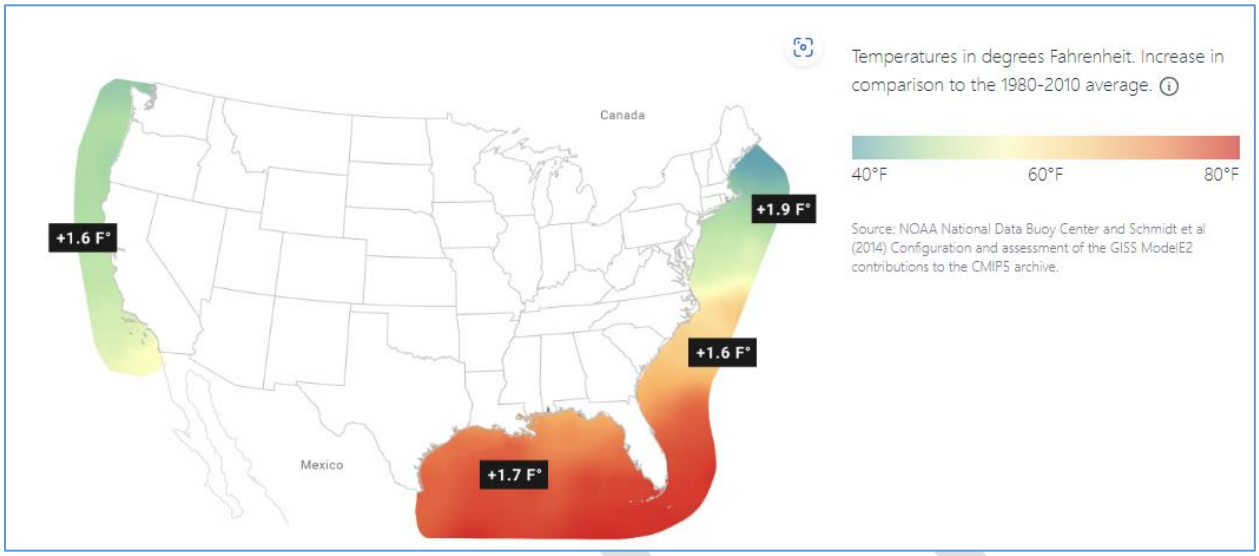


With a changing environment, the seas will get warmer; there will be new weather patterns and stronger storms. The atmosphere will warm with more energy available for a storm to create higher-intensity winds. Warmer oceans feed storms that develop out at sea and then make their way toward land.

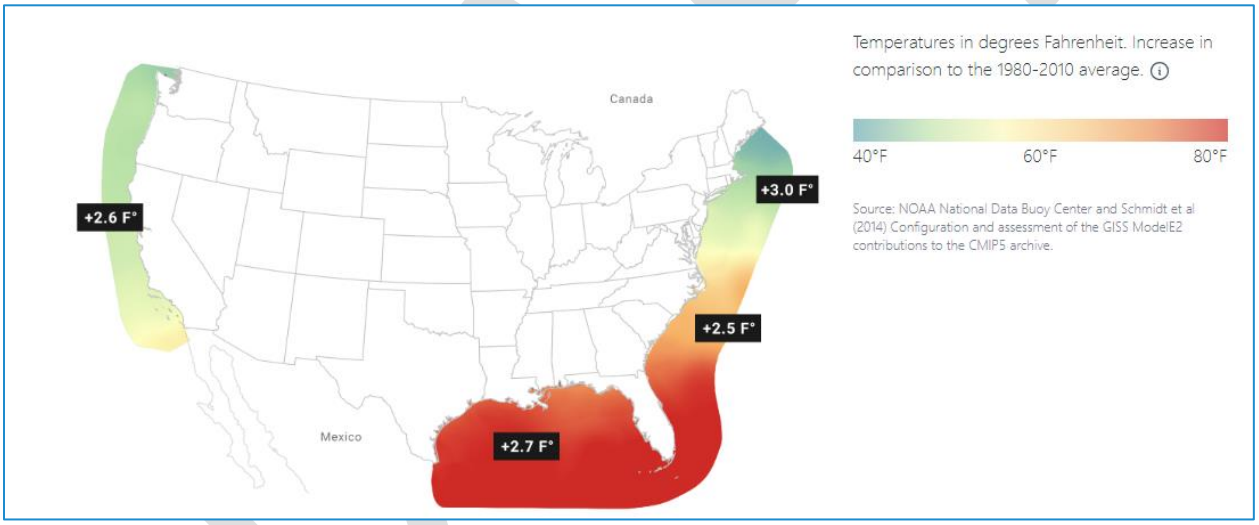
This year



In 15 Years



In 30 years



Section IV. Floods

A. Identification of Hazard

The threat of a flood has been chosen by the HMPUC as the fourth most likely hazard to occur and cause damage in the community, based on experience, the FEMA-described methodology, and other factors. Historical data have been examined from various sources, including the National Climatic Data Center (see Appendix F), and local history and personal accounts, to determine the frequency of events. For further information, see the HAZUS Report in Appendix G.

Floods may occur at any time, in many cases without warning, and their effects can range from minor inconvenience to wholesale destruction. Floods are most often caused by heavy rains associated with thunderstorms, hurricanes, or tropical storms. Flooding can result from a rise in the level of a body of water such as a river or a lake, or from rain falling faster than it can be absorbed by the ground (especially under weather conditions that make soil less pervious, for example after a period of drought). Flooding frequently occurs in urban areas when a large amount of rain, above the capacity of the urban drainage system, falls on impervious surfaces such as streets, buildings, and parking lots. Flooding can also result from the failure of man-made structures such as levees and dams.

Flash floods are floods that occur in short timespans, often so quickly that people are caught off-guard. Flash floods can occur because of any of the causes mentioned above but are most often due to extremely heavy rainfall from thunderstorms. More information is available at the National Weather Service (https://www.weather.gov/phi/FlashFloodingDefinition).

According to the National Weather Service (http://tadd.weather.gov/), more deaths occur each year due to flooding than from any other thunderstorm-related hazard. The Centers for Disease Control and Prevention report that over half of all flood-related drownings occur when a vehicle is driven into hazardous flood water. The next highest percentage of flood-related deaths is due to walking into or near flood waters. People underestimate the force and power of water. Many of the deaths occur in automobiles as they are swept downstream. Of these drownings, many are preventable, but too many people continue to drive around the barriers that warn you the road is flooded. A mere 6 inches of fast-moving flood water can knock over an adult. It takes just 12 inches of rushing water to carry away a small car, while 2 feet of rushing water can carry away most vehicles. It is never safe to drive or walk into flood waters.

DRAFT

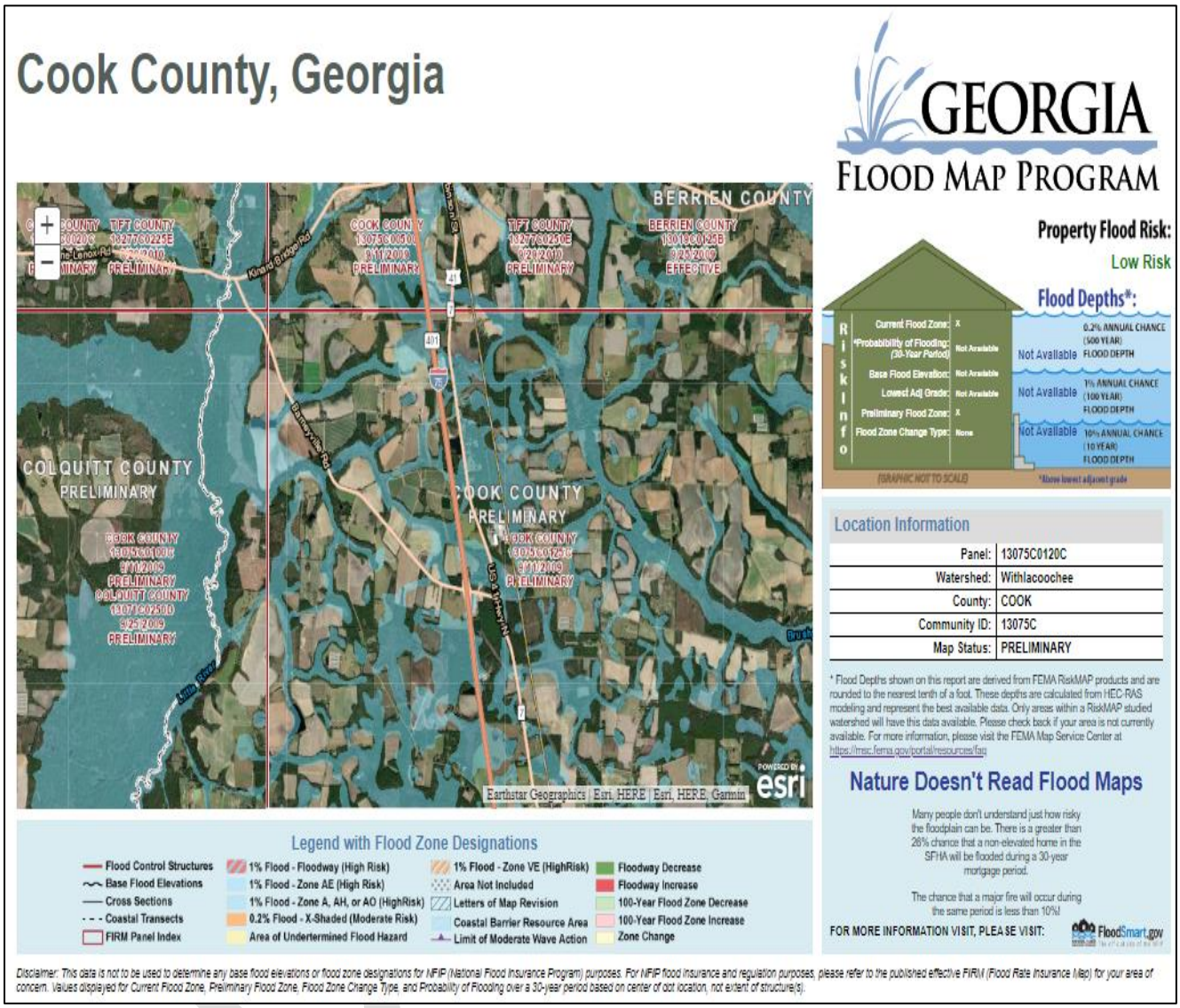
Flood zones, as defined by FEMA, are described in the table below.

Flood Zone Designations and Descriptions
Source: FEMA (https://hazards.fema.gov/onlinelomc/ext/Help/loadInstructions)

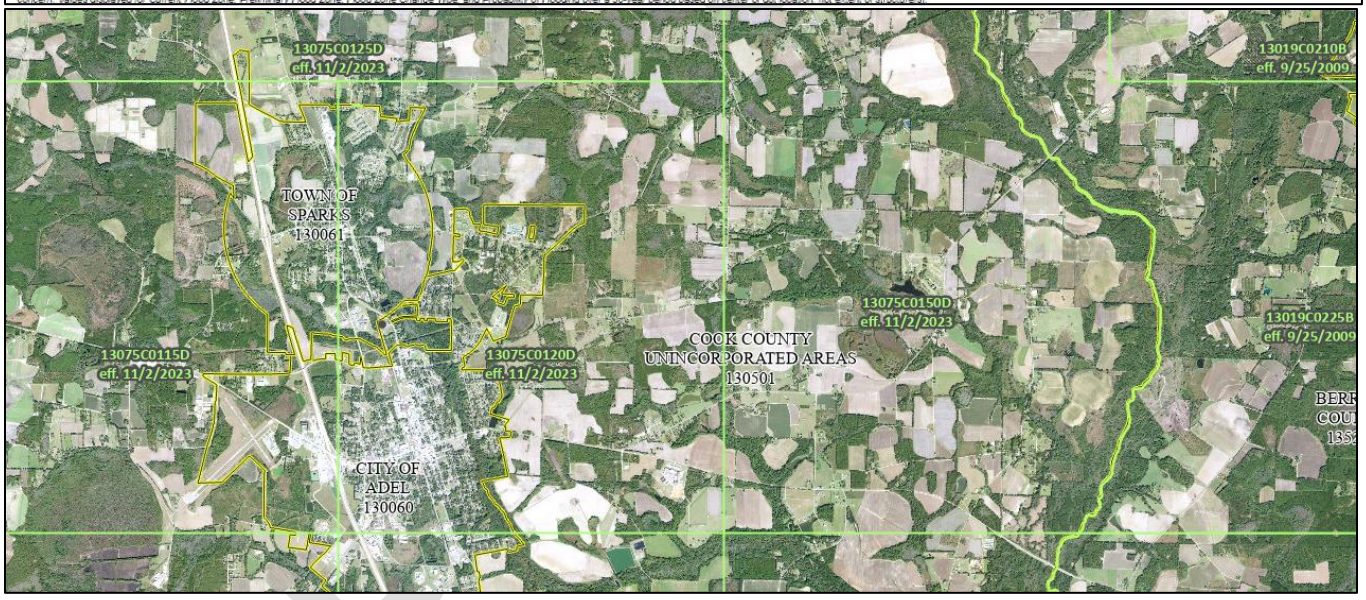
Zone Designations	Zone Descriptions
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths or base flood elevations are shown within these zones.
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
A1-A30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
V	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.
V1-V30	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
VE	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
B	An area of moderate flood hazard is usually between the limits of the 100-year and 500-year floods. Are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.
X Shaded	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. Are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
X Unshaded	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.

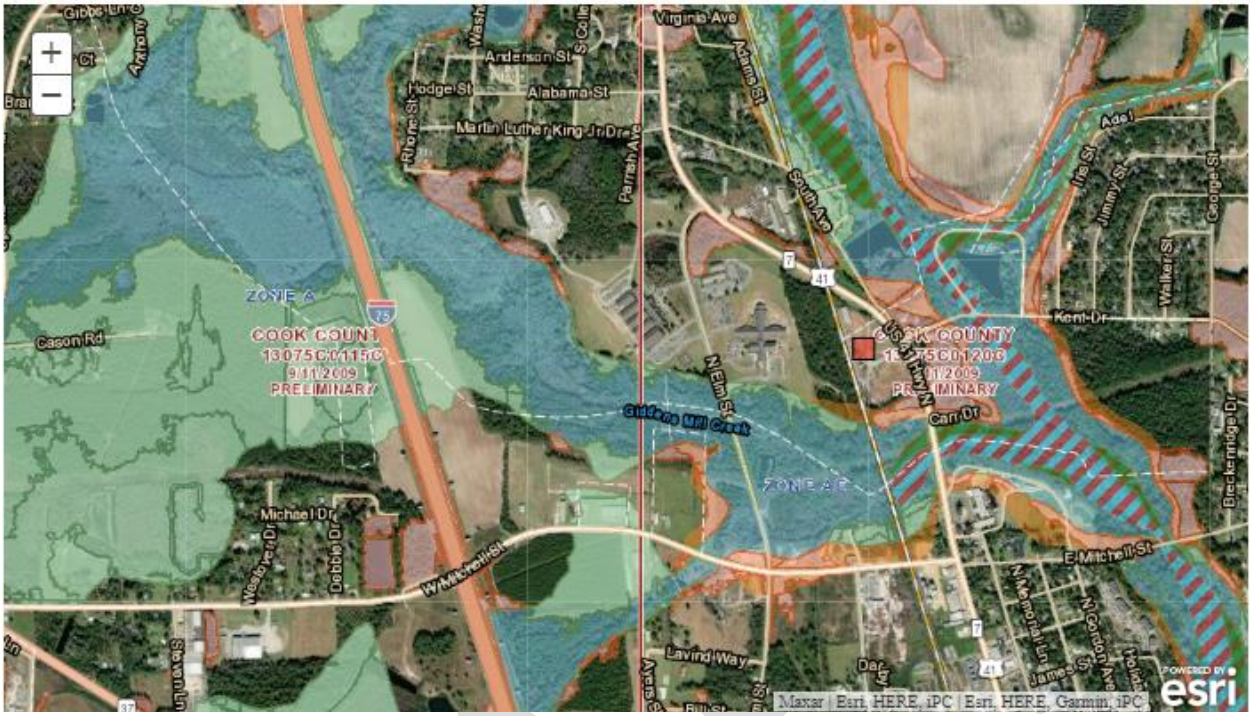
DRAFT

The following are the floodplain maps for the county and cities:

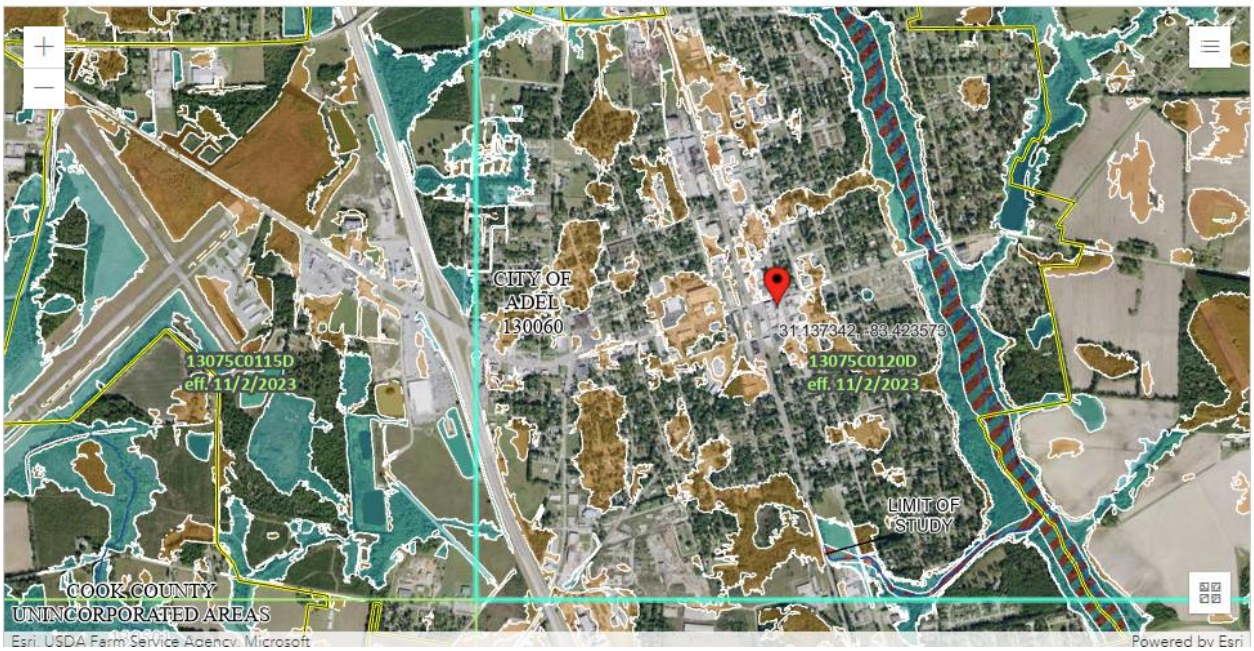



Cook County, Georgia
GEORGIA
FLOOD MAP PROGRAM
Property Flood Risk:
Low Risk
Flood Depths*:
Not Available
Not Available
Not Available
Location Information
Panel: 13075C0120C
Watershed: Withlacoochee
County: COOK
Community ID: 13075C
Map Status: PRELIMINARY
Nature Doesn't Read Flood Maps
FOR MORE INFORMATION VISIT, PLEASE VISIT:
FloodSmart.gov
Legend with Flood Zone Designations
Flood Control Structures
Base Flood Elevations
Cross Sections
Coastal Transects
FIRM Panel Index
1% Flood - Floodway (High Risk)
1% Flood - Zone AE (High Risk)
1% Flood - Zone A, AH, or AO (HighRisk)
0.2% Flood - X-Shaded (Moderate Risk)
Area of Undetermined Flood Hazard
1% Flood - Zone VE (HighRisk)
Area Not Included
Letters of Map Revision
Coastal Barrier Resource Area
Limit of Moderate Wave Action
Floodway Decrease
Floodway Increase
100-Year Flood Zone Decrease
100-Year Flood Zone Increase
Zone Change
Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern. Values displayed for: Current Flood Zone, Preliminary Flood Zone, Flood Zone Change Type, and Probability of Flooding over a 30-year period based on center of plot location, not extent of structure(s).

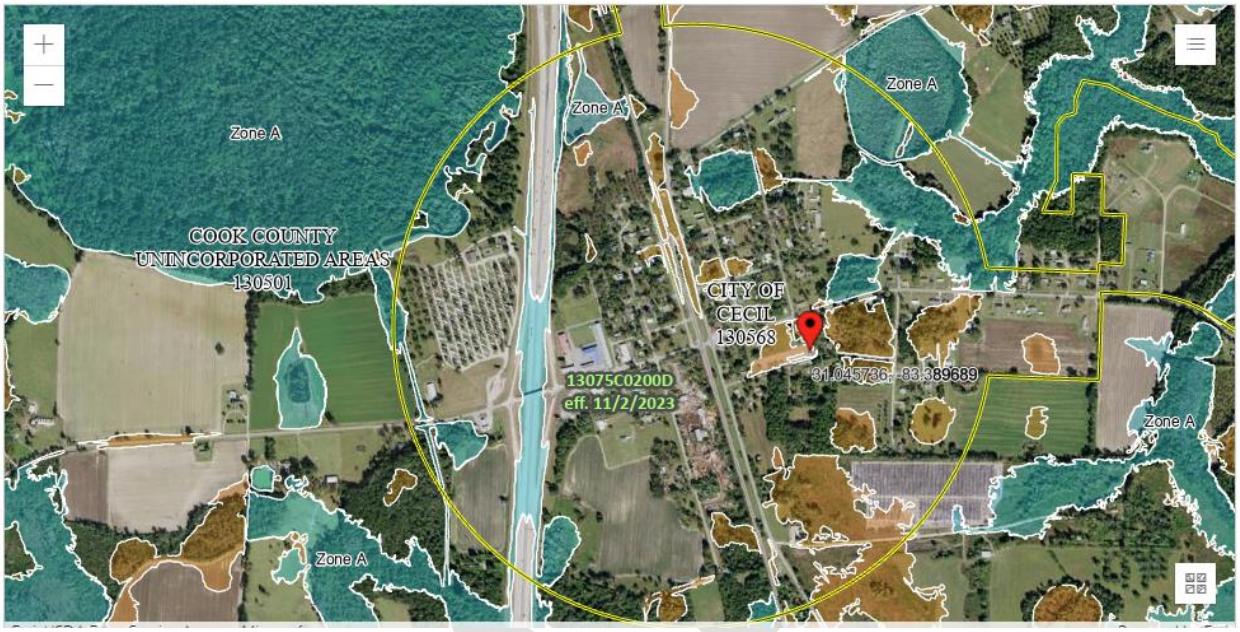

13075C0125D
eff. 11/2/2023
13019C0210B
eff. 9/25/2009
TOWN OF
SPARKS
130061
13075C0150D
eff. 11/2/2023
13019C0225B
eff. 9/25/2009
13075C0115D
eff. 11/2/2023
13075C0120D
eff. 11/2/2023
COOK COUNTY
UNINCORPORATED AREAS
130501
CITY OF
ADEL
130060


ZONE A
COOK COUNTY
13075C0115C
9/11/2009
PRELIMINARY
ZONE AE
Giddens Mill Creek
Maxar | Esri, HERE, iPC | Esri, HERE, Garmin, iPC
esri

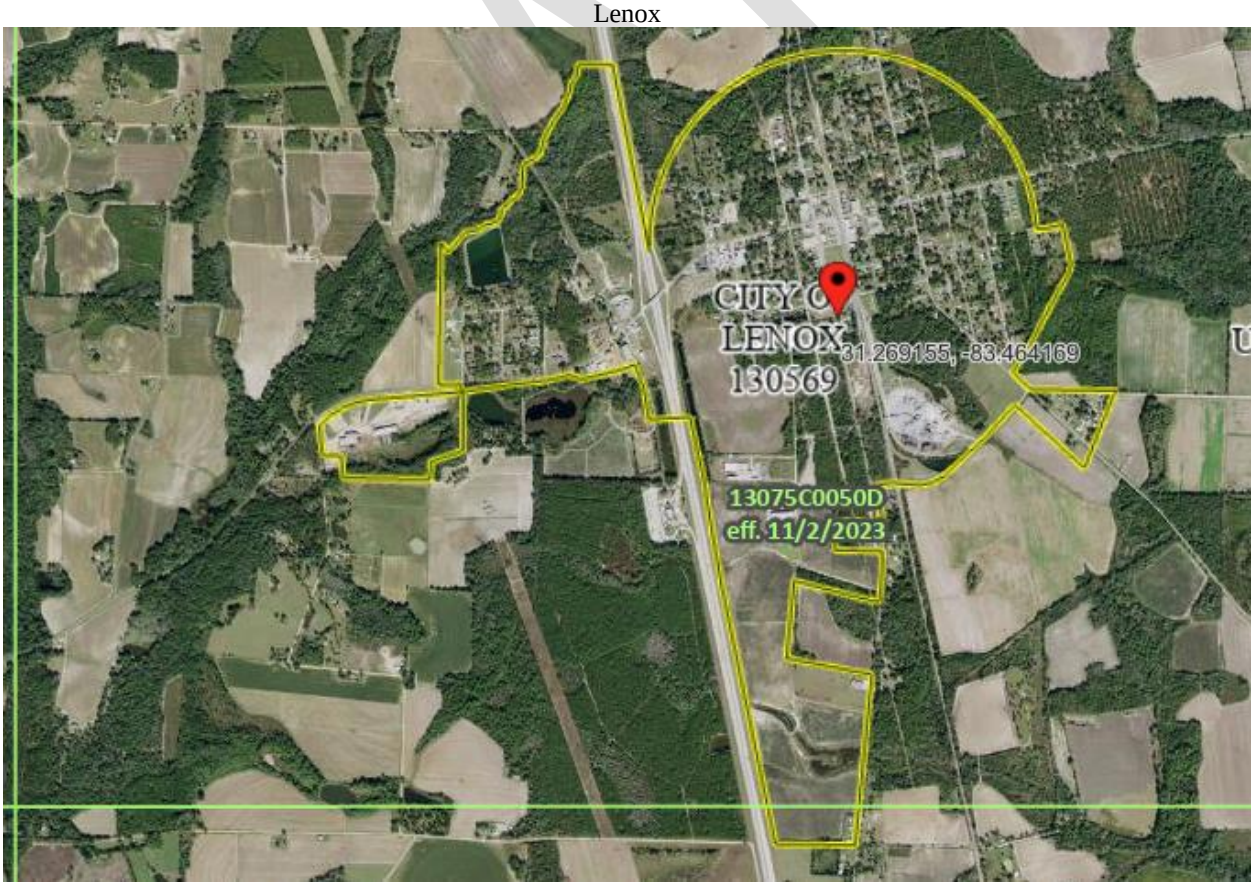
Adel


CITY OF
ADEL
130060
31.137342, -83.423573
13075C0115D
eff. 11/2/2023
13075C0120D
eff. 11/2/2023
LIMIT OF
STUDY
COOK COUNTY
UNINCORPORATED AREAS
Esri, USDA Farm Service Agency, Microsoft
Powered by Esri

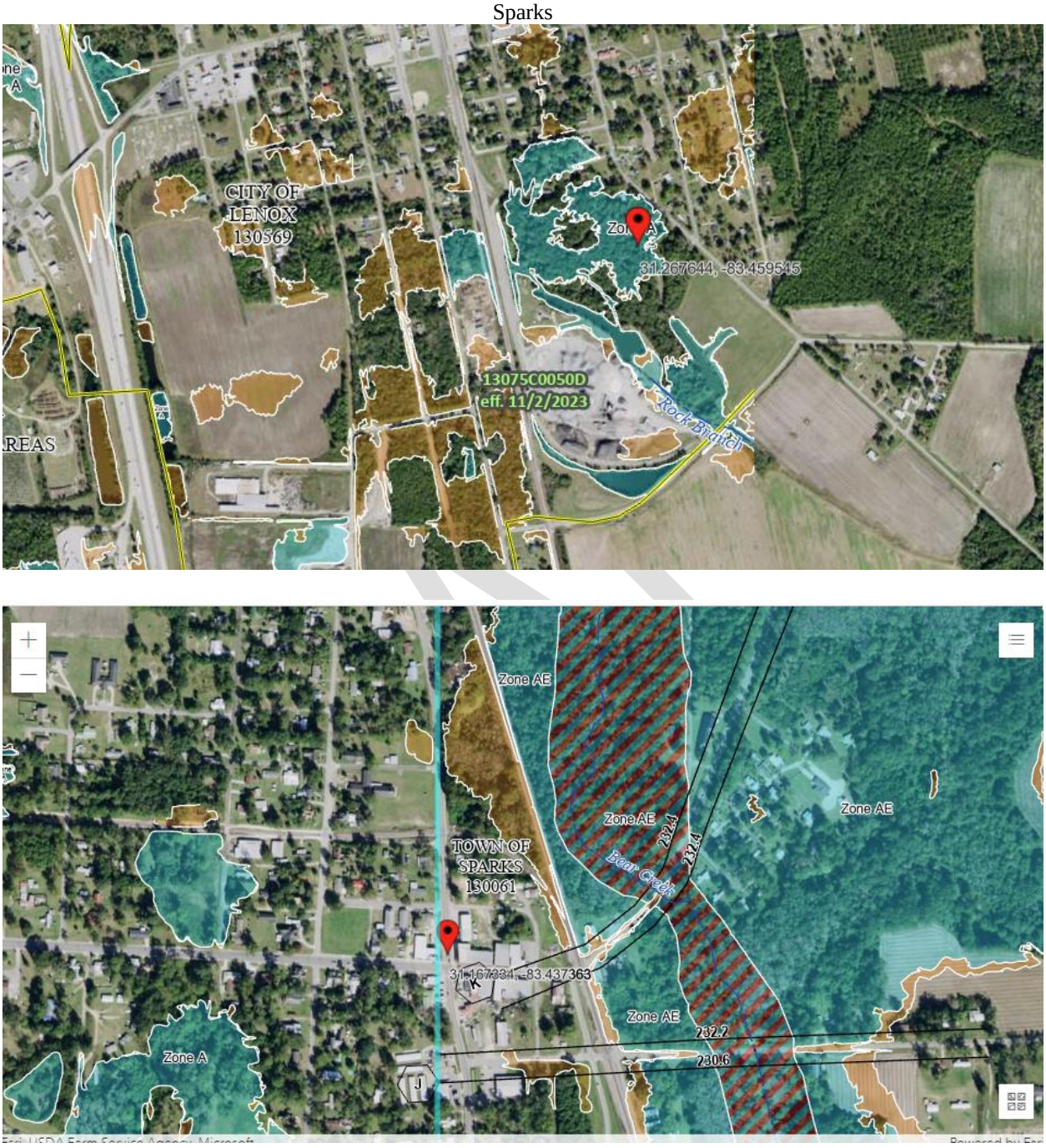
Cecil


Zone A
Zone A
Zone A
COOK COUNTY
UNINCORPORATED AREAS
130501
CITY OF
CECIL
130568
31.045736, -83.389689
13075C0200D
eff. 11/2/2023
Zone A
Zone A

Lenox


CITY O
LENOX
130569
31.269155, -83.464169
13075C0050D
eff. 11/2/2023

Sparks



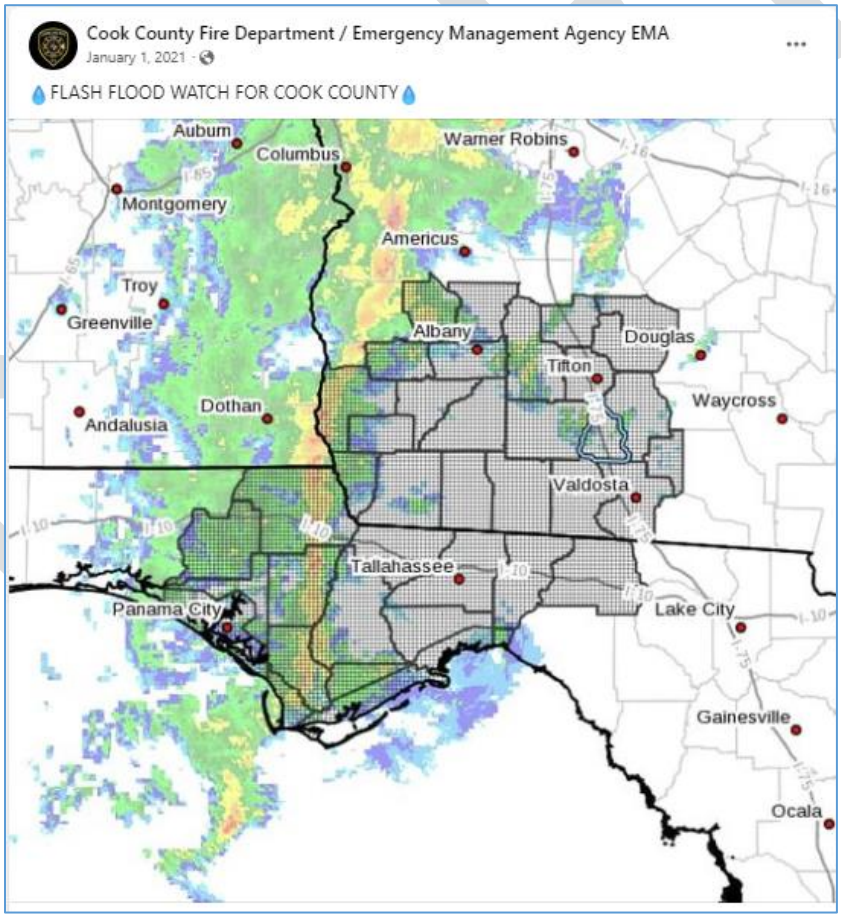
Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are all vulnerable to the effects of flooding. Areas within flood zones are naturally more vulnerable. For more information, see the maps in Appendix A.

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), there are 8 reports of floods occurring in Cook County (including the Cities) between 01/01/1950 and 07/05/2022. The Historic Recurrence Interval is 9.3years. This is a 10.96% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.5, the past 20-year frequency is 0.3, and the past 50-year frequency is 0.16 (see the Hazard Frequency Table in Appendix D).

On July 14, 2015, slow-moving storms led to flash flooding across portions of Cook County. A stationary thunderstorm over Adel caused heavy rainfall in a short time. Some streets had water up to a foot deep and were briefly closed. City officials have stated that the City of Sparks is more prone to flooding than any other area within the county.

Since the last HMP, only one flooding event has been reported by NOAA in Cook County. On July 5, 2022, a combination of weak steering flow and tropical moisture resulted in a slow-moving thunderstorm over Cook County, which produced isolated flash flooding. A motorist reported water over the roadway on Coxstill Road.

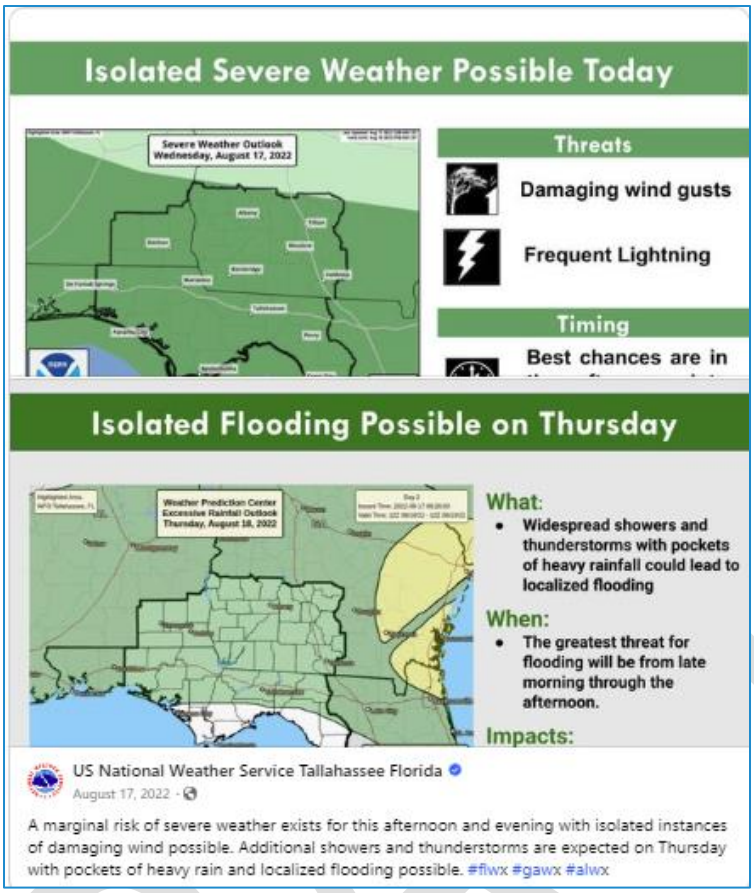


Cook County Fire Department / Emergency Management Agency EMA
August 25, 2022 -

Even though we are not under any Flood watches or warning at this time, we do have areas where there is high water from the excessive rain fall last night and from the past few days. We do have a couple of roads closed or near closing in the City of Sparks where we do have high water concerns.

Please remember "Do not drive thru water over the roads". If the road is covered with water, you cannot see the dangers underneath it. Find another route and report the road to local authorities. We are still expecting more rain over the next several days.

Please be mindful that the Road Department Crews will be out working in these areas as well.


Isolated Severe Weather Possible Today
Severe Weather Outlook
Wednesday, August 17, 2022
Threats
Damaging wind gusts
Frequent Lightning
Timing
Best chances are in
Isolated Flooding Possible on Thursday
Weather Prediction Center
Excessive Rainfall Outlook
Thursday, August 18, 2022
What:
Widespread showers and thunderstorms with pockets of heavy rainfall could lead to localized flooding
When:
The greatest threat for flooding will be from late morning through the afternoon.
Impacts:
US National Weather Service Tallahassee Florida
August 17, 2022 -
A marginal risk of severe weather exists for this afternoon and evening with isolated instances of damaging wind possible. Additional showers and thunderstorms are expected on Thursday with pockets of heavy rain and localized flooding possible. #flwx #gawx #alwx


Highlighted Area:
WFO Tallahassee, FL
Weather Prediction Center
Excessive Rainfall Outlook
Friday, August 26, 2022
Day 1
Issued Time: 2022-08-26 08:17:00
Valid Time: 122 08/26/22 - 122 08/27/22
AL
GA
FL
Montgomery
Albany
Douglas
Waycross
Tallahassee
Lake City
Probability of excessive rainfall leading to rapid onset flooding.*
High Risk At least 70%
Moderate Risk At least 40%
Slight Risk At least 15%
Marginal Risk At least 5%
* Within 25 miles of a point.
May not represent localized flooding threat over burn scars.
US National Weather Service Tallahassee Florida
August 26, 2022 -
Another wet afternoon is expected today. Areas across the Panhandle, due to recent heavy rains and the potential for more today, have a slight risk (level 2 of 4) risk for excessive rainfall today. Elsewhere, heavy rain rates could produce localized flooding in slow moving storms.

Cook County Fire Department / Emergency Management Agency EMA
August 26, 2022 ·

FLOOD ADVISORY IN EFFECT UNTIL 1245 AM EDT SATURDAY
Flood Advisory issued August 26 at 9:37PM EDT until August 27 at 12:45AM EDT by NWS Tallahassee FL
* WHAT...Flooding caused by excessive rainfall is expected.

* WHERE...A portion of south central Georgia, including the following counties, Berrien, Brooks, Colquitt, Cook and Lowndes.

* WHEN...Until 1245 AM EDT.

* IMPACTS...Minor flooding in low-lying and poor drainage areas.

* ADDITIONAL DETAILS...
- At 935 PM EDT, Doppler radar indicated heavy rain due to thunderstorms. Minor flooding is ongoing or expected to begin shortly in the advisory area. Between 1.5 and 2 inches of rain have fallen in the last 1 Hour.
- Additional rainfall amounts of 1 to 3 inches are expected over the area. This additional rain will result in minor flooding.
- Some locations that will experience flooding include... Adel, Nashville, Valdosta, Hahira, Sparks, Ray City, Pavo, Morven, Berlin, Cecil, Pine Valley, Greggs, Cook Co A/P, I-75 At Exit 29, Barney, Massee, New Lois, Cottle, Allenville and Berrien Co A/P.
- http://www.weather.gov/safety/flood
Turn around, don't drown when encountering flooded roads. Most flood deaths occur in vehicles.

Be especially cautious at night when it is harder to recognize the dangers of flooding.

US National Weather Service Tallahassee Florida
September 8, 2022 ·

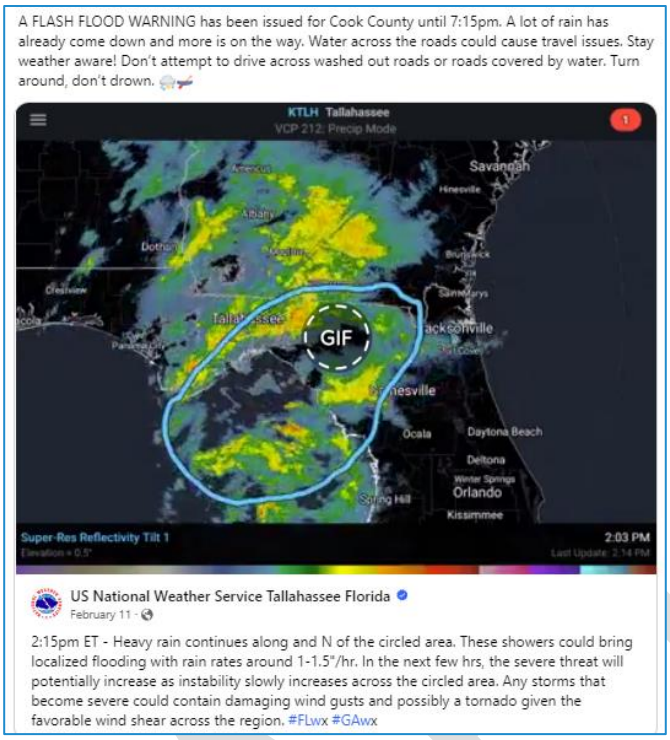
9/8 - Several rounds of heavy rainfall are expected across the area through the weekend with the best chances along the Big Bend coast & SE Big Bend. Both flash flooding & riverine flooding are possible in the areas of highest rainfall. A Flood Watch is in effect. Please keep up with the latest forecasts! #FLwx

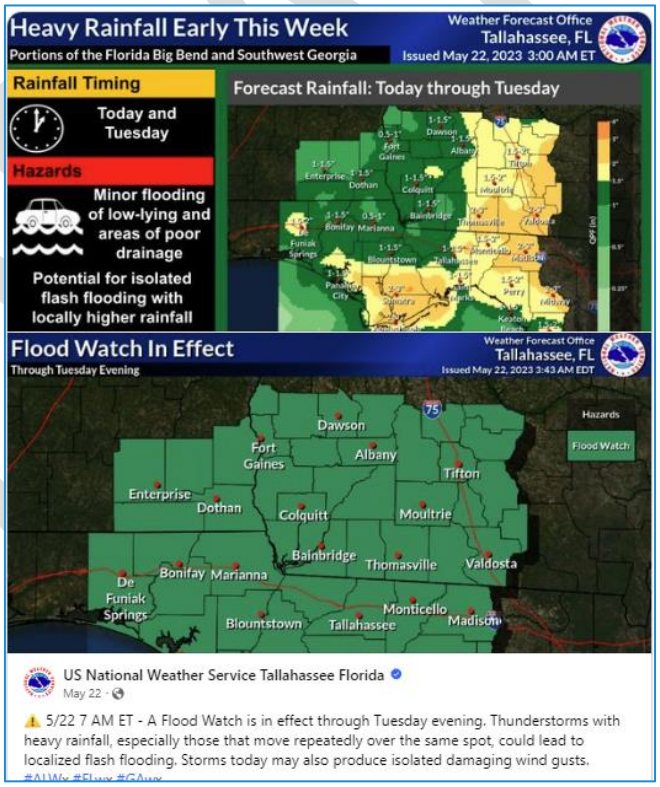
US National Weather Service Tallahassee Florida
September 9, 2022 ·

September 9, 6:30am - The rain is coming this weekend, especially for folks across Florida. The heaviest amounts will fall near the coast, but the heavy rain potential won't be limited there. Isolated amounts could be near 10 inches by Monday as waves of showers/storms develop. #FLwx #ALwx #GAwx


Severe Storms Possible this morning
Weather Forecast Office
Tallahassee, FL
Severe Weather Risk upgraded to Slight
Issued November 30, 2022 1:40 AM ET
Severe Weather Outlook
Wednesday, November 30, 2022
Threats
Scattered damaging wind gusts
A tornado or two possible
Timing
Mainly this Morning
Actions
Have multiple
Squall Line Timing
to receive a warning
NOAA Weather Radio
Local TV and Radio
US National Weather Service Tallahassee Florida
November 30, 2022 ·
11/30/22 AM
There is now a Slight Risk (level 2 of 5) of severe thunderstorms this morning. A squall line will arrive in SE Alabama around 5 am CT, moving SE through the morning. Damaging winds are the biggest threat, but a tornado or two are possible.
Squall Line Timing has sped up a bit, with most of the tri-state area getting the squall line this morning. The line should be weakening as it reaches the southeast FL Big Bend early this afternoon.


Situation Overview
A potentially significant severe weather event unfolds tonight through Thursday morning from an approaching potent frontal system.
Scattered showers & storms (possibly severe) should move onshore to the Panhandle into southeast AL this afternoon and early evening.
A squall line then arrives ahead of a cold front tonight into Thursday morning. Strengthening winds preceding the line will also make for hazardous marine and beach conditions.
The main threats from these storms will be damaging to destructive winds and a few tornadoes, a couple may be strong.
The greatest risk areas (Enhanced, level 3 of 5) are in southeast AL and the FL Panhandle.
Severe risk lingers through Thursday morning before ending by the afternoon.
Tonight's Severe Weather Event
Thursday (after 7 AM ET)
Line Timing
US National Weather Service Tallahassee Florida
December 14, 2022 ·
Given the Power-Point mishap with the FB Live event earlier, we decided to post the slides for folks to easily view here! Please continue to monitor and stay weather aware for any watches/warnings that are issued tonight, and take shelter as necessary! Stay safe out there!





Although the most complete available data was used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

C./D. Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are equally vulnerable to this hazard.

An estimated 3.04% of the Residential property (2,282 of 7,506) in Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard, with a total value of $517,126,926. Also, an estimated 6.38% of the Commercial, Industrial, Agricultural, Religious Non-Profit, Government, Education and Utility properties (4,789 of 7,506) in the community may be affected, with a total value of $509,959,708. The values are based on the most recent available tax roll data for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, provided by the Cook County Tax Assessor's Office.

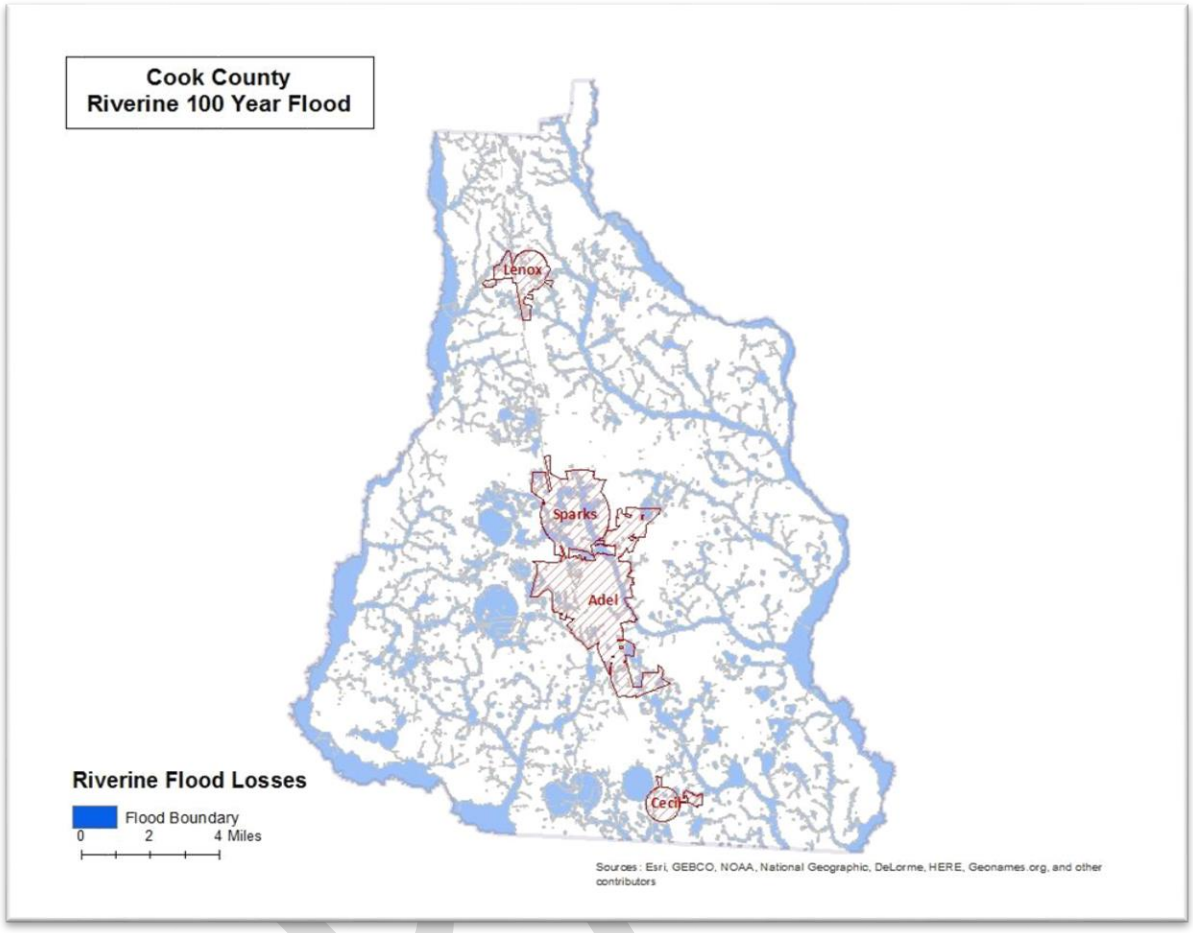
Damage to crops is not considered in the above estimates. According to the most recent estimate (2022) available on the University of Georgia's GeorgiaData website (www. https://caed.uga.edu/), the total farm gate value of agricultural production in Cook County is $147,587,977.40 in the State of Georgia.

According to the inventory database reports and maps, 11 of the 80 Critical Facilities and Infrastructure for Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) are in flood zones and therefore could be affected by this hazard. Ten facilities have a Flood Hazard Score of 3, and one has a Flood Hazard Score of 4. The total value of these Critical Facilities is $3,548,500.

Many individuals do not have access to transportation and thus are susceptible to weather hazards. It is very important to notify these individuals through weather radios, radio stations, and other means so that they may seek shelter and/or plan for transportation to shelter facilities. Therefore, a major consideration should be helping individuals, government, and non-profit organizations prepare for the pending flood hazard events.

Building damages from the Riverine 1% Flood scenario could impact the economy significantly
The GMIS reports do not list any Repetitive Loss/NFIP properties in Cook County or the Cities of Adel, Cecil, Lenox, and Sparks. The table below summarizes the potential flood-related building damage throughout Cook County, including the local jurisdictions. Only one essential facility (fire station) would receive damage.

Table 9: Cook County Riverine 1% Building Losses

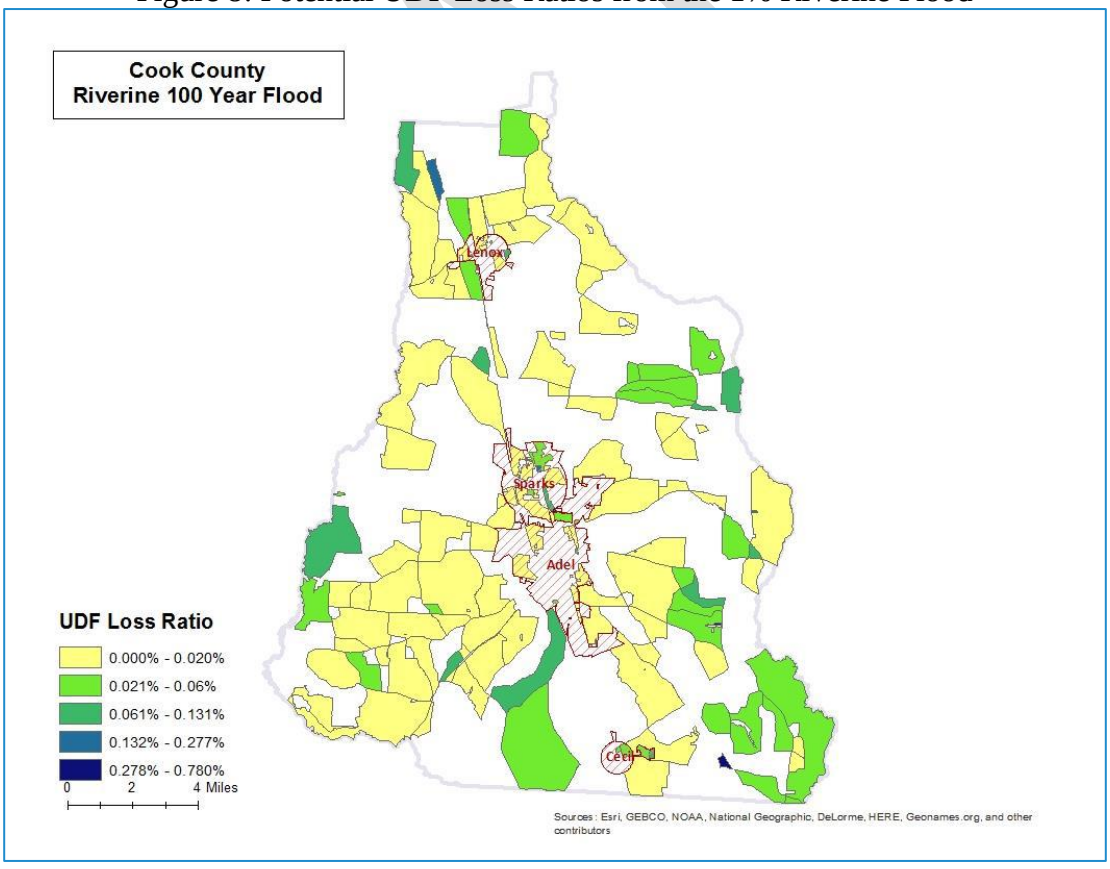


DRAFT

Below are the potential loss ratios of total buildings from the 1% flood by the 2010 census block:

Occupancy Classification	Total Buildings	Total Buildings Damaged	Total Building Exposure	Total Losses to Buildings	Loss Ratio of Exposed to Damaged
			Adel		
Commercial	360	8	$ 194,595,334	$ 196,134	0.10%
Industrial	106	2	$ 149,417,926	$ 13,818	0.01%
Residential	2,147	12	$ 396,126,818	$ 147,524	0.04%
			Cecil		
Industrial	4	1	$ 5,510,283	$ 21,521	0.39%
Residential	163	12	$ 17,827,689	$ 188,242	1.06%
			Lenox		
Commercial	51	1	$ 17,697,929	$ 7,149	0.04%
Residential	401	11	$ 33,754,347	$ 138,808	0.41%
			Sparks		
Commercial	68	8	$ 22,714,654	$ 457,107	2.01%
Residential	824	93	$ 69,418,072	$ 546,137	0.79%
			Unincorporated		
Commercial	97	7	$ 56,487,309	$ 45,292	0.08%
Government	4	1	$ 1,625,747	$ 35,229	2.17%
Industrial	47	4	$ 40,631,108	$ 548,165	1.35%
Religious	25	1	$ 21,279,418	$ 48,398	0.23%
Residential	3,971	203	$ 438,078,165	$ 3,482,883	0.80%
			County Total		
Total	8,268	364	$ 1,465,164,800	$ 5,876,137	

Figure 8: Potential UDF Loss Ratios from the 1% Riverine Flood



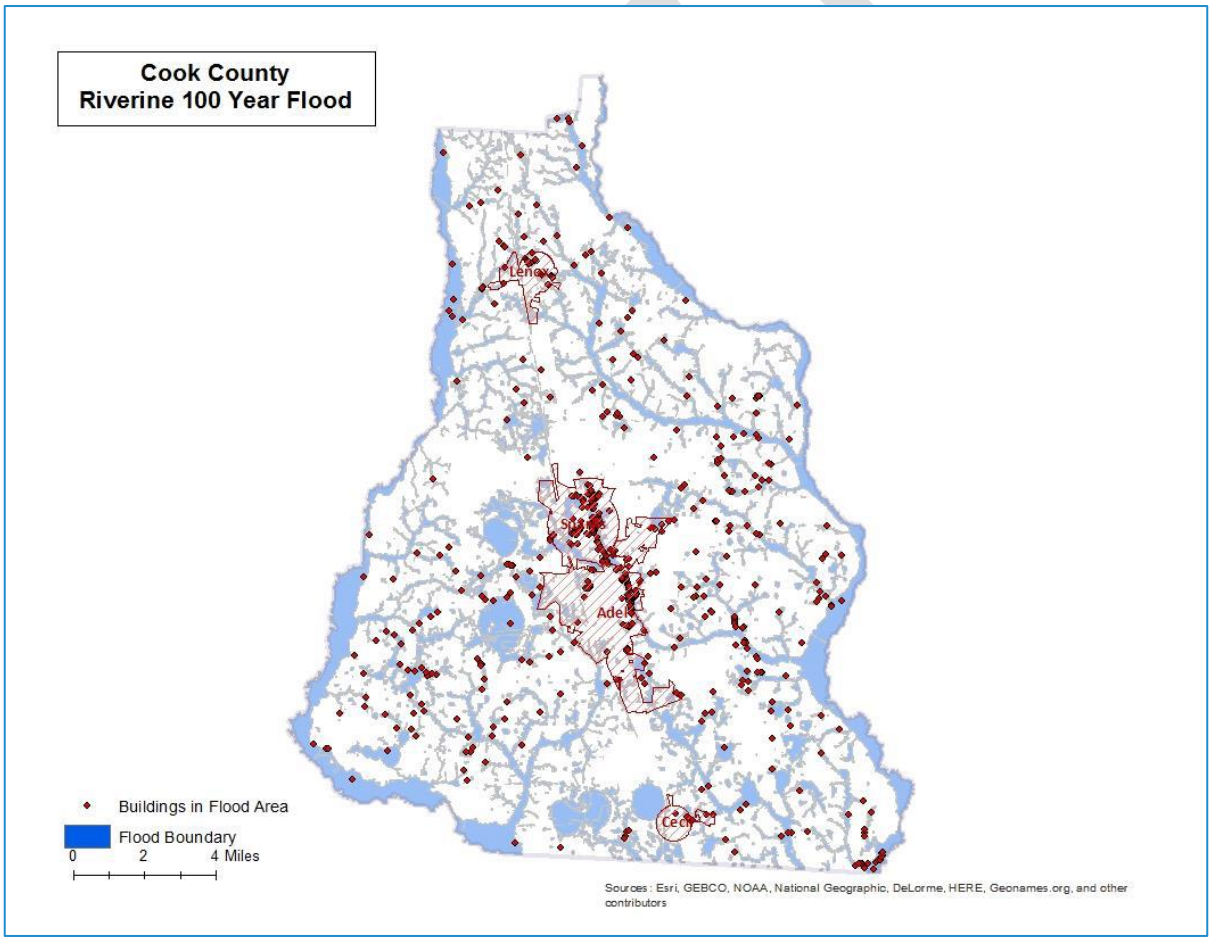
The model breaks the debris from the flood into the following three categories:

- Finishes (dry wall, insulation, etc.)
- Structural (wood, brick, etc.)
- Foundations (concrete slab, concrete block, rebar, etc.)

The estimate of debris generated is a total of 6,560 tons and is mapped below:

1) Finishes – 2,786 tons
2) Structural – 1,237 tons
3) Foundations – 2,448 tons

Figure 9: Damaged Buildings in 1% Riverine Flood



An essential facility may have the same impact as other buildings within the flood boundary. This can include structural failure, extensive water damage to the facilities and loss of facility functionality.

Table 10: Expected Damage to Essential Facilities in 1% Riverine Flood

Classification	Total	Moderate	Substantial	Loss of Use
Fire Station	12	1	0	1
Hospitals	1	0	0	0
Police Stations	5	0	0	0
Schools	4	0	0	0
EOCs	1	0	0	0

The GMIS reports do not list any Repetitive Loss/NFIP properties in Cook County or the Cities of Adel, Cecil, Lenox, and Sparks.

(See Appendix G. HAZUS Report for more information on this scenario)

E. Land Use and Development Trends

According to 2021 U.S. Census Bureau American Community Survey 5-year estimates, the population of Cook County is 17,188, an increase of 0.5% since 2016. The City of Adel's 2021 population is 5,459, a 2.9% increase since 2016. The City of Cecil's 2021 population is 317, a 9.7% decrease since 2016. The Town of Lenox's 2021 population is 786, a 5.9% decrease since 2016. The Town of Sparks' 2021 population is 2,300, a 13% increase since 2016.

Building Codes

Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) has zoning regulations. All jurisdictions have mandatory building and fire codes that a building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the construction codes mandatory as the Georgia State Minimum Standard Codes. (SEE CHAPTER 4, REGULATORY TOOLS/PLANS FOR ADOPTED CODES).

FIRM Compliance

Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are members of the National Flood Insurance Program (source: https://www.fema.gov/cis/GA.html). As of November 2023, all these jurisdictions comply with NFIP requirements and intend to remain in compliance by enforcing flood plain ordinances which prohibit or severely limit development in flood plains. For example, section 10 of the Cook County Zoning Ordinance, "Water Resource Districts," contains restrictions on building and land use intended to protect river waters, control erosion, and absorb flood waters.

Cook County adopted The Flood Damage Prevention Ordinance on April 15, 1996, amended on September 8, 2009, and last amended on October 2, 2023. Cook County's initial FIRM was identified on April 1, 1996, Adel's initial FIRM was identified on July 18, 1975, and September 1, 2017, Cecil's, and Lenox were December 6, 2001. Sparks' initial dates were February 14, 1975, and November 16, 1977. Cook County and all cities Current Effective Map Date is November 2, 2023. (*See Appendix D FEMA Community Status Book Report*).

NFIP Substantial Damage Regulations

The Cook County Building Inspector implements and enforces the floodplain management regulations for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks.

The Building Inspector also reviews building plans, and issues permits for the county and each jurisdiction. Permits are not approved until signed off as compliant with all building codes and NFIP requirements.

After a flood event, the Building Inspector performs damage assessments to determine whether the damage constitutes SI (substantial improvements), or SD (substantial damage) post disaster, and ensures all requirements are addressed. The County Inspector also reviews the cost estimates of the proposed work to ensure they are reasonable using the current market value of the structure and its characteristics, while excluding land value, using the market value to determine if the proposed improvements meet SI requirements or using market value prior to the damage to determine if repairs meet SD requirements. Field inspections are also conducted during the construction to ensure it complies with the issued permits and work with the owners to correct any violations found. All FIRMS and SFHA permits are retained and available to the public.

The County Inspector coordinates with the property owners and insurance adjusters on all NFIP insurance claims and Increased Cost of Compliance (ICC) coverage.

Documentation and Reporting: The Building Inspector will prepare detailed documentation of the damage assessment, cost estimation, and calculations. This documentation will be essential for official determinations, insurance claims, or assistance applications. The Inspector coordinates with the property owners and insurance adjusters on all NFIP insurance claims and Increased Cost of Compliance (ICC) coverage.

For many years, Cook County and the Cities of Adel, Cecil, Lenox, and Sparks have used CDBG funds to improve street paving and drainage work in their communities. Cook County and the Cities of Adel, Cecil, Lenox, and Sparks have used CDBG funds to improve street paving and drainage work in their communities for many years. The projects included roads, ditches, drainage, etc., continuing to control flooding.

Cook County and the Cities of Adel, Cecil, Lenox, and Sparks do not participate in the Community Rating System (CRS) program. As of October 1, 2023, they were not eligible, according to FEMA (source: http://www.fema.gov/library/viewRecord.do?id=3629).
No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

According to FEMA data, 33% of the total area of Cook County (49,267 acres) is within a flood zone (32.5% in Zone A, 0.4% in Zone AE, and 0.1% in the 0.2 percent annual chance flood hazard zone). Approximately 22% of the City of Adel (1,279 acres), 18.6% of the City of Cecil (118 acres), 25.2% of the Town of Lenox (262 acres), and 39.5% of the Town of Spark (1,027 acres) are within flood zones.

G. Overall HRV Summary of Events and Their Impact

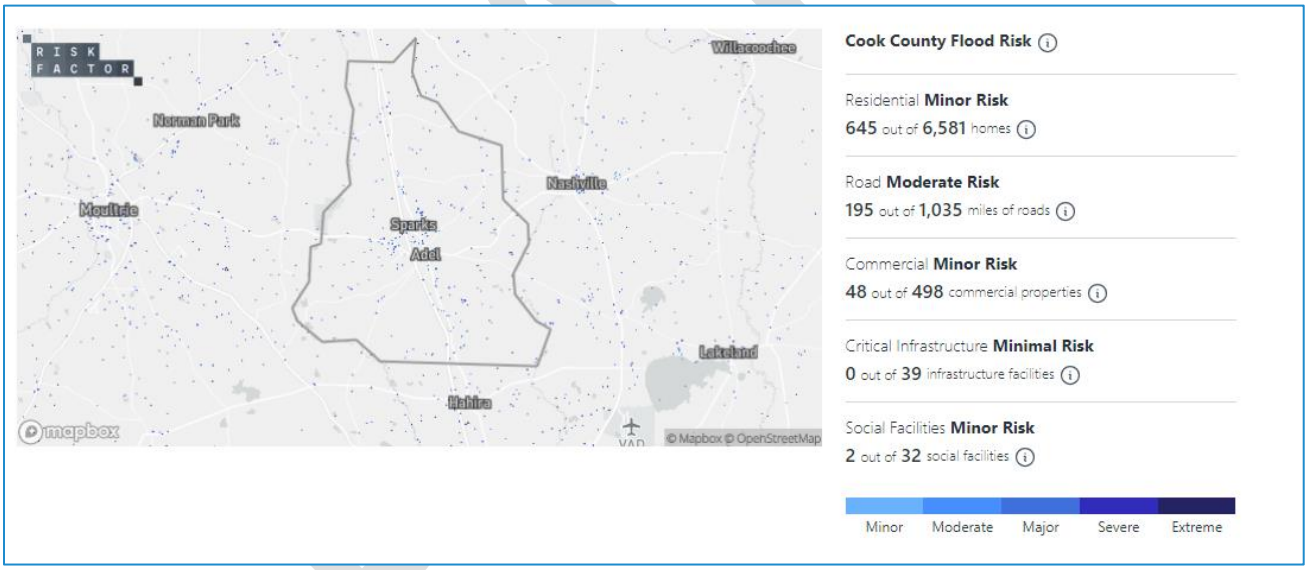
Floods can cause damage at any place, at any time, throughout Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, especially in flood-prone areas. Floods can happen quickly, and residents may not have time to evade floodwaters. The cost of the damage and potential loss of life may be higher if the event strikes populated areas as opposed to more sparsely populated or unpopulated areas.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

H. Impacts from Future Conditions

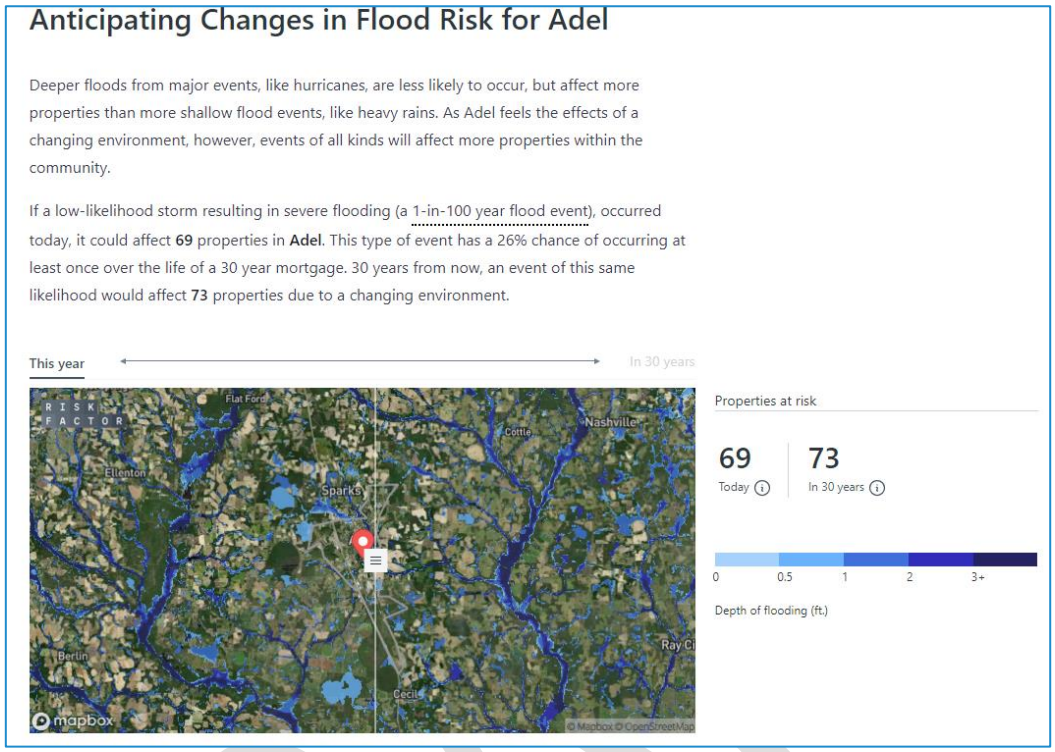
There are 693 properties in Cook County with a greater than 26% chance of being severely affected by flooding over the next 30 years. This is 11% of all the properties in Cook County. However, Cook County has minor risk of flooding over the next 30 years.

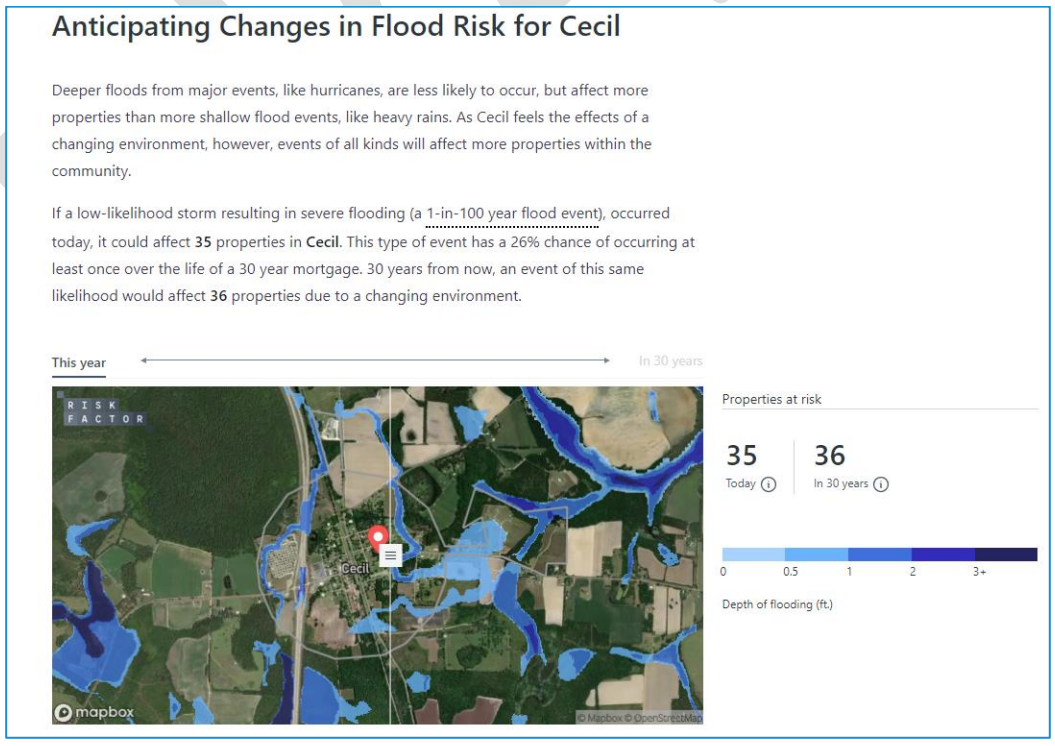


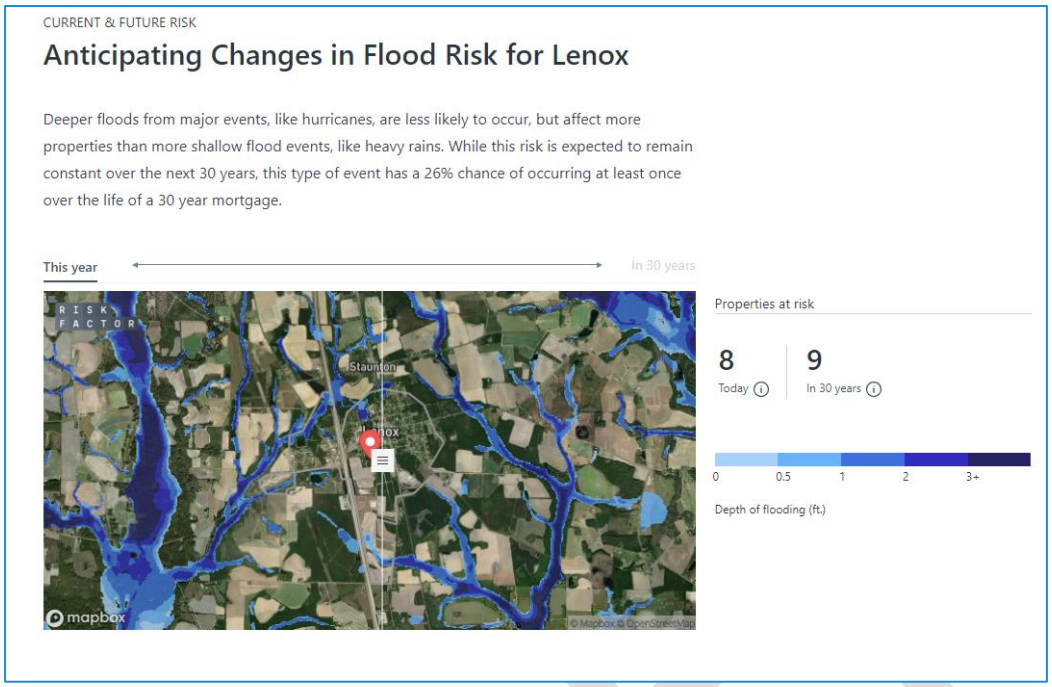
Cook County already invests in flood risk reduction products, but more may be needed.
Hurricanes are less likely to occur in the county but floods from major events, but with the changing environment, Cook County will have more events to affect properties within the community, such as hurricanes, that will affect more properties than the shallow events (heavy rain) do.

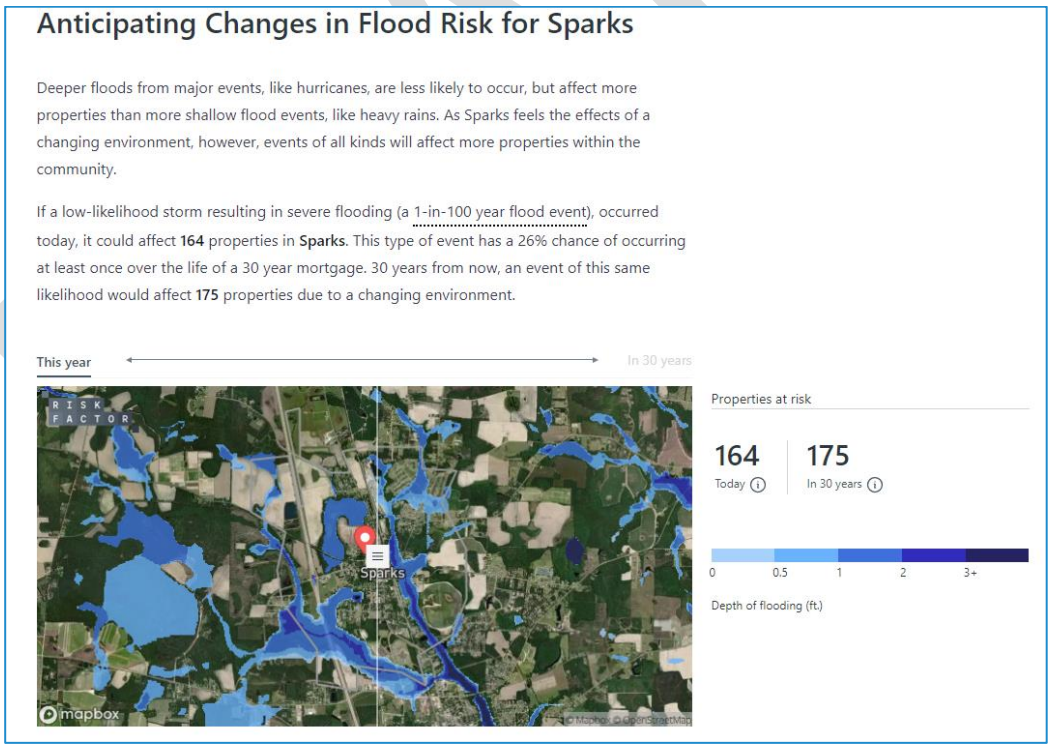
If a storm causing severe flooding (1-in-100-year100 year flood), occurred today, it could affect 672 properties in the county. The likelihood of this happening over the life of a 30-year mortgage

is 26%. In 30 years, an event of the same likelihood would affect 707 properties. This is all due to the environment changing.



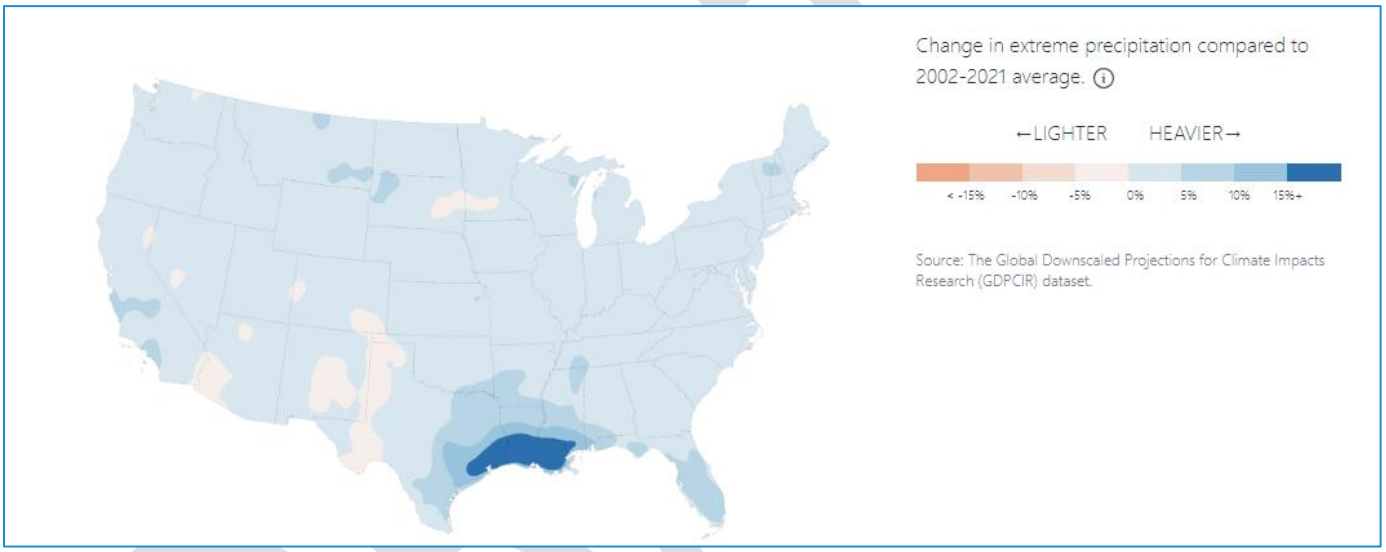




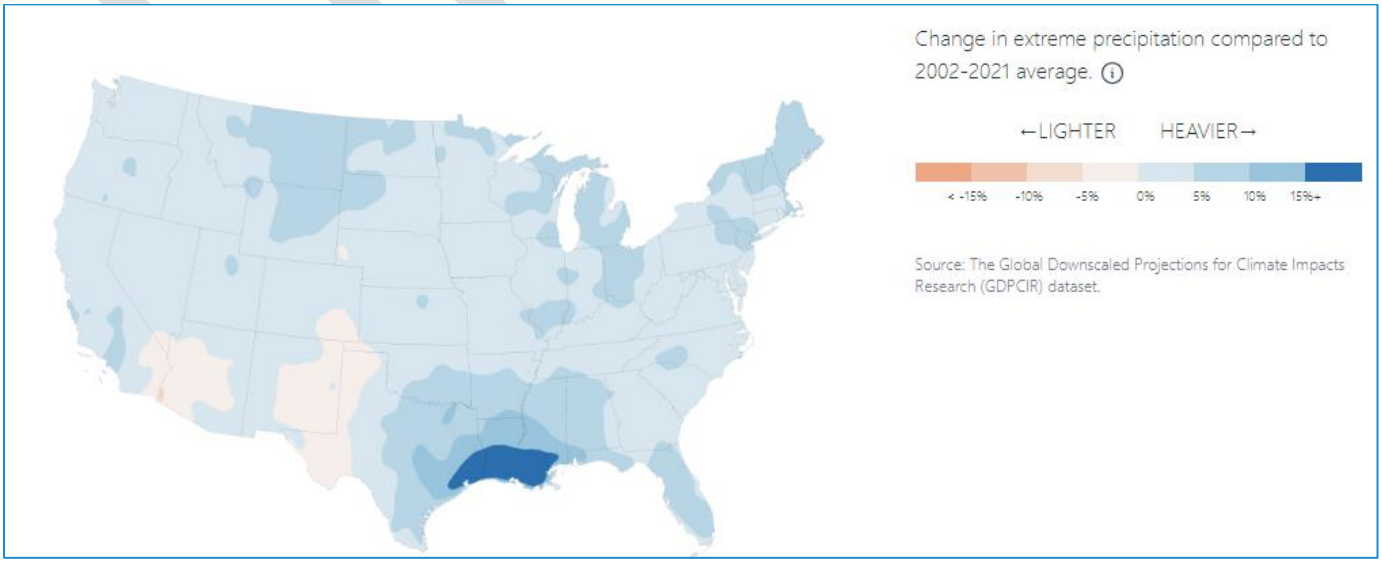


A changing environment can cause higher seas, new weather patterns, and stronger storms. As the atmosphere warms, there is more evaporation and water when it rains. Warmer atmosphere means warmer oceans and flooding can intensify from hurricanes and offshore storms. Sea levels rising will increase coastal flood risks and higher seas with more water available when high tides and coastal storms cause more flooding.

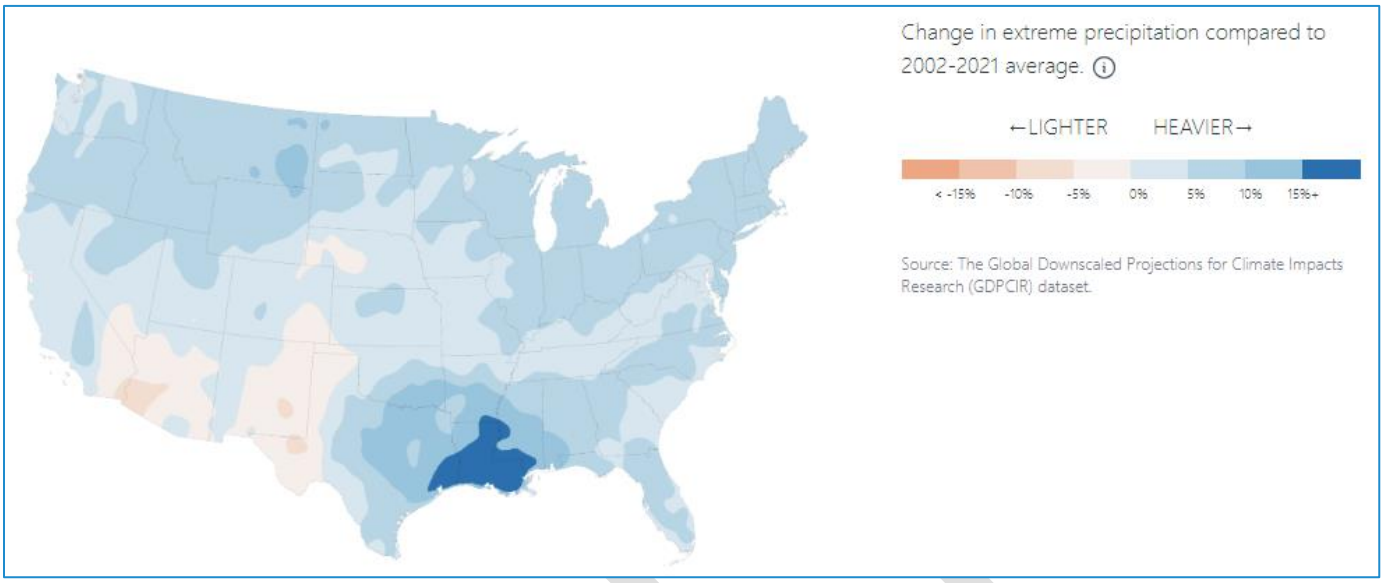
This Year



In 15 Years



IN 30 YEARS



Source: [Cook County, GA Flood Factor® Report | Risk Factor]

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Section V. Wildfires

A. Identification of Hazard

The threat of wildfire has been chosen by the HMPUC as the fifth most likely hazard to occur and cause damage in the community, based on experience, the FEMA-described methodology, and other factors. Historical data have been examined from various sources, including the National Climatic Data Center and Georgia Forestry Commission (see Appendix F), as well as from local history and personal accounts, to determine the frequency of events.

Much of southern Georgia is covered by forests, and fires play an important role in the health of forest ecosystems by breaking down organic matter into soil nutrients and helping seeds to germinate (source: NASA, https://earthobservatory.nasa.gov/Features/GlobalFire/fire_2.php). When naturally occurring wildfires are suppressed, combustible fuel (such as dead leaves and branches) accumulates in the forest. This increases the risk of larger, more destructive fire events in the future. Controlled, prescribed fires lower the risk of larger fire events and are beneficial to forest health (source: USDA, https://www.fs.usda.gov/detail/dbnf/home/?cid=stelprdb5281464).

Low humidity, lack of recent precipitation (or drought conditions), wind speed, and temperature are a combination of weather conditions that favor the kindling and spread of wildfires. A high fuel load (i.e., the accumulation of dead vegetation), in combination with the above, also provides for the kindling and spread of wildfires. Much of Cook County, including some areas near the Cities, is forested with commercial and free-growing pine trees and other trees. These trees can and do catch fire frequently in both small and large fire events.

According to NASA (https://earthobservatory.nasa.gov/IOTD/view.php?id=89757), an estimated 84 percent of wildfires are caused by humans. Some common ways that people start fires include discarding cigarettes, leaving campfires unattended, and losing control of prescribed burns or crop fires. Sparks from railroads and power lines, as well as arson, also routinely cause wildfires.

When a residential area, whether it be a single home or an entire subdivision, is adjacent to an area containing vegetative fuels, such as a forest or other wooded area, this is referred to as a Wildland-Urban Interface area (WUI). These are the areas at greatest risk for property damage due to Wildfire.

Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are all vulnerable to the effects of wildfires. The USDA Forest Service assigns areas a Wildfire Hazard Potential (WHP) score of Very Low, Low, Moderate, High, or Very High. As the map below shows, most of Cook County is scored either Low, Moderate, High, or Non-burnable, except for some small areas in the southeast corner of the county which are scored Very High.

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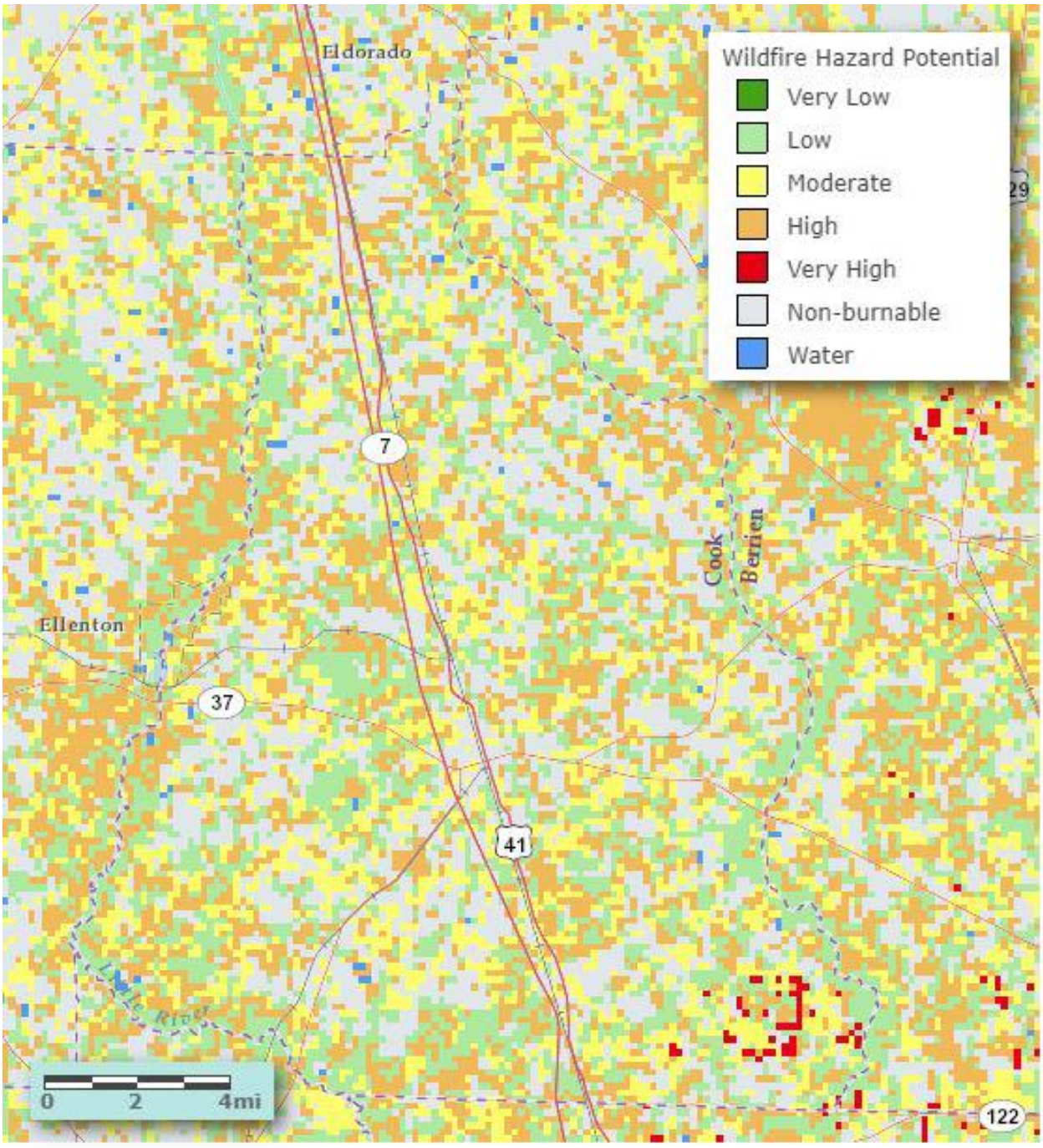
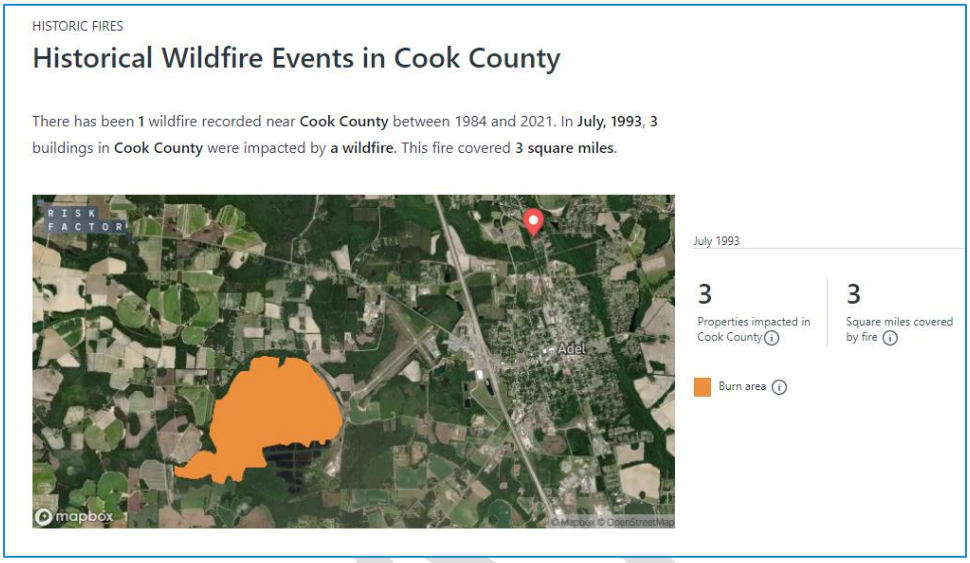


Data Source: USDA Forest Service and Fire Modeling Institute
https://www.arcgis.com/home/item.html?id=f291ac4840984de5a0cf842d8d7a0973

B. Profile of Events, Frequency of Occurrences, Probability

There is 1 historical wildfire recorded near Cook County between 1984 and 2021, by Risk Factor. In July 1993, 3 buildings in Cook County were impacted by a wildfire. This fire covered 3 square miles.



According to Georgia Forestry Commission data, there are 3,037 reports of wildfires occurring in Cook County (including the Cities) between 01/01/1967 and 12/31/2022. The Historic Recurrence Interval is 0.02 years. This is a 5,522% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 35.1, the past 20-year frequency is 53.9, and the past 50-year frequency is 59.96(see the Hazard Frequency Table in Appendix D).

Since the previous Hazard Mitigation Plan was completed, 53 wildfire events have occurred.

Although the most complete available data was used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

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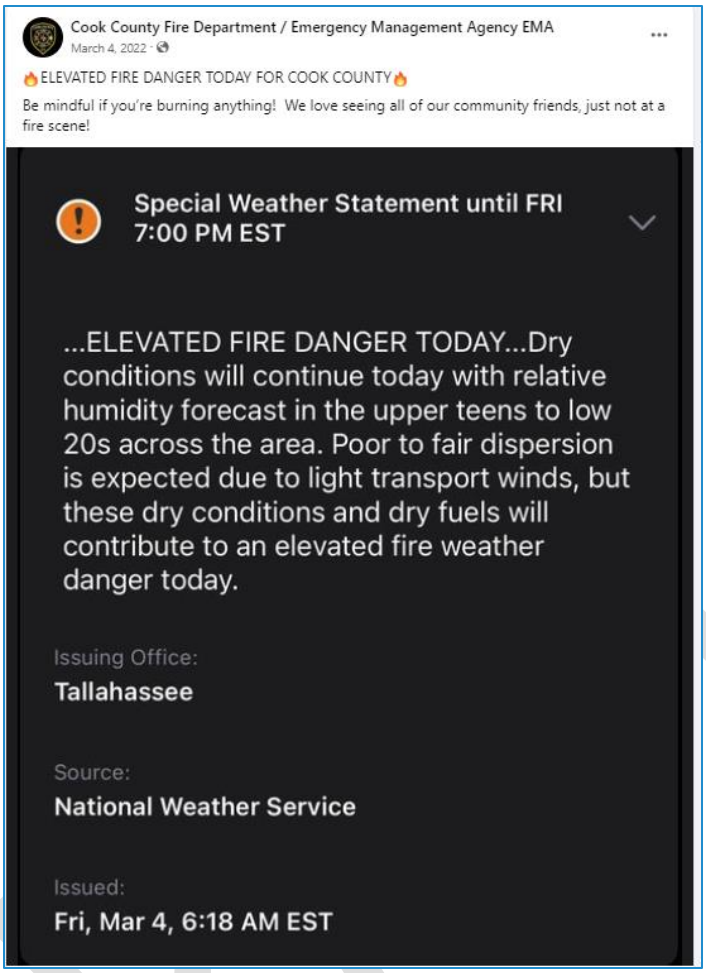
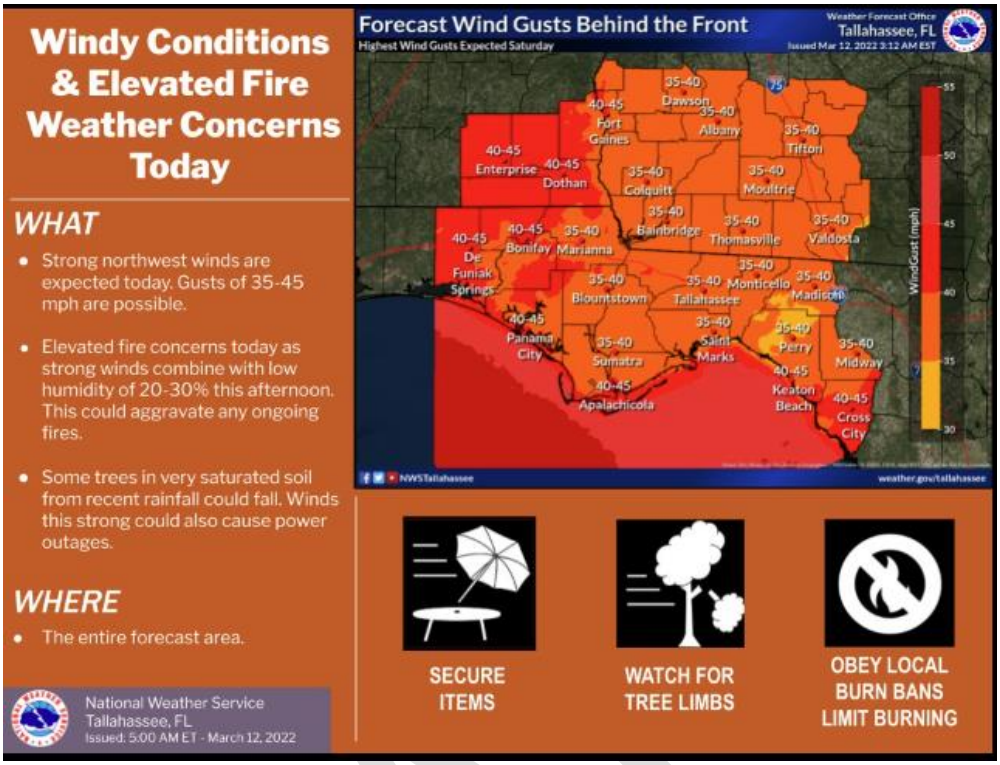

Cook County Fire Department / Emergency Management Agency EMA
March 4, 2022 ·
🔥ELEVATED FIRE DANGER TODAY FOR COOK COUNTY🔥
Be mindful if you're burning anything! We love seeing all of our community friends, just not at a fire scene!
Special Weather Statement until FRI 7:00 PM EST
...ELEVATED FIRE DANGER TODAY...Dry conditions will continue today with relative humidity forecast in the upper teens to low 20s across the area. Poor to fair dispersion is expected due to light transport winds, but these dry conditions and dry fuels will contribute to an elevated fire weather danger today.
Issuing Office:
Tallahassee
Source:
National Weather Service
Issued:
Fri, Mar 4, 6:18 AM EST

DRAFT


Cook County Fire Department / Emergency Management Agency EMA
March 5, 2022 ·
⚠️UPDATE: EVENT CHANGED TO 🔥ELEVATED RISK🔥
🚩RED FLAG EVENT CANCELLED (as of 8:18am)
🚩RED FLAG WARNING issued for our area today🚩
What is a 🚩RED FLAG WARNING? It means that critical fire weather is occurring now or it will start shortly.
🚩STRONG WINDS
🚩LOW RELATIVE HUMIDITY
🚩WARM TEMPERATURES
🔥ALL OF THESE CONTRIBUTE TO EXTREME FIRE BEHAVIOR🔥
⚠️Don't burn today, save it for another day⚠️
Red Flag Warning
Columbus
Montgomery
Selma
Americus
Greenville
Troy
Albany
Douglas
Tifton
Andalusia
Dothan
Waycross
Valdosta
Tallahassee
Pensacola


Windy Conditions & Elevated Fire Weather Concerns Today
WHAT
Strong northwest winds are expected today. Gusts of 35-45 mph are possible.
Elevated fire concerns today as strong winds combine with low humidity of 20-30% this afternoon. This could aggravate any ongoing fires.
Some trees in very saturated soil from recent rainfall could fall. Winds this strong could also cause power outages.
WHERE
The entire forecast area.
National Weather Service
Tallahassee, FL
Issued: 5:00 AM ET - March 12, 2022
Forecast Wind Gusts Behind the Front
Highest Wind Gusts Expected Saturday
Weather Forecast Office
Tallahassee, FL
Issued Mar 12, 2022 3:12 AM EST
35-40 Dawson
40-45 Fort Gaines
35-40 Albany
35-40 Tifton
40-45 Enterprise
40-45 Dothan
35-40 Colquitt
35-40 Moultrie
35-40 Bainbridge
35-40 Thomasville
35-40 Valdosta
40-45 De Funiak Springs
40-45 Bonifay
35-40 Marianna
35-40 Blountstown
35-40 Tallahassee
35-40 Monticello
35-40 Madison
40-45 Panama City
35-40 Sumatra
35-40 Saint Marks
35-40 Perry
35-40 Midway
40-45 Apalachicola
40-45 Keaton Beach
40-45 Cross City
WindGust (mph)
55
50
45
40
35
30
NWSTallahassee
weather.gov/tallahassee
SECURE ITEMS
WATCH FOR TREE LIMBS
OBEY LOCAL BURN BANS LIMIT BURNING

DRAFT

Cook County Fire Department / Emergency Management Agency EMA · Follow

June 23, 2022

This afternoon and evening we all battled the largest fire we've had in Cook County in the 102* summer heat. A saw mill in Cecil was not only on fire, it was spreading FAST through their lumber yard. This is a fire we consider a success because no lives were lost and nobody lost their homes!

Without the outpour of help from our neighboring fire departments, citizens dropping off water, citizens pulling fire hoses, and a small business providing some relief from the heat, this would not be the successful operation it was.

A PROFOUND 🔥THANK YOU🔥 to the following:

Berrien County Fire Department
Brooks County Fire Department
Lowndes County Fire Department
Lenox Fire Department
Sparks Fire Department
Georgia Forestry
Ray City Fire Department
New Lois Fire Department
Georgia Power
Kona Ice
Norfolk Southern Railroad
Cook County Sheriff's Department
Cecil Police
Red Cross
Grady/South Georgia EMS
Cook County Road Department
Our 911 dispatchers
And the countless citizens who brought water and Gatorade to us.

Last and not least....THANK YOU TO THE MEN AND WOMEN OF OUR COOK COUNTY FIRE DEPARTMENT! You are an amazing, dedicated, hard working group of people that we are all so grateful for🔥

Adel News Tribune
The Spirit of Cook County Since 1889
Serving Adel...Cecil...Lenox...Sparks

Huge fire devastates landmark business

By Editor | June 28, 2022 | 0

Firefighters battled the blaze in 102 degree summer heat.

The biggest fire at a local business in many years burned up eight acres of product and equipment last week at Guthrie Lumber Company on Union Street in Cecil.

The blaze broke out at about 3:45 p.m. on Wednesday, June 22, 2022, at the company's saw mill and spread rapidly through the lumber yard. Area residents for many miles around could see a mammoth black column of smoke rising out of the conflagration.

Firefighters battled the blaze to the point of exhaustion in 102 degree summer heat throughout Wednesday afternoon, and then into the evening.

No injuries were reported. EMS stood by if needed to assist the firefighters.

The dry weather created the conditions for a massive fire with such low humidity. Thankfully, there was no wind, or a much larger disaster could have erupted.

Cook County Fire Chief Johnny West said he considered the fire response operation to be a success because no lives were lost and neighboring homes were saved. Fire personnel contained the flames to the point that the office building, the company's main saw, and two endangered nearby homes were spared. However, customers' lumber on the yard was a major loss.

"Without the outpouring of help from our neighboring fire departments, citizens dropping off water, citizens pulling fire hoses, and a small business providing some relief from the heat, this would not be the successful operation it was," Chief West said.

Chief West gave "a profound thank you" to the following first responders and supporters: Berrien County Fire Department, Brooks County Fire Department, Lowndes County Fire Department, Lenox Fire Department, Sparks Fire Department, the Georgia Forestry Commission, Ray City Fire Department, New Lois Fire Department, Georgia Power Co., Kona Ice, Norfolk Southern Railroad, Cook County Sheriff's Office, Cecil Police Department, American Red Cross, Grady/South Georgia EMS, Cook County Road Department, "our 911 dispatchers, and the countless citizens who brought water and Gatorade to us."

Last but not least, Chief West said, "Thank you to the men and women of our Cook County Fire Department! You are an amazing, dedicated, hardworking group of people that we are all so grateful for."

The fire started when a motor bearing went out on a wood planer that was in operation and sparks caught a pile of sawdust and wood debris on fire, Chief West said. The flames quickly spread across the lumber yard where years' worth of sawdust and old tree bark had collected.

Fire personnel have continued to be called back to the scene over the last several days to deal with flare-ups at hot spots. They had to extinguish some burning tires near railroad tracks and a fire in neighboring woods, Chief West said.

The Georgia Forestry Commission has cut several firebreaks in the area, and the owner brought in a front end loader to clear out some of the material that was contributing to the resurgence of fires.

Rain on Friday night helped stop more fire breakouts.

Established in 1992, Guthrie Lumber, a family-owned and -operated business, serves the South Georgia and North Florida areas. Mr. Vernon Guthrie, a 102-year-old D-Day veteran of World War II, owns the business.

The Guthrie family hopes to get the company back up and running despite their major losses.

A GoFundMe account has been set up to assist the Guthries with rebuilding and covering lost income.

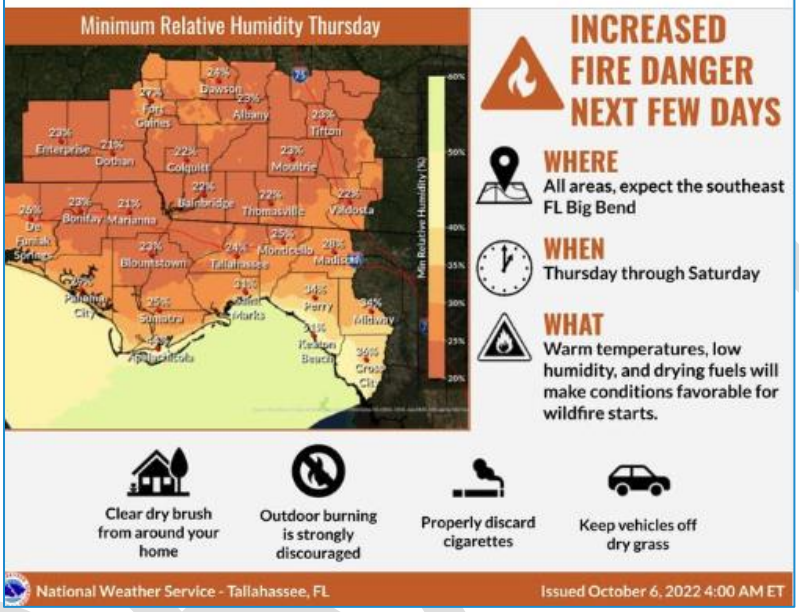
Cook County Fire Department / Emergency Management Agency EMA
October 6, 2022 -

Please read the statement below from the National Weather Service:

An increased fire danger continues through the next few days due to low humidity, warm temperatures, and drying fuels. Humidity increases a bit by Saturday, but winds will increase slightly, keeping the wildfire threat elevated.

Overview:

Warm temperatures, low humidity, and dry soils and fuels will all combine to produce an increased fire danger through at least Saturday. High temperatures the next few days will be in the middle to upper 80s, possibly near 90 in some spots. However, very dry air will be in place as well, resulting in relative humidity values of 20-30%. Given the lack of rainfall over the last few weeks, soils and fuels have been drying and are more receptive to burning. This all leads to an increased fire danger and a possible uptick in fire starts. By Saturday, a dry cold front moves through which will bring a slight uptick in winds. However, winds are still expected to remain below Red Flag Warning criteria. Regardless, the fire danger will likely remain elevated through at least Saturday.




t Minimum Temperatures
Tallahassee
Dawson
Albany
Tifton
Enterprise
Dothan
Colquitt
Moultrie
Bainbridge
Thomasville
Valdosta
Bonifay
Marianna
Blountstown
Tallahassee
Monticello
Madison
Panama City
Sumatra
Saint Marks
Perry
Midway
Keaton Beach
Apalachicola
Cross City
FIRE WEATHER WATCH
Fire Weather Watch is issued when
itical fire weather conditions
e possible.
ritical fire conditions" means
arm temperatures, low humidity,
d strong, gusty winds.
e Prepared.
RED FLAG WARNING
A Red Flag Warning is issued when
critical fire weather conditions
happening or are about to happe
Avoid burning, be careful around o
flames, safely dispose of cigarettes.
Fires can spark and grow very quick
Take Action!
weather.gov
Maximum Wind Gusts
Tallahassee, FL
Minimum Relative Humidity Values
Tallahassee, FL


Cook County Fire Department / Emergency Management Agency EMA
March 19 ·
Today at 1:10pm, Cook County Fire Department / Emergency Management Agency EMA responded to a structure fire in Chaserville. State Fire Marshals determined the fire was arson. We need your help to identify the individual or individuals responsible. Up to a $10,000 reward is being offered. Let's catch this fool!
REWARD UP TO $10,000
FOR INFORMATION LEADING TO THE ARREST & CONVICTION OF PERSON(S) RESPONSIBLE FOR ARSON!
Help
Eliminate
Arson
Today

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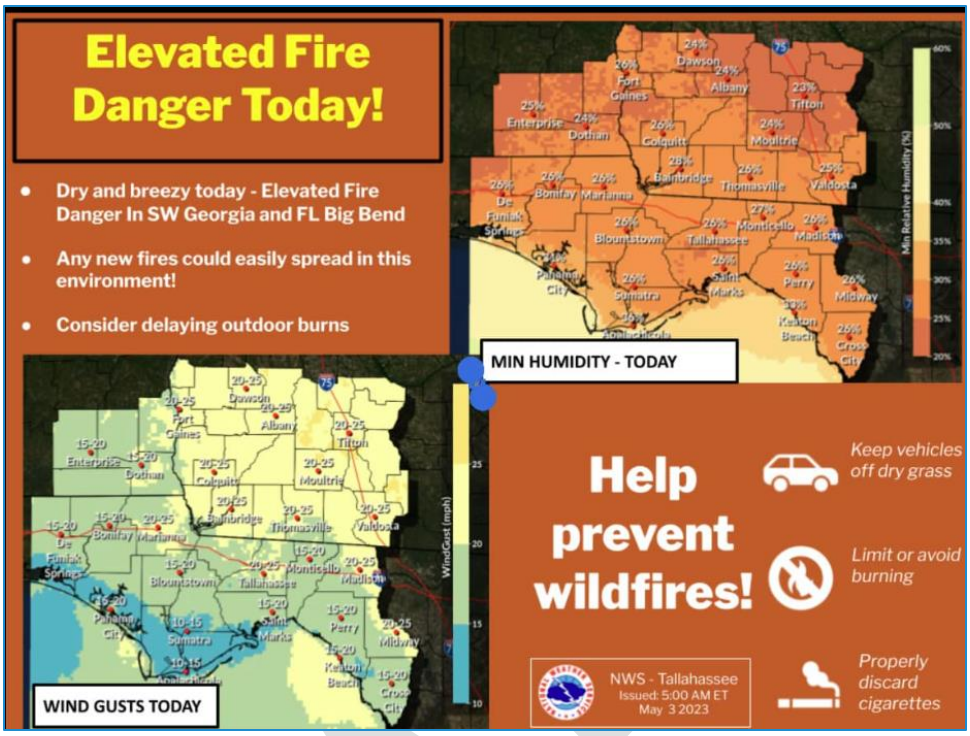

COOK COUNTY FIRE DEPARTMENT
Monthly Call Statistics
July 2023

Building Fires:	1
Vehicle Fires:	2
Grass/Wood Fires:	1
Fire Alarms / Cancelled:	4
Auto Accidents:	1
Medical Calls:	11
Other Calls:	6
Total Calls:	26

C./D.: Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are equally vulnerable to this hazard.

An estimated 100% of the Residential property (7,506 of 7,506) in Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard, with a total value of $955,196,000. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,922 of 2,845) in the

community may be affected, with a total value of $716,747,972. The values are based on the most recent available tax roll data for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, provided by the Cook County Tax Assessor's Office.

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According to the inventory database reports and maps, all the 58 Critical Facilities and Infrastructure for Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard. The total value of these Critical Facilities is $198,051,152.

E. Land Use and Development Trends

According to 2021 U.S. Census Bureau American Community Survey 5-year estimates, the population of Cook County is 17,188, an increase of 0.5% since 2016. The City of Adel's 2021 population is 5,459, a 2.9% increase since 2016. The City of Cecil's 2021 population is 317, a 9.7% decrease since 2016. The Town of Lenox's 2021 population is 786, a 5.9% decrease since 2016. The Town of Sparks' 2021 population is 2,300, a 13% increase since 2016.

Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) has zoning regulations. All jurisdictions have mandatory building and fire codes that a building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make construction codes mandatory as the Georgia State Minimum Standard Codes. (SEE CHAPTER 4, REGULATORY TOOLS/PLANS FOR ADOPTED CODES).

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

Wildfires may happen at any place at any time but are more likely in forested areas. Unincorporated Cook County has more areas rated "High" for Wildfire Hazard Potential than the Cities, and unincorporated Cook County is the only jurisdiction that has any areas rated "Very High." The impact of a wildfire would be more severe in places with higher population density due to more people being in danger and more potential for destruction of homes and other buildings. In jurisdictions without building codes and inspections, structures may exist that are not built to code and therefore may be especially vulnerable to the effects of wildfires and other hazards.

The City of Adel has 16 full-time paid firefighters and 20 volunteers. The other Cities and the County are served by volunteer firefighters. The following are the ISO Classes of fire stations in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks.

STATION		ISO RATING
Adel Fire Station #1	213 E Third St	3
Adel Fire Station #2	700 S Elm St	3
Sparks Volunteer Fire Department	113 E Colquitt Ave	5
Chaserville-Massee Volunteer Fire Department	10454 Barneyville Rd	5
Cook County Cecil Volunteer Fire Department	2005 Highway 41	5
Pine Valley Fire Department Station #1	3576 Highway 76 Station	5
Pine Valley Fire Department #2	5375 McConnell Bridge Rd	5
Cook County Fire Dept N Cook Station	959 Kinard Bridge Rd	5
Cook County SE Cook Station #1	488 Register Road	5
Cook County SE Cook Station #2	4193 Futch Rd	5
Lenox Volunteer Fire Station #1	42 E Central Ave	5
Lenox Volunteer Fire Station #2	65 Brad St	5

G. Overall HRV Summary of Events and Their Impact

Wildfires can cause damage anywhere, at any time, throughout Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. They can spread quickly, and residents may not have time to evacuate. The cost of the damage and potential loss of life may be higher if the event strikes populated areas as opposed to more sparsely populated or unpopulated areas.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

H. Impacts from Future Conditions

The risk of wildfires is changing due to the change in the environment. This means higher temperatures, and drier conditions that created a condition prime for a wildfire to spread.

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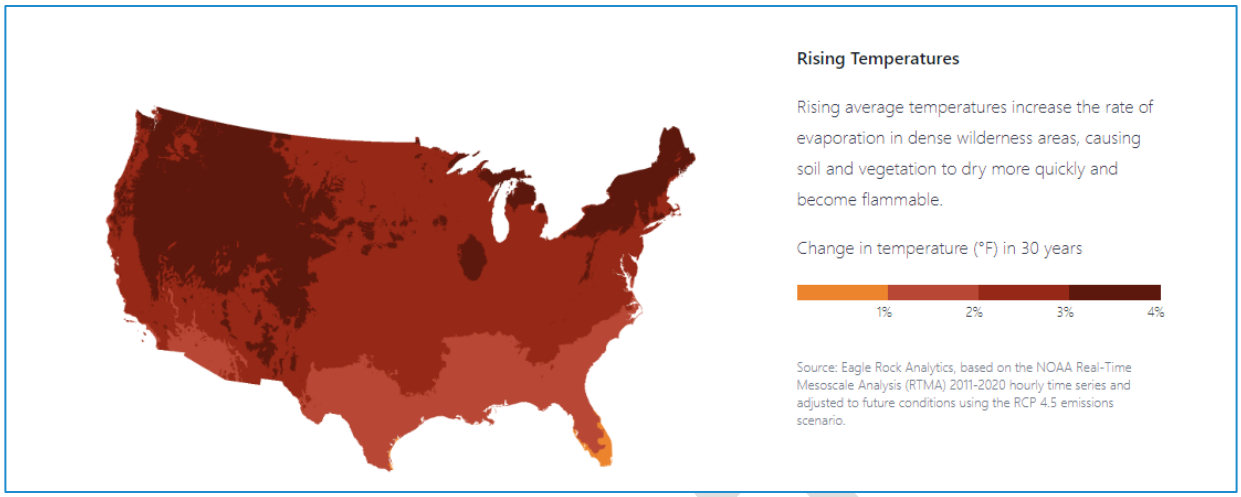
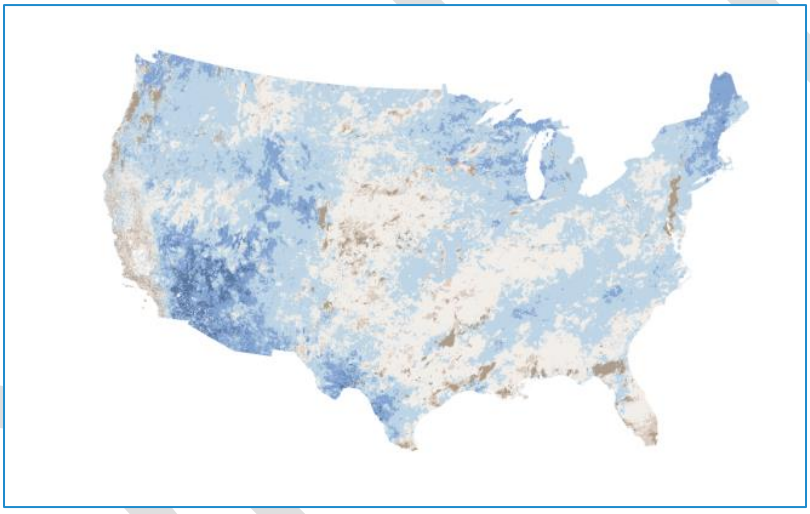
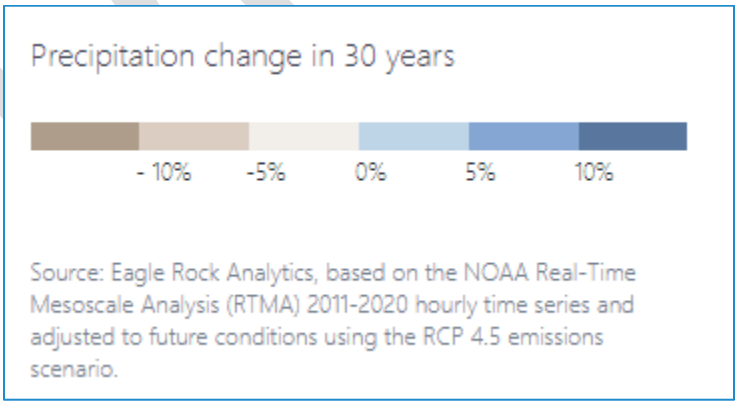


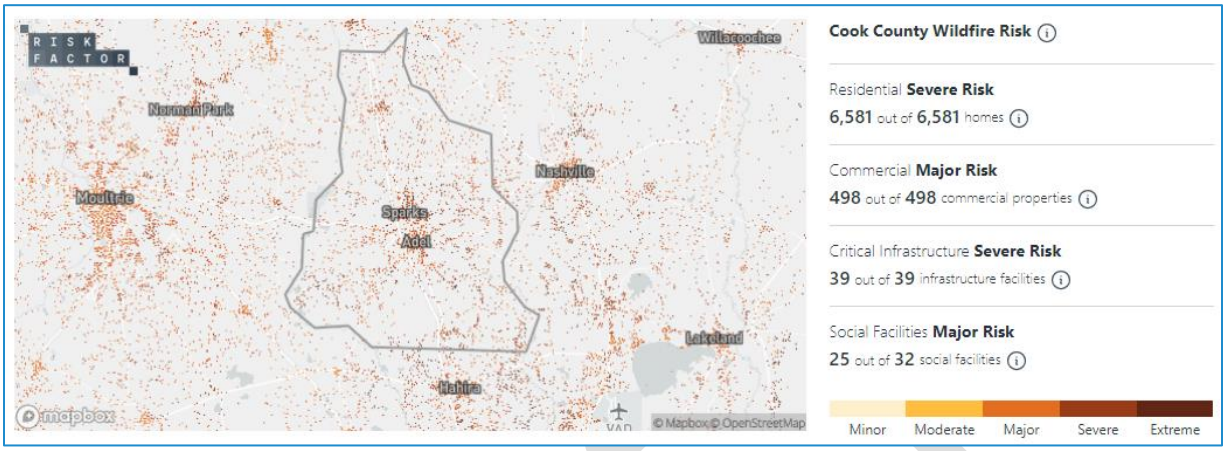
The precipitation patterns are also changing with exacerbating dry seasons in areas more prone to wildfire. This causes burns to become more frequent and severe.

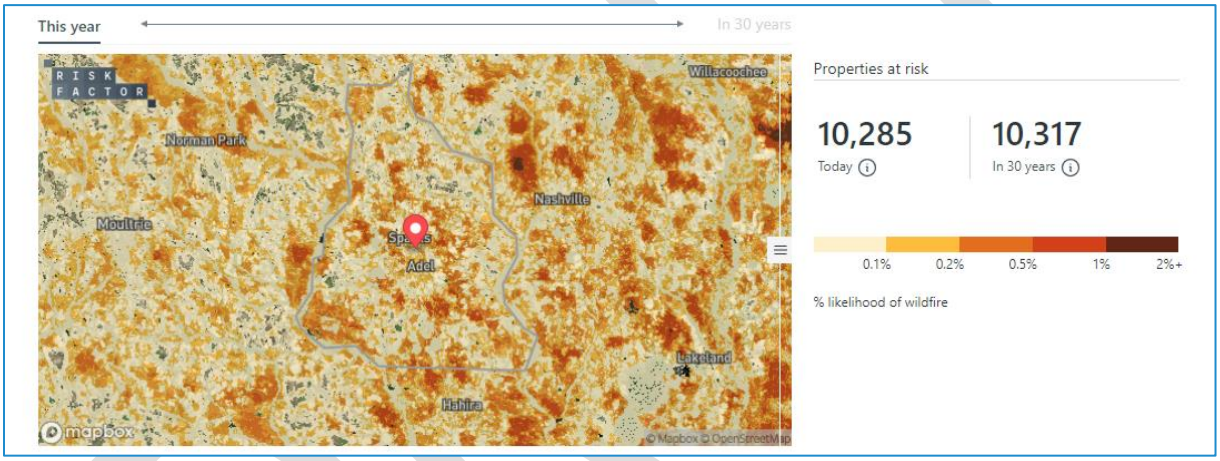


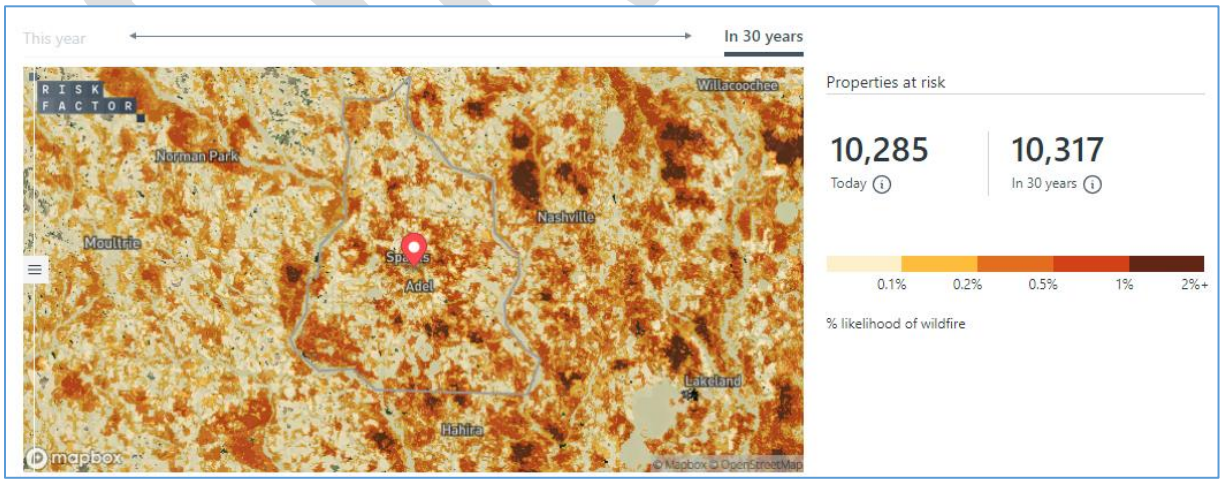


Lower humidity in the air will cause plants to release moisture to balance the environment. This results in dry vegetation that is more prone to wildfire.

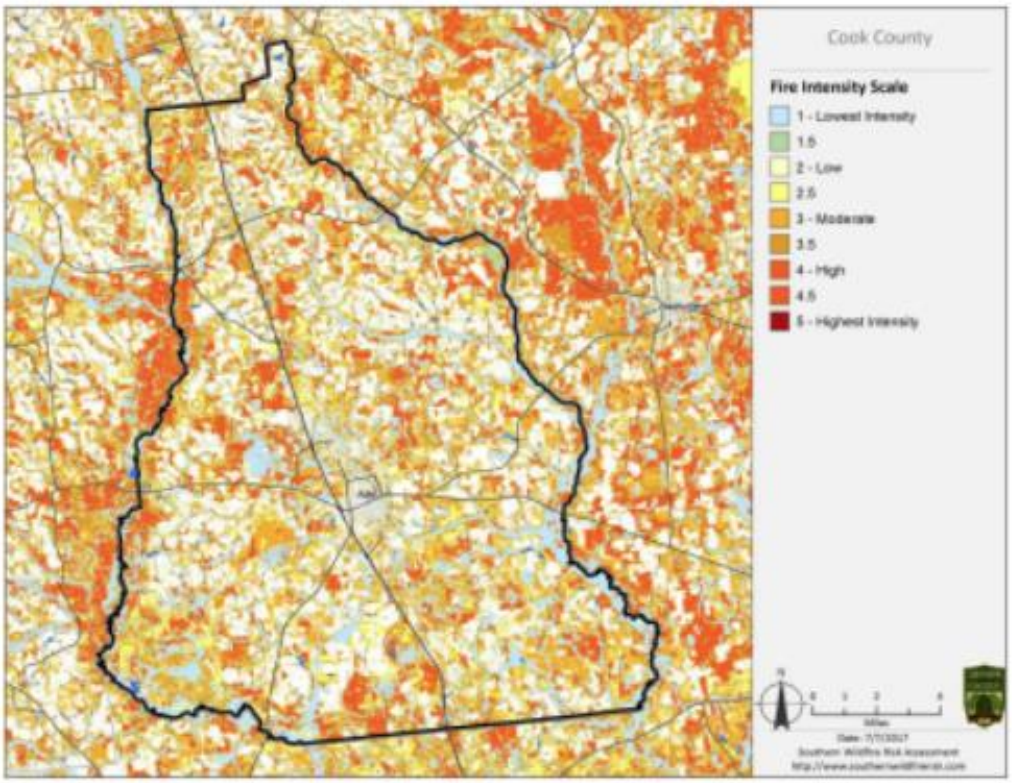
Wildfire not only damages property, but it can also cut off utilities, emergency services and impact evacuation routes. It can also impact the economic well-being of the community. Over the next 30 years, wildfire will be a severe risk to Cook County.



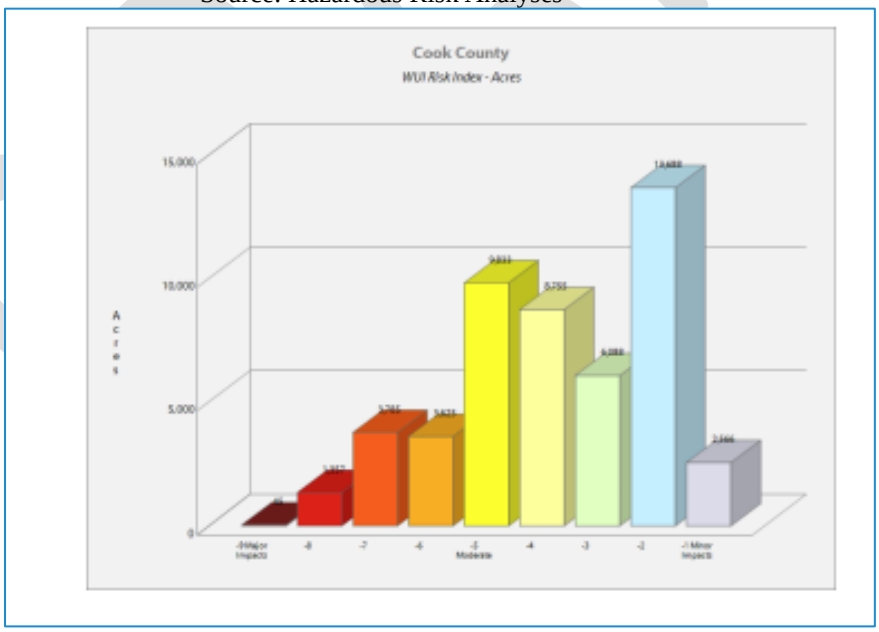




Source: Risk Factor



Source: Hazardous Risk Analyses



Section VI. Extreme Heat

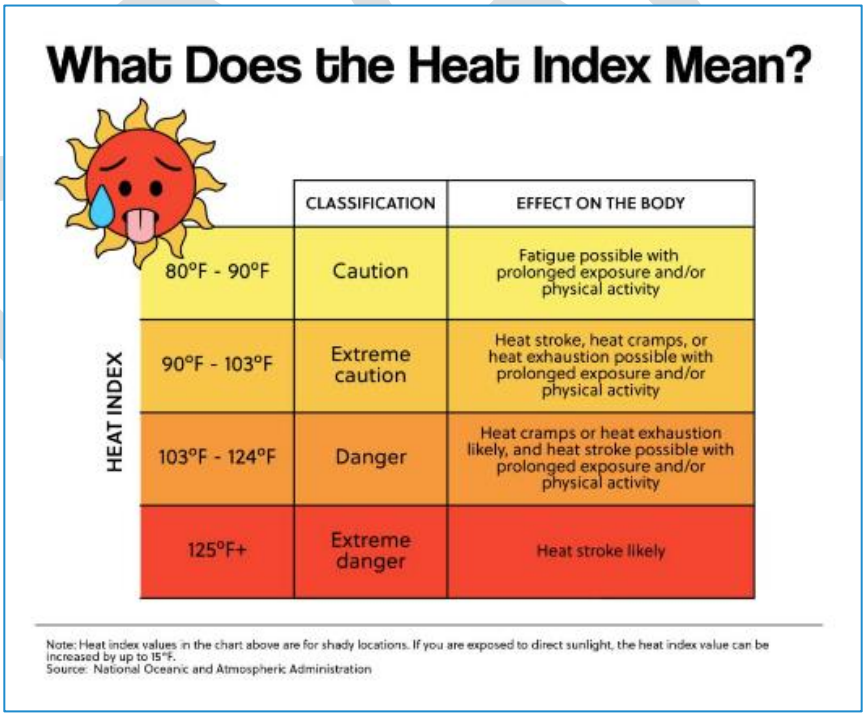
A. Identification of Hazard

The threat of extreme heat has been chosen by the HMPUC as the sixth most likely hazard to occur and cause damage in the community, based on experience, the FEMA-described methodology, and other factors. Historic data have been examined from various sources, including the National Climatic Data Center (see Appendix F), and from local history and personal accounts, to determine the frequency of events.

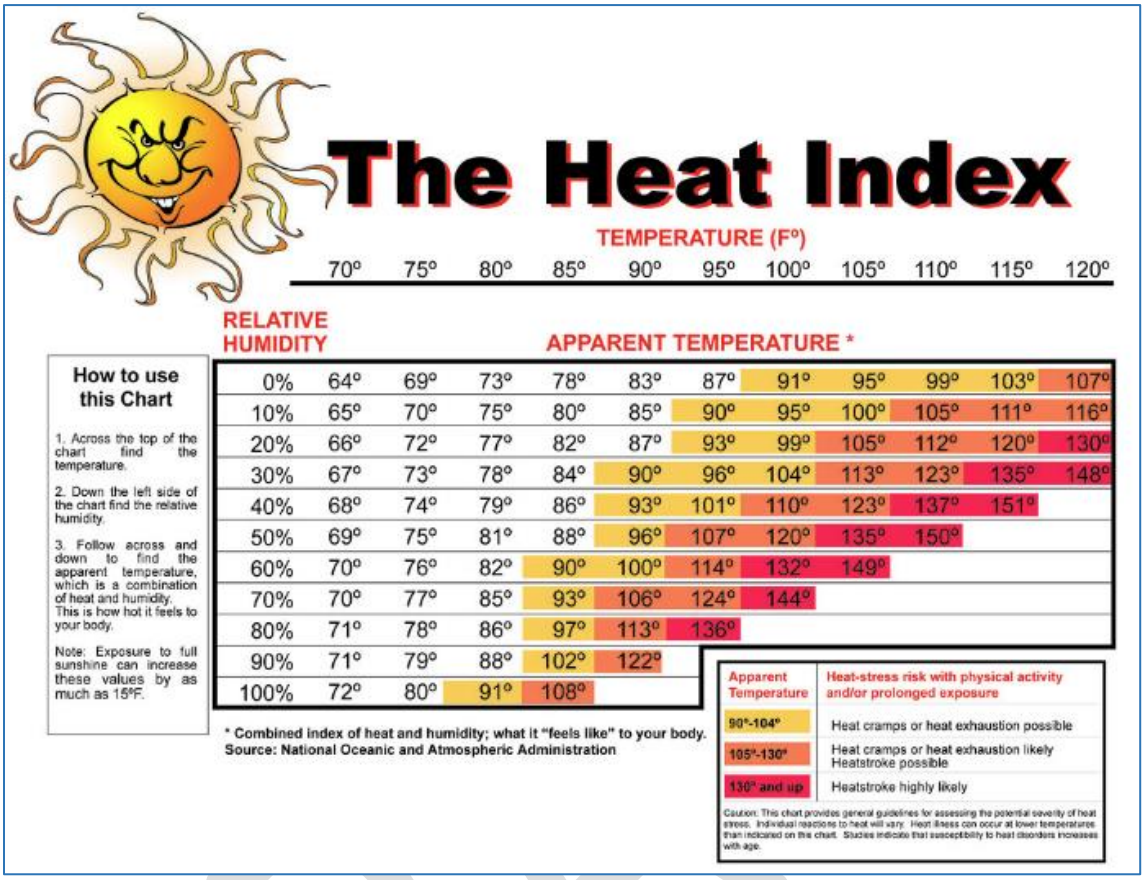
The major hazard presented by heat waves is not so much to infrastructure as to the population. Despite the comparatively warm climate of this region, there are many residents who are not adequately prepared to handle extreme heat events (for example, those without air conditioning in their homes). The risk is particularly high for the elderly and the young. Extreme heat is a hazard that may result in loss of life or damage to property and the economy. Due to weather forecasting methods, most extreme heat events can be predicted with some level of accuracy ahead of time.

The heat index is a measure that combines the effects of heat and humidity. When heat and humidity combine to reduce the amount of evaporation of sweat from the body, outdoor exercise becomes dangerous even for those in good shape (source: National Weather Service, http://www.nws.noaa.gov/forecasts/wfo/definitions/defineHeatIndex.html).

The table below shows the levels of danger associate with the heat index as calculated by the National Weather Service (source: https://www.weather.gov/ama/heatindex).



The Heat Index chart below shows Heat Index Values for various temperatures and humidity levels. As an example, if the air temperature is 96° F and the relative humidity is 65%, the heat index—i.e., how hot it feels—is 121° F.



For the National Weather Service's Tallahassee district (which includes Cook County), an **Excessive Heat Watch** is issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours. A Watch is used when the risk of a heat wave has increased but its occurrence and timing is still uncertain. A Watch provides enough lead time so that those who need to prepare can do so, such as city officials who have excessive heat event mitigation plans. The National Weather Service office in Tallahassee will issue this product if the heat index might reach or exceed 113°F.

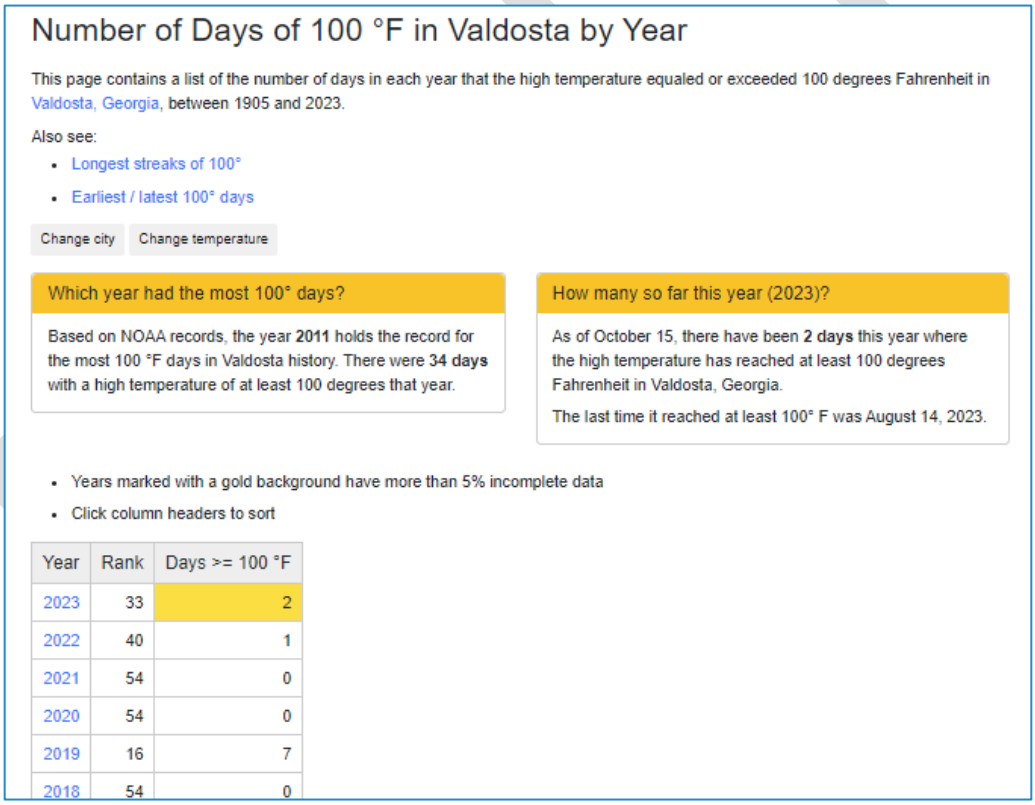
A **Heat Advisory** is issued when an excessive heat event is expected in the next 24 hours. This is issued when an excessive heat event is occurring, is imminent, or has a very high probability of occurring. An advisory is for less serious conditions that cause significant discomfort or inconvenience and, if caution is not taken, could lead to a threat to life. The National Weather Service will issue this product if the heat index might reach 108-112°F.

An **Excessive Heat Warning** is issued when an excessive heat event is expected in the next 24 hours. A warning is issued when an excessive heat event is occurring, is imminent, or has a very high probability of occurring. The warning is used for conditions posing a threat to life. The National Weather Service will issue this product if the heat index is expected to reach or exceed 113°F. (Source: Florida State University, https://emergency.fsu.edu/hazards/heat/about)

Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are all equally vulnerable to the effects of extreme heat.

B. Profile of Events, Frequency of Occurrences, Probability

In the previous HMP, 35 extreme heat events occurred in Cook County (including the Cities) between 01/01/2006 and 12/31/2017. As you will see in Appendix F, NOAA does not have any recorded information on heat in Cook County. According to https://riskfactor.com, it had estimated 7 hot days in 2023 with temperatures over 100 degrees. On https://www.extremeweather.com, (see below) it was stated that in neighboring Lowndes County there were 8 days recorded for temperatures of 100 degrees or higher, from 2018-2022. Using this information, it is estimated that 8 heat events have occurred in Cook County since 2017, bringing the total to 48. The Historic Recurrence Interval is 1.52 years. This is a 65.75% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 2.5, the past 20-year frequency is 1.6, and the past 50-year frequency is 0.96 (see the Hazard Frequency Table in Appendix D). These were all Heat Advisories except for two events in 2012, which were Excessive Heat Warnings.



Number of Days of 100 °F in Valdosta by Year

This page contains a list of the number of days in each year that the high temperature equaled or exceeded 100 degrees Fahrenheit in Valdosta, Georgia, between 1905 and 2023.

Also see:

- Longest streaks of 100°
- Earliest / latest 100° days

Change city | Change temperature

Which year had the most 100° days?

Based on NOAA records, the year **2011** holds the record for the most 100 °F days in Valdosta history. There were **34 days** with a high temperature of at least 100 degrees that year.

How many so far this year (2023)?

As of October 15, there have been **2 days** this year where the high temperature has reached at least 100 degrees Fahrenheit in Valdosta, Georgia.

The last time it reached at least 100° F was August 14, 2023.

- Years marked with a gold background have more than 5% incomplete data
- Click column headers to sort

Year	Rank	Days >= 100 °F
2023	33	2
2022	40	1
2021	54	0
2020	54	0
2019	16	7
2018	54	0

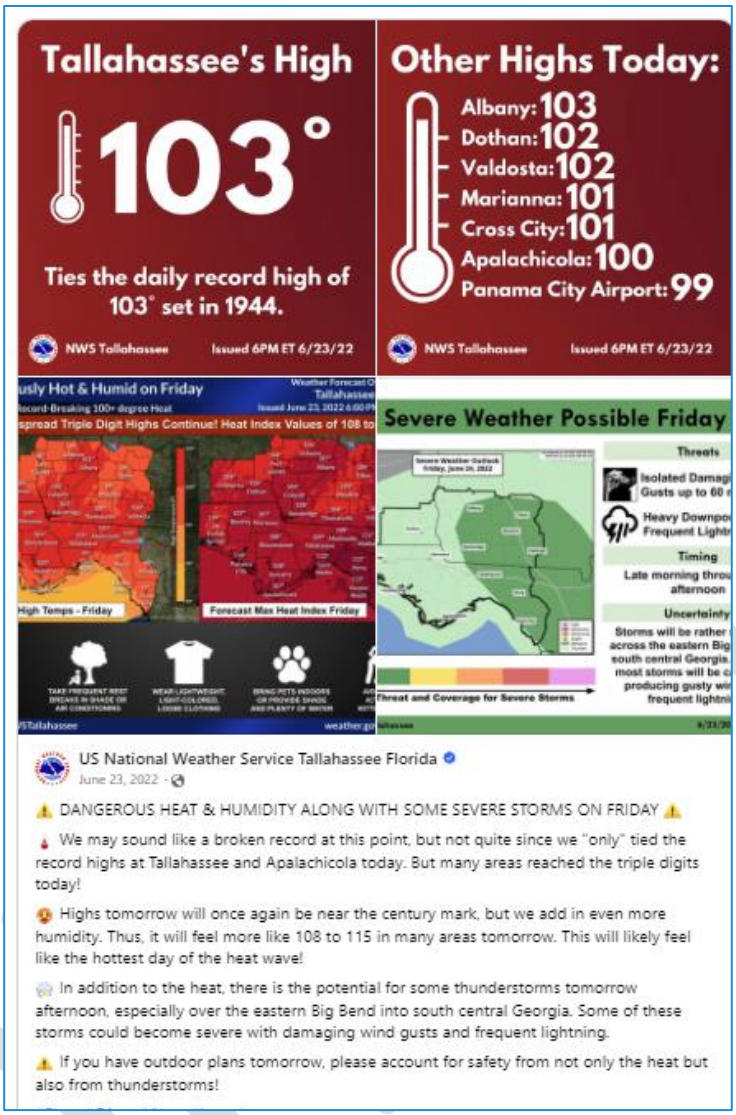
Since the previous Hazard Mitigation Plan was completed, 6 extreme heat events have occurred. These were all Heat Advisories.

Although the most complete available data was used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

US National Weather Service Tallahassee Florida
June 23, 2022 ·

The hottest weather of the ongoing heat wave will be this afternoon. Many temperatures records will be broken. Widespread highs of 100-104 degrees. A Heat Advisory is in effect. Avoid strenuous outdoor activity during the afternoon hours. weather.gov/heat

Fire danger is also high north of I-10 due to scorching heat and low humidity. If possible, delay outdoor burning until next week.


Tallahassee's High
103°
Ties the daily record high of 103° set in 1944.
NWS Tallahassee
Issued 6PM ET 6/23/22
Other Highs Today:
Albany: 103
Dothan: 102
Valdosta: 102
Marianna: 101
Cross City: 101
Apalachicola: 100
Panama City Airport: 99
NWS Tallahassee
Issued 6PM ET 6/23/22
High Temps - Friday
Forecast Max Heat Index Friday
Severe Weather Possible Friday
Threats
Timing
Late morning throu
afternoon
Uncertainty
Threat and Coverage for Severe Storms
US National Weather Service Tallahassee Florida
June 23, 2022 ·
DANGEROUS HEAT & HUMIDITY ALONG WITH SOME SEVERE STORMS ON FRIDAY
We may sound like a broken record at this point, but not quite since we "only" tied the record highs at Tallahassee and Apalachicola today. But many areas reached the triple digits today!
Highs tomorrow will once again be near the century mark, but we add in even more humidity. Thus, it will feel more like 108 to 115 in many areas tomorrow. This will likely feel like the hottest day of the heat wave!
In addition to the heat, there is the potential for some thunderstorms tomorrow afternoon, especially over the eastern Big Bend into south central Georgia. Some of these storms could become severe with damaging wind gusts and frequent lightning.
If you have outdoor plans tomorrow, please account for safety from not only the heat but also from thunderstorms!

US National Weather Service Tallahassee Florida
June 24, 2022 ·

Today will be the finale for the ongoing heat wave. Triple-digit heat will again be common, but more humidity will mean dangerously high heat index values. An Excessive Heat Warning is in effect for the coastal Big Bend and the Lower Suwanee Valley, where heat index of 110-115 is forecast!

The heat will get chased away late this afternoon and this evening, as strong to possibly severe storms consolidate along the I-75 corridor. They will blow out to the west across the FL Big Bend and Southwest Georgia early this evening. Isolated damaging wind gusts, frequent lightning, and torrential downpours are expected. If storms repeatedly move over the same place, then localized flash flooding is possible.

Head indoors when you hear thunder approach! The weather will start to change quickly late today.

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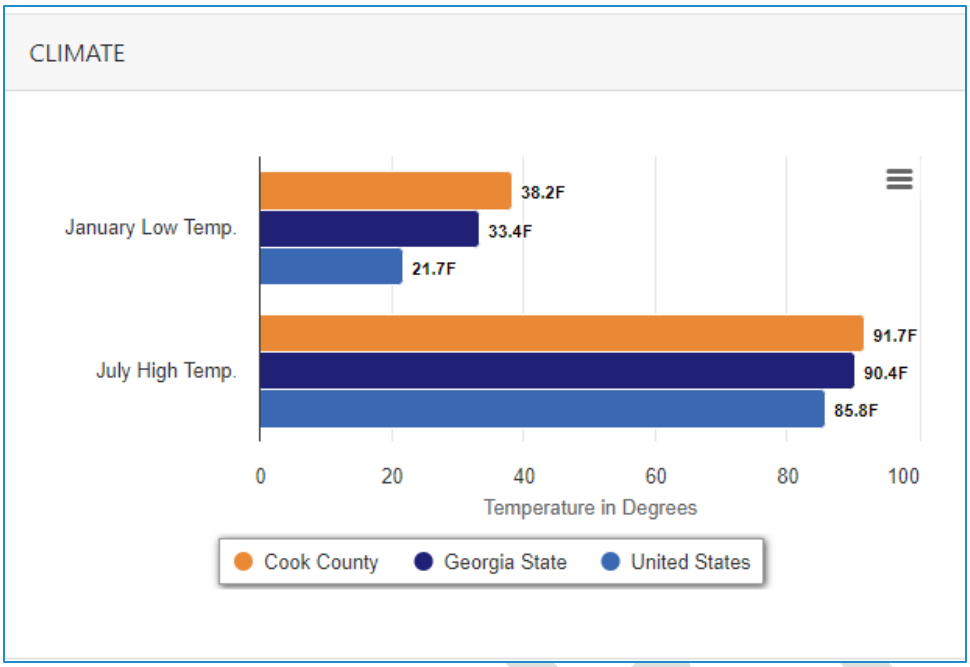
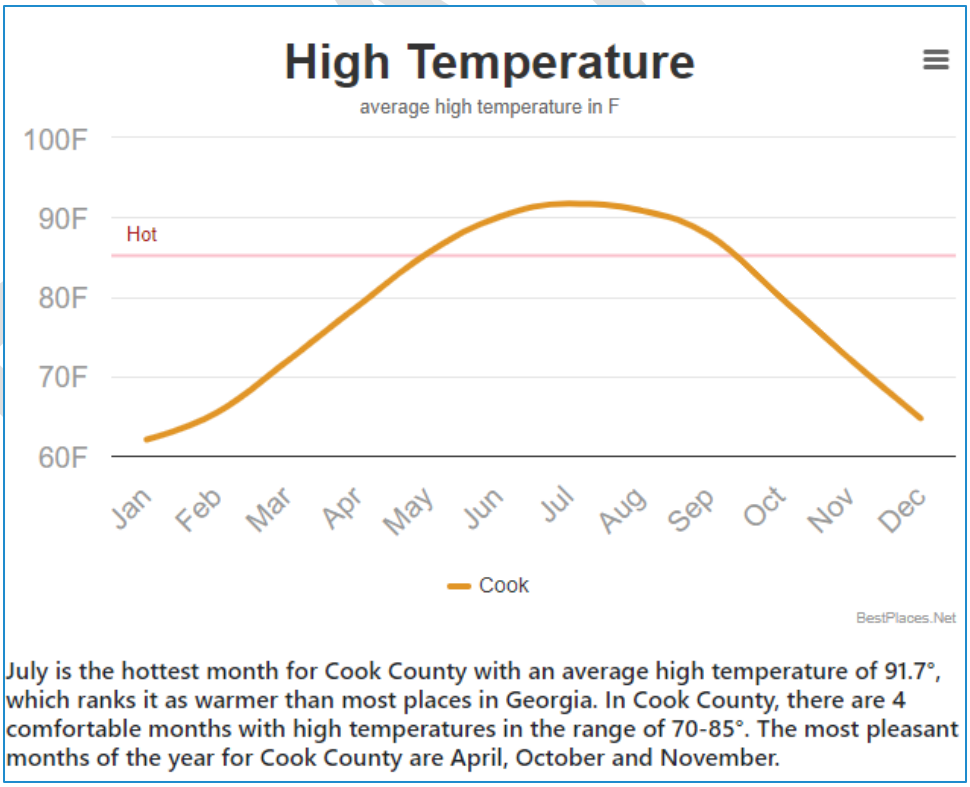
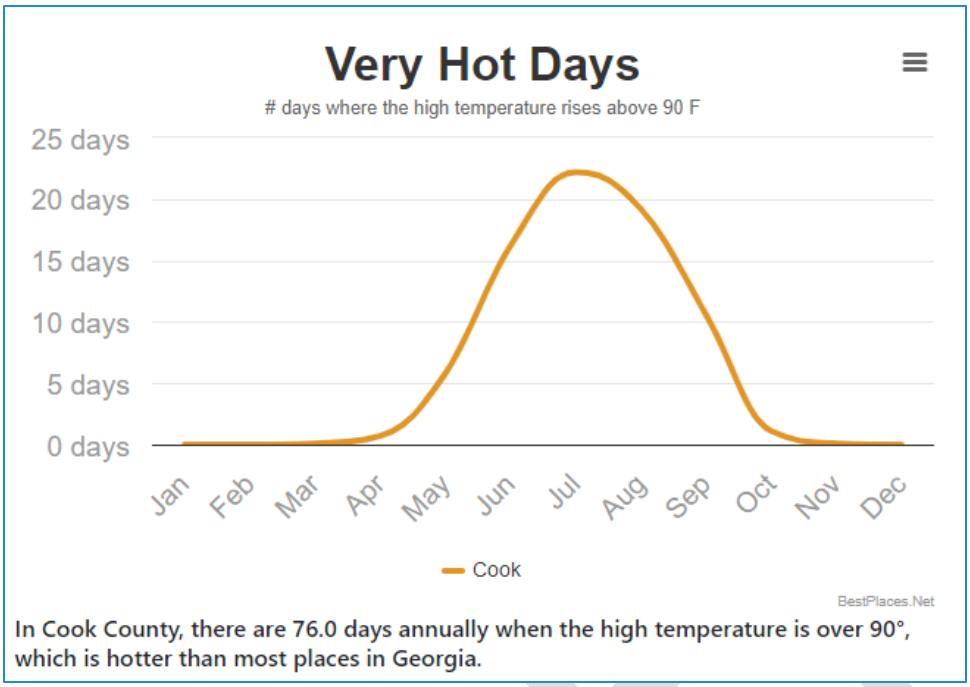


[Climate in Cook County, Georgia (bestplaces.net)]



July is the hottest month for Cook County with an average high temperature of 91.7°, which ranks it as warmer than most places in Georgia. In Cook County, there are 4 comfortable months with high temperatures in the range of 70-85°. The most pleasant months of the year for Cook County are April, October and November.



Climate in Cook County, Georgia (bestplaces.net)

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No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

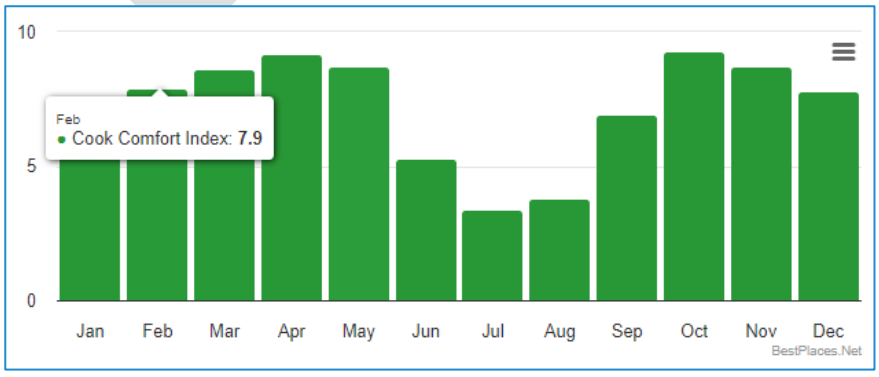
Extreme heat may happen at any place at any time, and no difference in severity is expected between Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. However, the impact may be more severe in places with higher population density due to more people being in danger. Power failures exacerbate extreme heat events because of the ensuing lack of air conditioning.

No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

Extreme heat has the potential to harm people throughout Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, especially during the summer months. The potential for damage to health and loss of life will be higher for people without air conditioning and would be exacerbated by a power failure. Extreme heat is a far greater threat to public health than to buildings and infrastructure.

October, April and November are the most pleasant months in Cook County, while July and August are the least comfortable months. [Climate in Cook County, Georgia (bestplaces.net)]



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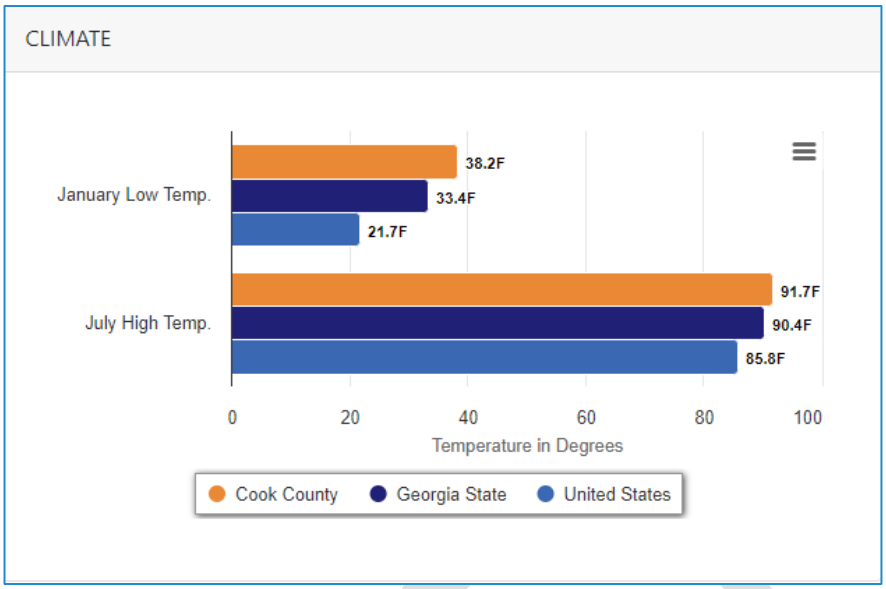


The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

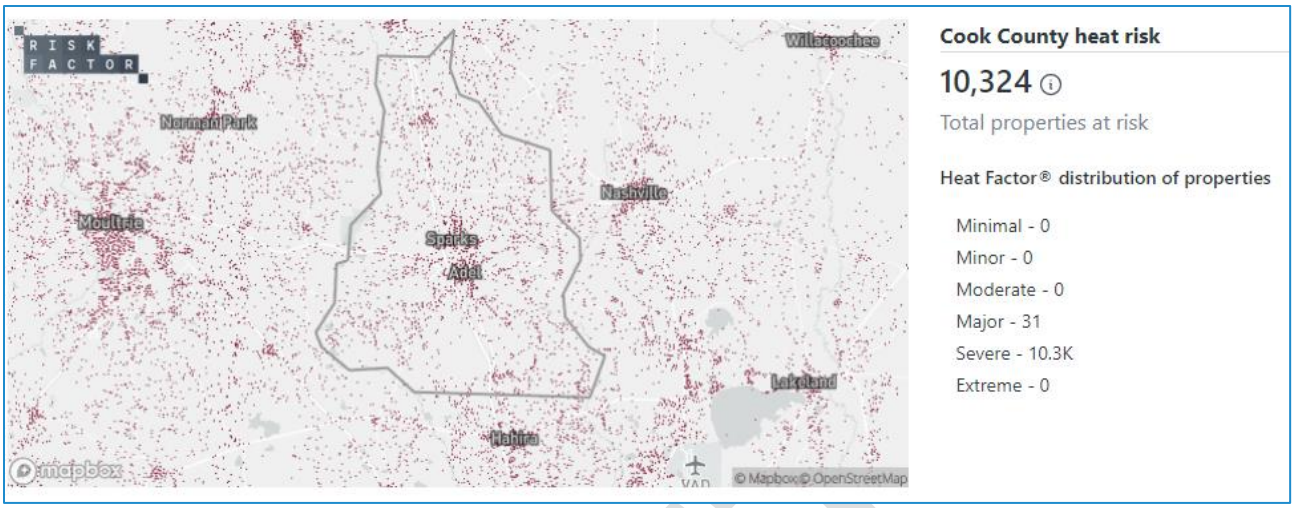
H. Impacts from Future Conditions

Many people confuse weather and climate, but they are different. Weather is the conditions of the atmosphere over a short period of time, and climate is how the atmosphere is over long periods of time.

Weather is how the atmosphere behaves and its effects on life and human activities. Weather can change from minute to minute. Most people think of weather in terms of temperature, humidity, precipitation, cloudiness, brightness, visibility, wind, and atmospheric pressure.

Climate is the description of the long-term pattern of weather in a place. Climate can mean the average weather for a particular region and period taken over 30 years. The climate is the average of weather over time.

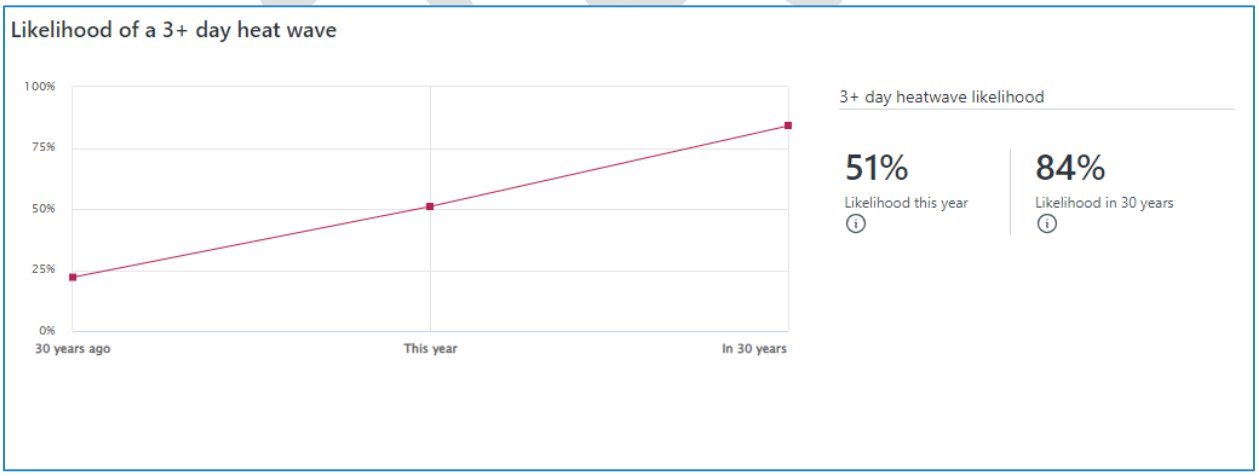
According to https://riskfactor.com, Cook County has a severe risk from heat. The "feel like" temperatures are increasing and 100% of homes in Cook County have a risk of heat, unlike some other regions of the United States.



Increasing average temperature has much more effects on how Cook County is affected by heat events.

Heat waves

A heat wave consisting of 3 or more consecutive days where the “feels like” temperature meets or exceeds the local definition of a “hot day” is an increasing possibility as temperatures rise. The “hot day” temperature for Cook County is 108ºF. 30 years ago, the likelihood of a 3 day or longer heat wave in Cook County was 22%.

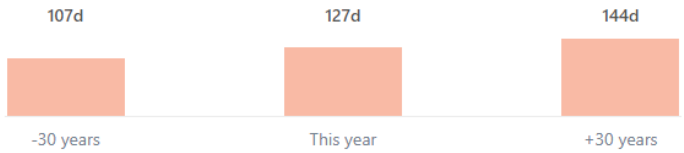


Heat wave likelihood | **Health caution days** | Dangerous days | Hot days | Consecutive hot days

Health caution days (90+°F)

Spending time in heat where the "feels like" temperature exceeds **90°F** can be physically hazardous, especially for high-risk individuals. 30 years ago, the number of days above **90°F** in **Cook County** would have been around **107 days**. This year approximately **127 days** are expected to reach or exceed **90°F**.

Days above 90°F per year

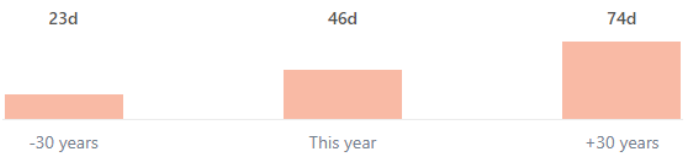


The number of health caution days in **Cook County** will continue to increase, with the number of days the temperature reaches or exceeds **90°F** increasing to **144 days**.

Dangerous days (100+°F)

Heat causes more deaths per year than any other natural risk. Temperatures become dangerous to spend time in at a "feels like" temperature of **100°F**. 30 years ago, the number of days above **100°F** in **Cook County** would have been around **23 days**. This year approximately **46 days** are expected to reach or exceed **100°F**.

Days above 100°F per year

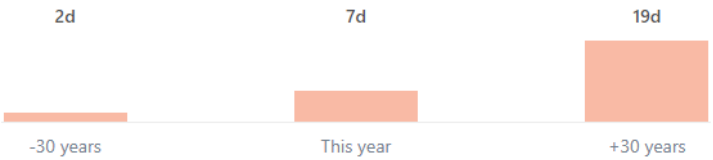


The number of dangerous days in **Cook County** will continue to increase, with the number of days the temperature reaches or exceeds **100°F** increasing to **74 days**.

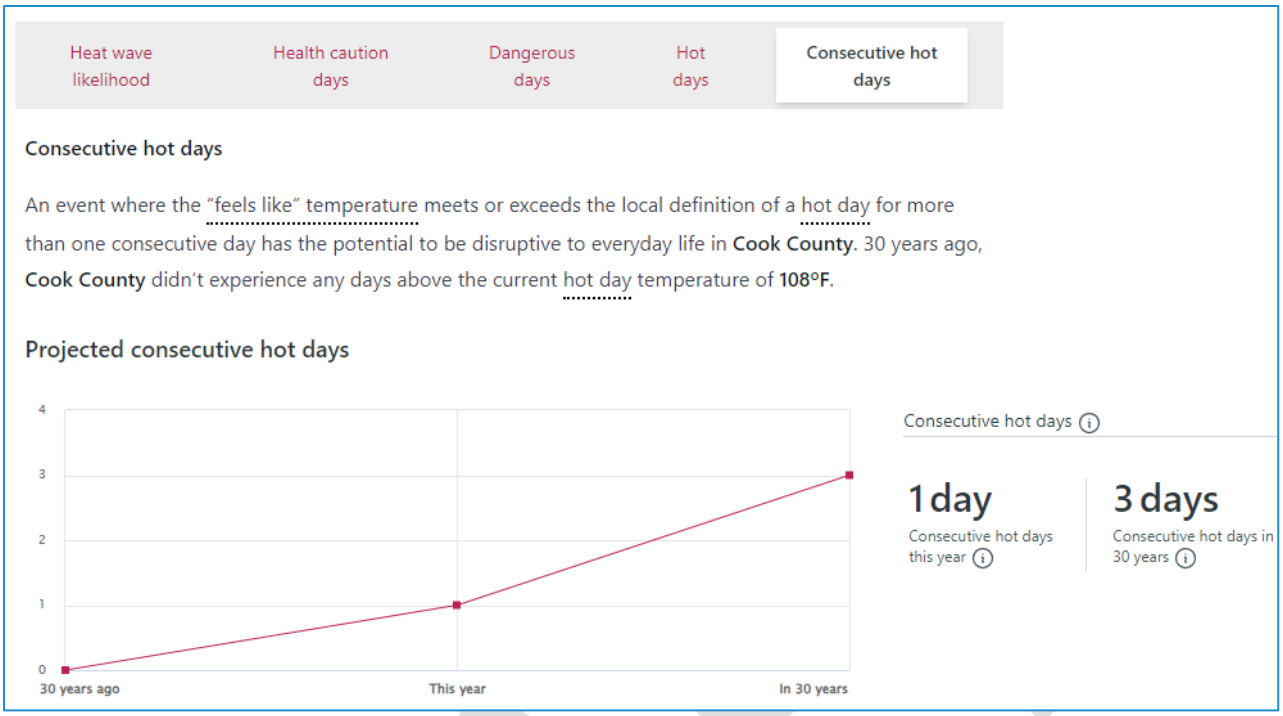
Hot days

Any day the "feels like" temperature exceeds **108°F** is considered a hot day for **Cook County**. 30 years ago, the number of days above 108°F would have been around **2 days**. This year approximately **7 days** are expected to reach or exceed **108°F**.

Days above 108°F per year



The number of hot days in this area will continue to increase, with the number of days the temperature reaches or exceeds **108°F** increasing to **19 days**.



Hot days in Cook County any days above the "feel like" temperatures of 108° F. Currently, Cook County experiences approximately 7 hot days, compared to the changing climate of 19 days above 108°F in 30 years.

One of the resulting effects of heat is the increase in energy usage that occurs as homes and businesses try to keep cool indoors. Based on this year's heat projections in Cook County, it is estimated that air conditioning would increase energy consumption on 167 days annually.

This risk may become even more pronounced in 30 years, as the number of cooling days is expected to increase to 179 days per year. This increase in need for cooling is expected to increase Cook County's electricity usage for cooling purposes by 8.80%.

Heat can pose threats to health and human safety such as fatigue, heat stroke, heat exhaustion, and heat cramps. During a heat wave, "feels like" temperatures can also reach levels that cause hospitalization and even death for certain individuals. Learn more about the health risks that could affect Cook County below.

A hot day in Cook County is any day above a "feels like" temperature of 108ºF. Cook County is expected to experience 7 hot days this year. Due to a changing climate, Cook County will experience 19 days above 108ºF in 30 years.

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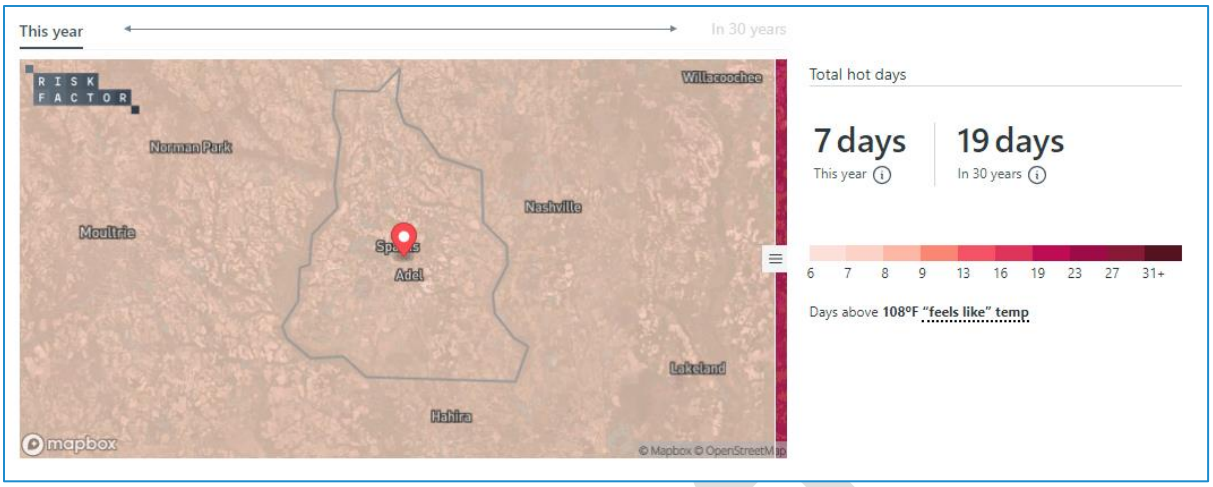
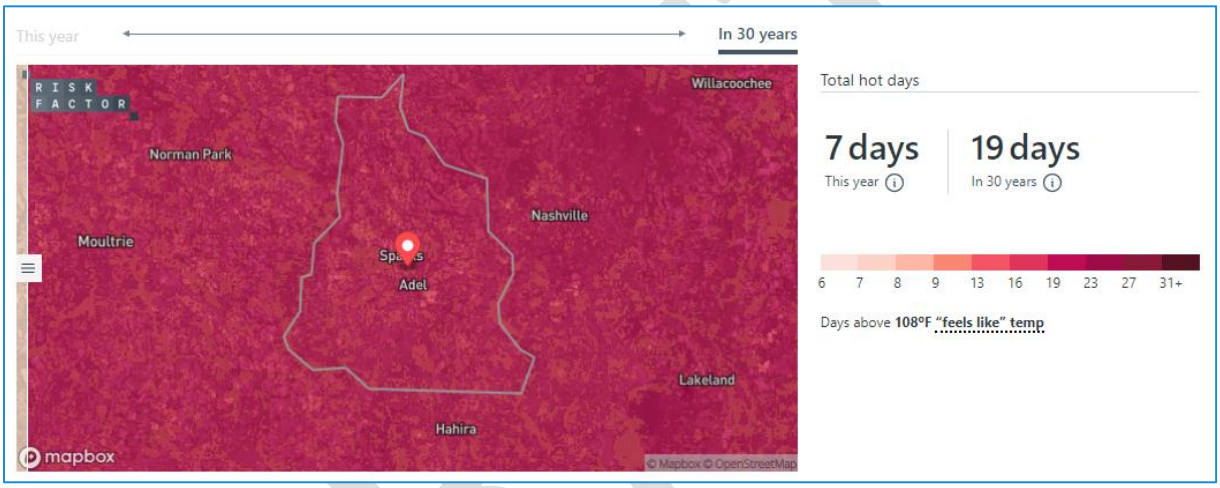


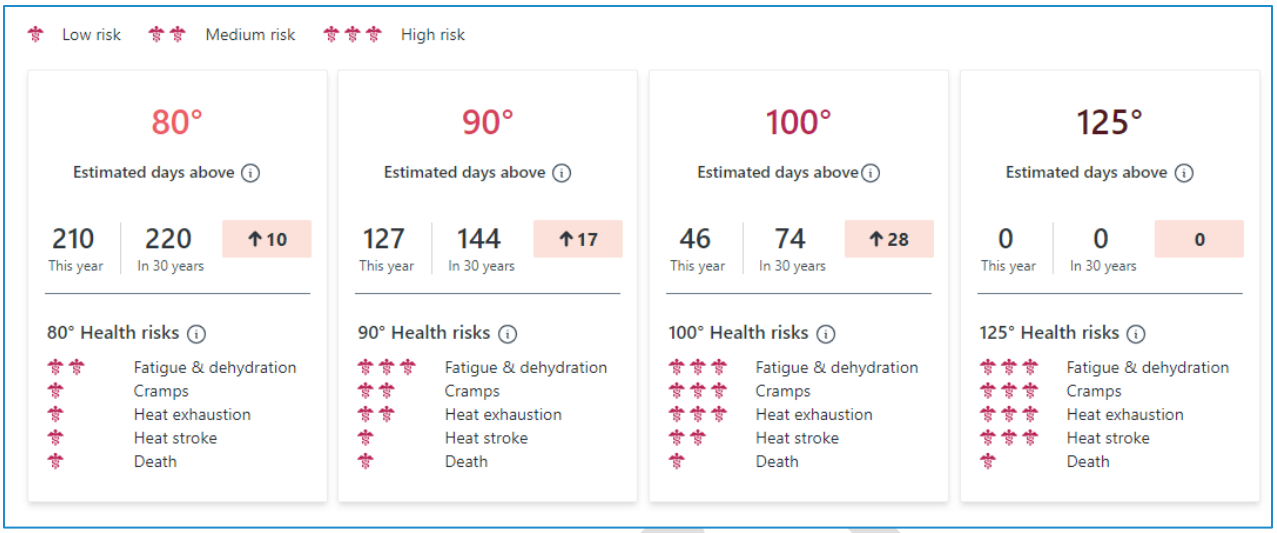


One of the resulting effects of heat is the increase in energy usage that occurs as homes and businesses try to keep cool indoors. Based on this year's heat projections in Cook County, air conditioning is estimated to increase energy consumption for 278 days annually.

This risk may become even more pronounced in 30 years, as the number of cooling days is expected to increase to 286 days per year. This increase in need for cooling is expected to increase Cook County ‘s electricity usage for cooling purposes by 8.80%.

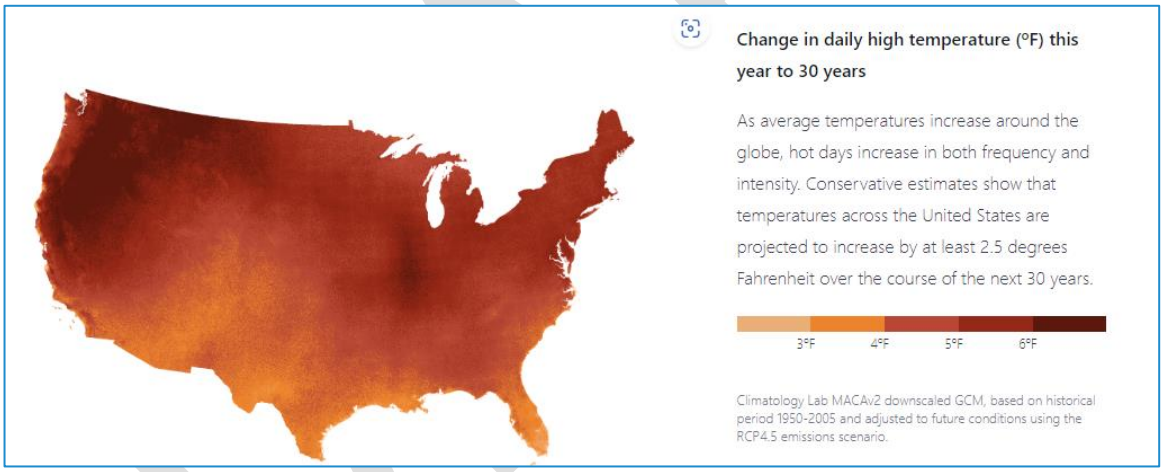
Number of cooling days this year vs. in 30 years

- 278 This year
- 286 In 30 years



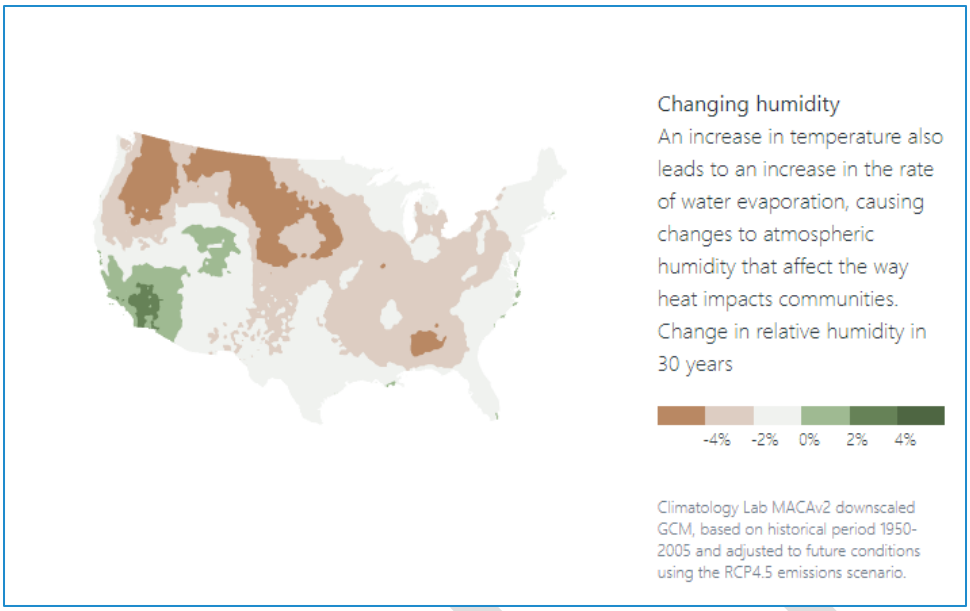
Heat risks are changing because of the changing environment, which causes higher average temperatures and humidity. This affects the heat index and makes heat events a risk.

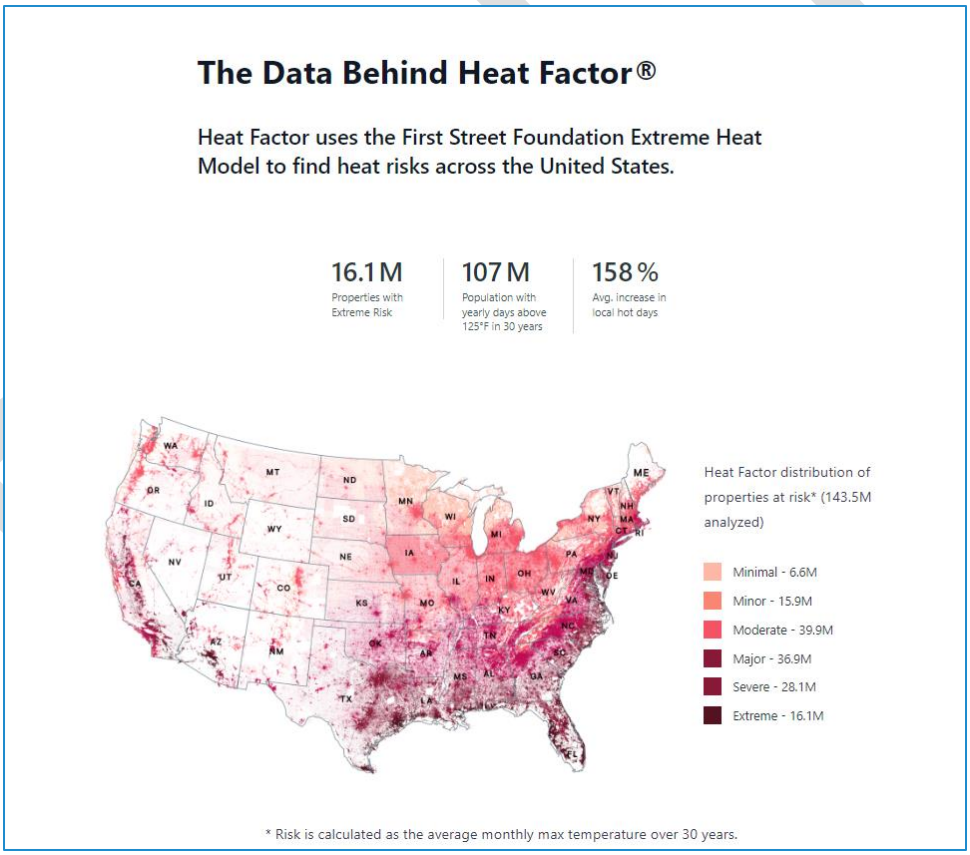
With global temperatures rising, this has resulted in daily high temperatures in the summer, longer summers and deadly heat waves in areas that are not acclimated to the heat risks.



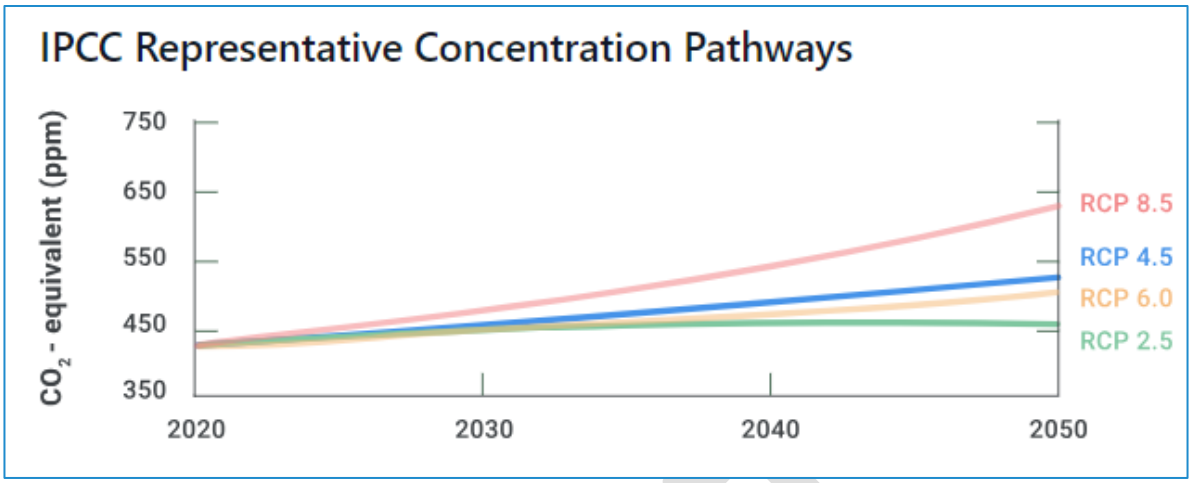
Over the last 30 years, the average temperature has increased in the US by 1.2°F compared to the first half of the 20th century. This has caused an increase in the frequency and intensity of hot days. This makes heat waves and heat advisories more frequent. This warming trend is expected to continue to increase over the next 30 years. Estimates are projected that temperatures will rise by a minimum of 2.5°F over the next 30 years.

Humidity has played a big role in the humidity patterns effects of heat. Hot air can hold the moisture, creating a vapor-pressure deficit between the surface air and water stored in plant-life in the ground. By doing this, it causes a cycle of building heat that prolongs the duration and intensity of heat events.

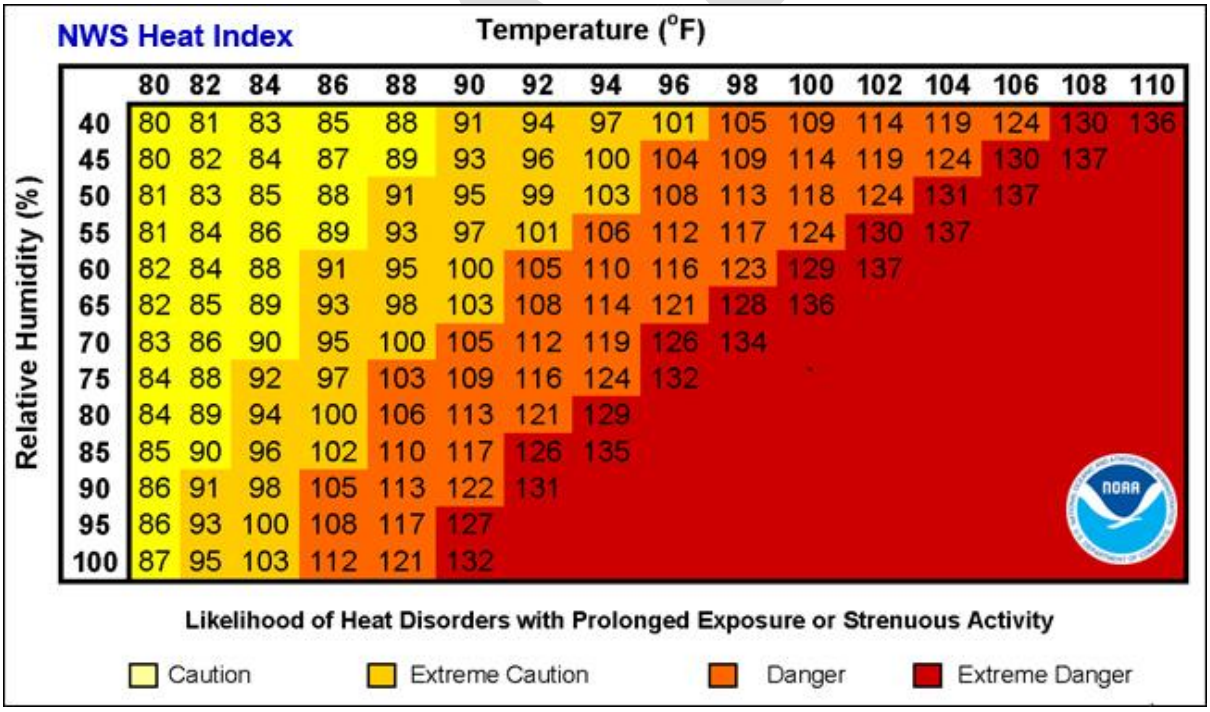




The following model analyzes multiple possibilities under the RCP 4.5 carbon emissions scenario to forecast how temperatures will change 30 years into the future and applies the outcomes of that forecast to the high-resolution spatial temperature model. This allows the First Street Foundation Extreme Heat Model to predict temperatures 30 years from now in a way that meets the rigorous standard of scientific peer review.



While the experience of heat may vary from community to community, there are certain health effects from heat that cannot be ignored. Extreme heat is the deadliest of all-natural events. The following data identifies local hot days to measure the number of days both this year and in 30 years that a community will experience exceeding safety thresholds informed by the National Weather Service.



Source: https://riskfactor.com/county/cook-county

Section VII. Drought

A. Identification of Hazard

The threat of drought has been chosen by the HMPUC as the seventh most likely hazard to occur and cause damage in the community, based on experience, the FEMA-described methodology, and other factors. Historic data have been examined from various sources, including the National Climatic Data Center and U.S. Drought Monitor (see Appendix F), as well as from local history and personal accounts, to determine the frequency of events.

Although drought is associated with the summer months in many other parts of the United States, our region has a humid subtropical climate with more precipitation, on average, in the summer than in the winter. Drought can occur at any time, and its effects can last throughout the year and continue from year to year. These effects may include agricultural losses, increased wildfire and fire risk, lack of water for citizens and firefighting, increased flooding risk (because dry land can be less absorbent of rainfall), and other effects that influence other hazards and the safety of the community.

Crops (including trees) are usually most adversely affected by drought events, along with community residents whose water supplies are restricted or cut off (especially those using individual wells). Residents of unincorporated Cook County have wells, which may go dry during drought periods, thus leaving those residents without water for extended periods of time. The Cities of Adel, Cecil, Lenox, and Sparks have municipal water systems.

The U.S. Drought Monitor (http://droughtmonitor.unl.edu), established in 1999, is a weekly map of drought conditions that is produced jointly by the National Oceanic and Atmospheric Administration, the U.S. Department of Agriculture, and the National Drought Mitigation Center (NDMC) at the University of Nebraska-Lincoln. The U.S. Drought Monitor website is hosted and maintained by the NDMC. The Drought Monitor summary map identifies general drought areas, labelling droughts by intensity, with D1 being the least intense and D4 being the most intense. Descriptions of these categories are provided in the table below (source: http://droughtmonitor.unl.edu/AboutUs/ClassificationScheme.aspx).

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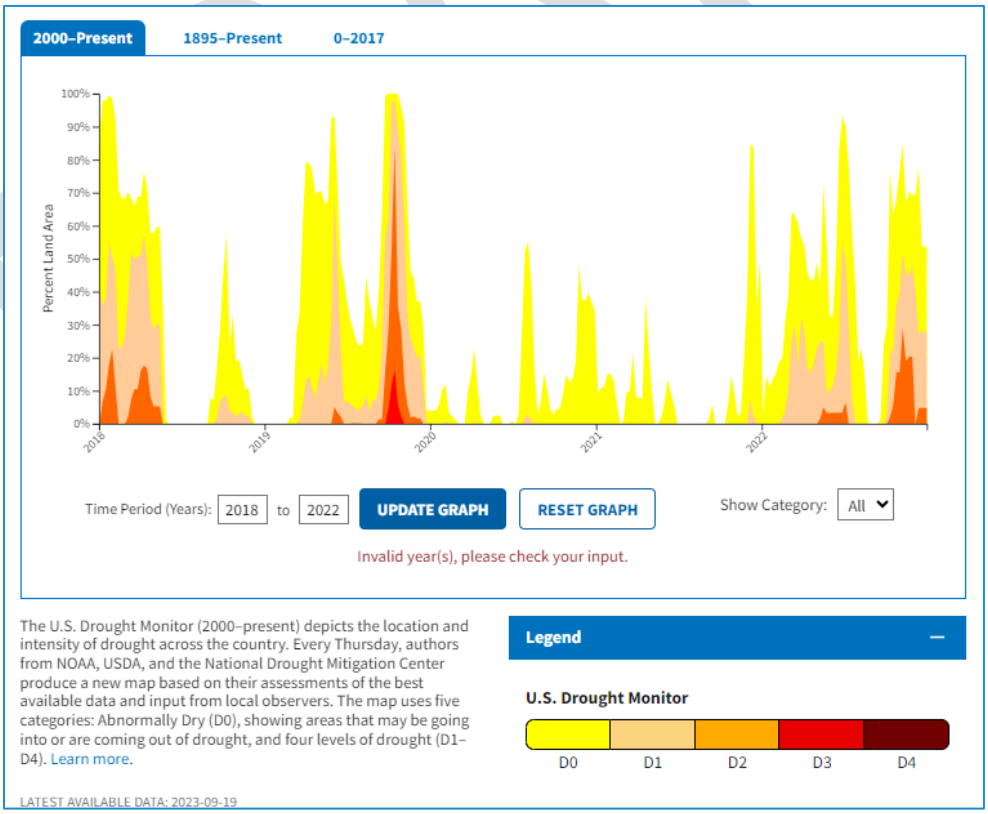
Category	Description	Possible Impacts
D0	Abnormally Dry	Going into drought: ▪ short-term dryness slowing planting, growth of crops or pastures Coming out of drought: ▪ some lingering water deficits ▪ pastures or crops not fully recovered
D1	Moderate Drought	▪ Some damage to crops, pastures ▪ Streams, reservoirs, or wells low, some water shortages developing or imminent ▪ Voluntary water-use restrictions requested
D2	Severe Drought	▪ Crop or pasture losses likely ▪ Water shortages common ▪ Water restrictions imposed
D3	Extreme Drought	▪ Major crop/pasture losses ▪ Widespread water shortages or restrictions
D4	Exceptional Drought	▪ Exceptional and widespread crop/pasture losses ▪ Shortages of water in reservoirs, streams, and wells creating water emergencies



Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are all equally vulnerable to the effects of drought.

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), 28 reports of drought events occurred in Cook County (including the Cities) between 01/01/1950 and 11/01/2022. The Historic Recurrence Interval is 2.61years. This is a 38.36% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 1.0, the past 20-year frequency is 0.95, and the past 50-year frequency is 0.56 (see the Hazard Frequency Table in Appendix D).

Since the previous Hazard Mitigation Plan became effective, 3 drought events have occurred and been recorded by NOAA. During the past few years, drought has caused substantial crop damage in Cook County (agriculture is a vital part of the county's economy) and has increased the community's vulnerability to wildfires due to the dryness of the vegetative fuel available to burn. Drought conditions have exacerbated damage done by wildfires (see Ch. 2, Section V), contributing to the 83 wildfire events that have occurred since the last plan was adopted, and exacerbating the damage caused by these wildfires. A D2 severe drought occurred in Cook County on 01/09/2018 and expanded across portions of southwest Georgia during the week and continued into February. On 10/08/2019, another D2 severe drought developed across Cook County and across southwest and south-central Georgia and persisted through 10/22/2019. The final D2 severe drought recorded by NOAA, was on 11/01/2019 and lasted through 11/12/2019. Drought levels up to D4 (Exceptional Drought) have been reported 2 times, on 11/22/2016 and 12/01/2016. In both events, local estimates report that drought resulted in crop losses and heightened wildfire risk.

Although the most complete available data was used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

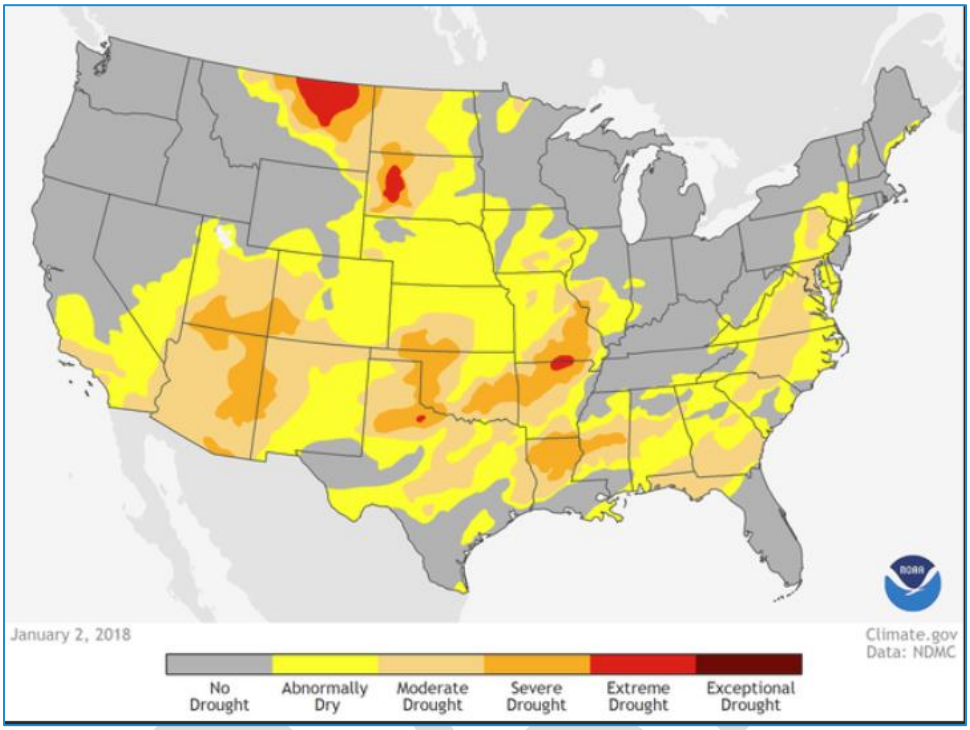
C./D. Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are equally vulnerable to this hazard.

An estimated 100% of the Residential property (7,506 of 7,506) in Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard, with a total value of $955,196,000. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,922 of 2,845) in the community may be affected, with a total value of $716,747,972. The values are based on the most recent available tax roll data for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, provided by the Cook County Tax Assessor's Office.

Damage to crops is not considered in the above estimates. According to the most recent estimate (2022) available on the University of Georgia's GeorgiaData website (www. https://caed.uga.edu/), the total farm gate value of agricultural production in Cook County is $147,587,977.40 in the State of Georgia.

According to the inventory database reports and maps, all 58 Critical Facilities and Infrastructure for Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard. The total value of these Critical Facilities is $198,051,152.



E. Land Use and Development Trends

According to 2021 U.S. Census Bureau American Community Survey 5-year estimates, the population of Cook County is 17,188, an increase of 0.5% since 2016. The City of Adel's 2021 population is 5,459, a 2.9% increase since 2016. The City of Cecil's 2021 population is 317, a 9.7% decrease since 2016. The Town of Lenox's 2021 population is 786, a 5.9% decrease since 2016. The Town of Sparks' 2021 population is 2,300, a 13% increase since 2016.

Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) has zoning regulations. All jurisdictions have mandatory building and fire codes that a building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make construction codes mandatory as the Georgia State Minimum Standard Codes. (SEE CHAPTER 4, REGULATORY TOOLS/PLANS FOR ADOPTED CODES).

F. Multi-Jurisdictional Differences

Residents of unincorporated Cook County have wells, which may go dry during drought periods, thus leaving those residents without water for extended periods of time. The Cities of Adel, Cecil, Lenox, and Sparks have municipal water systems.
No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

Drought has the potential to harm people and the economy throughout Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, potentially at any time of the year and most significantly in unincorporated areas not served by municipality's water systems. Drought may increase the likelihood of wildfires and flooding. Water shortages can impede firefighting efforts at all levels. The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

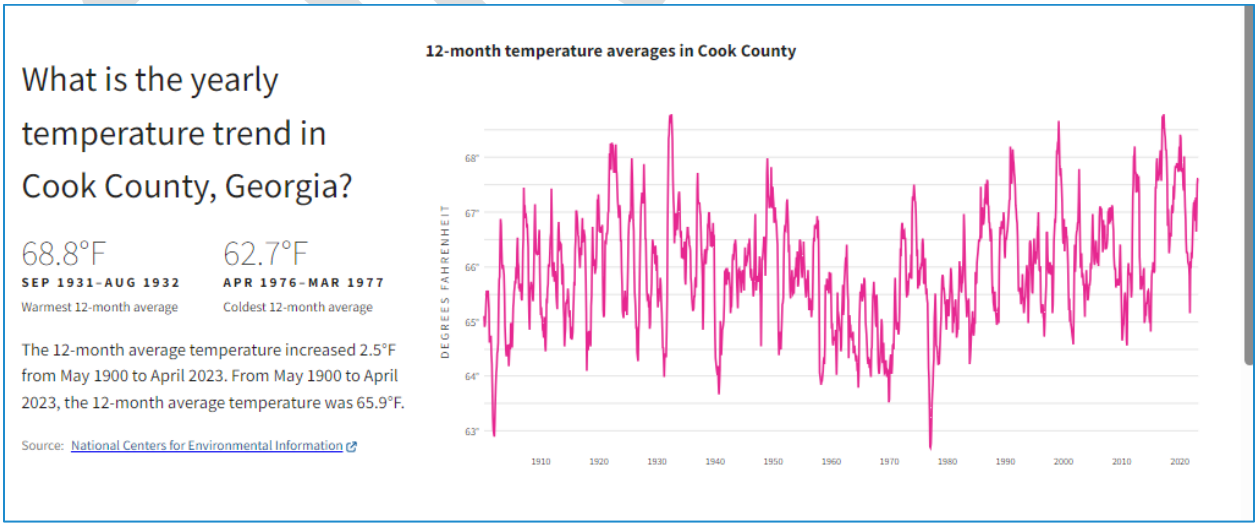
Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

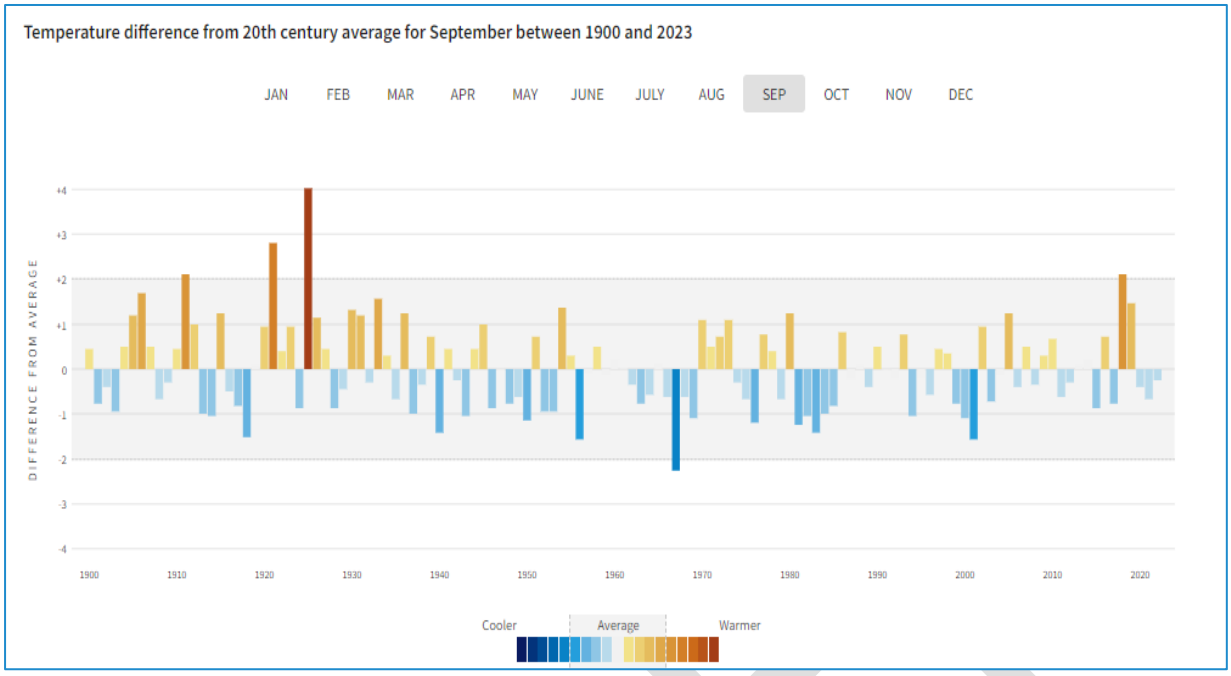
H. Impacts from Future Conditions

The climate is making drought more likely to occur and more severe. Climate change can make the rising temperatures cause dry regions drier and wet regions wetter. The warmer temperature enhances evaporation, reduces surface water, and dries out the soil and vegetation.

Scientists recognize the correlation between drought and global warming, but the two events don't mean one causes the other. Droughts can occur every year or very few years, and last for decades with varying levels of dryness.

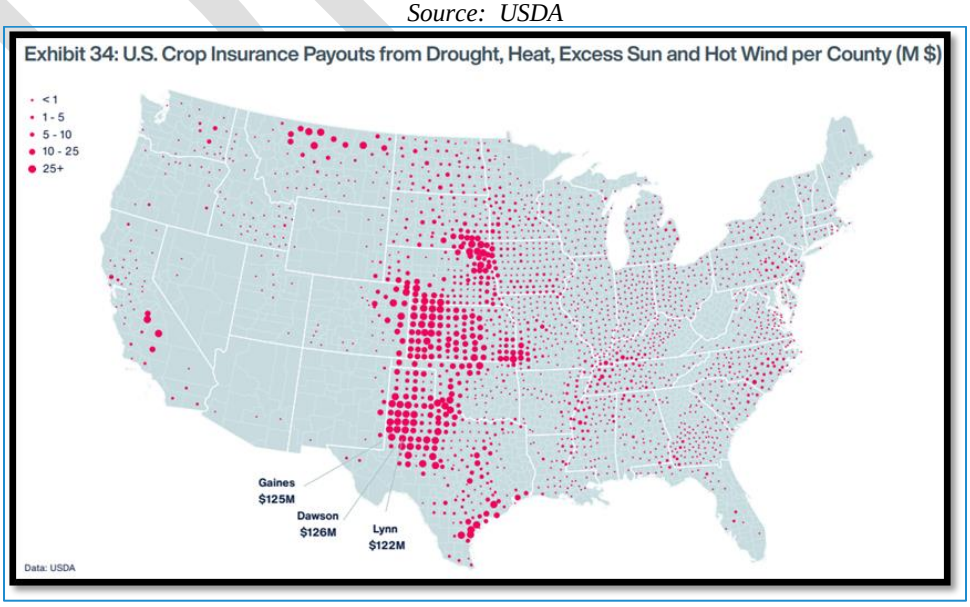
According to an August 2021 report by the Intergovernmental Panel on Climate Change, scientists have high confidence that for every half degree Celsius (0.9 degree Fahrenheit) the atmosphere warms, noticeable increases will occur in some regions in the intensity and frequency of droughts that harm agriculture and ecosystems. Extreme agricultural and ecological drought events that used to occur once every 10 years are now 1.7 times more likely than they were from 1850 to 1900, before humans heavily influenced the climate.





Since 2020 and continuing through 2022, severe drought conditions spread across the United States. The total number of drought events, under moderate or worse, was the largest since 2012. The maximum number of events reached in November 2022 (63%) was close to the maximum in September 2012 (65%). These drought conditions caused considerable payouts by the US Department of Agriculture's (USDA's) Risk Management Agency (RMA) crop insurance program. There was more than $8 billion (about $25 per person in the US) in indemnity payouts. This was second to the 2012 payout of $18 billion (about $55 per person in the US).

Source: USDA



Section VIII. Severe Winter Weather

A. Identification of Hazard:

The Cook County HMPUC has chosen the threat of a severe winter storm as the eighth most likely hazard to occur and cause damage in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks based on experience, the FEMA-described methodology, and other factors. Historical data have been examined from various sources, including the National Climatic Data Center (see Appendix F) and local history and personal accounts to determine the frequency of events.

Although this natural hazard did not rank high in any dataset of occurrences or damages happening in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, undocumented personal accounts of the Cook County HMPUC members rated this hazard as likely to occur and cause damage. A significant reason for this is that the various crops that are an essential part of the county's economy could be severely damaged by a winter storm or by unseasonably cold temperatures, resulting in a substantial economic loss to the community. In addition, because of the infrequency of severe winter storms in this region, Cook County and the Cities of Adel, Cecil, Lenox, and Sparks residents are not well prepared to handle such events. Icy roads may result in many automobile crashes because residents are not accustomed to driving in icy conditions. Being unprepared may result in loss of life or substantial damage to property and the economy.

Severe winter storms, at worst, will produce sleet, freezing rain, and/or 1 to 2 inches of snow, with temperatures as low as the teens (°F). Snow accumulation usually melts away within 24 hours. Possible damage includes downed tree limbs, impassable roadways, power outages, increased emergency service workloads, failed water/sewer/septic systems, and (as mentioned above) crop damage and vehicle crashes.

B. Profile of Severe Winter Storm Events, Frequency of Occurrences, Probability:

The historical record for severe winter storms is spotty, with many unreported or underreported events. All of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are vulnerable to severe winter storms, but the effects of most such events are minimal. Severe storms can occur during the winter, usually with a warning in advance. There are only two winter storms recorded by NOAA for Cook County.

On 01/28/2014, total liquid-equivalent estimates were greater than a quarter inch across portions of southern Georgia, including Cook County. All southern Georgia received at least a tenth of an inch of sleet and freezing rain. Power outages occurred across the area, along with treacherous road conditions. On 01/03/2018, in the early morning, portions of north Florida and South Georgia had a mix of wintry precipitation. The precipitation was primarily freezing rain mixed with some sleet

The Historic Recurrence Interval is 25.00 years. This is a 4.00% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.2, the past 20-year frequency is 0.1, and the past 50-year frequency is 0.04 (see the Hazard Frequency Table in Appendix D). However, Cook County HMPUC has witnessed underreported cases of minimal to severe winter storm events

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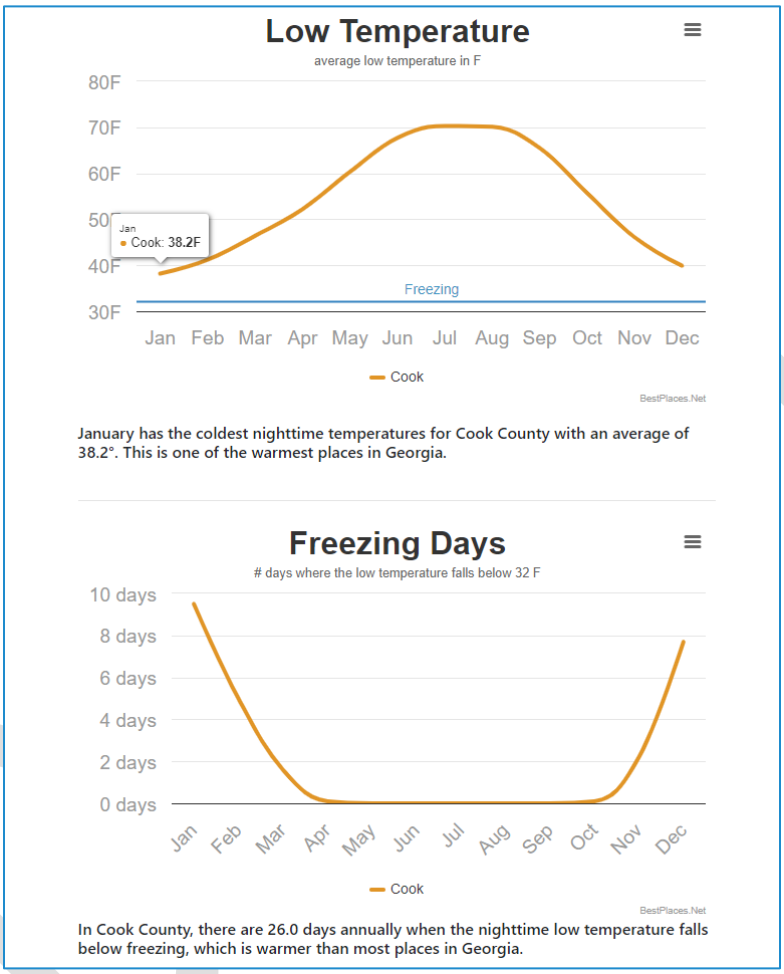
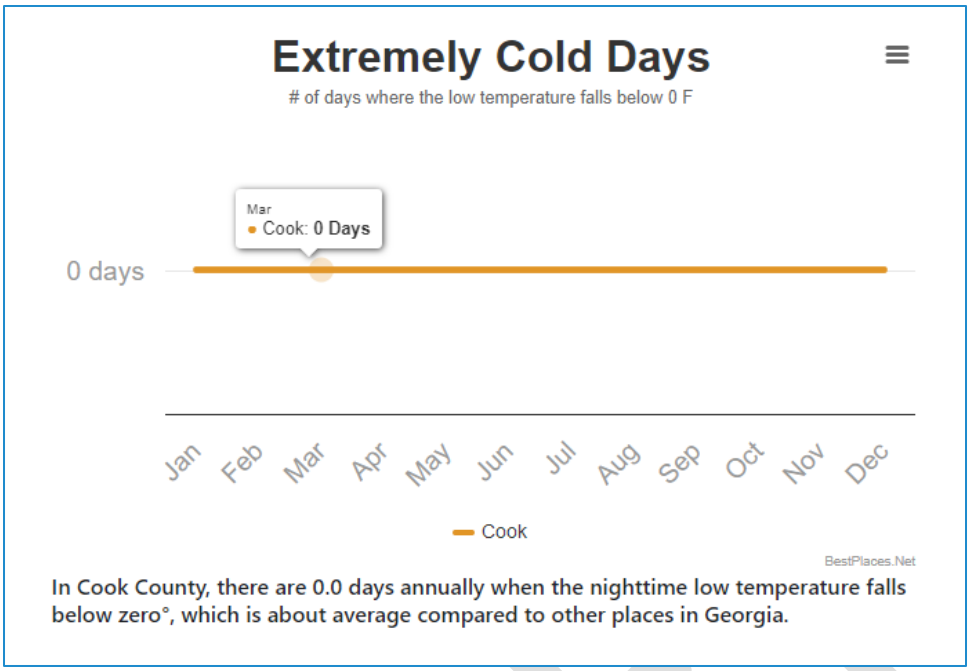
occurring within Cook County and its cities that are not included in the NOAA database or any other known data source.

Winters tend to be mild, with temperatures ranging from the high 30s to the low 50s. Snowfall in Cook, GA County is relatively rare but not unheard of. The weather is typically mild to warm in March, but in 2023 there was a late frost in March that destroyed a lot of the crops. This has also happened in the past.



Climate in Cook County, Georgia (bestplaces.net)



[Climate in Cook County, Georgia (bestplaces.net)]

Hot, Freezing, Rainy, Snowy Days: Cook

	Hot Days	Freezing Days	Rainy Days	Snowy Days
January	0	10	9	0
February	0	5	8	0
March	0	2	8	0
April	1	0	6	0
May	6	0	7	0
June	16	0	12	0
July	22	0	12	0
August	19	0	12	0
September	11	0	8	0
October	1	0	6	0
November	0	2	7	0
December	0	8	8	0

C./D.: Inventory of Assets Exposed and Potential Loss to Severe Winter Storms:

An estimated 100% of the Residential property (7,506 of 7,506) in Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard, with a total value of $955,196,000. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,922 of 2,845) in the

community may be affected, with a total value of $716,747,972. The values are based on the most recent available tax roll data for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, provided by the Cook County Tax Assessor's Office.

However, it should be noted that damage to buildings and other structures is not usually the most significant effect seen from severe winter storms. The major hazards from severe winter storms are vehicle crashes and crop damage, frozen/burst water pipes, power outages, overtaxed emergency services, and roadway blockages. It is scarce for Cook County to see any significant accumulation of snow or ice; however, some severe winter storms in the past have been accompanied by .75-inch to .88-inch size hail.

Damage to crops is not considered in the above estimates. According to the most recent estimate (2022) available on the University of Georgia's GeorgiaData website (www. https://caed.uga.edu/), the total farm gate value of agricultural production in Cook County is $147,587,977.40 in the State of Georgia.

Cook County was ranked at #10 for Blackberries in 2021, #9 for Bell Peppers, #8 for Sweet Corn, # 8 for Watermelon, #8 for Zucchini, #6 for eggplants, #5 for Greens, #4 for Ornamental Container Nursery, and #2 for cabbage. Sudden changes in temperatures from warm to cold, and cold to hot, can cause damage to crop.

Top Ten Counties by Value - Blackberries

County	Acres	Farm gate Value
Lanier	188	$3,384,000
Coffee	114	$1,818,300
Colquitt	81	$1,502,547
Irwin	282	$1,443,840
Tift	57	$1,408,000
Thomas	54	$1,350,000
Mitchell	6	$1,305,000
Montgomery	38	$881,600
Laurens	26	$676,000
Cook	29	$536,558

Top Ten Counties by Value - Bell Peppers

County	Acres	Farm gate Value
Echols	2,600	$74,880,000
Colquitt	1,230	$29,274,000
Lowndes	710	$14,768,000
Clinch	62	$9,349,600
Brooks	333	$6,926,400
Tift	199	$4,709,600
Worth	133	$3,147,200
Ware	135	$2,808,000
Cook	113	$2,350,400
Grady	180	$1,980,000

Top Ten Counties by Value - Watermelon

County	Acres	Farm gate Value
Tift	1,285	$18,975,000
Crisp	1,998	$17,982,000
Wilcox	1,536	$14,976,000
Telfair	1,450	$10,837,500
Turner	1,677	$10,218,320
Worth	1,000	$9,800,000
Tattnall	789	$9,472,920
Cook	900	$8,312,500
Colquitt	1,108	$8,310,000
Berrien	815	$6,723,750

Top Ten Counties by Value - Sweet Corn

County	Acres	Farm gate Value
Decatur	12,000	$90,750,000
Mitchell	7,750	$60,562,500
Seminole	1,600	$19,200,000
Worth	1,350	$9,112,500
Colquitt	1,120	$8,400,000
Toombs	675	$5,315,625
Miller	500	$3,937,500
Cook	266	$2,094,750
Rabun	178	$1,401,750
Montgomery	165	$1,299,375

Top Ten Counties by Value - Zucchini

County	Acres	Farm gate Value
Colquitt	1,628	$17,908,000
Echols	250	$3,900,000
Tift	255	$3,195,000
Worth	170	$2,312,000
Lowndes	150	$1,500,000
Brooks	214	$1,450,000
Grady	110	$1,100,000
Cook	76	$760,000
Turner	55	$550,000
Wheeler	43	$430,000

Top Ten Counties by Value - Eggplant

County	Acres	Farm gate Value
Echols	900	$9,450,000
Colquitt	240	$2,700,000
Lowndes	160	$1,792,000
Brooks	71	$795,200
Grady	92	$644,000
Cook	36	$403,200
Ware	30	$336,000
Tift	21	$252,000
Baker	22	$246,400
Clinch	18	$201,600

Top Ten Counties by Value - Greens

County	Acres	Farm gate Value
Colquitt	2,888	$19,516,000
Tift	908	$9,755,000
Worth	620	$6,442,000
Toombs	730	$4,925,000
Cook	1,016	$4,470,835
Echols	375	$1,646,250
Telfair	246	$1,478,000
Macon	175	$1,365,000
Brooks	185	$1,080,900
Grady	326	$749,250

Top Ten Counties by Value - Container Nursery

County	Acres	Price	Farm gate
McDuffie	860	$71,294.00	$61,312,840
Grady	568	$85,000.00	$48,280,000
Lowndes	150	$71,294.00	$10,694,100
Cook	10	$712,944.00	$7,129,440
Oconee	217	$30,964.00	$6,719,188
Walton	75	$85,552.80	$6,416,460
Clarke	75	$71,294.00	$5,347,050
Polk	85	$44,010.00	$3,740,850
Toombs	52	$71,294.00	$3,707,288
Butts	50	$71,294.00	$3,564,700

E. Land Use and Development Trends Related to Winter Storms:

According to 2021 U.S. Census Bureau American Community Survey 5-year estimates, the population of Cook County is 17,188, an increase of 0.5% since 2016. The City of Adel's 2021 population is 5,459, a 2.9% increase since 2016. The City of Cecil's 2021 population is 317, a 9.7% decrease since 2016. The Town of Lenox's 2021 population is 786, a 5.9% decrease since 2016. The Town of Sparks' 2021 population is 2,300, a 13% increase since 2016.

Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) has zoning regulations. All jurisdictions have mandatory building and fire codes enforced by the Cook County building inspector. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make construction codes mandatory as the Georgia State Minimum Standard Codes. (SEE CHAPTER 4, REGULATORY TOOLS/PLANS FOR ADOPTED CODES).

No other land use and development trends related to severe winter storms have been identified.

F. Multi-Jurisdictional Severe Winter Storm Differences:

All of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks have an equal chance of being affected by severe winter storms. In the event of icy roads, hazards would be more significant along high-traffic corridors and in densely populated areas. The impact of crop damage would likely be more severely felt in unincorporated Cook County, where more of the land is devoted to agriculture.

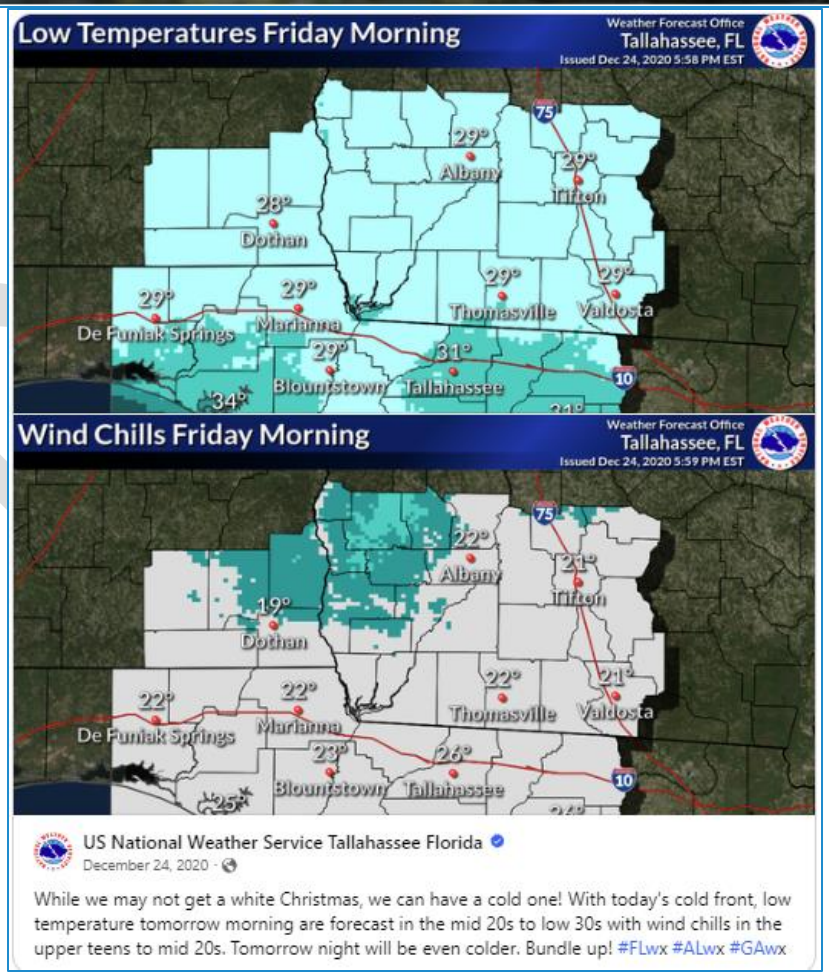
G. General Overall HRV Summary of Severe Winter Storm Events and Their Impact on the Community:

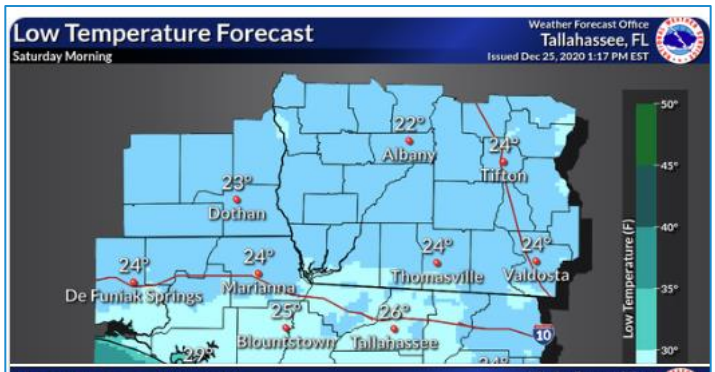
Severe winter storms can cause damage at any place, at any time during the winter months, throughout Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. The damage may be higher in vehicle crashes in the populated centers and crop damage in the county's agricultural areas. Most severe winter storms that pass through the area cause minimal to no damage.

The Cook County HMPUC recognizes severe winter storms as the eighth most likely natural hazard to occur and cause damage. They have developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen severe winter storm impacts on Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. These are contained in Chapter 4, Section VIII.

DRAFT

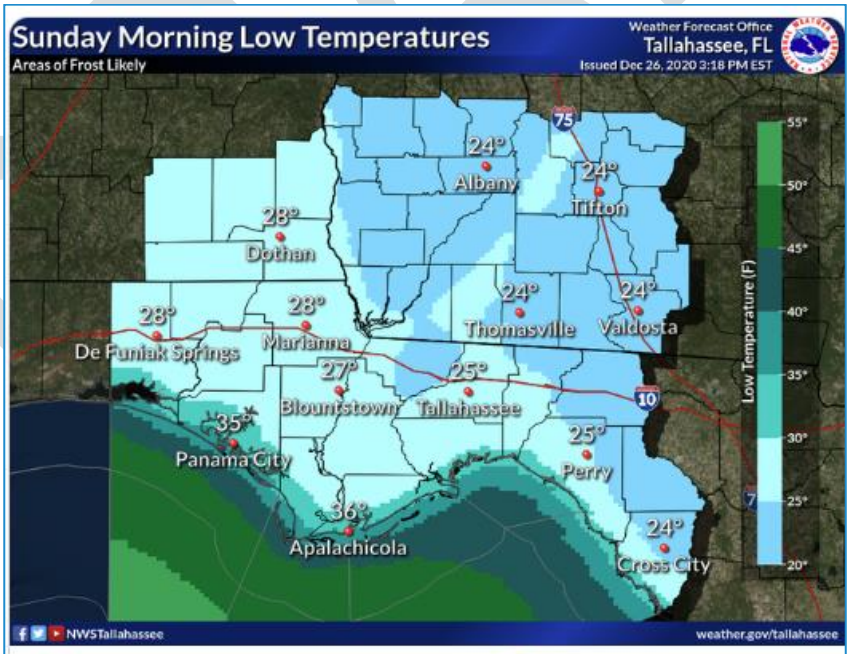

Brrrrr! Much Colder For Christmas
Below Normal Temps Likely
Alabama
Georgia
Florida
Miami
Pictured: chance for below normal temperatures over the next 6 to 10 days.
Source: Climate Prediction Center
Falling Iguanas are possible!
National Weather Service
Miami/South Florida
What We Know:
• Much colder air arrives Christmas Day and lingers into the weekend.
• High confidence in much below normal temperatures.
Unanswered Questions:
• Exactly how cold it will get, although temperatures in the 30s are possible for inland areas Christmas night.
What You Can Do:
• Keep up w/forecast changes.
• Have a plan to protect sensitive vegetation.
December 21, 2020 12:11 PM ET


Low Temperatures Friday Morning
Weather Forecast Office
Tallahassee, FL
Issued Dec 24, 2020 5:58 PM EST
29°
Albany
29°
Tifton
28°
Dothan
29°
29°
Thomasville
29°
Valdosta
29°
De Funiak Springs
Marianna
29°
31°
Blountstown
Tallahassee
34°
10
Wind Chills Friday Morning
Weather Forecast Office
Tallahassee, FL
Issued Dec 24, 2020 5:59 PM EST
22°
Albany
21°
Tifton
19°
Dothan
22°
22°
Thomasville
21°
Valdosta
22°
De Funiak Springs
Marianna
23°
26°
Blountstown
Tallahassee
25°
10
US National Weather Service Tallahassee Florida
December 24, 2020 ·
While we may not get a white Christmas, we can have a cold one! With today's cold front, low temperature tomorrow morning are forecast in the mid 20s to low 30s with wind chills in the upper teens to mid 20s. Tomorrow night will be even colder. Bundle up! #FLwx #ALwx #GAwx



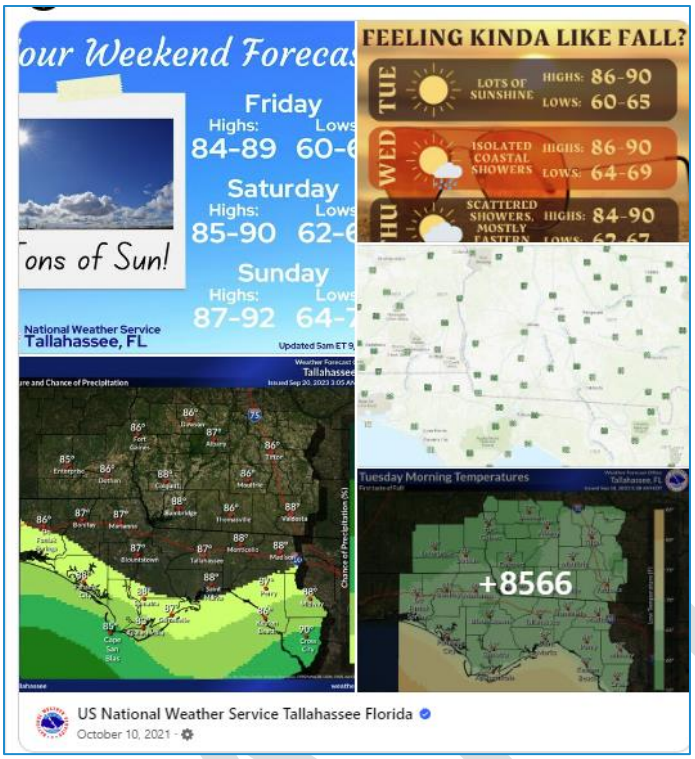
US National Weather Service Tallahassee Florida
December 25, 2020 ·

Brrr! Tonight's low temperature forecast! Several areas will drop into the low 20s with a hard freeze warning in effect. Take extra precautions to protect uninsulated pipes. And as always with sub-freezing temperatures, bring pets indoors, protect people and sensitive vegetation!



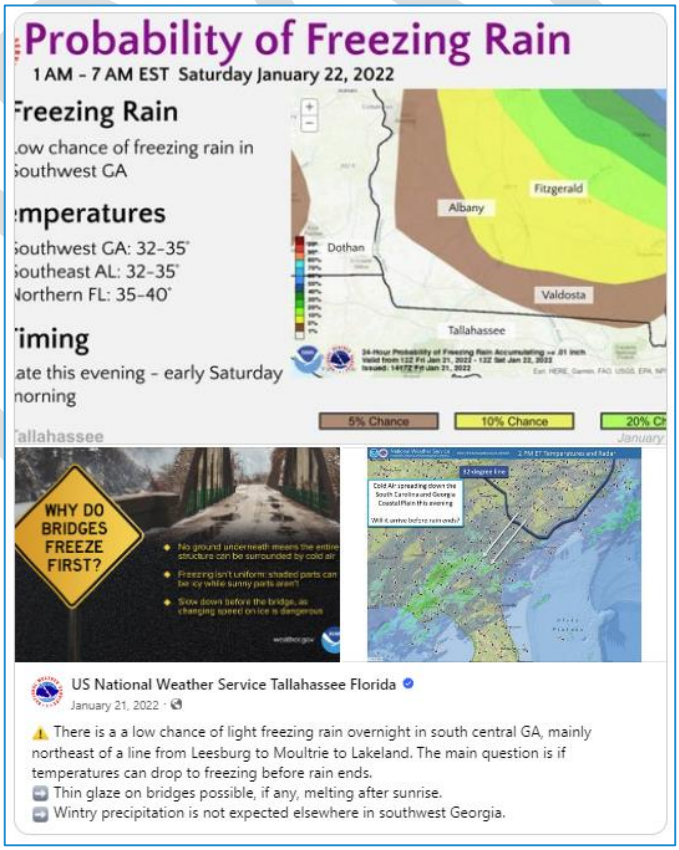
US National Weather Service Tallahassee Florida
December 26, 2020 ·

Another night of below freezing temperatures across the region is expected. Not quite as cold as Saturday morning, but still important to protect uninsulated pipes, sensitive vegetation, bring pets indoors, and check on vulnerable people.


our Weekend Forecas
Friday
Highs: Lows
84-89 60-6
Saturday
Highs: Lows
85-90 62-6
Sunday
Highs: Lows
87-92 64-7
ons of Sun!
National Weather Service
Tallahassee, FL
Updated 5am ET 9
FEELING KINDA LIKE FALL?
TUE
LOTS OF SUNSHINE
HIGHS: 86-90
LOWS: 60-65
WED
ISOLATED COASTAL SHOWERS
HIGHS: 86-90
LOWS: 64-69
THU
SCATTERED SHOWERS, MOSTLY EASTERN
HIGHS: 84-90
Tuesday Morning Temperatures
+8566
US National Weather Service Tallahassee Florida
October 10, 2021


Low Temperatures This Morning
Frosty and Cold Sunday Morning
Weather Forecast Office
Tallahassee, FL
920 am ET Dec 27 2020
Summary
Here are some of the low temperatures across the region this morning – slightly warmer than yesterday. Most inland areas experienced temperatures in the mid 20s. Temperatures will warm up to near 60 degrees today under sunny skies!
Fort Rucker
27
24
Dothan
Enterprise
28
Blakely
27
Albany
26
Camilla
27
Tifton
27
Bainbridge
27
Thomasville
Valdosta
28
Marianna
28
28
27
De Funiak Springs
25
Tallahassee
Madison
29
25
26
Panama City Airport
Sumatra
Mayo
26
25
Apalachicola
28
Cross City
24
NWSTallahassee
weather.gov/tallahassee
US National Weather Service Tallahassee Florida
December 27, 2020
That's three morning lows in a row across the region in the 20s! Nearly halfway to Jan 2018 when it occurred 7 days in a row. Included is a map of low temperatures around the region this Sunday morning. The warmup begins today with highs 55-60 and lows Monday morning in the 30s.


NWS TALLAHASSEE
Cold Overnight Temperatures
Southeast Alabama: 27 - 31°
Southwest Georgia: 26 - 34°
Northern Florida: 29 - 35°
Protect People
Protect Pets
Protect Plants
January 17, 2022
US National Weather Service Tallahassee Florida
January 17, 2022 ·
Areas of frost and near or below freezing temperatures are expected tonight. Be sure to protect people, pets, plants, & pipes!

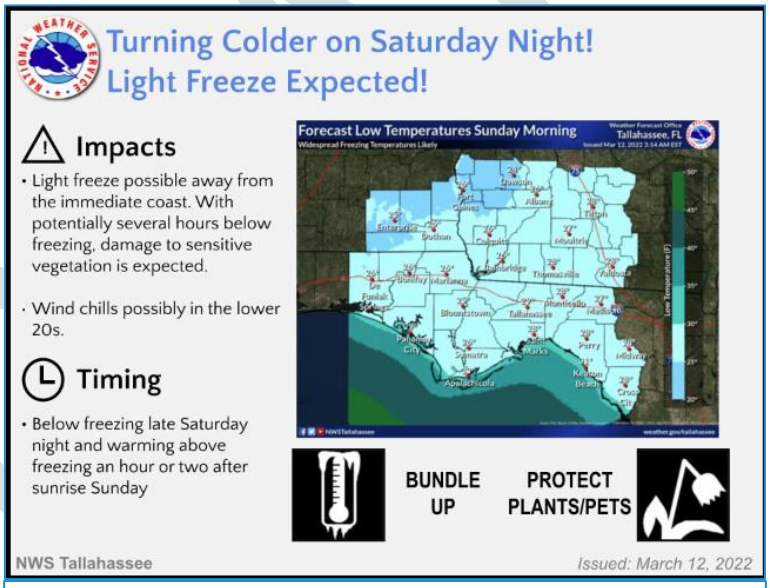

Probability of Freezing Rain
1 AM - 7 AM EST Saturday January 22, 2022
Freezing Rain
Low chance of freezing rain in Southwest GA
mperatures
Southwest GA: 32-35°
Southeast AL: 32-35°
Northern FL: 35-40°
iming
ate this evening - early Saturday norning
Albany
Fitzgerald
Dothan
Valdosta
Tallahassee
5% Chance
10% Chance
WHY DO BRIDGES FREEZE FIRST?
US National Weather Service Tallahassee Florida
January 21, 2022 ·
There is a a low chance of light freezing rain overnight in south central GA, mainly northeast of a line from Leesburg to Moultrie to Lakeland. The main question is if temperatures can drop to freezing before rain ends.
Thin glaze on bridges possible, if any, melting after sunrise.
Wintry precipitation is not expected elsewhere in southwest Georgia.


Cook County Fire Department / Emergency Management Agency EMA
January 27, 2022 ·
This weekend, the coldest temps of the season, so far, will be here. Bottom line.....it's going to be cold 🥶. One important addition to the rule of protecting the Four P's during cold weather is the 5th rule of PRACTICING FIRE SAFETY🔥. Space heaters and fireplaces are a big concern during these winter weather days. Be safe!
The 5 P's of
Cold Weather Preparedness
1. Protect People
2. Protect Pets
3. Protect Plants
4. Protect Pipes
5. Practice Fire Safety


Cold & Windy Conditions
Tonight through Sunday
Weather Forecast Office
Tallahassee, FL
Issued Jan 28, 2022 5:03 AM EST
Hazards
Cold Warning
Wind Chill Advisory
Wind Advisory
Rip Current Statement
Albany
Tifton
Dothan
Thomasville
Valdosta
Marianna
De Funiak Springs
Blountstown
Tallahassee
Forecast Min Temps of 23F or less
Late Sat night to early Sun morning
Weather Forecast Office
Tallahassee, FL
Issued Jan 28, 2022 5:08 AM EST
Hazards
Hard Freeze Watch
Albany
Tifton
Dothan
Thomasville
Valdosta
Marianna
De Funiak Springs
Blountstown
Tallahassee
US National Weather Service Tallahassee Florida
January 28, 2022 ·
1/28/22 520am ET - Cold & windy conditions tonight through the weekend
Tonight:
Strong winds along the coast & offshore
Wind chills in the teens to 20s over land
Sat morning: Freezing temps
Sun morning: Hard freeze likely (23F or less)
Link to watches/warnings/advisories: http://ow.ly/1Nuy50HGk5u

US National Weather Service Tallahassee Florida
January 29, 2022 ·

The coldest temperatures so far this winter are expected Sunday morning with lows bottoming out in the low to mid 20s for most of the area away from the panhandle coast. A hard freeze warning is in effect early Sunday morning for most of the area. #alwx #gawx #flwx



US National Weather Service Tallahassee Florida
March 12, 2022 ·

The severe weather threat has ended for our area, but it will remain very windy through the day. Wind gusts of 35-45 mph will be possible, and these winds could down some tree limbs or cause power outages!

In addition, the strong winds and low humidity will create increased fire weather concerns today across the area.

Tonight, freezing temperatures are expected with lows in the middle 20s to near 30. This kind of late-season cold could kill young, blooming, sensitive plants. Wind chills Sunday morning could be in the lower 20s.

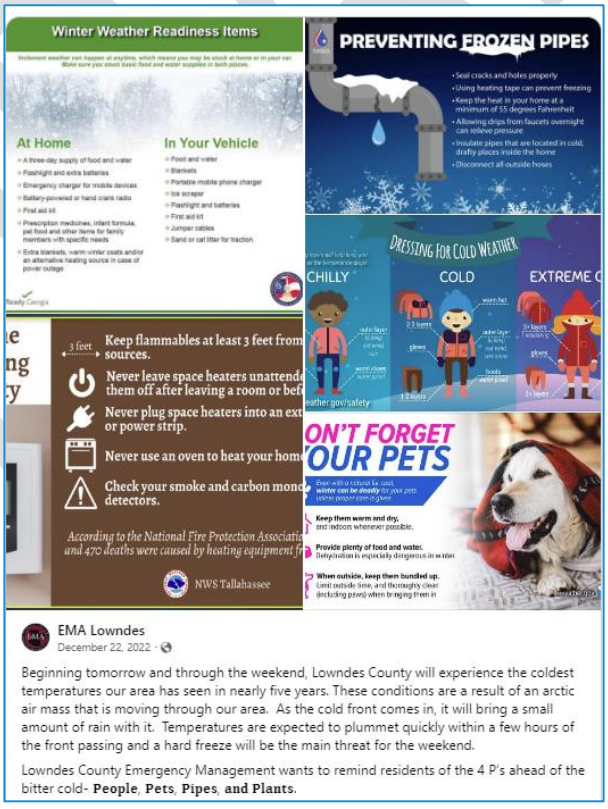
US National Weather Service Tallahassee Florida
December 19, 2022 ·

The arctic blast arrives to the tri-state region this Friday and the coldest temps of the season quickly settle in for the Christmas wknd. Wind chills possibly in single digits in AL/GA Saturday morning. A hard freeze is likely Fri night and Sat Night.

While northern folks might be used to this weather, we aren't! Don't forget:

- Cover sensitive plants, and bring in pets!
- Protect pipes, consider dripping faucets connected to external pipes!
- Use caution heating your home!

Forecasts: http://weather.gov/tallahassee

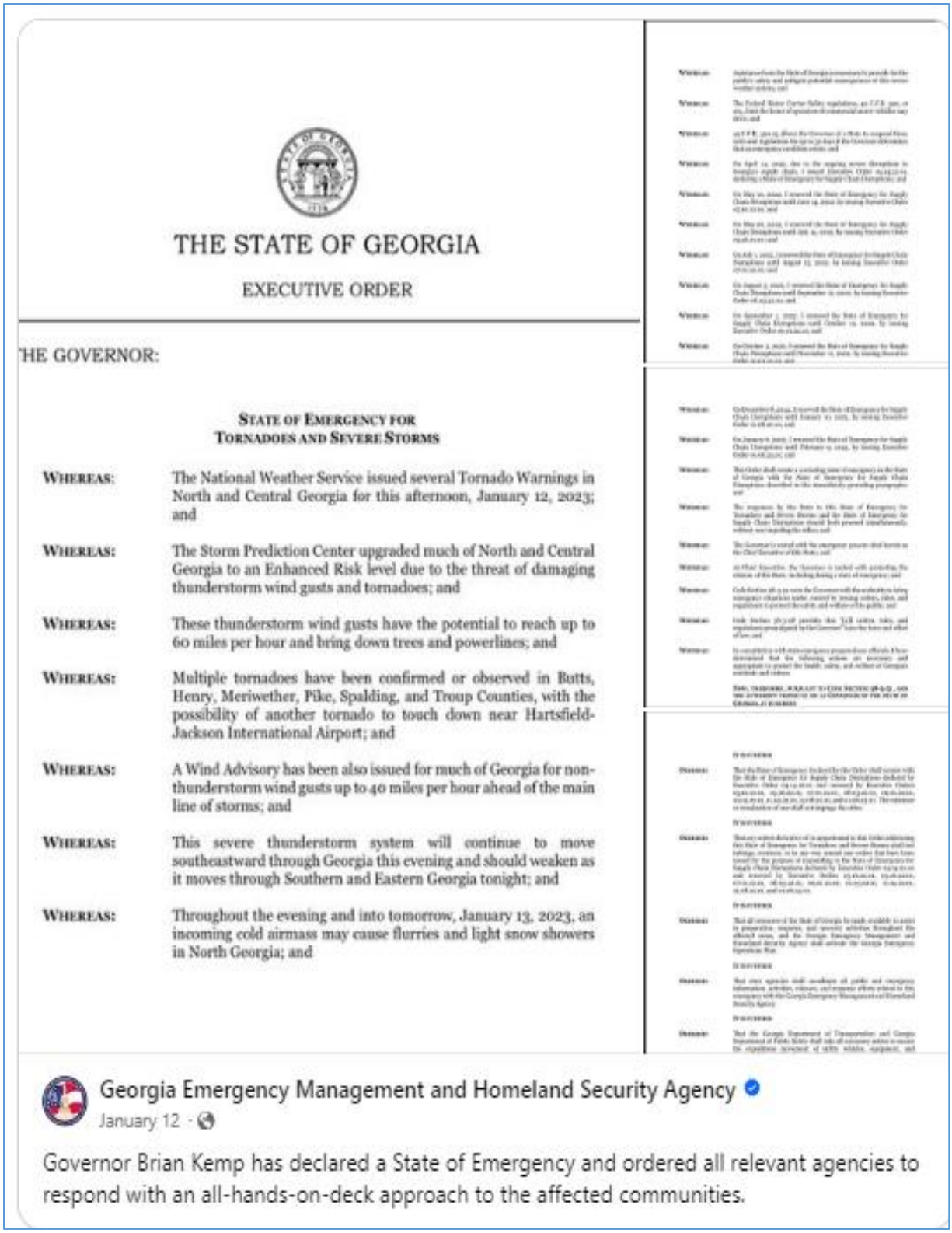


EMA Lowndes
December 22, 2022 ·

Beginning tomorrow and through the weekend, Lowndes County will experience the coldest temperatures our area has seen in nearly five years. These conditions are a result of an arctic air mass that is moving through our area. As the cold front comes in, it will bring a small amount of rain with it. Temperatures are expected to plummet quickly within a few hours of the front passing and a hard freeze will be the main threat for the weekend.

Lowndes County Emergency Management wants to remind residents of the 4 P's ahead of the bitter cold- **People**, **Pets**, **Pipes**, **and Plants**.


Winter Weather Readiness Items
Inclement weather can happen at anytime, which means you may be stuck at home or in your car. Make sure you stock basic food and water supplies in both places.
At Home
A three-day supply of food and water
Flashlight and extra batteries
Emergency charger for mobile devices
Battery-powered or hand crank radio
First aid kit
Prescription medicines, infant formula, pet food and other items for family members with specific needs
Extra blankets, warm winter coats and/or an alternative heating source in case of power outage
In Your Vehicle
Food and water
Blankets
Portable mobile phone charger
Ice scraper
Flashlight and batteries
First aid kit
Jumper cables
Sand or cat litter for traction
Ready.Georgia
Georgia Emergency Management and Homeland Security Agency
December 20, 2022 ·
According to the National Weather Service, we'll be seeing below freezing temperatures going into the weekend. Here are some ways to prepare for the approaching weather. For more information, visit https://gema.georgia.gov/plan-prepare/storms-disasters/winter.



THE STATE OF GEORGIA

EXECUTIVE ORDER

THE GOVERNOR:

STATE OF EMERGENCY FOR TORNADOES AND SEVERE STORMS

WHEREAS: The National Weather Service issued several Tornado Warnings in North and Central Georgia for this afternoon, January 12, 2023; and

WHEREAS: The Storm Prediction Center upgraded much of North and Central Georgia to an Enhanced Risk level due to the threat of damaging thunderstorm wind gusts and tornadoes; and

WHEREAS: These thunderstorm wind gusts have the potential to reach up to 60 miles per hour and bring down trees and powerlines; and

WHEREAS: Multiple tornadoes have been confirmed or observed in Butts, Henry, Meriwether, Pike, Spalding, and Troup Counties, with the possibility of another tornado to touch down near Hartsfield-Jackson International Airport; and

WHEREAS: A Wind Advisory has been also issued for much of Georgia for non-thunderstorm wind gusts up to 40 miles per hour ahead of the main line of storms; and

WHEREAS: This severe thunderstorm system will continue to move southeastward through Georgia this evening and should weaken as it moves through Southern and Eastern Georgia tonight; and

WHEREAS: Throughout the evening and into tomorrow, January 13, 2023, an incoming cold airmass may cause flurries and light snow showers in North Georgia; and

Georgia Emergency Management and Homeland Security Agency

January 12 ·

Governor Brian Kemp has declared a State of Emergency and ordered all relevant agencies to respond with an all-hands-on-deck approach to the affected communities.

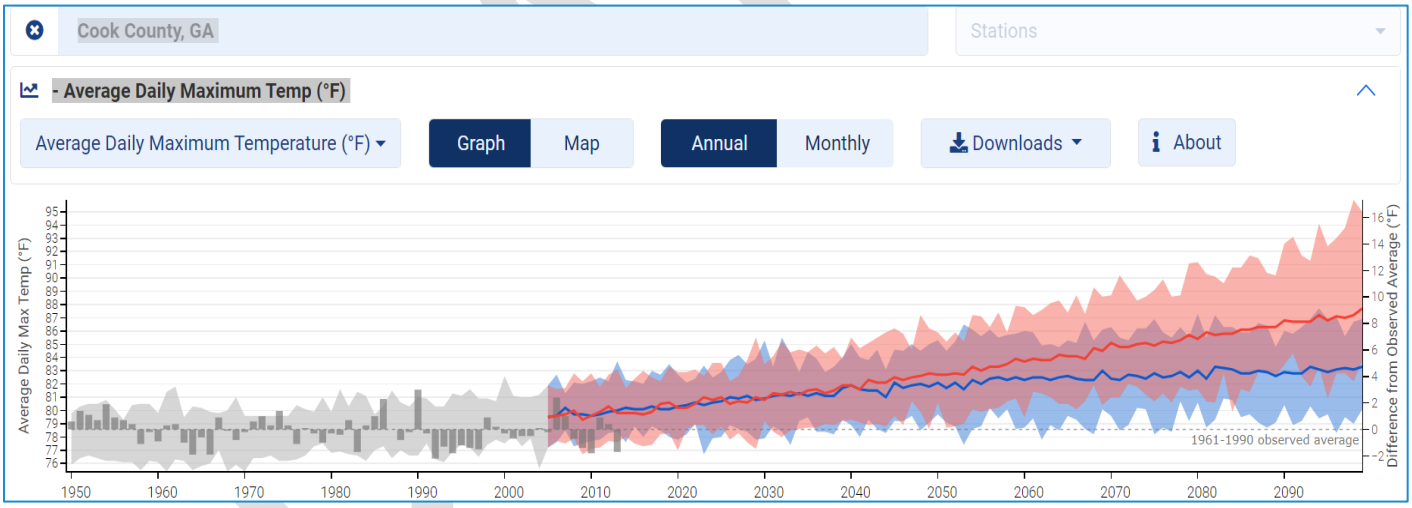
H. Impacts from Future Conditions

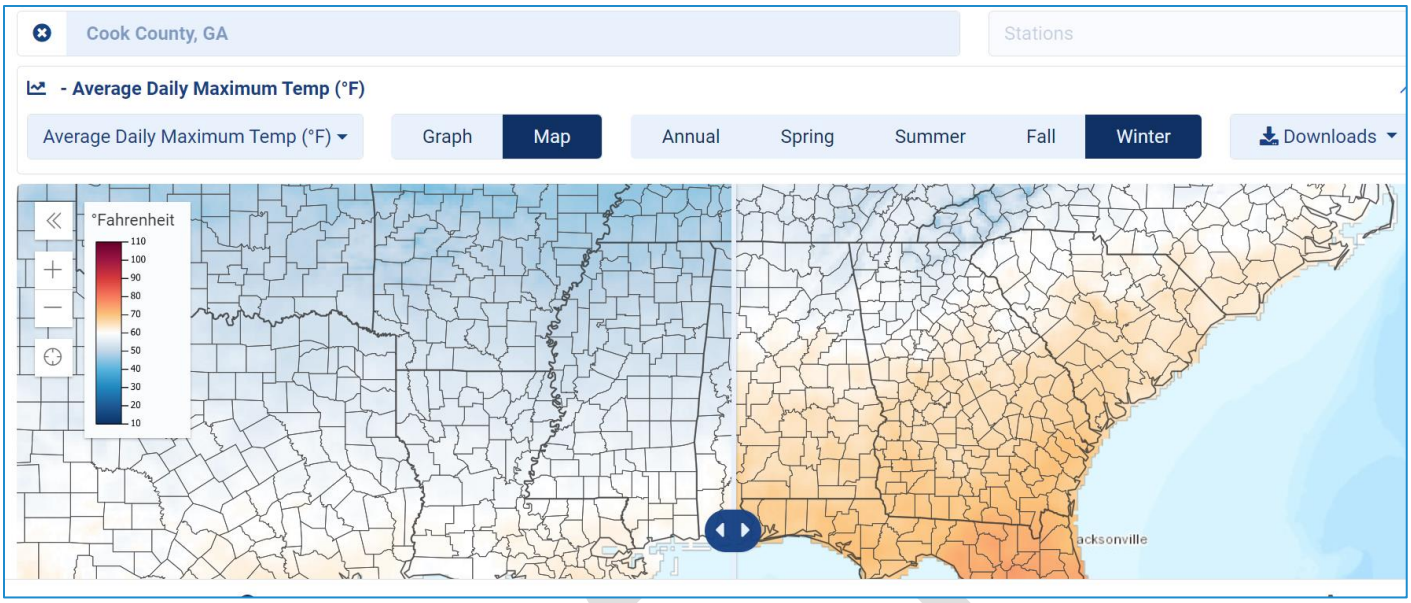
The 12-month average temperature increased by 2.5°F from May 1900 to April 2023. From May 1900 to April 2023, the 12-month average temperature was 65.9°F. Cook County is not shown to have continuous cold weather pattern, a few cold snaps do occur almost on a yearly basis with temperatures in the low 20's and even light snow. Weather always has and always will fluctuate. There are warm days, mild days, cool days, and even some very cold days. There are dry periods and wet periods. And this will continue to be the case.

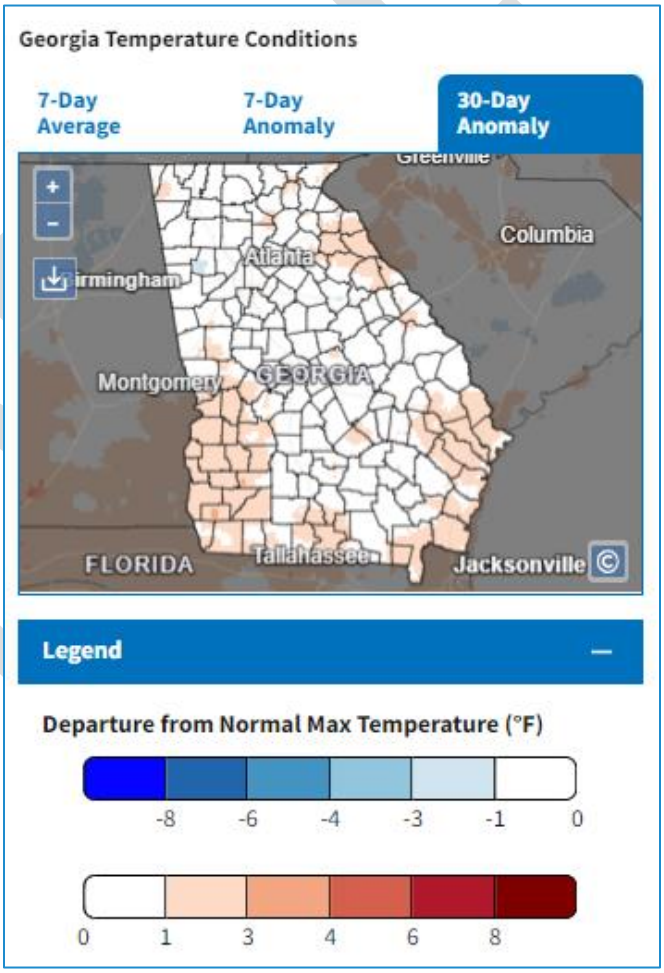
One consequence of climate change may help explain a weather phenomenon that would seem to have little to do with global warming. This is the reason why Arctic deep-freezes keep spilling farther and farther south.

As average global temperatures rise and the Arctic continues to warm, the jet stream is slowing down and increasingly wavy. In the winter, this is bone–chilling cold Arctic air – typically held in a stable place by the once–stronger jet stream to both spill farther south than usual and linger over areas unaccustomed to it for longer.

As winters on average have been getting shorter and warmer, many places should still expect to see bouts of very cold weather from time and time. *Source: NOAA*




Cook County, GA
Stations
- Average Daily Maximum Temp (°F)
Average Daily Maximum Temp (°F)
Graph
Map
Annual
Spring
Summer
Fall
Winter
Downloads
°Fahrenheit
110
100
90
80
70
60
50
40
30
20
10


Georgia Temperature Conditions
7-Day Average
7-Day Anomaly
30-Day Anomaly
Columbia
Atlanta
Montgomery
GEORGIA
FLORIDA
Tallahassee
Jacksonville
Legend
Departure from Normal Max Temperature (°F)
-8
-6
-4
-3
-1
0
0
1
3
4
6
8

Chapter 3:
Local Technological Hazard, Risk, and Vulnerability (HRV) Summary

Section I. Hazardous Materials Release

A. Identification of Hazard

Hazardous materials are substances or materials the Secretary of Transportation has determined that they can pose an unreasonable risk to health, safety, and property when transported in commerce. When these materials are released, they become dangerous. A release may occur by spilling, leaking, emitting toxic vapors, or any other process that enables the material to escape its container, enter the environment, and create a potential hazard.

The effects of hazardous material releases can occur very rapidly with little or no advance warning, in the form of explosions, fires, and immediate health impacts. Slower effects can include long-term environmental damage and long-term health problems resulting from exposure.

B. Profile of Events, Frequency of Occurrences, Probability

Hazardous material spills are common in areas where hazardous materials are fabricated, processed, and stored. Transportation of hazardous materials by truck causes the most hazardous materials events. Many products containing hazardous chemicals are routinely used and stored in homes. These products are also shipped daily on the nation's highways, railroads, waterways, and in pipelines. In most cases, disasters involving hazardous materials are confined to a localized area, whether an accidental release occurs at a fixed facility or in association with a transportation incident. There is also a threat from stationary industries located within the cities and county that pose a known threat if there is a spill, release, or explosion. The United States Environmental Protection Agency categorizes wastes according to four characteristics: Ignitability, corrosivity, reactivity, and toxicity. Furthermore, the EPA categorizes hazardous wastes according to the following hazard codes (source: https://www.epa.gov/hw/defining-hazardous-waste-listed-characteristic-and-mixed-radiological-wastes):

(T) - Toxic Waste
(H) - Acute Hazardous Waste
(I) - Ignitable Waste
(C) - Corrosive Waste
(R) - Reactive Waste
(E) - Toxicity Characteristic Waste

The extent or severity of a hazardous materials release within the community is not predictable due to the varied nature of hazardous materials and the widespread area covered by the transportation network upon which such materials may be transported.

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According to the USDOT Pipeline and Hazardous Materials Safety Administration's Office of Hazardous Materials Safety database (see Appendix F), there are 4 reports of Hazardous Materials Release events occurring in Cook County (including the Cities) between 01/01/2001 and 12/31/2022. (Source: https://portal.phmsa.dot.go, see Appendix F. I.8). The Historic Recurrence Interval is 5.25 years. This is a 19.05% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.3, the past 20-year frequency is 0.15, and the past 50-year frequency is 0.08 (see the Hazard Frequency Table in Appendix D).

One hazardous materials release event has been recorded since the previous Hazard Mitigation Plan was completed. This occurred in the City of Adel (USDOT Report Number E-2021110255) and involved a spill of Flammable – Combustible Liquid consisting of paint, including lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base. No damage cost was listed.

Although the most complete available data was used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

C./D.: Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are equally vulnerable to this hazard.

An estimated 100% of the Residential property (7,506 of 7,506) in Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard, with a total value of $955,196,000. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,922 of 2,845) in the community may be affected, with a total value of $716,747,972. The values are based on the most recent available tax roll data for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, provided by the Cook County Tax Assessor's Office.

Damage to crops is not considered in the above estimates. According to the most recent estimate (2022) available on the University of Georgia's GeorgiaData website (www. https://caed.uga.edu/), the total farm gate value of agricultural production in Cook County is $147,587,977.40 in the State of Georgia.

According to the inventory database reports and maps, all 58 Critical Facilities and Infrastructure for Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard. The total value of these Critical Facilities is $198,051,152.

E. Land Use and Development Trends

Residential land use in Cook County is concentrated along a corridor shared by Interstate 75, US Route 41, and an active freight rail line. All four incorporated cities are along this corridor. Most of the community's population lives relatively close to these major transportation routes. Therefore, the likelihood is high that any severe hazardous materials release along these transportation routes would affect one or more population centers.

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According to 2021 U.S. Census Bureau American Community Survey 5-year estimates, the population of Cook County is 17,188, an increase of 0.5% since 2016. The City of Adel's 2021 population is 5,459, a 2.9% increase since 2016. The City of Cecil's 2021 population is 317, a 9.7% decrease since 2016. The Town of Lenox's 2021 population is 786, a 5.9% decrease since 2016. The Town of Sparks' 2021 population is 2,300, a 13% increase since 2016.

Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) has zoning regulations. All jurisdictions have mandatory building and fire codes that a building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the construction codes mandatory as the Georgia State Minimum Standard Codes. (SEE CHAPTER 4, REGULATORY TOOLS/PLANS FOR ADOPTED CODES).

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

Interstate 75, US Route 41, and an active freight rail line pass through all jurisdictions, including the centers of all the incorporated Cities. The facilities most vulnerable to a hazardous materials release are located within a one-mile buffer of the major highways and railways, including most of the community's critical facilities.

G. Overall HRV Summary

A significant portion of the community could be vulnerable to a hazardous materials release. Preparation for such an event requires specific training for first responders and coordination among agencies to ensure a swift response and containment of hazardous materials to minimize potential loss of life and property. Therefore, a key priority should be to train responders to fulfill their responsibilities and conduct periodic tests to be sure the response plan is realistic and that responders are ready to carry it out.
Human error is the probable cause of most transportation incidents and associated consequences involving the accidental release of hazardous materials. Varying quantities of hazardous materials are manufactured, used, or stored in Cook County. Due to the county's location on or near several major transportation routes, the potential exists for a catastrophic hazardous material release event due to a transportation accident.

Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

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Section II. Disease Outbreak

A. Identification of Hazard

The threat of an infectious disease outbreak has been chosen by the HMPUC as the second most likely human-caused hazard to occur and cause damage in the community.

The community is vulnerable to public health emergencies that may occur naturally on their own, including but not limited to:

- Communicable disease outbreaks
- Pandemic influenza
- Mosquito-borne illness
- Food-borne illness

Diseases that cause a public health emergency may have a rapid onset or a slow onset. They may be highly localized or may be widespread in nature. Depending on the public health emergency, treatment may not be immediately available.

Some examples of recent public health emergencies include:

- **Zika virus** – spread mostly by the bite of an infected *Aedes* species mosquito; Zika can be passed from a pregnant woman to her fetus. Infection during pregnancy can cause certain birth defects. There is no vaccine or medicine for Zika. Local mosquito borne Zika virus transmission has been reported in the continental United States. (Source: https://www.cdc.gov/zika/about/index.html)
- **Pandemic Influenza: Pandemics happen when new (novel) influenza A viruses emerge, which can infect people easily and spread from person to person in an efficient and sustained way.** Unlike seasonal flu, which happens annually, pandemic flu happens rarely (three times in the last century), but the results are much more devastating. Most people have little or no immunity to pandemic influenza because they have no previous exposure to the virus or similar viruses. Even healthy people may be at high risk for serious complications, and health care providers and hospitals may be overwhelmed. (Source: https://www.cdc.gov/flu/pandemic-resources/basics/about.html)
- **Ebola -** a rare and deadly disease caused by infection with one of the Ebola virus species, Ebola is spread through direct contact with bodily fluids. An outbreak in West Africa in 2014 is estimated to have caused over 11,000 deaths. Although only 4 cases related to this outbreak occurred in the United States, transmission could have been far more widespread were it not for close coordination between the CDC, other federal agencies, state and local health departments, and the travel industry. (Source: https://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/qa.html).
- **COVID-19 -** an acute disease in humans caused by a coronavirus, which is characterized mainly by fever and cough and can progress to severe symptoms and, in some cases, death, especially in older people and those with underlying health conditions. It was originally identified in China in 2019 and became pandemic in 2020.

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COVID-19 (coronavirus disease 2019) is a disease caused by a virus named SARS-CoV-2. It can be very contagious and spreads quickly. Over one million people have died from COVID-19 in the United States.

COVID-19 most often causes respiratory symptoms that can feel much like a cold, the flu, or pneumonia. COVID-19 may attack more than your lungs and respiratory system. Other parts of your body may also be affected by the disease. Most people with COVID-19 have mild symptoms, but some people become severely ill.

Some people including those with minor or no symptoms, will develop post-COVID Conditions – also called "Long COVID."

Viruses are constantly changing, including the virus that causes COVID-19. These changes occur over time and can lead to new strains of the virus or variants of COVID-19. Slowing the spread of the virus by protecting yourself and others can help slow new variants from developing working with state and local public health officials to monitor the spread of all variants, including Omicron.
https://www.cdc.gov/coronavirus/2019

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What You Need to Know

- New variants of SARS-CoV-2, the virus that causes COVID-19, will continue to occur.
- CDC coordinates collaborative partnerships which continue to fuel the largest viral genomic sequencing effort to date.
- The Omicron variant, which emerged in November 2021, has many lineages. New lineages continue to emerge and spread in the United States and globally.
- We have the tools to fight variants. Take steps to protect yourself and others.
- For the most up to date information on current variants, visit CDC's COVID Data Tracker.

	Total Reported	7-Day Average (Jul 23)
Cases	2,281	0
Deaths	83	0

In Cook County, there were 0 newly reported COVID-19 cases and 0 newly reported COVID-19 deaths on Jul 23, 2023

B. Profile of Events, Frequency of Occurrences, Probability

According to the best data available, there have not been any disease outbreak events in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. However, the entire community is equally vulnerable to this hazard and an outbreak could happen at any place at any time.

C./D.: Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks are equally vulnerable to this hazard.

An estimated 100% of the Residential property (7,373 of 7,373) in Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard, with a total value of $404,515,378. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (2,845 of 2,845) in the community may be affected, with a total value of $587,190,249. The values are based on the most recent available tax roll data for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, provided by the Cook County Tax Assessor's Office.

Damage to crops is not considered in the above estimates. According to the most recent estimate (2022) available on the University of Georgia's GeorgiaData website (www. https://caed.uga.edu/), the total farm gate value of agricultural production in Cook County is $147,587,977.40 in the State of Georgia.

According to the inventory database reports and maps, all the 58 Critical Facilities and Infrastructure for Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) could be affected by this hazard. The total value of these Critical Facilities is $198,051,152.

E. Land Use and Development Trends

According to 2021 U.S. Census Bureau American Community Survey 5-year estimates, the population of Cook County is 17,188, an increase of 0.5% since 2016. The City of Adel's 2021 population is 5,459, a 2.9% increase since 2016. The City of Cecil's 2021 population is 317, a 9.7% decrease since 2016. The Town of Lenox's 2021 population is 786, a 5.9% decrease since 2016. The Town of Sparks' 2021 population is 2,300, a 13% increase since 2016.

Cook County (including the Cities of Adel, Cecil, Lenox, and Sparks) has zoning regulations. All jurisdictions have mandatory building and fire codes that a building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the construction codes mandatory as the Georgia State Minimum Standard Codes. (SEE CHAPTER 4, REGULATORY TOOLS/PLANS FOR ADOPTED CODES).

No other land use or development trends related to this hazard have been identified.

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F. Multi-Jurisdictional Differences

The impact of a disease event will be more severe in places with higher population density due to more people being exposed and higher potential for person-to-person transmission. No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

For most of the last century, disease outbreaks have been rare in the United States due to the presence of an advanced health care system, effective vaccination programs, and coordination between the CDC, other federal agencies, state and local health departments, and health care providers. However, the potential remains for a disease outbreak to harm people throughout Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 5.
Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

H. Impacts from Future Conditions

Climate change will influence the health of people and diseases in numerous ways. Some existing health threats will intensify and there will be new health threats that will emerge. Considerations are age, economic resources, and location.

Health effects to increase will include respiratory and cardiovascular diseases. There will also be an increase in injuries and premature deaths, distribution of food and water-borne illnesses and other infectious diseases, and threats to people's mental health. The air quality will continue to change, which will affect those with asthma and other respiratory diseases.

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Climate change poses many risks to human health. Some health impacts of climate change are already being felt in the United States. We need to safeguard our communities by protecting people's health, wellbeing, and quality of life from climate change impacts. Many communities are already taking steps to address these public health issues and reduce the risk of harm.

BACKGROUND

When we burn fossil fuels, such as coal and gas, we release carbon dioxide (CO_2). CO_2 builds up in the atmosphere and causes Earth's temperature to rise, much like a blanket traps in heat. This extra trapped heat disrupts many of the interconnected systems in our environment.

Climate change might also affect human health by making our air less healthy to breathe. Higher temperatures lead to an increase in allergens and harmful air pollutants. For instance, longer warm seasons can mean longer pollen seasons – which can increase allergic sensitizations and asthma episodes and diminish productive work and school days. Higher temperatures associated with climate change can also lead to an increase in ozone, a harmful air pollutant.

THE CLIMATE-HEALTH CONNECTION

Decreased air quality introduces a number of health risks and concerns:

- According to the National Climate Assessment, climate change will affect human health by increasing ground-level ozone and/or particulate matter air pollution in some locations. Ground-level ozone (a key component of smog) is associated with many health problems, including diminished lung function, increased hospital admissions and emergency department visits for asthma, and increases in premature deaths.
- More and larger wildfires linked to climate change could also significantly reduce air quality and affect people's health in a number of ways. Smoke exposure increases acute (or sudden onset) respiratory illness, respiratory and cardiovascular hospitalizations, and medical visits for lung illnesses. The frequency of wildfires is expected to increase as drought conditions become more prevalent.
- Exposure to allergens causes health problems for many people. When sensitive individuals are simultaneously exposed to allergens and air pollutants, allergic reactions often become more severe. The increase in air pollutants makes the effects of increased allergens associated with climate change even worse. People with existing pollen allergies may have increased risk for acute respiratory effects.

APHA

CDC

U.S Department of Health and Human Services
Centers for Disease Control and Prevention

Chapter 4: Local Natural Hazard Mitigation Goals and Objectives

Summary of Changes:

Table 4.1 gives a brief description of each section in this chapter and a summary of the changes made.

Chapter 4 Section	Updates to Section
I. Hurricanes/Tropical Storms	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
II. Tornadoes	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
III. Floods	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
IV. Windstorms/ Hailstorms/Lightning	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
V. Wildfires	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
VI. Extreme Heat	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
VII. Drought	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
VIII. Severe Winter Storms	

Table 4.1: Overview of updates to Chapter 4: Local Natural Hazards, Mitigation Goals and Objectives

Overall Community Mitigation Goals, Policies, and Values Narrative

This plan, as a joint effort between Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, will serve as a comprehensive mitigation plan. The mitigation strategies, hazard identification, and other information identified in this plan will be integrated into all comprehensive County plans, as well as all municipality plans in the future. Incorporation of these strategies will occur, as necessary, throughout this planning cycle covered by this Hazard Mitigation Plan Update. Aspects of this plan will be integrated into the Comprehensive Plan during the next planning cycle.

Identified hazards and mitigation strategies of the previous Hazard Mitigation plan were integrated into the Local Emergency Operations Plan, multiple County and City SOPs and SOGs, and future planning and zoning plans. Cook County will integrate mitigation strategies identified in this plan into the Joint Comprehensive Plan, Community Wildfire Protection Plan, Continuity of Operations Plan (when applicable), and other plans. Strategies identified in the previous plan were applied to

grant applications, building and zoning requirements, and development planning considerations for Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. Many of these strategies will be applied using previously identified policies and ordinances. All jurisdictions have the authority to adopt locally binding ordinances and policies to enhance the mitigation strategies in their jurisdiction.

The Legal and Regulatory Capability Survey (below) describes the authorities available to the jurisdictions and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local jurisdictions to implement hazard mitigation activities.

Regulatory Tools/Plans	Regulatory Type: Ordinance, Resolution, Codes, Plans, Etc.	Local Authority	State Prohibited	Higher Authority
Building Codes	(The following codes with took effect as of January 1, 2021, with amendments in 2020 and 2022) International Building Code – 2018 Edition International Residential Code – 2018 Edition International Plumbing Code – 2018 Edition International Mechanical Code – 2018 Edition International Fuel Gas Code – 2018 Edition International Energy Conservation Code – 205 Edition International Fire Code – 2018 Edition International Electric Code – 2020 Edition International Swimming Pool and Spa Code – 2018 Edition	Yes	No	Yes
Capital Improvements Plan	Cook County and Cities of Adel, Cecil, Lenox, and Sparks Comprehensive Plan	Yes	No	No
Comprehensive Plan	Cook County and Cities of Adel, Cecil, Lenox, and Sparks Comprehensive Plan	Yes	No	No

Economic Development Plan	Cook County and Cities of Adel, Cecil, Lenox, and Sparks Comprehensive Plan	Yes	No	Yes
Emergency Response Plan	Cook County Local Emergency Operations Plan (LEOP)	Yes	No	Yes
Zoning Ordinances	Cook County Zoning Ordinance Adel Zoning Ordinance Lenox Zoning Ordinance Sparks Land Development Code	Yes	No	No

The Cities of Adel, Cecil, Lenox, and Sparks each offer many administrative and technical services to their communities. City departments (for each of the cities) include Administrative, Public Works, Water and Sewer, Garbage, Licensing and Permits, Police Department, and Fire Department.

Opportunities to integrate the requirements of this Plan into other local planning mechanisms shall continue to be identified. Although it is recognized that there are many possible benefits to integrating components of this Plan into other local planning mechanisms, the development and maintenance of this stand-alone Hazard Mitigation Plan is deemed by the Cook County Hazard Mitigation Planning Committee to be the most effective and appropriate method to implement local hazard mitigation actions currently.

While Cook County and the Cities of Adel, Cecil, Lenox, and Sparks each operate autonomously, there is a high level of cooperation exhibited when it comes to hazard mitigation and emergency planning efforts. Each local government has designated representatives to participate in the emergency management process, whether it be during planning, response, or recovery phases. The local Emergency Management Agency hosts regular meetings to gather all relevant local, regional and state partners to develop effective plans and strengthen relationships among all stakeholders. Working together, the jurisdictions have been able to access resources available through several state and federal sources that have been instrumental in improving the technical capabilities of these communities to more effectively mitigate hazards and provide more accurate warning and preparatory information to their citizens.

Overall, the priorities for each of the local communities have remained relatively unchanged. The hazards and risks associated with each have not changed, and many of the action steps identified during previous Hazard Mitigation Plans are still relevant and remain a priority in this plan as well.

Authority for the development of this Plan was given by the Cook County Commission because of their execution of the Grantee-Subgrantee Agreement for the Cook County Hazard Mitigation Grant Program (HMGP) Planning Project; and by the Cities of Adel, Cecil, Lenox, and Sparks, located in Cook County, through their participation in the planning project. The Cook County Emergency Management Agency is authorized to oversee emergency management within Cook County and the Cities of Adel, Cecil, Lenox, and Sparks.

The jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the goals, objectives, and action steps contained in Chapter 4 of this Plan.

All jurisdictions (within their budgets) can expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives, and action steps included in this plan. The number of resources available to the jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

This chapter describes the comprehensive range of Mitigation Goals, Objectives, and Action Steps developed by the HMPUC to reduce damage and improve safety through Hazard Mitigation. These were arranged by the natural hazards in Chapter 2. There is an emphasis on emergency preparedness and infrastructure.

The HMPUC discussed and identified the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Chapter 4 of this Plan after identifying the hazards noted in Chapter 2 of this Plan. All community areas were considered in developing the comprehensive range of Mitigation Goals, Objectives, and Action Steps. These were identified after the weighing of many factors discovered during the planning process, including risk assessment, storm history, past damage, community resources, and other factors.

A list of the comprehensive range of Mitigation Goals, Objectives, and Action Steps was compiled from the input of the HMPUC, as well as from others within the community. Members of the HMPUC prioritized the identified comprehensive range of Mitigation Goals, Objectives, and Action Steps based on what was anticipated to be most beneficial to the community. The benefits of all action steps were determined to be greater than the costs involved.

Several criteria were established to assist the HMPUC members in the prioritization of these suggested Mitigation Goals, Objectives, and Action Steps. Criteria included perceived cost vs. benefit or cost effectiveness, availability of potential funding sources, overall feasibility, measurable milestones, political support for the proposed actions, and the STAPLEE criteria.

Through this prioritization process, several projects emerged as having higher priority than others. Some of the projects involved expending considerable amounts of funds to initiate the required actions. The determination of a project's cost/benefit analysis (such as the FEMA B/CA model) will be implemented at the time of application or funding request. Other projects allowed the communities to pursue completion of the project using potential grant funding. Still others required no significant financial commitment from the communities.

Chapter 6, Sections I-III, describes the planning process involved in selecting the comprehensive range of Mitigation Goals, Objectives, and Action Steps. The Action Steps are given a rating of High, Medium, or Low Priority by the HMPUC based on factors (with a primary emphasis on prioritized cost versus benefit review) identified in Chapter 6, Section I.

Relevant comprehensive ranges of Mitigation Goals, Objectives, and Action Steps are listed below throughout the chapter. The Cook County EMA Director has been chosen by Cook County and the Cities of Adel, Cecil, Lenox, and Sparks to oversee the projects. The Cook County EMA has been designated by Cook County and the Cities of Adel, Cecil, Lenox, and Sparks to be the coordinating agency for implementation and administration of these projects.

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Section I. Windstorms/Hailstorms/Lightning

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. Lightning is unpredictable and can happen at any place and at any time. Because of the potential for injury, death, and property damage, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section IV.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in the community are listed in the National Register of Historic Places.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendation:

Goal 1: Reduce the risks and vulnerability of citizens and critical facilities to damage resulting from windstorms/hailstorms/lightning.

Objective 1: Protect the lives, health, and property of residents from the force of windstorms/hailstorms/lightning.

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Action Step 1: Educate homeowners and builders on individual safe rooms.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 2: Distribute programs on personal emergency preparedness, e.g., emergency survival kits.	
Responsible Department	EMA
Anticipated Cost	$5,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024+2029
Priority	Medium
Status	Ongoing

Action Step 3: Encourage the American Red Cross to teach the Citizen's Disaster Course on a frequent basis.	
Responsible Department	EMA, ARC
Anticipated Cost	$2,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA
Jurisdiction	Cook County
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 4: Encourage businesses to develop emergency plans.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

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Action Step 5: Increase public awareness of the Early Warning Communication/Notification System, NOAA weather radios, and available community safe shelters by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 6: Trim tree lines around roads, homes, utilities and businesses.	
Responsible Department	EMA, Cook PW, Municipalities PW, Georgia Power, Colquitt EMC, Adel
Anticipated Cost	$300,000
Existing & Potential Funding Sources	Local operating funds, grants
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 7: Seek funding to retrofit government buildings and schools to reinforce windows, roofs and doors.	
Responsible Department	EMA, Building Inspections/Code Enforcement, Board of Education
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local funds, OHS-GEMA/FEMA
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 8: Initiate an inspection program at critical facilities to identify construction weaknesses subject to high wind damage.	
Responsible Department	Building Inspections/Code Enforcement
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local funds, OHS-GEMA/FEMA
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

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Action Step 9: Review building codes for proper wind strength and safety regulations and for consistency with state and federal regulations.	
Responsible Department	Building Inspections/Code Enforcement
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, completed, which will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Changes from the Previous Plan

Action Step 10: Install lightning warning and protection equipment at outdoor recreational facilities countywide. Completed and added to Weather Stem.

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Section II. Tornadoes

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. Tornadoes are unpredictable and can happen at any place and at any time. Because these tornadoes may be extremely powerful and cause great damage, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section II.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in the community are listed in the National Register of Historic Places.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendation:

Goal 1: Reduce the risks and vulnerability of citizens and critical facilities to damage resulting from tornadoes.

Objective 1: Protect the lives, health, and property of residents from the force of tornadoes.

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Action Step 1: Educate homeowners and builders on individual safe rooms.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 2: Distribute programs on personal emergency preparedness, e.g., emergency survival kits.	
Responsible Department	EMA
Anticipated Cost	$5,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 3: Encourage the American Red Cross to teach the Citizen's Disaster Course on a frequent basis.	
Responsible Department	EMA, ARC
Anticipated Cost	$2,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA
Jurisdiction	Cook County
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 4: Encourage businesses to develop emergency plans.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

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Action Step 5: Increase public awareness of the Early Warning Communication/Notification System, NOAA weather radios, and available community safe shelters by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 6: Trim tree lines around roads, homes, utilities and businesses.	
Responsible Department	EMA, Cook PW, Municipalities PW, Georgia Power, Colquitt EMC, Adel
Anticipated Cost	$300,000
Existing & Potential Funding Sources	Local operating funds, grants
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 7: Seek funding to retrofit government buildings and schools to reinforce windows, roofs and doors.	
Responsible Department	EMA, Building Inspections/Code Enforcement, Board of Education
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local funds, OHS-GEMA/FEMA
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 8: Initiate an inspection program at critical facilities to identify construction weaknesses subject to high wind damage.	
Responsible Department	Building Inspections/Code Enforcement
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local funds, OHS-GEMA/FEMA
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing
Action Step 9: Review building codes for proper wind strength and safety regulations and for consistency with state and federal regulations.	
Responsible Department	Building Inspections/Code Enforcement

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Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 10: Purchase Weather Stem System (self-contained with camera) with real-time weather data.	
Responsible Department	Schools/County/Cities
Anticipated Cost	$10,000
Existing & Potential Funding Sources	Local operating funds/grants
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	NEW

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, completed, which will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Changes from the Previous Plan

No changes.

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Section III. Hurricanes/Tropical Storms

A. Community Mitigation Goals

As previously indicated in Chapter 2, hurricanes and tropical storms may cause substantial damage to life, property, and the economy in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. They are usually accompanied by some advanced notice, giving the community time to prepare and/or evacuate. The HMPUC believes that, because these extreme weather events have the potential to cause great damage, injury, and loss of life, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section I.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in the community are listed in the National Register of Historic Places.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendations

Goal 1: Reduce the risks and vulnerability of citizens and critical facilities to damage resulting from hurricanes.

Objective 1: Protect the lives, health, and property of residents from the force of hurricanes.

Action Step 1: Educate homeowners and builders on individual safe rooms.	
Responsible Department	EMA
Anticipated Cost	Staff Time

DRAFT

Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 2: Distribute programs on personal emergency preparedness, e.g., emergency survival kits.	
Responsible Department	EMA
Anticipated Cost	$5,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 3: Encourage the American Red Cross to teach the Citizen's Disaster Course on a frequent basis.	
Responsible Department	EMA, ARC
Anticipated Cost	$2,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA
Jurisdiction	Cook County
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 4: Encourage businesses to develop emergency plans.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

DRAFT

Action Step 5: Increase public awareness of the Early Warning Communication/Notification System, NOAA weather radios, and available community safe shelters by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2019-2024
Priority	High
Status	Ongoing

Action Step 6: Trim tree lines around roads, homes, utilities and businesses.	
Responsible Department	EMA, Cook PW, Municipalities PW, Georgia Power, Colquitt EMC, Adel
Anticipated Cost	$300,000
Existing & Potential Funding Sources	Local operating funds, grants
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 7: Seek funding to retrofit government buildings and schools to reinforce windows, roofs and doors.	
Responsible Department	EMA, Building Inspections/Code Enforcement, Board of Education
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local funds, OHS-GEMA/FEMA
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 8: Initiate an inspection program at critical facilities to identify construction weaknesses subject to high wind damage.	
Responsible Department	Building Inspections/Code Enforcement
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local funds, OHS-GEMA/FEMA
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

DRAFT

Action Step 9: Review building codes for proper wind strength and safety regulations and for consistency with state and federal regulations.	
Responsible Department	Building Inspections/Code Enforcement
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 10: Acquire and install auxiliary, mobile, and/or fixed generators (including transfer switches and soft start systems) where needed, including all designated evacuation and emergency shelters, community water systems, and critical facilities.	
Responsible Department	EMA
Anticipated Cost	$350,000 per unit
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	New

Action Step 11: Upgrade communication capabilities among first responders, law enforcement, and other critical personnel and departments.	
Responsible Department	EMA, Police/Sherriff's Departments, Fire Depts.
Anticipated Cost	$2.5 million
Existing & Potential Funding Sources	Local operating funds, grants
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing. Adel is upgraded.

Action Step 12: Acquire and install weather alert sirens or equivalent early warning infrastructure.	
Responsible Department	EMA
Anticipated Cost	$150,000
Existing & Potential Funding Sources	Local operating funds, grants
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing. In the process of being installed. (As of 10-11-22) it should be installed in 35-45 days.

DRAFT

Action Step 13: Train and educate for the C.E.R.T. (Citizens Emergency Response) Program.	
Responsible Department	EMA
Anticipated Cost	Staff
Existing & Potential Funding Sources	Local operating funds, grants.
Jurisdiction	EMA
Timeframe	2024-2029
Priority	High
Status	NEW

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, completed, which will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Changes from the Previous Plan

Changes:
Action Step #11
Cost changed to $2.5 million

Action Step #12
Should be installed in November 2023

New Action Step:
Action Step #13

DRAFT

Section VI. Floods

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. Floods are unpredictable and can happen at any place and at any time. Because of the damage and loss of life it may cause, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

The major flooding sources in Cook County include the Little River, the New River, the Withlacoochee River, and Bear Creek. Due to these facts, the Cook County HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps listed below should be implemented to reduce the threat of flood damage in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks.

B. Identification and Analysis of the Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section III.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in the community are listed in the National Register of Historic Places.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

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C. Mitigation Strategy and Recommendations:

Goal 1: Minimize losses to existing and future structures, especially community critical facilities, due to flooding caused by excessive rainfall.

Objective 1. Improve capacity of the Adel, Lenox, Cecil, Sparks, and Cook County existing drainage infrastructure to handle excessive rainfall.

Action Step 1: Seek funding to develop a countywide Master Drainage Plan.	
Responsible Department	County Manager
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 2: Determine, in consultation with engineers, schedule for phased implementation of the countywide Master Drainage Plan.	
Responsible Department	County Manager
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 3: Seek funding for phased implementation of the countywide Master Drainage Plan.	
Responsible Department	County Manager
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 4: Continue to review and update storm water run-off, watershed plans and effectiveness of present drainage ditches, culverts, storm water and sanitation network.	
Responsible Department	County Engineer
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

DRAFT

Action Step 5: Review existing regulations to ensure adequacy in reducing the amount of future development in identified flood hazard areas.	
Responsible Department	Building Inspections/Code Enforcement
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 6: Update and improve floodplain maps.	
Responsible Department	EMA, FEMA
Anticipated Cost	$50,000
Existing & Potential Funding Sources	Local Operating Funds, FEMA
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2014-2029
Priority	Medium
Status	Ongoing. In the process.

Action Step 7: Distribute letters to all property owners in the county regarding potential flood hazards as required for participation in the Community Rating System (CRS).	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 8: Review all capital improvements plans to ensure that infrastructure improvements are not directed towards flood hazard areas.	
Responsible Department	County/City Managers, Clerks
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

DRAFT

Action Step 9: Work with Georgia Department of Transportation to identify areas of frequent roadway flooding and develop mitigation strategies.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 10: Continue to enforce floodplain ordinances.	
Responsible Department	County Code Enforcement
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 11: Review and amend the Adel, Lenox, Cecil, Sparks, and Cook County Building Codes as required due to mandatory changes in the National Flood Insurance Program.	
Responsible Department	Building Inspections
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Objective 2: Protect and conserve flood-prone areas for community greenspace development.

Action Step 12 (formerly 14): Monitor comprehensive land use plans to ensure consistency with the green space program, including mapping of lands to be permanently protected.	
Responsible Department	Building Inspections
Anticipated Cost	$15,000
Existing and potential Funding Sources	Local Budget, State and Federal Grant Funding
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

DRAFT

Action Step 13 (formerly 15): Monitor existing subdivision regulations to promote conservation of floodplains, wetlands, and groundwater recharge areas.	
Responsible Department	Building Inspections/Code Enforcement
Anticipated Cost	$20,000
Existing & Potential Funding Sources	Local Budget, State and Federal Grant Funding
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 14 (formerly 16): Seek funding from private foundations, individuals, federal and state grants, and local communities to leverage green space grant funds.	
Responsible Department	County Manager
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Budget, State and Federal Grant Funding
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Objective 3: Ensure public health and safety during and following flood events.

Action Step 15 (formerly 17): Cap wells not in use and increase wellhead waterproofing.	
Responsible Department	Cook County Public Health
Anticipated Cost	$100,000
Existing & Potential Funding Sources	Local Budget, State and Federal Grant Funding
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 16 (formerly 18): Investigate methods to reduce Non-Point Source pollution, such as increasing grass growth along waterways.	
Responsible Department	County/Cities Public Works
Anticipated Cost	$100,000
Existing & Potential Funding Sources	Local Budget, State and Federal Grant Funding
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Low
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

DRAFT

E. Local Public Information and Awareness Strategy.

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, completed, which will result in life, money, and property savings. For further details on plan execution, see Chapter 6.

F. Changes from the Previous Plan

Completed Action Steps:

Action Step #13 Deleted: Seek funding to buy out all structures located in the highest flood prone areas. Work has been done through drainage and road systems to prevent flooding in these areas. This Action Step is no longer needed.

DRAFT

Section V. Wildfires

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. Wildfires are unpredictable and can happen at any place and at any time. Due to the great damage, it may cause, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of the Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section V.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in the community are listed in the National Register of Historic Places.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendation

Goal 1: Prevent damage resulting from wildfires in Cook County, reduce the threat of wildfires, and protect the life and property of residents.

Objective 1: Prevent destruction of forests and structures.

DRAFT

Action Step 1: Improve communication with Georgia Environmental Protection Division regarding illegal burning issues.	
Responsible Department	EMA, Georgia Forestry Commission/EPD/EPA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 2: Acquire all terrain vehicles.	
Responsible Department	EMA, Georgia Forestry Commission, County/Cities Fire Departments
Anticipated Cost	$200,000
Existing & Potential Funding Sources	Georgia Forestry Commission, State and Federal Grant Programs
Jurisdiction	Cook County
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 3: Seek state and federal grants to acquire better fire equipment..	
Responsible Department	EMA, County/Cities Fire Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 4: Improve wildland fire training at the local fire department level.	
Responsible Department	Georgia Forestry Commission, County/Cities Fire Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Georgia Forestry Commission, GPSTC
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

DRAFT

Action Step 5: Improve public awareness of wildfire fighting techniques and the importance of fire buffers around the home by publishing articles in the local newspaper, holding town hall meetings, radio announcements and providing bulletins to local churches and schools.	
Responsible Department	EMA, Georgia Forestry Commission, County/Cities Fire Departments
Anticipated Cost	$15,000
Existing & Potential Funding Sources	Georgia Forestry Commission, State and Federal Grant Programs
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 6: Support Georgia Forestry Public Outreach efforts.	
Responsible Department	EMA, Georgia Forestry Commission, County/Cities Fire Departments
Anticipated Cost	$10,000
Existing & Potential Funding Sources	Georgia Forestry Commission, State and Federal Grant Programs
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 7: Enforce building, fire and safety codes.	
Responsible Department	Building Inspections, County/Cities Fire Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 8: Develop an ordinance to enforce burn permits at the local level.	
Responsible Department	Cook County Code Enforcement
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

DRAFT

Action Step 9: Investigate methods to provide landowners an incentive to prescribe burn timberland thereby minimizing heavy fuel loads.	
Responsible Department	Georgia Forestry Commission, County/Cities Fire Departments
Anticipated Cost	$25,000
Existing & Potential Funding Sources	Georgia Forestry Commission, State and Federal Grant Programs
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 10: Create more fire breaks.	
Responsible Department	Georgia Forestry Commission, County/Cities Fire Departments
Anticipated Cost	$100,000
Existing & Potential Funding Sources	Georgia Forestry Commission, State and Federal Grant Programs
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 11: Build roads into areas that have no other access.	
Responsible Department	Georgia Forestry Commission
Anticipated Cost	$200,000
Existing & Potential Funding Sources	Georgia Forestry Commission, State and Federal Grant Programs
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 12: Educate the public and provide information on nighttime burning and smoke management.	
Responsible Department	EMA, Georgia Forestry Commission, County/Cities Fire Departments
Anticipated Cost	$25,000
Existing & Potential Funding Sources	Georgia Forestry Commission, State and Federal Grant Programs
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

DRAFT

Objective 2: Reduce threat of wildfire occurring during periods of drought.

Action Step 13 (formerly 14): Become a designated "Firewise Community."	
Responsible Department	EMA, County/Cities Fire Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step 14 (formerly 15): Install more dry hydrants.	
Responsible Department	County/Cities Fire Departments
Anticipated Cost	$300,000
Existing & Potential Funding Sources	State and Federal Grant programs
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step 15 (formerly 16): Seek funding to acquire more fire tankers (2000 to 3000 gallons) for local fire departments.	
Responsible Department	EMA, County/Cities Fire Departments
Anticipated Cost	$500,000
Existing & Potential Funding Sources	Local Budget, SPLOST, OHS-GEMA, FEMA, Assistance to Fire Fighters Grants, Safer Grants
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

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Action Step 16 (formerly 17): Increase public awareness of wildfire dangers around the home and community, such as lighted matches, cigarettes, trash, and the process for obtaining burn permits by publishing articles in the local newspaper, holding town hall meetings, radio announcements and providing bulletins to local churches and schools.	
Responsible Department	EMA, Georgia Forestry Commission, County/Cities Fire Departments
Anticipated Cost	$25,000
Existing & Potential Funding Sources	State of Georgia Forestry Commission, State and Federal Grant Programs
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	Ongoing
Action Step 17 (formerly 18): Construct a new fire station for the City of Adel.	
Responsible Department	City of Adel Fire Department
Anticipated Cost	$4 million
Existing & Potential Funding Sources	Local Funds, Grants
Jurisdiction	City of Adel
Timeframe	2024-2029
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, completed, which will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Changes from the Previous Plan

Changes to Action Steps:

Action #1: Added EPD and EPA to Responsible Department. Changed responsibility to County only.

DRAFT

Action Step #18: Change the cost to $4 million.

Completed Actions:

Action Step # 13: Acquire a new fire engine for the Town of Lenox.

DRAFT

Section VI. Extreme Heat

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. Extreme Heat events can happen at any place and at any time. Because of the potential for injury and death, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section VI.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in the community are listed in the National Register of Historic Places.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendation:

Goal 1: Prevent heat-related injuries and deaths.

Objective 1: Provide potential heat-stress victims with emergency shelter.

DRAFT

Action Step 1: Establish operating policies and procedures, identify managing entity, and determine needed equipment and supplies.	
Responsible Department	Local Emergency Operations Planning Committee
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, completed, which will result in life, money, and property savings. For further details on plan execution, see Chapter 6.

F. Changes from the Previous Plan

No changes.

DRAFT

Section VII. Drought

A. Community Mitigation Goals

As indicated in Chapter 2, drought may cause substantial economic, property, and personal damage in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks, particularly crop damage. Its effects can be long-term, with the damage increasing as time goes by. In addition, drought conditions can contribute to wildfires in the community. The HMPUC believes that, due to the damage drought can cause, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:
This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:
Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section VII.

3. Community Values, Historic and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in the community are listed in the National Register of Historic Places.

4. New Buildings and Infrastructure:
The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:
The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendations

Goal 1: Reduce the economic impact of drought on the Cook County economy.

Objective 1: Minimize the economic impact of drought on agriculture.

DRAFT

Action Step 1: Promote more efficient use of surface irrigation.	
Responsible Department	Local Extension Services, County
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, State Funds
Jurisdiction	Cook County
Timeframe	2024-2024
Priority	Medium
Status	Ongoing

Action Step 2: Promote construction of farm ponds for irrigation.	
Responsible Department	Local Extension Services, County
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, State Funds
Jurisdiction	Cook County
Timeframe	2024-2024
Priority	Medium
Status	Low

Action Step 3: Identify funds to repair existing ponds.	
Responsible Department	Local Extension Services, County
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, State Funds
Jurisdiction	Cook County
Timeframe	2024-2024
Priority	Low
Status	Ongoing

Action Step 4: Promote the drilling of 4-inch wells to recharge farm ponds.	
Responsible Department	Local Extension Services, County
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, State Funds
Jurisdiction	Cook County
Timeframe	2024-2024
Priority	Medium
Status	Ongoing

Action Step 5: Implement a support system through FFA and USDA.	
Responsible Department	Local Extension Services, County
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, State Funds
Jurisdiction	Cook County
Timeframe	2024-2024
Priority	Low
Status	Ongoing

DRAFT

Objective 1: Manage available water resources.

Action Step 6: Heighten public awareness on actions citizens can take to conserve water.	
Responsible Department	Local Extension Services, County/City governments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, State Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

Action Step 7: Utilize the media for the distribution and publication of drought information.	
Responsible Department	Local Extension Services, County/City governments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, State Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	Medium
Status	Ongoing

Action Step 8: Update community websites to provide drought related information that is readily accessible.	
Responsible Department	Local Extension Services, County/City governments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, State Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2019-2024
Priority	High
Status	Ongoing

Action Step 9: Target conservation alerts to individual households through an Early Warning Communication/Notification bulletin board.	
Responsible Department	EMA
Anticipated Cost	$10,000 annual expense
Existing & Potential Funding Sources	Local budget, OHS-GEMA and FEMA grant funding
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

DRAFT

Action Step 10: Ensure the reasonable allocation of supply during drought events through a coordinated and cooperative inter-agency response.	
Responsible Department	EMA, OHS-GEMA, FEMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local budget, OHS-GEMA, FEMA
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

Action Step 11: Ensure the reasonable allocation of supply during drought events through a coordinated and cooperative inter-agency response.	
Responsible Department	All local governments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local budgets
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, completed, which will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Changes from the Previous Plan

No changes.

DRAFT

Section VII. Severe Winter Weather

A. Community Mitigation Goals

As previously indicated in Chapter 2, Section VIII, severe winter storms may cause substantial economic, property, and personal damage in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. Severe winter storms are usually predictable ahead of time. Still, they can happen in any part of Bacon County and the Cities of Adel, Cecil, Lenox, and Sparks during the period surrounding the winter months.

Severe winter storms may cause substantial problems. Cook County and the Cities of Adel, Cecil, Lenox, and Sparks do not have the specialized equipment used during severe winter storms that most northern counties and cities possess. The Cook County HMPUC believes that due to the damage these severe winter storms have the potential to cause, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce the threat of severe winter storms damage in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:
Structural options in this plan include wrapping exposed pipes and adding insulation at critical facilities, championing new construction built to appropriate low-temperature ratings, and championing retrofitting existing buildings.

Non-structural options include disseminating information to the public concerning severe winter storms and maintaining temperatures over 32 degrees during freezes in government facilities.

2. Existing Policies, Regulations, Ordinances, and Land Use:
Cook County and the Cities of Adel, Cecil, Lenox, and Sparks currently operate in compliance with the 2012 International Building Code standards and its amendments. Cook County has a building inspection program that inspects all of Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. Cook County and all cities have a joint Planning Commission.

3. Community Values, Historical and Special Considerations:
Cook County and the Cities of Adel, Cecil, Lenox, and Sparks have historic buildings, a few of which are Critical Facilities. Historic and special considerations pose significant challenges concerning mitigating thunderstorm/wind damage involving wind retrofitting on historic buildings. The Cook County Courthouse and other historic Critical Facilities should be eligible for the National Register.

Worksheet #4-STAPLEE Criteria was completed for each Action Step. Please see the worksheets contained in Appendix D Section I.

4. New Buildings and Infrastructure:

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The mitigation strategy and recommendations include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:
The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendations

Goal 1: Prevent or reduce damage caused by severe winter storms in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks.

Objective 1: Minimize losses to existing and future structures, especially Critical Facilities, and Infrastructure, due to severe winter storms.

Action Step #1: Continue the policy of wrapping exposed piping with insulation and installing new insulation layers at Critical Facilities in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks.	
Responsible Department	Cook County EMA
Anticipated Cost	$3,000 per year
Existing & Potential Funding Sources	Local budgets
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	High
Status	New

Action Step #2: Maintain temperatures above 32 degrees to prevent freezing in government-owned occupied and unoccupied structures in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks.	
Responsible Department	Cook County EMA
Anticipated Cost	$3,000 per year
Existing & Potential Funding Sources	Local budgets
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	New

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Action Step #3: Disseminate information to the public concerning severe winter storms, champion new construction being built to appropriate low-temperature ratings, and champion existing buildings being retrofitted in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks.	
Responsible Department	Cook County EMA, Cook County Inspections Department
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local budgets
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2029
Priority	Medium
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the above strategies are intended to be carried out by each local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

Plan sections shall be monitored and evaluated annually by the Cook County EMA. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, completed, resulting in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. New

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Chapter 5.
Local Technological Hazard Mitigation Goals and Objectives

Overall Community Mitigation Goals, Policies, and Values Narrative

The purpose of the Cook County Hazard Mitigation Plan is to not only assess the vulnerability of the area to natural hazards, but to identify those action steps that may need to be undertaken to reduce the potential loss of life and property from identified technological hazards. As in natural hazards, this plan's development requires an overall set of community goals that clearly state the community's commitment to reducing or avoiding the long-term vulnerabilities to the identified hazards. With these overall goals in place, more specific goals, objectives, and action steps to protect the community from the identified hazards can then be developed. Using the findings from the Risk Assessment as a guide, the HMPUC has developed the following overall community mitigation goals:

Goal 1: Protect the public health and safety;

Goal 2: Eliminate or reduce exposure of critical community facilities to the hazards identified in the community risk assessment;

Goal 3: Where exposure to hazards cannot be limited, implement, to the extent resources are available, the action steps needed to reduce the potential loss of life and property;

Goal 4: Maintain and/or enhance the community's capacity to issue warnings and to respond promptly and effectively in a hazard event.

With these overall community mitigation goals in place, the following Goals, Objectives, and Action Steps have been developed to specifically address the technological hazards identified in Chapter 3. In addition, the same methodology as in Chapter 4 was utilized in ranking the priority of each action step.

There have not been any changes in the overall priorities since the previous plan was completed.

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Section I. Hazardous Materials Release

A. Community Mitigation Goals

As previously indicated in Chapter 3, a hazardous materials release may cause substantial damage to life, property, and the economy in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. Such events can occur with little or no warning, giving the community no time to prepare and/or evacuate. The HMPUC believes that, because these events have the potential to cause great damage, injury, and loss of life, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 3 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 3, Section I. Very little in the way of existing policies and regulations could be identified which affects hazardous materials handling by the private sector. Local entities are required to file Material Safety Data Sheets (MSDS) with the host jurisdiction informing local officials of the types of hazardous chemicals on site.

3. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

4. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendations

Goal 1: Protect the health and safety of residents of Cook County.

Objective 1: Minimize the effects of hazardous material spills, releases, or explosions from identified technological hazards.

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Action Step 1: Maintain HazMat response training.	
Responsible Department	EMA, City and County Managers, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

Action Step 2: Seek funding to expand HazMat training to first responders (fire, police, sheriff, EMS).	
Responsible Department	EMA, City and County Managers, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	FEMA, GEMA, DHS and local budget
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

Action Step 3: Increase public awareness and procedures to follow if a hazardous material spill, release, or explosion event occurs by publishing articles in the local newspaper, holding town hall meetings, radio announcements, provide community training, and providing bulletins to local churches and schools.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, GEMA, FEMA
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

Action Step 4: Train local government officials on proper response procedures for hazardous material spill events.	
Responsible Department	Local Emergency Operations Planning Committee, EMA, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

Action Step 5: Review and update Standard Operating Procedures (SOP) for responding to a hazardous material spill, release, or explosive event.	
Responsible Department	Local Emergency Operations Planning Committee, EMA, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

Action Step 6: Investigate, implement, and train first responders in methods to relocate residents if a hazmat event occurs.	
Responsible Department	Local Emergency Operations Planning Committee, EMA, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

Action Step 7: Provide workplace training on decontamination steps.	
Responsible Department	Local Emergency Operations Planning Committee, EMA, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	High
Status	Ongoing

Action Step 8: Review annually all hazardous material transportation routes (relocate routes if necessary).	
Responsible Department	Local Emergency Operations Planning Committee, EMA, GDOT
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	Medium
Status	Ongoing

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Action Step 9: Develop a relationship with industries that store, process, or utilize hazardous materials to educate/encourage them to develop a plan for hazardous events.	
Responsible Department	Local Emergency Operations Planning Committee, EMA, GDOT
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Cook County, Adel, Cecil, Lenox, Sparks
Timeframe	2024-2024
Priority	Medium
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, completed, which will result in life, money, and property savings. For further details on plan execution, see Chapter 6.

F. Changes from the Previous Plan

Action Steps, 3, 5, and 8 were edited.

Action Step 9 - NEW

DRAFT

Section II. Disease Outbreak

A. Community Mitigation Goals

As previously indicated in Chapter 3, a disease outbreak may cause substantial damage to life, public health, and the economy in Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. A disease outbreak can overwhelm community resources and first responders and may be difficult or impossible to contain. Because these events have the potential to cause great damage, injury, and loss of life, the HMPUC believes that a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 3, Section I.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in the community are listed in the National Register of Historic Places.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendations

Goal – Protect the population of Cook County from the effects of a disease outbreak.

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Action Step	Responsible Department	Est. Cost	Funding Sources	Jurisdiction	Timeframe	Priority	Status
Objective #1 - Secure external sources of funding and training to help prepare for and respond to events.							
Increase Immunization education, prevention and pre-planning efforts, particularly for the homeless and low-income individuals in the community, and host flu shots and other immunization clinics.	Health Department	$100,000	General Funds, GEMA, FEMA, Health Department	County and Cities	2019-2024	High	New
Identify vulnerable populations (homeless, migrants, low income, etc.) and identify community groups to work with in order to reach and educate these populations effectively regarding health issues.	EMA, Health Department	Staff time	General Funds, GEMA, FEMA	County and Cities	2019-2024	High	New
Develop plan to identify community locations to obtain and distribute Water, Food, Ice, Tarps, medical countermeasures, etc.	EMA	Staff time	General Funds, GEMA	County and Cities	2019-2024	Medium	New
Develop Local Emergency Planning Committee	EMA	Staff time	General Funds	County and Cities	2019-2024	Medium	New

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Approach large businesses about working with the EMA on developing public health emergency plans.	Health Dept.	Staff time	General Funds	County and Cities	2019-2024	Medium	New

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, completed, which will result in life, money, and property savings. For further details on plan execution, see Chapter 6.

F. Changes from the Previous Plan

No changes.

DRAFT

Chapter 6:
Executing The Plan

Summary of changes:

- Revised and updated language.

Section I.
Implementation of the Action Plan

A. Administrative Actions

The meetings and planning process of the HMPUC have been overseen by the Cook County Emergency Management Agency. The Southern Georgia Regional Commission contracted with the Cook County Commission to administer and facilitate the planning process. The Cook County Commission and the Cities of Adel, Cecil, Lenox, and Sparks will adopt the Plan (on approval by GEMA and FEMA) by the resolutions contained in Appendix E.

B. Authority and Responsibility

The Cook County Commission and the Cities of Adel, Cecil, Lenox, and Sparks have authorized the submission of this Plan to both GEMA and FEMA for approval.

As determined by the City and County governments and the HMPUC, the Cook County EMA Director will be responsible for this Plan and its continued usage as a planning document. The EMA Director will oversee implementation, monitoring, and updates for all jurisdictions. The respective jurisdictions will be responsible for the implementation of their specific mitigation activities as proposed in this plan.

C. Prioritization

1. Methodology for Prioritization

In prioritizing the implementing of the action steps identified in this plan, those hazards deemed to pose the greatest threat will be given the primary consideration. In prioritizing the implementation feasibility of the action steps and projects, local governments will consider additional cost,time factors, and additional activities requiring smaller amounts of money and staff time to implement will be given highest implementation priority. Those steps requiring additional funding for equipment or staff time beyond the normal budgets of the communities will be incorporated into the budget process, when possible, based on the cost-benefit analysis described below.

2. Use of Cost Benefit Analysis

The data provided in Worksheet 3 will be utilized to quantify the number of persons and/or property at risk from each hazard. Combined with the criteria in Worksheet 4, local governments can assess the potential value of at-risk properties and the resulting benefits from the proposed action steps.

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In prioritizing projects, the local governments will also utilize cost benefit analysis (CBA) to evaluate the feasibility of a major project. CBA is a well-established method for quantitatively comparing the benefits and costs of mitigation projects. The result is a Benefit-Cost Ratio (BCR), which is derived from a project's total net present value of benefits divided by the total project cost estimate, which must include all documented project and maintenance costs. The benefits of mitigation projects are avoided damages, disruptions, losses, and casualties. Examples of common benefits include avoided or reduced damages to buildings, contents, or infrastructure; avoided or reduced economic impacts of loss of function of buildings; avoided or reduced displacement costs for temporary quarters; avoided or reduced loss of public services; avoided or reduced loss of net business income; avoided or reduced economic impacts of loss of function of infrastructure; avoided or reduced road or bridge closures; avoided or reduced loss of utility services; and avoided or reduced deaths and injuries.

3. Use of Other Calculations

Additional calculations performed included availability of potential funding sources; overall feasibility; measurable milestones; public and political support for the proposed actions; and the STAPLEE Additional calculations performed included the Availability of potential funding sources, overall feasibility, measurable milestones, public and political support for the proposed actions, and the STAPLEE criteria. Additional calculations performed included the Availability of potential funding sources, overall feasibility, measurable milestones, public and political support for the proposed actions, and the STAPLEE criteria.

4. Use of Other Review Structure

In addition to the cost-benefit analysis, other factors that may affect the prioritization of projects include the availability of special tax, grant, and/or loan funds which become available on a limited basis to finance project implementation, such as SPLOST funds or FEMA Pre-Disaster Mitigation Program funds.

D. Incorporation of Local Hazard Mitigation Plan into Other Plans/Planning Measures

This Plan will be reviewed by Cook County and the Cities of Adel, Cecil, Lenox, and Sparks. The requirements of this Hazard Mitigation Plan will be taken into consideration and will be incorporated into Comprehensive Plans, Five-Year Short-Term Work Program, Capital Improvement Plans, Local Emergency Operations Plans, and all other such Plans as appropriate.

Once this plan is approved, it will be used by the consultants and planning committees responsible for the update process for the County and City Comprehensive Plans, Short-Term Work Programs, and all other plans that could incorporate the requirements of this plan.

To facilitate inclusion of this Plan, the Cook County Commission and the Cities of Adel, Cecil, Lenox, and Sparks will provide a copy of this Plan to the persons and/or committees responsible for writing and updating plans.

Section II.
Evaluation and Monitoring

A. Method

The Cook County EMA Director will be charged with ensuring that this plan is monitored and periodically updated in subsequent years. The method that the Cook County EMA will use to monitor the plan and evaluate implementation progress will be the following:

- The Cook County EMA will conduct quarterly telephone interviews with various local governments and area agencies to chart their plan progress.
- The EMA Director will hold formal public meetings at least once a year to monitor the progress of the plan implementation and allow the public a forum for expressing concerns, opinions, and ideas.
- Throughout the year, a series of informal meetings will be held in which various aspects of the plan, including monitoring and evaluation, are discussed.

B. Criteria Used to Monitor and Evaluate the Plan

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property.

Section III.
Plan Update and Maintenance

A. Public Involvement

Because the Hazard Mitigation Plan is intended to help ensure a safe and livable environment for all Cook County and Cities of Adel, Cecil, Lenox, and Sparks residents, it is imperative that public involvement be an integral part of the planning process.

Since the adoption of the original Cook County Pre-Disaster Mitigation Plan, citizens have been kept involved and apprised of plan progress through such forums as regularly scheduled County Commission meetings, public hearings, and applicable newspaper coverage. This same level of public education, awareness, and citizen involvement will continue over the next five years until the next required update of the Hazard Mitigation Plan. When specific issues dictate, public hearings will be conducted, and all other community planning efforts (Comprehensive Plan, Regional Plan, etc.) will afford citizens the opportunity to participate in and comment on the need to incorporate hazard mitigation initiatives.

To facilitate the goal of continued public involvement in the planning process, the EMA will ensure that the following steps are taken:

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- The public will be directly involved in the update and review of the Plan.
- Copies of the plan will be kept on hand at appropriate agencies throughout the community.
- The plan will be available on City, County, and/or Regional Commission websites, and will contain an e-mail address and phone number the public can use for submitting comments and concerns about the plan.
- A public meeting will be held annually to provide the public with a forum for expressing concerns, opinions, and ideas. The EMA will set meeting schedules and dates and use County resources to publicize and host this meeting.

B. Timeframe

Pursuant to the requirements set forth in the Disaster Mitigation Act of 2000, the community is again required to update and evaluate the plan no more than five years after its adoption. At least one year before the required five-year update period ends, the EMA Director will begin planning a new update to this plan. This will consist of establishing a new planning committee that will be tasked with completing the update following the same process used for this update.

No later than the conclusion of the five-year period following approval of the plan update, the EMA Director shall submit a revised Hazard Mitigation Plan to GEMA for its approval. Note that the plan update process, as established, is subject to change depending on subsequent regulations and/or requirements set forth by GEMA and FEMA.

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Chapter 7:
Conclusion

Summary of changes:

- Revised and updated language
- Revised Hazards priority order
- New Hazard
- New FEMA requirements added
- Action Steps amended as needed with changes

Cook County and the Cities of Adel, Cecil, Lenox, and Sparks have suffered considerable damage in the past from natural hazards. Planning and undertaking structural and nonstructural action steps before a disaster occurs can save lives and property. This philosophy has been the driving force behind the preparation of the Cook County Hazard Mitigation Plan.

Education of the population and enhanced warning can decrease the vulnerability of the county's citizens and visitors. Continued and improved public information and communication with the population are important parts of this plan. Because of this planning process, Cook County and Cities of Adel, Cecil, Lenox, and Sparks officials have gained a better understanding of the hazards affecting the community.

As a result of the planning process described in Chapter 1 and the hazard, risk, and vulnerability assessment in Chapter 2, Cook County and the Cities of Adel, Cecil, Lenox, and Sparks have a realistic perspective on the hazards to which the community is exposed. With the mitigation strategy outlined in Chapter 4 and the implementation plan included in Chapter 6, the local leaders have an "action plan" to follow when allocating resources to reduce their community's vulnerability to such hazards.

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References

Cook County Board of Tax Assessors (http://www.qpublic.net/ga/cook/)

Cook County website (https://cookcountyga.us/)

City of Adel website (http://www.cityofadel.us/)

Town of Lenox website (http://www.cityoflenox.municipalimpact.com/city-hall)

Center for Agribusiness & Economic Development. 2015 Georgia Farm Gate Value Report. (http://caes2.caes.uga.edu/center/caed/documents/GAFGVR2015_DEC16.pdf)

Federal Emergency Management Agency (www.fema.gov)

FEMA National Flood Insurance Program Community Status Book (https://www.fema.gov/national-flood-insurance-program-community-status-book)

Georgia Data. "Agriculture." (https://georgiadata.org/agriculture.html)

Georgia Emergency Management Agency, Georgia Mitigation Information System (https://apps.itos.uga.edu/GEMA.GMIS/)

Georgia Emergency Management and Homeland Security Agency (http://www.gema.ga.gov/)

Georgia Forestry Commission (www.gatrees.org)

National Oceanic and Atmospheric Administration, National Centers for Environmental Information, Storm Events Database (http://www.ncdc.noaa.gov/stormevents/)

National Weather Service. Archived NWS Watch/Warnings at the Iowa State University Environmental Mesonet (https://mesonet.agron.iastate.edu/request/gis/watchwarn.phtml)

Southern Georgia Regional Commission (www.sgrc.us)

USDOT Pipeline and Hazardous Materials Safety Administration. Office of Hazardous Materials Safety database (https://hazmatonline.phmsa.dot.gov/IncidentReportsSearch/IncrSearch.aspx)

U.S. Drought Monitor (http://droughtmonitor.unl.edu/)

United States Census Bureau (www.census.gov)

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Appendices

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Appendix A. Hazard Identification, Risk, and Vulnerability (HRV)

Section I. GEMA Worksheet 3A

1. Windstorms/Hailstorms/Lightning
2. Tornadoes
3. Hurricanes/Tropical Storms
4. Floods
5. Wildfires
6. Extreme Heat
7. Drought
8. Severe Winter Weather

Section II. GMIS Critical Facilities Maps

1. Critical Facilities and Hazard Potential for Hazards Affecting the Entire Community (Hurricanes/Tropical Storms, Tornadoes, Lightning, Extreme Heat, and Drought)
2. Critical Facilities and Wind Zones
3. Critical Facilities and Wildfire Hazard Areas (GMIS data)
4. Critical Facilities and Flood Zones

Section III. Other Maps

Hurricane MEOW maps
Tornado track map
FEMA flood maps From HAZUS Report
UNL Drought Monitor Map

Appendix B. Growth and Development Trends

Census Demographic Summary
Comprehensive Plan Short Term Work Program
Cook County Tax Digest
City of Adel Tax Digest
City of Cecil Tax Digest
Town of Lenox Tax Digest
Town of Sparks Tax Digest

Appendix C. Other Planning Documents

Community Wildfire Protection Plan

Appendix D. Worksheets Used in Planning Process

Hazard Frequency Table
GEMA Worksheet #1
GEMA Worksheet #2
GEMA Worksheet #4 (for each objective)

Appendix E. Copies of Required Planning Documentation

I. Public Notices
II. Sign-in Sheets
III. Adoption Resolutions

Appendix F. Reports and Inventories

I. General Historic Reports
1. Hurricanes/Tropical Storms – NOAA data

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2. Tornadoes – NOAA data
3. Floods – NOAA data
4. Windstorms/Hailstorms/Lightning – NOAA data
5. Wildfires – GFC data
6. Extreme Heat – NWS data
7. Drought – NOAA data
8. Hazardous Materials Release – USDOT data

II. Critical Facilities Inventory

Appendix G. HAZUS Report

Appendix H. Brochure

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