Association of County Commissions of Alabama

LOCAL RECOVERY PLAN FOR ALABAMA MID COUNTIES

Local Recovery Plan for the Alabama MID Counties in response to the 2020 Hurricanes Sally and Zeta: Clarke, Dallas, Escambia, Marengo, Perry, Washington and Wilcox

DRAFT 1
JULY 14, 2024

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I. Definitions and Acronyms

ACCA	Association of County Commissions of Alabama
ACS	American Community Survey
ADECA	Alabama Department of Economic and Community Affairs, State entity designated to administer federal funding in response to the Covered Disasters.
CDBG-DR	Community Development Block Grant Disaster Recovery Program.
CDC/ATSDR	Centers for Disease Control and Prevention Agency for Toxic Substances and Disease Registry
FEMA	Federal Emergency Management Agency
FEMA NRI	Federal Emergency Management Agency National Risk Index
FSA	Farm Service Agency
FVL	FEMA Verified Loss
HHMID	Hardest Hit Most Impacted and Distressed City/County identified by the federal government.
HOI	Homeowners Insurance
HUD	United States Department of Housing and Urban Development
IA	Individual Assistance Program
LMI	Low and Moderate Income
LRP	Local Recovery Plan
LRPP	Local Recovery Planning Program (State of Alabama's process to develop local strategies that identify projects and capacity enhancements that address risks to community lifelines that support health and safety while mitigating against future disasters).
MID	Most Impacted and Distressed County identified by the federal or state government.
MID Recovery Zone	Most Impacted and Distressed Area identified by local unmet needs assessment within Zone; a HHMID or MID county where project or program activities will be concentrated.
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
PA	Public Assistance program
PHA	Public Housing Authority
PPFVL	Personal Property FEMA Verified Loss
R/ECAP	Racially or Ethnically Concentrated Areas of Poverty
RPFVL	Real Property FEMA Verified Loss
SBA	U.S. Small Business Administration
SHMP	State Hazard Mitigation Plan
SVI	Social Vulnerability Index
USDA	US Department of Agriculture

II. Executive Summary

A. Overview

In 2020, Alabama faced significant impacts from Hurricanes Sally and Zeta, leading to disaster declarations across numerous counties. Hurricane Sally, the first to hit Alabama since 2004, made landfall on September 16 near Gulf Shores as a Category 2 hurricane, causing severe flooding and damage to agricultural areas. Just a month later, Hurricane Zeta struck, bringing Category 3 winds and widespread power outages. The inland counties, including Clarke, Dallas, Escambia, Marengo, Perry, Washington, and Wilcox, were notably affected, facing challenges in recovery due to limited experience and resources.

In response, the State of Alabama established the 2020 Community Development Block Grant Disaster Recovery (CDBG-DR) Grant for Hurricanes Sally and Zeta Action Plan and the Local Recovery Planning Program (LRPP) for the HHMID and MID counties. Led by the Association of County Commissions of Alabama (ACCA), the 7 MID Counties collaborated via a planning consortium to develop this Local Recovery Plan (LRP) for comprehensive recovery strategies, ensuring that resources are effectively directed to the communities in need within Clarke, Dallas, Escambia, Marengo, Perry, Washington, and Wilcox counties. This LRP aims to support long-term recovery and resilience in the most impacted and distressed areas, identified as the Most Impacted and Distressed Recovery Zones (MID Recovery Zones).

III. Citizen Participation

Community engagement for the Local Recovery Plan is designed to achieve the following goals:

- Meet with the County and City stakeholders to understand their goals and objectives.
- Engage the public to understand their priorities, goals, and concerns, and to gain their input on priority projects.
- Provide digital and in-person opportunities for feedback and input.
- Ensure that all internal staff and consultants are aligned in messaging.
- Compile feedback and incorporate into Plan

The public outreach plan can be found in Appendix A. The following sections provide an overview of participation and engagement requirements.

A. Citizen Participation

ACCA confirms that citizens and other stakeholders were given an opportunity for reasonable and timely access to information and a period for submitting comments relating to the Local Recovery Plan.

In line with the requirements noted in the LRPP Guidelines, each county held 1 planning charette, and 2 public hearings at different times of the day to provide citizens with the opportunity to provide input and comments regarding unmet needs and project activities. These hearings were held prior to the finalization of this plan to ensure that all project activity types and concepts were included.

B. Public Engagement and Stakeholder Consultation

In line with the requirements noted in the LRPP Guidelines, each county LRPs conducted extensive outreach to engage and consult with local government partners, non-governmental organizations, tribal governments, and other impacted stakeholders.

1. Local Government Partners

Staff members and officials representing public agencies were requested to participate in this planning process as part of their job or official responsibilities. The following local government agencies were requested to provide feedback regarding the contents of this LRP:

- City Mayors
- County Commissioners
- County Engineers
- County Emergency Managers
- County Public Health Officials
- County Administrators
- County Farm Service Agencies
- Local Chamber of Commerce and Tourism
- Public Housing Authorities

2. Indian Tribes

There is one federally recognized tribe in Alabama – Poarch Creek Indians. This tribe is in the northwestern corner of Escambia County. Additionally, there are several states recognized tribes, one of which is located within the southeastern corner of Washington County. Both tribes were invited to provide feedback and engage within the planning process.

3. Other Impacted Stakeholders

Other impacted stakeholders were invited to attend the planning charette and the two public meetings. These stakeholders include:

- Religious organizations
- Senior Centers
- Civic Centers
- Educational Organizations
- Healthcare Organizations
- Economic Development Organizations
- Non-governmental organizations including but not limited to Habitat for Humanity, American Red Cross, and Local Food Pantries

IV. Introduction and Background

Located in southern Alabama, Clarke, Dallas, Escambia, Marengo, Perry, Washington, and Wilcox counties are rich in history and natural beauty, each offering unique cultural and historical attractions. Clarke County is known for its timber and wildlife, while Dallas County, home to Selma, played a pivotal role in the Civil Rights Movement. Escambia County blends cultural heritage with

economic activity, and Marengo County boasts significant antebellum architecture. Perry County is historically significant in civil rights, Washington County is one of the oldest counties in the state, and Wilcox County is characterized by its rural charm and natural resources. These counties face common rural challenges, including economic development, access to healthcare, education, and infrastructure. Limited resources, population decline, and the need for disaster resilience further complicate efforts to improve quality of life and economic opportunities in these rural communities.

This plan identifies regional and county specific demographics, vulnerabilities, unmet housing, economic and infrastructure needs following the 2020 Huricanes, and hazards and risks to identify MID Recovery Zones, mitigation needs and eligible project activities.

V. Unmet Needs Assessment Methodology

A. Introduction

The Unmet Needs Assessment was completed using similar methods from the State Action Plan for Housing, Infrastructure and Economic areas, as outlined in the following sections.

B. Housing Unmet Needs Assessment

Information was compiled to document damages to owner-occupied and renter households, households based on residence type, insurance status, and gross income range per household for each county. For this analysis, full applicant-level data collected through FEMA's IA program was used. Datasets for Sally and Zeta are as of April 6, 2024[1].

Furthermore, the analysis performed defaulted to HUD's definitions of unmet need for owner-occupied and renter households.

To calculate the level of damage for **owner-occupied** households, the following criteria was used:

- **Minor-Low:** Less than $3,000 of FEMA inspected real property damage.
- **Minor-High:** $3,000 to $7,999 of FEMA inspected real property damage.
- **Major-Low:** $8,000 to $14,999 of FEMA inspected real property damage and/or 1 to 3.9 feet of flooding on the first floor.
- **Major-High:** $15,000 to $28,800 of FEMA inspected real property damage and/or 4 to 5.9 feet of flooding on the first floor.
- **Severe:** Greater than $28,800 of FEMA inspected real property damage or determined destroyed and/or 6 or more feet of flooding on the first floor.

To calculate the level of damage for **rental** households, the following criteria was used:

- **Minor-Low**: Less than $1,000 of FEMA inspected personal property damage.
- **Minor-High:** $1,000 to $1,999 of FEMA inspected personal property damage or determination of "Moderate" damage by the FEMA inspector.

[1] Open FEMA Dataset: Individuals and Households Program - Valid Registrations - v1, https://www.fema.gov/openfema-data-page/individuals-and-households-program-valid-registrations-v1

- **Major-Low:** $2,000 to $3,499 of FEMA inspected personal property damage or 1 to 3.9 feet of flooding on the first floor or determination of “Major” damage by the FEMA inspector.
- **Major-High:** $3,500 to $7,499 of FEMA inspected personal property damage or 4 to 5.9 feet of flooding on the first floor.
- **Severe:** Greater than $7,500 of FEMA inspected personal property damage or determined destroyed and/or 6 or more feet of flooding on the first floor or determination of “Destroyed” by the FEMA inspector.

The average cost for full home repairs for a specific disaster within each of the FEMA IA damage categories is calculated using the observed differences in real property damage costs, determined by the Small Business Administration (SBA) for its disaster loan program and the subset of homes inspected by both SBA and FEMA after Hurricanes Sally and Zeta. Since SBA inspects for full repair costs, it presumes to reflect the full cost to repair the home, which is generally more than FEMA estimates on the cost to make the home habitable. SBA data mentioned is from the publicly available SBA Disaster Loan Data on the SBA website[2]. In addition, the State Action Plan is utilized as ACCA does not have a data sharing agreement to access the more granular data set at the time of writing this plan. The National Flood Insurance Program (NFIP) Data is also utilized and pulled from the FEMA Open Data Sets[3].

For each household that was determined to have unmet housing needs, their estimated average total estimated loss was calculated using similar variables and calculation methods from the State Action Plan. These variables are:

1. FEMA Damage Category Application Counts of Minor-Low to Major-Low
2. FEMA Damage Category Application Counts of Major-High to Severe
3. FEMA IA Applications without FEMA Verified Loss
4. Public Housing Damages

After calculating total estimated losses, an additional 15% is added to the calculation to account for resilience costs for buildings to withstand future disasters. To calculate total unmet need, assistance received from FEMA IA, SBA and NFIP is summarized and subtracted from the total estimated total loss with the added resilience costs. Assistance received does not include any potential assistance received from the Home Recovery Alabama Program as there is no publicly available data for assistance received across the 7 MID counties.

The total unmet housing need was summarized at the Zip Code level for each county to assist in the calculation of identifying the Mid Recovery zones.

C. Infrastructure Unmet Needs Assessment

For the purposes of this analysis, the full applicant-level data was collected through FEMA’s Public Assistance (PA) program. Datasets pulled and utilized for Sally and Zeta are as of April 6, 2024[4].

[2] SBA Disaster Loan Data, Public Access: https://www.sba.gov/document/report-sba-disaster-loan-data
[3] FEMA Open Data sets, NFIP Data: https://www.fema.gov/openfema-data-page/fima-nfip-redacted-claims-v2
[4] Open FEMA, Public Assistance Datasets: https://www.fema.gov/about/openfema/data-sets#public

The FEMA PA Program can provide immediate assistance to impacted jurisdictions for emergency protective measures, permanent repairs to infrastructure, and community facilities. The Federal cost share for public assistance, typically, is not less than seventy-five percent (75%) of the eligible project cost, requiring the applicant to contribute the remaining twenty-five percent (25%) in cost share.[5] However, for Hurricane Sally under 4563-DR-AL Amendment 007 and for Hurricane Zeta under 4573-DR-AL Amendment 004, the Federal share was amended to ninety percent (90%) and ten percent (10%) state/local contribution.

The unmet needs analysis conducted for each county includes the Estimated PA Cost and additional costs for resiliency measures (15%) and increased cost of construction (23.6%) to estimate the Federal Share (90%) and the local share (10%) for PA Categories C through G. CDBG-DR Funds are not used for PA costs in Categories A, B and Z and are not considered in the calculation for unmet needs, but are still highlighted in the local share calculation.[6] The total unmet infrastructure need was summarized at the Zip Code level for each county to assist in the calculation of identifying the Mid Recovery zones.

D. Economic Unmet Needs Assessment

The economic unmet needs assessment was conducted using the Small Business Administration business loan data for applications with approved or denied loans. An additional fifteen percent (15%) in resilience costs was factored into the total estimated loss. The total amount paid out for real estate losses was subtracted from the total estimated loss to determine the remaining economic unmet needs in each county. The total unmet economic need was summarized at the Zip Code level for each county to assist in the calculation of identifying the Mid Recovery zones.

VI. MID Recovery Zones Identification Methodology

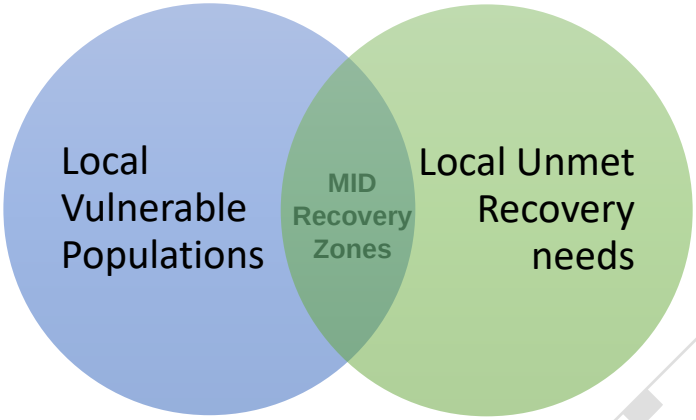
The MID Recovery Zones were identified at the census tract level based on two categories; areas with vulnerable populations and zip codes with the most unmet need and where these areas overlap with census tracts. A ranked approach was taken to rate the census tracts in each county based on a score from 0 to 20, with a total possible score of 10 for each category. Census tracts with scores between 15 and 20 are considered a MID Recovery Zone. See details of how the ranking was calculated:

1. **Unmet Needs Amount** – The higher the unmet needs dollar value for a zip code and the greater the percentage the census tract overlaps the Zip Code, the higher the score the census tract will receive.
    - **Vulnerability Score –** Disadvantaged areas which consists of Racially or Ethnically Concentrated Areas of Poverty (R/ECAP) and/or Opportunity Zones for the seven counties in Alabama, and the CDC Social Vulnerability Index (SVI) were used to provide a vulnerability score for each census tract. Where disadvantaged areas are located, the census tract received the highest possible score of 10 points. In census tracts without disadvantaged areas, the SVI vulnerability category was used to provide the vulnerability score. The scoring for the 5 SVI categories is as follows: Very Low = 2; Relatively Low = 4; Relatively Moderate = 6; Relatively High = 8; and Very High = 10. The CDC/ATSDR

[5] 44 C.F.R. § 206.47(b): eCFR :: 44 CFR 206.47 -- Cost-share adjustments.
[6] Public Assistance Program and Policy Guide Version 4 (fema.gov)

Social Vulnerability Index 2022 State Database was used in this plan and was accessed April 2024[7].

Figure 1: MID Recovery Zone Overview



VII. Mitigation Assessment

A. Introduction

In accordance with HUD and LRPP guidance, the following Mitigation Needs Assessment was completed. This assessment informs and provides a substantive basis for programs proposed in this Local Recovery Plan, with a focus on addressing and analyzing all significant current and future hazard risks.

This mitigation needs assessment analyzes regional wide risks with specific sections detailing hazards in the most impacted areas.

B. Methodology

For this plan, the 2023 State Hazard Mitigation Plan, county or regional hazard mitigation plans, and data from the FEMA National Risk Index, along with Stakeholder input was reviewed to develop a multi-hazard risk-based mitigation needs assessment. This mitigation assessment section provides an overview of the hazards, risks and community lifelines for the 7-county area. County specific details for their most relevant hazards are provided in each of the county section plans.

C. Hazard Identification and Risk

This section addresses quantitative and qualitative descriptions of the top regional hazards.

Dam Failure

Dam failure is the uncontrolled release of water and any associated waste from a dam. This hazard often results from a combination of natural and human causes and may follow other

[7] CDC/ATSDR SVI: https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html

hazards, such as hurricanes and earthquakes. Common causes of dam failure include the flooding caused by prolonged rainfall and overtopping caused by poor design or debris blockage.

According to the National Inventory of Dams[8] Alabama has 2,266 total dams with an average age of 57 years. Dams within the database have a hazard potential rating of High, Significant, Low and Undetermined and are defined as:

- **High Hazard Potential:** if there was a dam failure to occur the downstream flooding would likely result in loss of human life and there would be widespread damage to homes, industrial and commercial buildings, important utilities, highways, or railroads.
- **Significant Hazard Potential:** if a dam were to fail the downstream flooding would likely result in disruption of access to critical facilities, damage to public and private facilities, and require difficult mitigation efforts.
- **Low Hazard Potential**: if a dam were to fail the downstream flooding would likely result in slight damage to farm buildings, forest or agricultural land, or minor roads
- **Undetermined:** the risk hazard has not been determined by the National Inventory of Dams.

In the event of dam failure, all community lifelines are at risk as dam failure can result in catastrophic loss of life and property. Flooded roads can make transportation impossible, making it difficult for emergency services to reach affected communities. The infrastructure may also be damaged or washed away. Crops and livestock may be destroyed, and power outages can lead to a loss of energy-dependent structures and services. Additionally, clean drinking water may be scarce or unattainable.

Until June 7, 2023, Alabama did not have a dam safety program[9] which historically led to Alabama being disqualified from accessing federal infrastructure funds for dam-related inspections, training, and rehabilitation. Because of this, dams across the state including the 7 counties mentioned in this plan may not have received adequate funding to prevent and mitigate potential dam failures.

Drought

A drought is a water shortage originating from a deficiency in expected precipitation caused by unusual weather patterns that can have negative impacts on agriculture, animals, and/or people. A drought may be short-term (several weeks to month) or long-term which can span over years.

When a drought occurs in Alabama, the social, economic, and environmental impacts have the potential to be severe and widespread. The following are examples of the potential effects of drought in the State of Alabama, including effects the state has experienced in past drought events:

- Damage to livestock and crops.
- Increased local vulnerabilities to sinkholes and wildfire.
- Water usage conflicts.
- Accelerated coastal erosion.

[8] National Inventory of Dams, https://nid.sec.usace.army.mil/#/
[9] https://www.alabama-asce.org/alabama-establishes-first-state-dam-safety-program/

- Damaged fisheries.
- High energy demand and inflated energy prices due to the loss of hydropower.

Figure 2 provides an overview of the drought risk for the 7 MID counties.

In the event of a drought, the main lifeline impacted is food, water, and shelter. Crops and animals require water to thrive and grow, without which they stress and ultimately die.

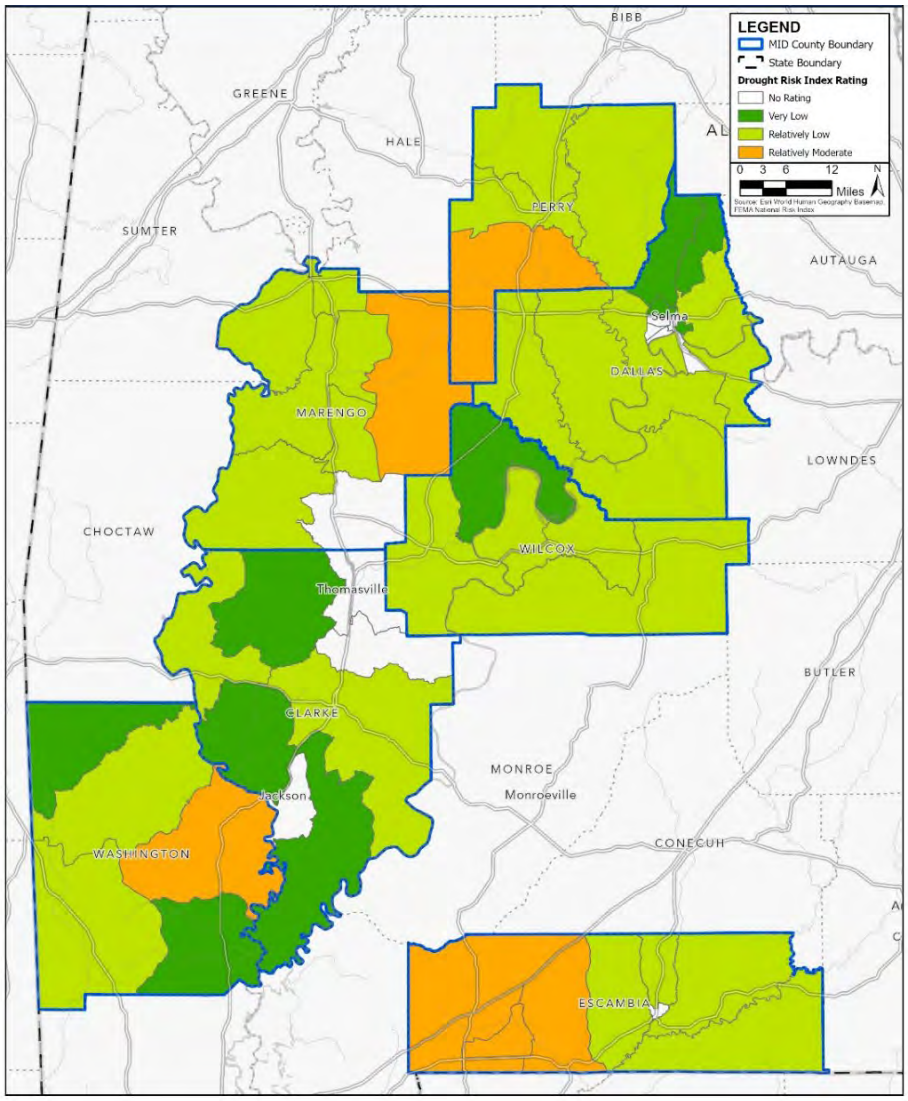


Figure 2 Drought Risk in MID Counties by Census Tract

Extreme Temperatures

Extreme Cold

Many homes and buildings, especially in rural areas, lack proper insulation or heating leading to the risk of broken water pipes, and hypothermia especially for vulnerable populations. Additionally, extreme cold temperatures may be accompanied by ice or snow and municipalities generally do not have the resources on hand, such as salt, sand, and snow removal equipment,

to deal with winter weather. While the probability of occurrence is low, this hazard is considered a risk to the region as the infrastructure is not in place to handle extremely cold temperatures.

Extreme Heat

Extreme heat is a period of excessively hot weather with higher-than-average temperatures combined with high humidity. Temperatures above 100 °F are generally considered dangerous and can lead to heat stroke, heat exhaustion, heat syncope and heat cramps. Severe heat can also place significant stress on plants and livestock. Figure 3 provides an overview of the heat wave risk across the region, varying from relatively low to very high.

Extreme cold and extreme heat pose a risk to all individuals and lifelines. During these extreme weather conditions, vulnerable populations are the most at risk. Heat stroke and related conditions can result in death during extreme heat, while during extreme cold hypothermia, frostbite, carbon monoxide poisoning caused from unsafe heating practices are the greatest threats to people. Power outages are more likely to occur during either of these weather events due to the strain that is put on the physical and electrical system, which can result in communication outages, stress on emergency services and make food supplies unavailable.

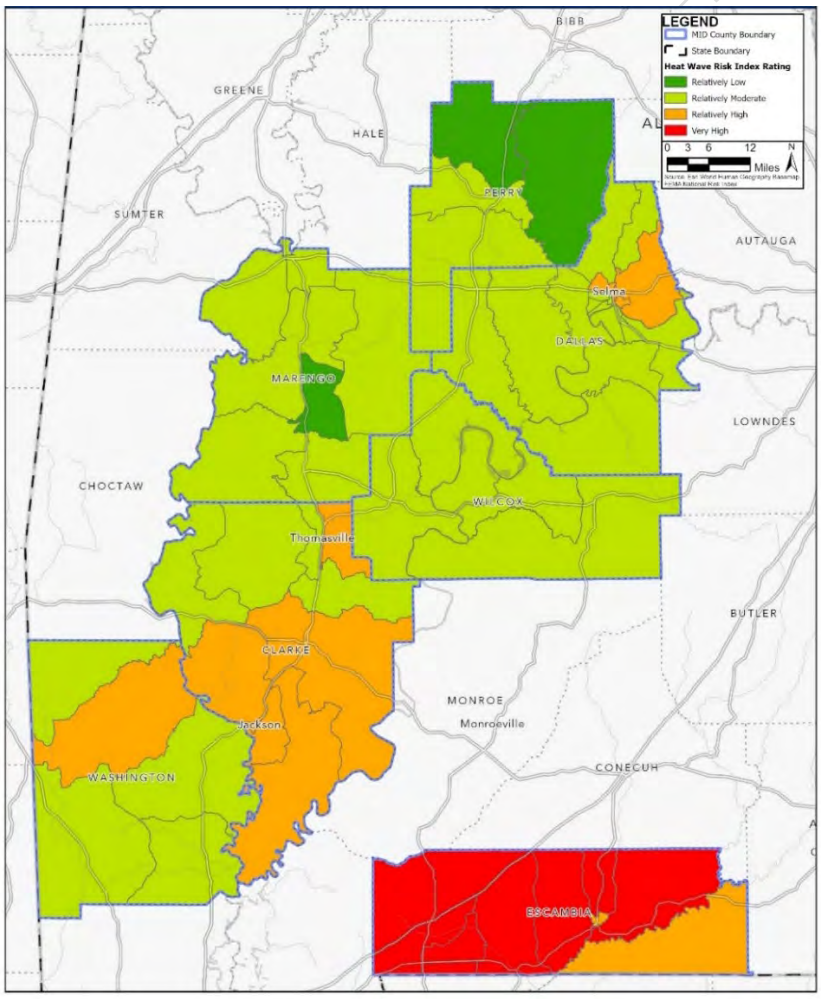


Figure 3 Heat Wave Risk in MID Counties by Census Tract

Hurricanes and Coastal Storms

Hurricanes are spinning, low-pressure storms that draw surface low-latitude air into their centers and attain strength, ranging from weak tropical waves to the most intense hurricanes. NOAA defines a hurricane as a tropical cyclone with maximum sustained winds of 74 mph or higher.

Hurricanes produce dangerous conditions due to flooding and high winds. Rainfall can cause ravine flooding and flash floods, creating dangerous conditions for residents and first responders. High wind speeds are typical with tropical cyclones, even resulting in tornadoes, which can damage homes and critical infrastructure.

Hurricanes are complicated events that involve multiple hazards, including storm surges, flooding, high winds, and tornadoes. As hurricanes move inland and weaken, wind-related damages may therefore be assigned to other hazard categories (such as tropical storms or strong/high winds). Figure 4 provides an overview of the hurricane risk across the region, with areas ranging from relatively low to very high risk with the greatest risk occurring in the counties closest to the Gulf of Mexico.

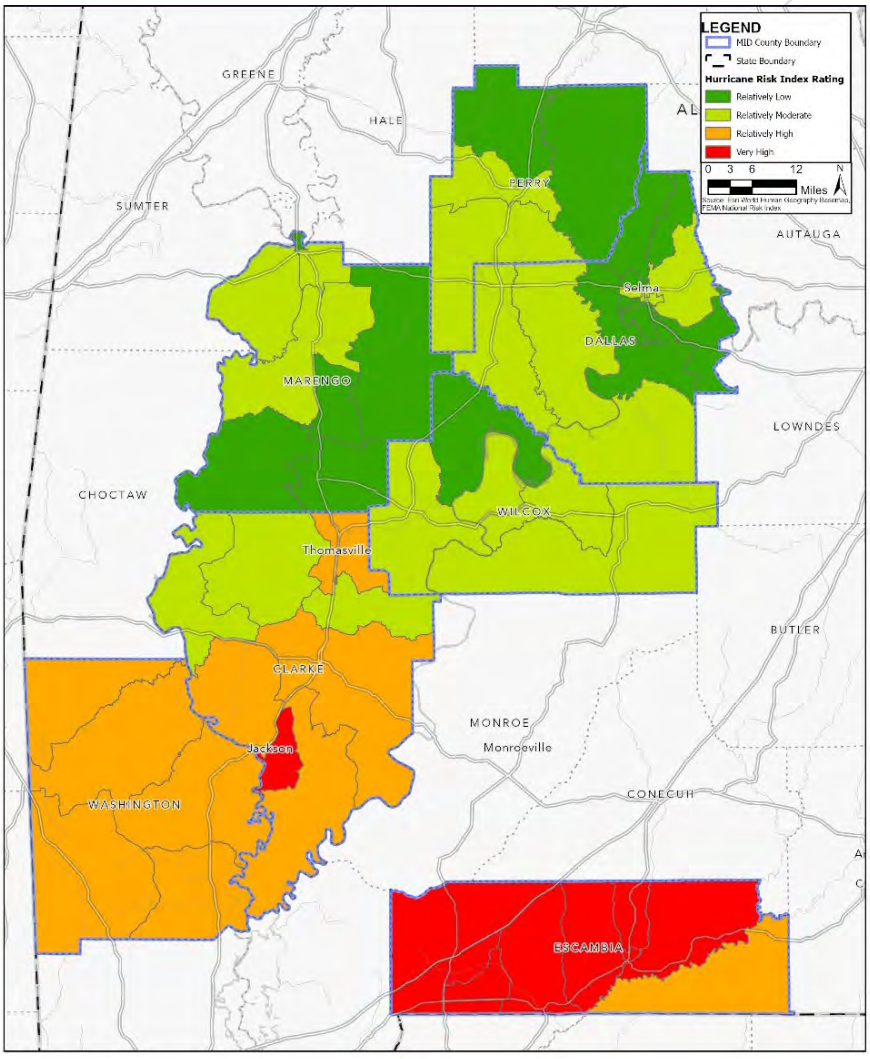


Figure 4 Hurricane Risk in MID Counties by Census Tract

In the event of a hurricane, all community lifelines are at risk. Downed trees due to high winds, and flooded roads due to significant rainfall can render transportation impossible, making it difficult for emergency services to reach affected communities. The infrastructure may also be damaged or washed away. Crops and livestock may be destroyed, and power outages can lead to a loss of energy-dependent structures and services for weeks. Additionally, clean drinking water may be scarce or unattainable.

Flooding

Coastal Flooding

Coastal flooding is when low-lying coastal areas flood due to the vertical rise above normal water level caused by strong, persistent onshore wind, high astronomical tide, and/or low atmospheric pressure, resulting in flooding that causes damage and erosion. Coastal flooding is common during tropical storms and hurricanes. There are many factors that determine the extent of the risk of coastal flooding during any given event, but in general coastal flooding and storm surge is most damaging when it occurs along a shallowly sloped shoreline, during high tide, in developed areas with limited natural buffers and in the right front quadrant of a tropical storm or hurricane. Figure 5 provides an overview of the coastal flood risk in the region, which is very low to no risk due to the proximity of these 7 counties to the Gulf Coast. Where the Alabama and Tombigbee Rivers meet at the southern tips of Clarke and Washington Counties, there is a very low risk for coastal flooding.

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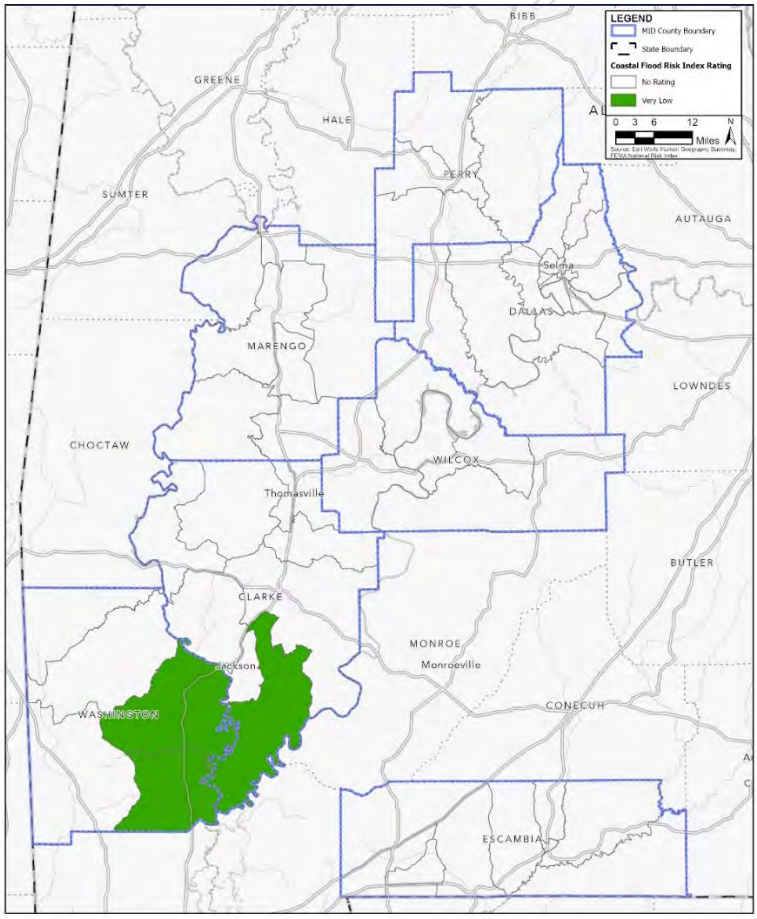


Figure 5 Coastal Flood Risk in MID Counties by Census Tract

Riverine Flooding

Riverine flooding, or flash flooding, occurs when areas near streams and low-lying areas flood due to the rapid rise of water due to intense rainfall, dam failure or blockages from debris. Flash flooding usually starts as a shorter-term localized flooding event; however, it may transition into an ongoing widespread flooding event. Injuries and deaths can occur when people are swept away by flood currents or when bacteria and disease are spread by floodwaters. Extensive property and roadway damage can occur due to the force or volume of floodwater. The debris carried by the moving water can also cause damage by running into walls of buildings, foundations, roads and bridges. Standing water from floods can damage plywood, gypsum wallboard, and household goods. Floodwater usually transports sediments, debris, contaminants such as oil, farm and lawn chemicals, and untreated sewage. When floodwaters recede, these contaminants remain in flooded buildings and on their contents. It is important to note that even when flooding does not cause property damage or loss of life, it can cause economic disruption. Figure 6 provides and overview of the riverine flood risk in the region, which is very low to relatively high.

In the event of a flooding event, all community lifelines are at risk. Flooded roads can make transportation impossible, making it difficult for emergency services to reach affected communities. The infrastructure may also be damaged or washed away. Crops and livestock may be destroyed, and power outages can lead to a loss of energy-dependent structures and services for weeks. Additionally, clean drinking water may be scarce or unattainable.

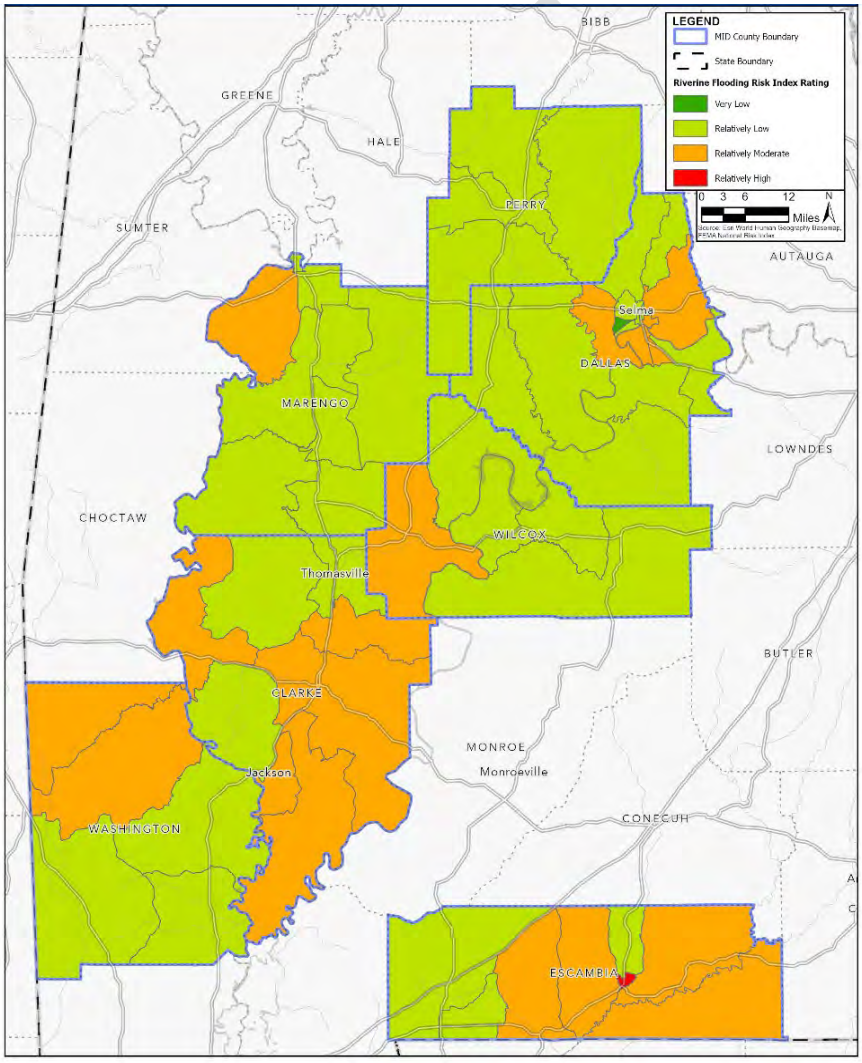


Figure 6 Riverine Flooding Risk in MID Counties by Census Tract

Severe Storms

A severe storm is a broad event category that may include lightning, hail, strong winds, intense rainfall and flooding. All these hazards can have an impact on the economy, agriculture, infrastructure, and housing.

Hail

Hail is a form of frozen precipitation that can occur during severe storms. While thunderstorms that produce hail are more common in the Great Plains, where the temperature contrasts associated with the jet stream are greatest, there is still a relatively high risk for hail in parts of Alabama as shown in Figure 7.

Hail can pose a serious threat to various aspects of life. It has the potential to cause extensive damage to transportation methods, including airplanes and vehicles. Hailstorms can cause visibility issues which increases the risk of accidents. Furthermore, roofs and windshields may be damaged. Hail can also negatively affect crops and roaming livestock in agricultural areas.

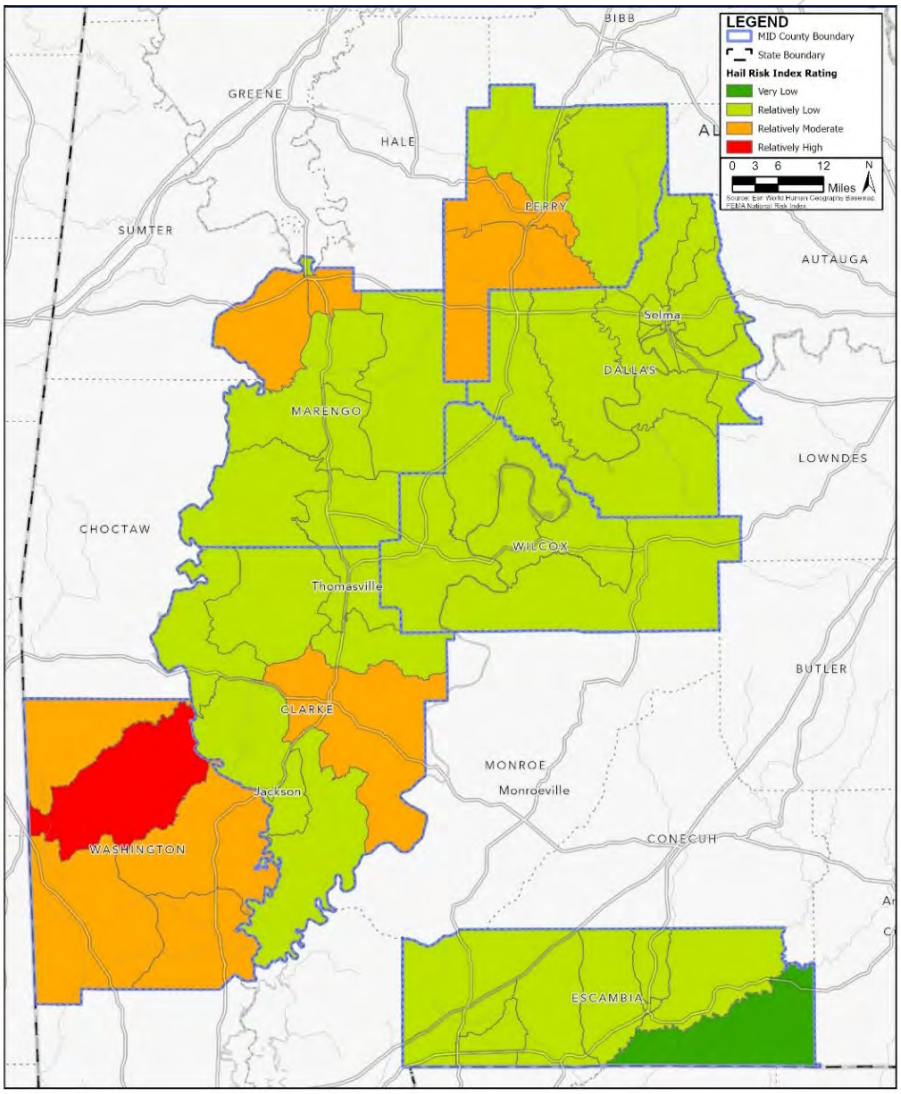


Figure 7 Hail Risk in MID Counties by Census Tract

Strong Winds

Strong winds consist of damaging winds that exceed 58 mph and are typically associated with thunderstorms, and tropical storms/hurricanes. Strong winds can result in flying debris, downed trees which may result in blocked roads, damaged homes and loss of power. Several parts of the region, including all of Washington County, have a relatively high risk for strong winds as shown in Figure 8.

All lifelines may be impacted by strong winds due to the high risk of damage in affected areas. High winds are generally contained in small areas; however, high winds can affect larger areas where tornadoes and hurricanes may develop. Safety and security may be affected, causing delays in areas due to downed trees and power lines. With power outages, those relying on home use of medical equipment may be at risk.

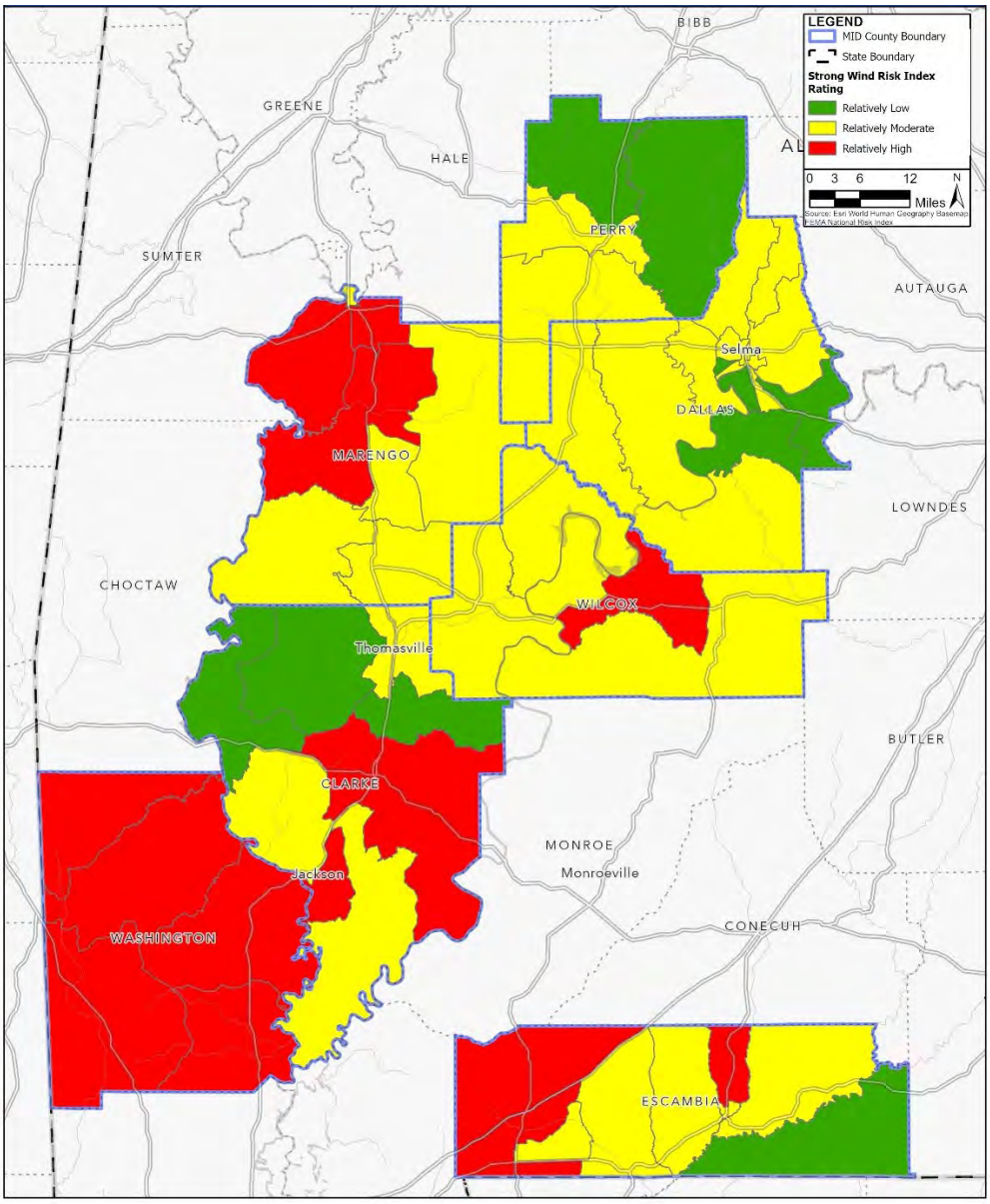


Figure 8 Strong Winds Risk in MID Counties by Census Tract

Tornadoes

Tornadoes are narrow, violently rotating columns of air that extend from the base of thunderstorms to the ground. A tornado is not always apparent and is only visible if it forms a condensation funnel made up of water droplets, dust, and debris. Tornadoes can result in property, crops, economic damage and the loss of life and injury. The damage is the result of the high wind velocities and wind-blown debris. Tornadoes can be difficult to predict; however, past occurrences and basic weather patterns can help to identify areas that are susceptible to the formation of tornadoes. Several parts of the region, especially in the more southern counties, have a relatively high risk of tornadoes as shown in Figure 9.

All lifelines may be impacted by tornadoes due to the high risk of damage in affected areas. Tornadoes can create localized or widespread damage. Safety and security may be affected, causing delays in areas due to downed trees and power lines. With power outages, those relying on home use of medical equipment may be at risk.

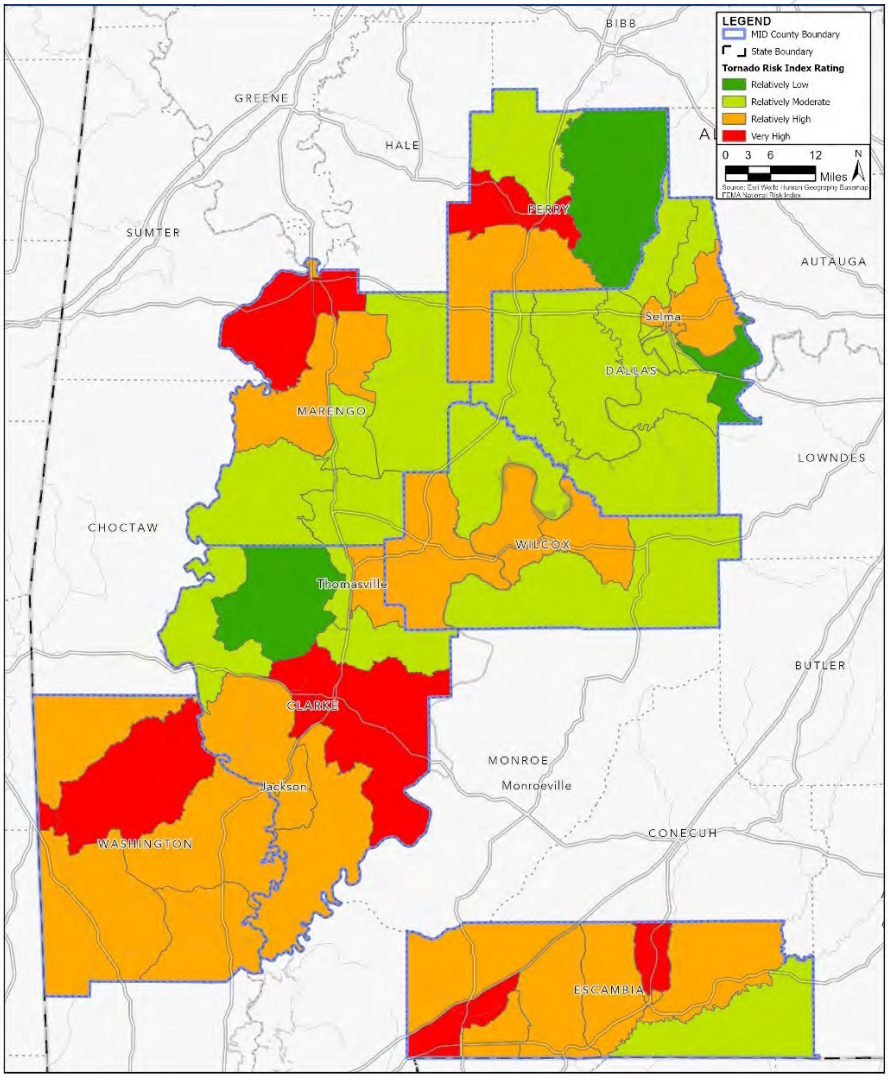


Figure 9 Tornado Risk in MID Counties by Census Tract

Wildfire

A wildfire is an unplanned and uncontrolled burning as it spreads through vegetation, and in some cases, structures. There are two types of wildfires: (1) wild land fires and (2) urban-wild land interface fires. Wild land fires occur in areas where there is no development, except for utilities and infrastructure; Urban-wild land interface fires occur in developed areas near or within the vegetative cover. Wildfire events occur most often in the summer and under drought conditions. Wildfires can start as slow burning fires along the forest floor, killing and damaging trees and usually spread more quickly as they reach the tops of trees. Wildfires can vary greatly in terms of size, location, intensity, and duration. The greatest threat to people and property exists with urban-wild land interface fires. The risk for wildfires is greatest (relatively moderate) in the southernmost counties, as shown in Figure 10.

All lifelines are threatened by wildfires as they can cause significant disruptions to transportation, communication, power, gas services, and water supply. In addition, they can harm air quality and result in the loss of property, crops, resources, animals, and human lives.

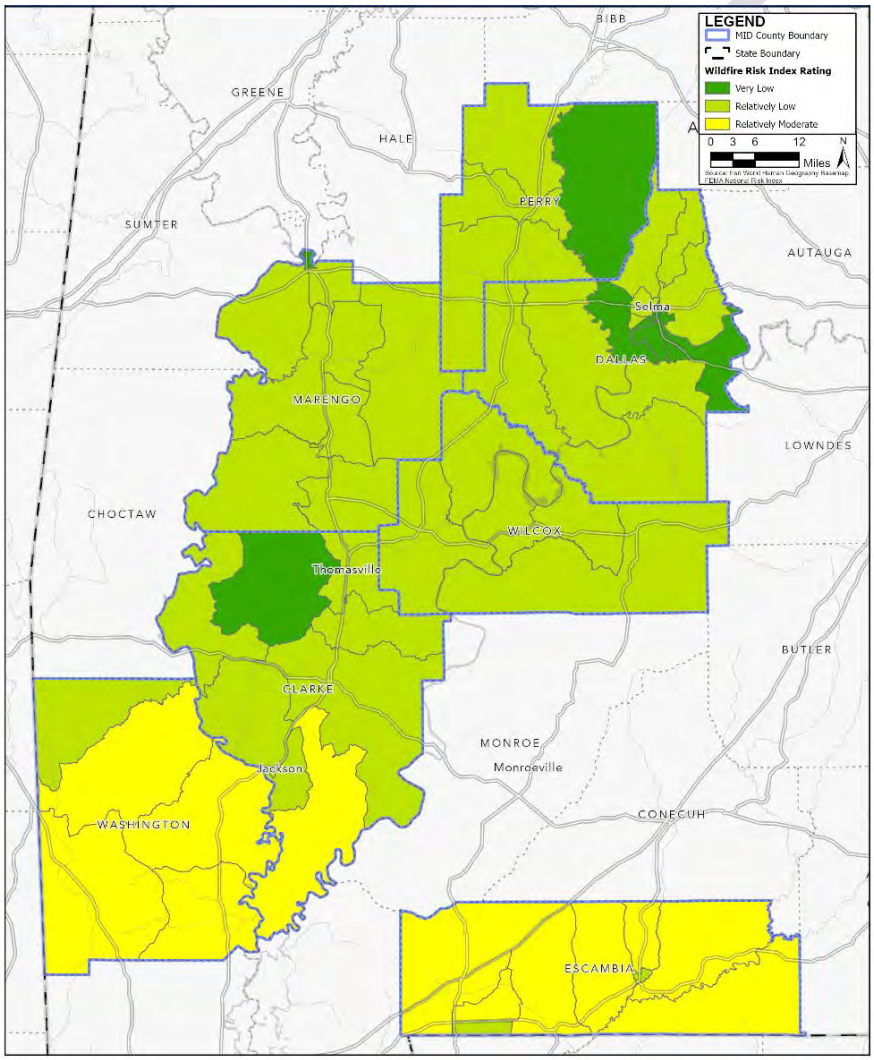


Figure 10 Wildfire Risk in MID Counties by Census Tract

D. Community Lifelines

Critical service areas or community lifelines refer to indispensable services that enable continuous operation of critical business and government functions after a disaster event and are essential to human health, safety and economic security. To best address unmet mitigation needs impacting emergency response and critical service areas, this plan provides a quantitative analysis of significant potential impacts and risks of hazards as highlighted in the previous section, and overview of the seven critical service areas listed across the 7 MID Counties. The below definitions and data are from FEMA's Critical Lifelines Toolkit[10] and FEMA's National Response Framework[11]. These critical service areas are interdependent and an impact in one service area is likely to result in cascading impacts across others.

4. Safety and Security

The Safety and Security community lifeline consists of law enforcement and government services, including the associated assets that maintain communal security, provide search and rescue, evacuations, and firefighting capabilities, and promote responder safety.

Data Sources for the Safety and Security asset map (Figure 11)

Variable	Critical Asset	Source
Law Enforcement	Yes	https://www.arcgis.com/home/item.html?id=0d79b978d71b4654bddb6ca0f4b7f830
Fire/EMS	Yes	https://services1.arcgis.com/CD5mKowwN6nIaqd8/arcgis/rest/services/HVRA_Source_Data_Fire_Stations/FeatureServer
Local EOCs	Yes	https://www.arcgis.com/home/item.html?id=874798faedc74358bac9bbe1867af3c7
Prisons		https://www.arcgis.com/home/item.html?id=2d6109d4127d458eaf0958e4c5296b67
Gov't Services – Courthouses		https://services2.arcgis.com/FiaPA4ga0iQKduv3/arcgis/rest/services/Structures_Landmarks_v1/FeatureServer
Community Safety Centers/Fairground		https://www.arcgis.com/home/item.html?id=86c323b5d44748228ef10bc8b452d9f7
Public Schools		https://www.arcgis.com/home/item.html?id=87376bdb0cb3490cbda39935626f6604
Private Schools		https://www.arcgis.com/home/item.html?id=0dfe37d2a68545a699b999804354dacf
Colleges & Universities		https://www.arcgis.com/home/item.html?id=0d7bedf9d582472e9ff7a6874589b545
Mobile Home Parks		https://www.arcgis.com/home/item.html?id=4cdbccc5c538452aa91ceee277c460f9
Places of Worship		https://www.arcgis.com/home/item.html?id=97603afcff00443f874acbe03c9e794a
Nursing Homes		https://www.arcgis.com/home/item.html?id=78c58035fb3942ba82af991bb4476f13

[10] FEMA Community Lifelines: https://www.fema.gov/emergency-managers/practitioners/lifelines
[11] FEMA National Response Framework: https://www.fema.gov/emergency-managers/national-preparedness/frameworks/response

5. Food, Water, Shelter

The Food, Water and Shelter lifeline support systems that enable the sustainment of life, such as water treatment; transmission and distribution systems; food retail and distribution networks; wastewater collection and treatment systems; sheltering; and agriculture.

Data Sources for the Food, Water and Shelter asset map (Figure 12):

Variable	Critical Asset	Source
Food Stores		https://www.arcgis.com/home/item.html?id=6c8c635b1ea94001a52bf28179d1e32b
Food Pantries		https://www.arcgis.com/home/item.html?id=16880d896b7f4f61a7dbb648b38f56fa
Shelters		https://www.arcgis.com/home/item.html?id=bcaf5fdb3db24c78afee52d4c8a02748
Wastewater Treatment Plants	Yes	https://data-algeohub.opendata.arcgis.com/maps/ALGeoHub::alabama-environmental-protection-agency-eps-facility-registry-service-frs-wastewater-treatment-plants/about

6. Health and Medical

The Health and Medical lifeline consist of infrastructure and service providers for medical care, public health, patient movement, fatality management, behavioral health, veterinary support, and health or medical supply chains.

Data Sources for the Health and Medical asset map (Figure 13):

Variable	Critical Asset	Source
Medical Care	Yes	https://www.arcgis.com/home/item.html?id=2c36dbb008844081b017da6fd3d0d28b

7. Energy

The Energy lifeline provides electric power infrastructure, composed of generation, transmission, and distribution systems, as well as gas and liquid fuel processing, transportation, and delivery systems. Disruptions can have a limiting effect on the functionality of other community lifelines.

Data Sources for the Energy asset map (Figure 14):

Variable	Critical Asset	Source
Power Plants	Yes	https://hifld-geoplatform.hub.arcgis.com/search?q=power
Gas Stations		https://www.arcgis.com/home/item.html?id=6c8c635b1ea94001a52bf28179d1e32b

8. Communications

The Communications lifeline consists of infrastructure owners and operators of broadband internet, cellular networks, landline telephony, cable services (to include undersea cable), satellite communications services, and broadcast networks (radio and television). Communication systems encompass a large set of diverse modes of delivery and technologies, often intertwined but largely operating independently. Services include elements such as alerts, warnings, and messages, including 911 and dispatch, and includes accessibility of financial services.

Data Sources for the Communications asset map (Figure 15):

Variable	Critical Asset	Source
Cell Towers		https://www.arcgis.com/home/item.html?id=15dabb4108254481b591018be2598f3c
FM Transmission Towers		https://www.arcgis.com/home/item.html?id=c3b038f2aedc4fa3a8d2fbeb4a04adec
Land Mobile Transmission Towers (private)		https://www.arcgis.com/home/item.html?id=4797be545f7449b4ab7b52b9e5b52ffc
Land Mobile Transmission Towers (commercial)		https://www.arcgis.com/home/item.html?id=4ec3d6fe24124d7597da4c88dfeae678
Broadband Radio Service and Educational Broadband Service Transmitters		https://www.arcgis.com/home/item.html?id=9123f543fd9f44e8ab20924ac8c979bf
Microwave Service Towers		https://www.arcgis.com/home/item.html?id=06ed62e7c6b74b4781a15c4ea30b2999
Banks and Finance		https://www.arcgis.com/home/item.html?id=6c8c635b1ea94001a52bf28179d1e32b

9. Transportation

The Transportation lifeline consists of multiple modes of transportation that often serve complementary functions and create redundancy, adding to the inherent resilience in overall transportation networks. Transportation infrastructure generally includes highway/roadways, mass transit, railway, aviation, maritime, pipeline, and intermodal systems.

Data Sources for the Transportation asset map (Figure 16):

Variable	Critical Asset	Source
Roadways		https://www.arcgis.com/home/item.html?id=ef89ed40fe6d46b19301391bfb99ceca
Railway		https://www.arcgis.com/home/item.html?id=d209f26edc86485a9c631311e50d9940
Port Facilities		https://data-algeohub.opendata.arcgis.com/maps/ALGeoHub::alabama-port-facilities/about
Aviation	Yes	https://www.arcgis.com/home/item.html?id=e747ab91a11045e8b3f8a3efd093d3b5

10. Hazardous Material

The Hazardous Material systems mitigate threats to the environment and public health/welfare. This includes assessment of facilities that use, generate, and store hazardous substances, including specialized conveyance assets and efforts to identify, contain, and remove incident debris, pollution, contaminants, oil or other hazardous substances.

Data Sources for the Hazardous Material Asset Map (

Figure 17):

Variable	Critical Asset	Source
Toxic Release Inventory Sites		https://ucfonline.maps.arcgis.com/home/item.html?id=76e9a521bc4245388c0d734be62bfb51
Superfund Sites		https://www.arcgis.com/home/item.html?id=c2b7cdff579c41bbba4898400aa38815
Solid Waste	Yes	https://www.arcgis.com/home/item.html?id=155761d340764921ab7fb2e88257bd97

Figure 11 Safety and Security Lifelines Map

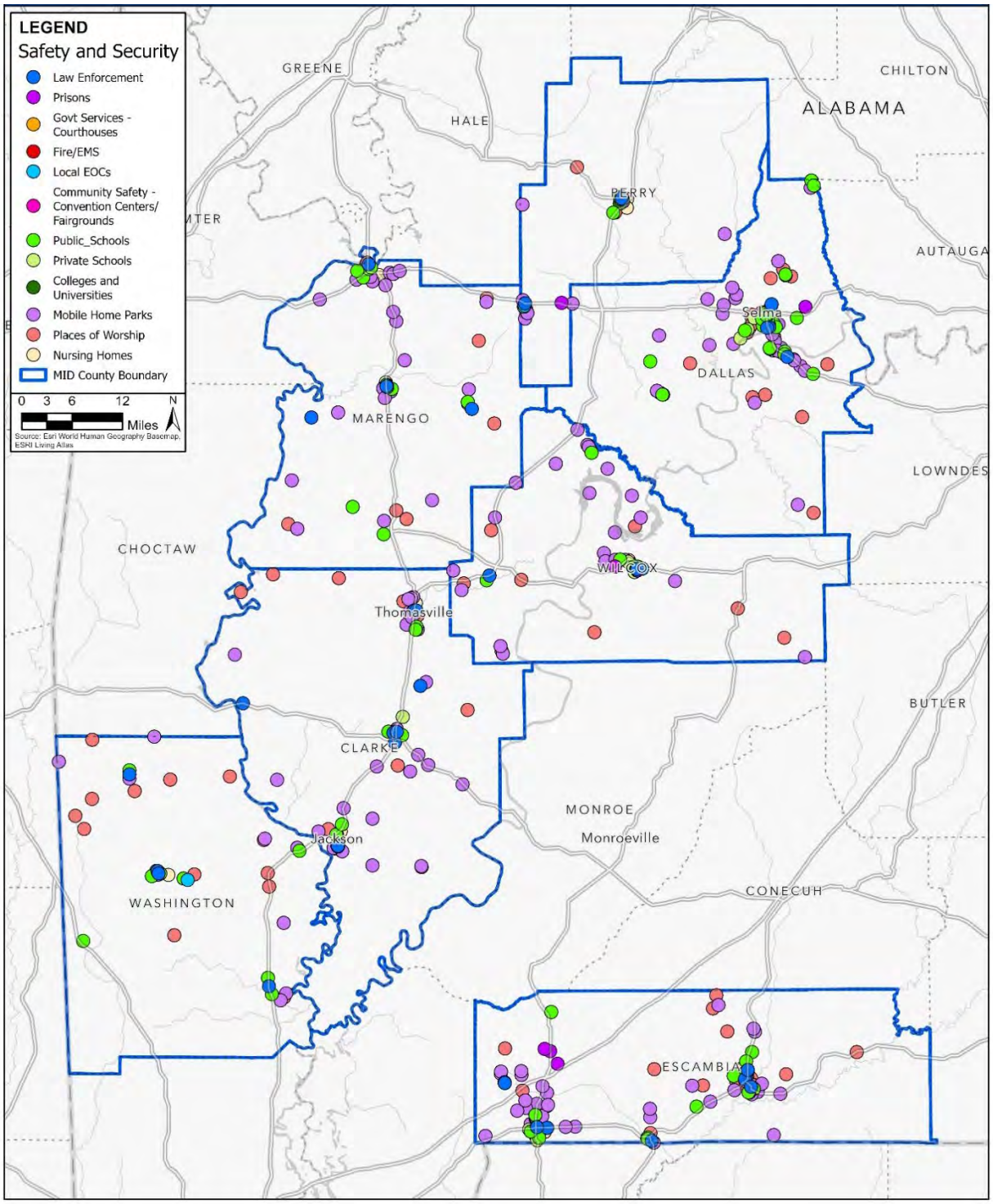

LEGEND
Safety and Security
Law Enforcement
Prisons
Govt Services - Courthouses
Fire/EMS
Local EOCs
Community Safety - Convention Centers/ Fairgrounds
Public_Schools
Private Schools
Colleges and Universities
Mobile Home Parks
Places of Worship
Nursing Homes
MID County Boundary
0 3 6 12 N
Miles
Source: Esri World Human Geography Basemap, ESRI Living Atlas
GREENE
HALE
PERRY
CHILTON
ALABAMA
AUTAUGA
Selma
DALLAS
MARENGO
LOWNDES
CHOCTAW
WILCOX
Thomasville
BUTLER
CLARKE
MONROE
Monroeville
Jackson
WASHINGTON
CONECUH
ESCAMBIA

Figure 12 Food, Water, and Shelter Lifelines Map

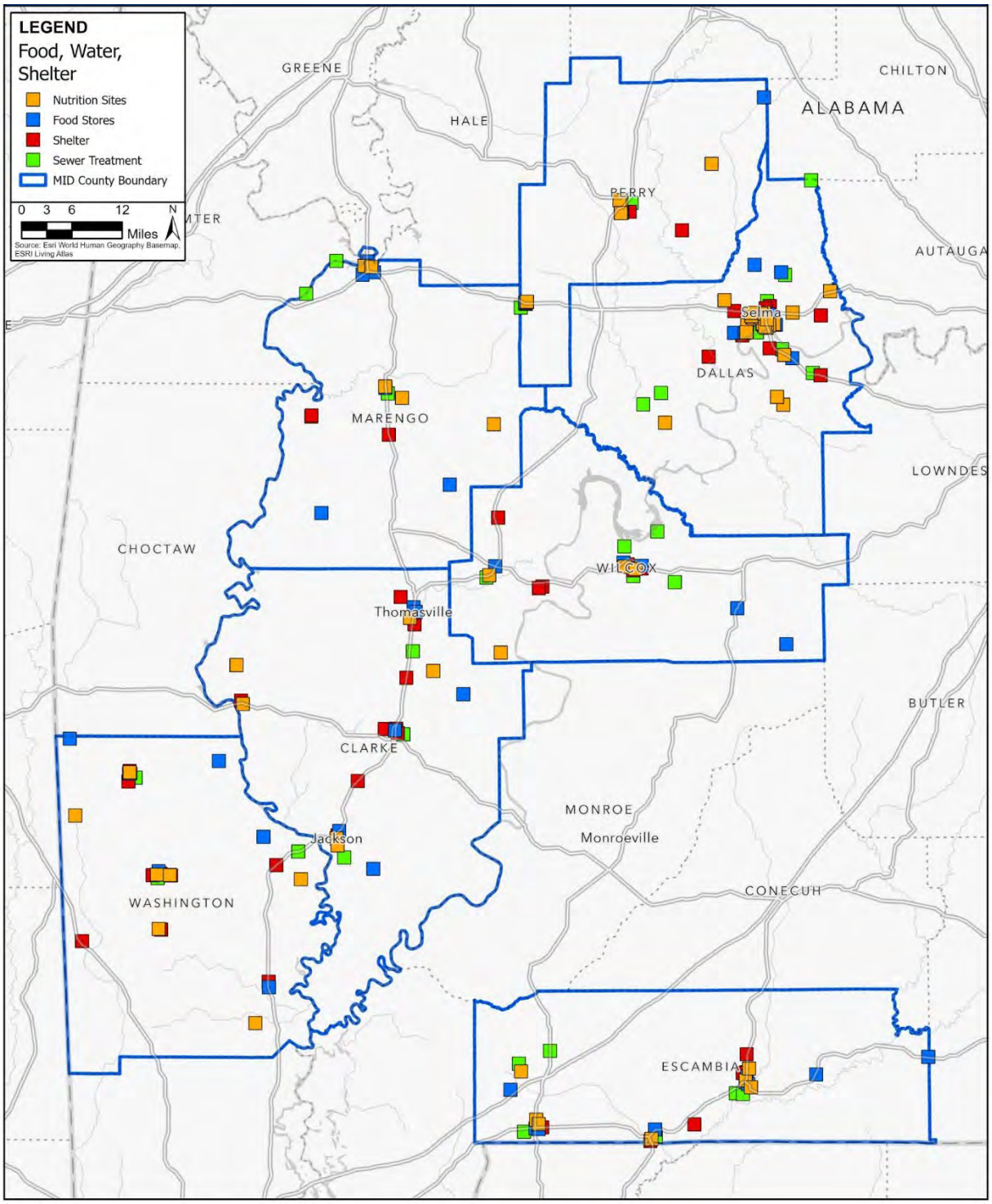


Figure 13 Health and Medical Community Lifelines Map

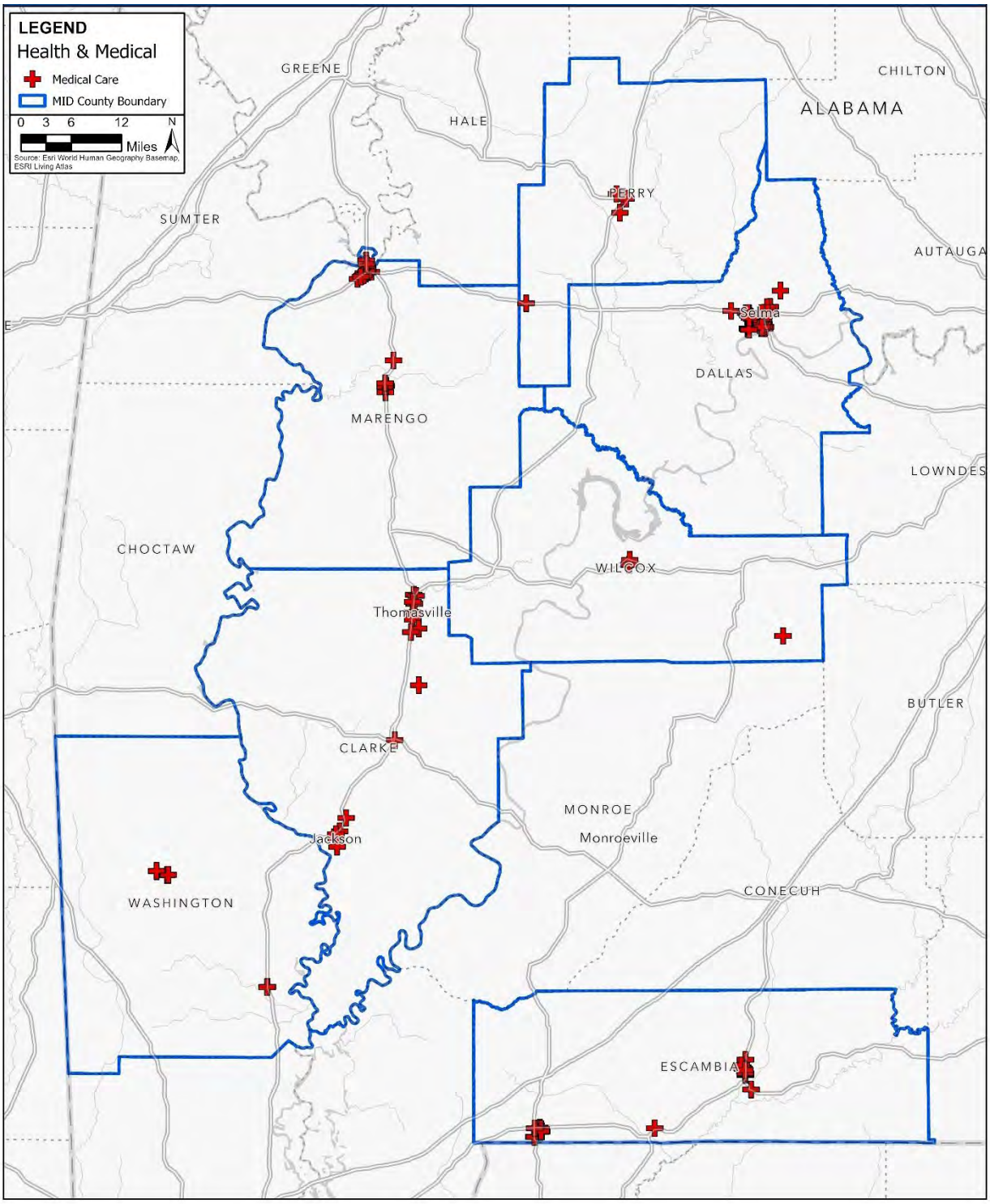


Figure 14 Energy Lifelines Map

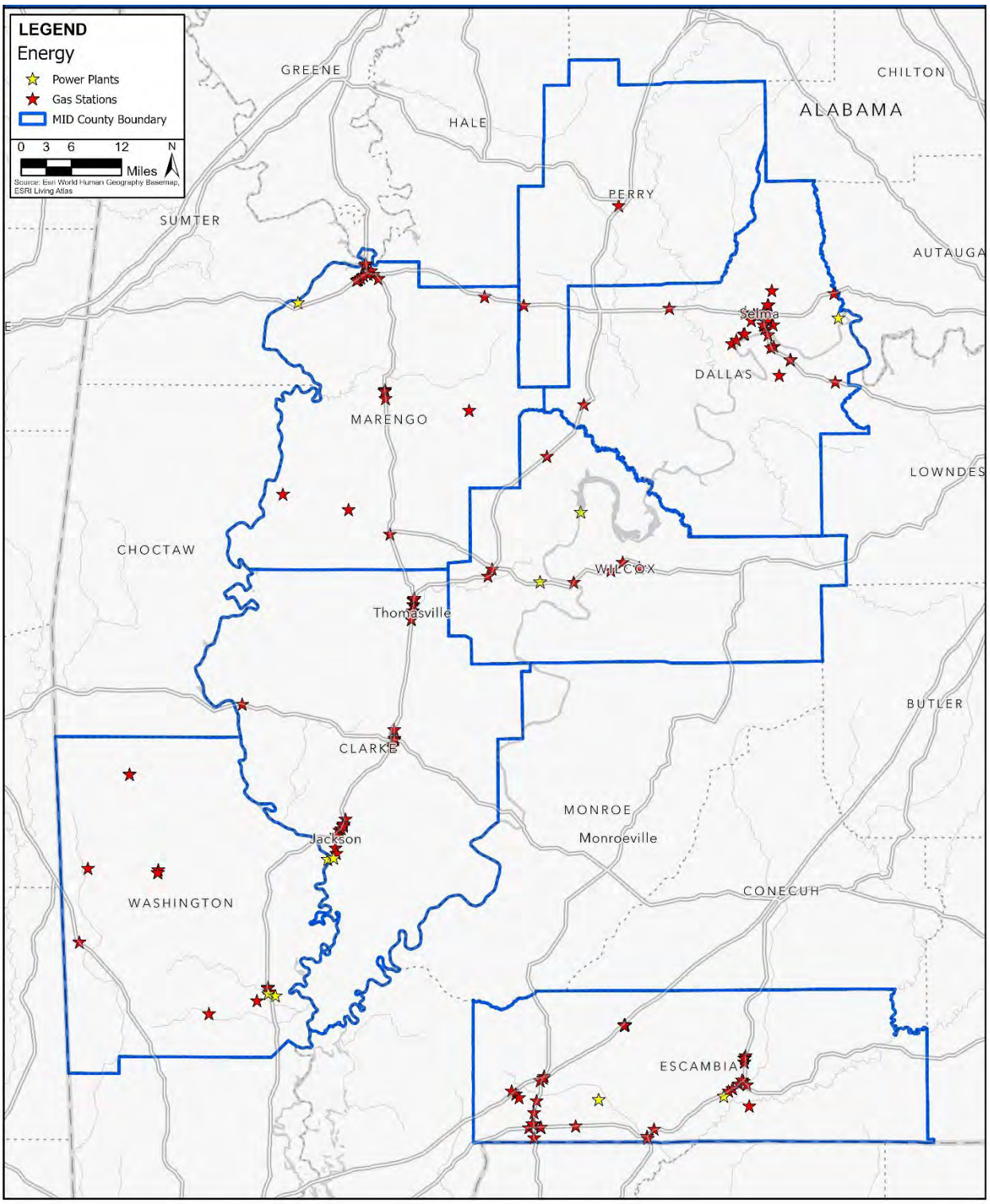


Figure 15 Communications Community Lifeline Map

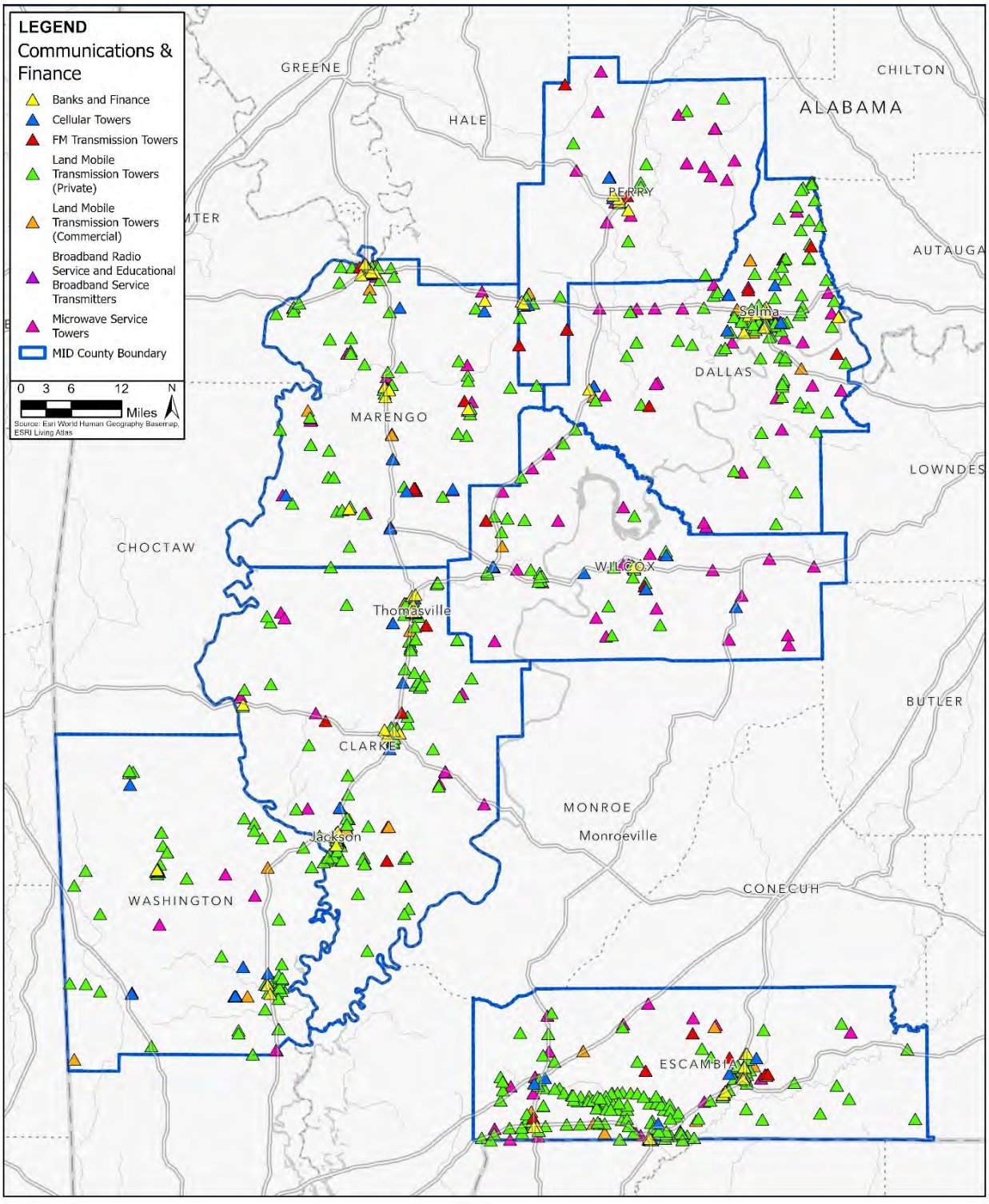


Figure 16 Transportation Lifelines Map

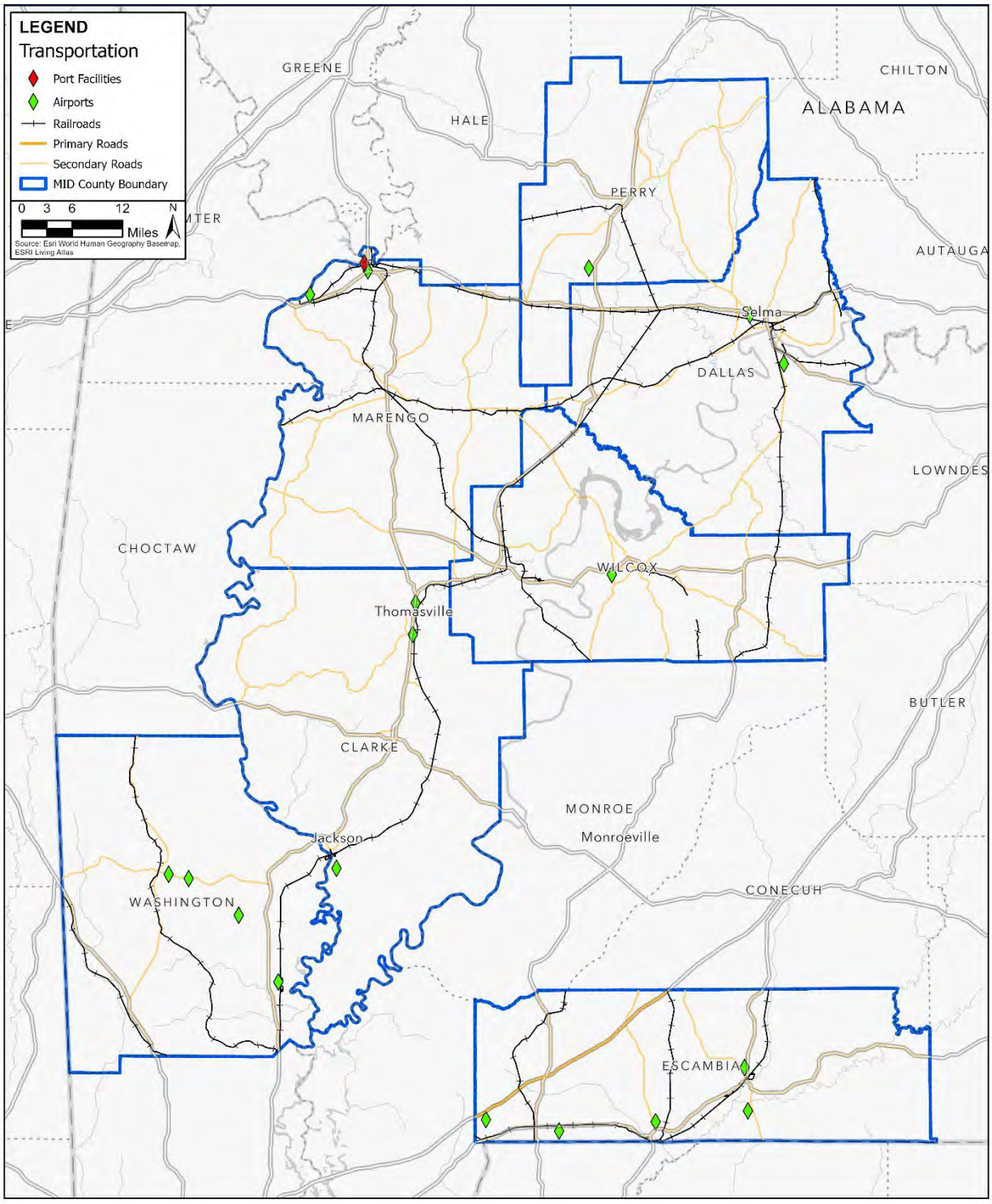
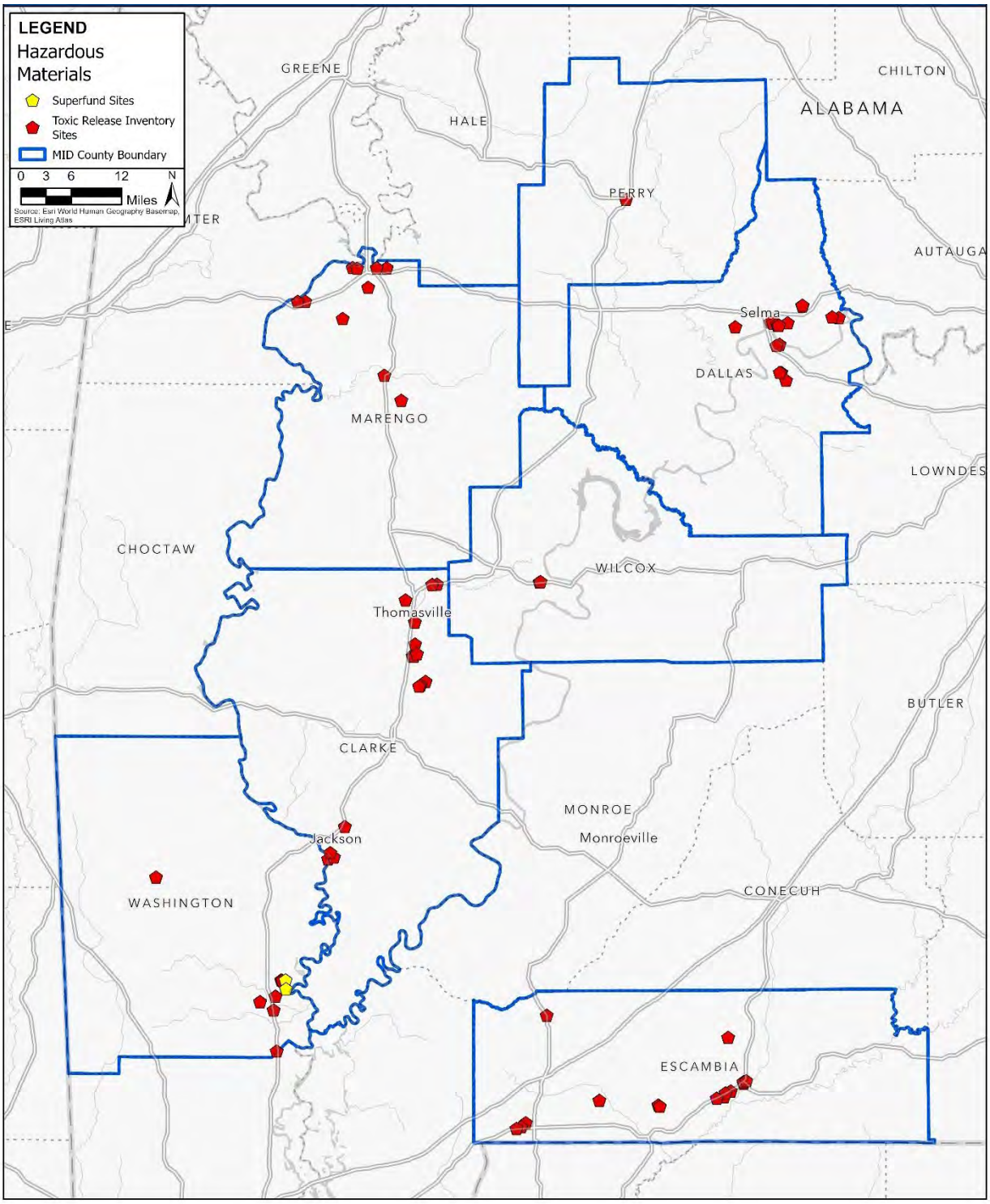


Figure 17: Hazard Material Community Lifeline Map



COUNTY PLANS

VIII. Clarke County

A. Introduction

Clarke County is located in the southwestern section of the state at the juncture of the Tombigbee and Alabama rivers and is the center of Alabama's timber industry with over 735,000 timberland acres and producing over $2.1 million tons of timber products. Clarke County produces the most timber products of any county in the State of Alabama. Alabama's timberland industry is the third largest commercial forestland in the nation with approximately 93% of Alabama's timberland being privately owned.[12]

According to the American Community Survey (ACS) 2022 5-Year Estimates[13], Clarke County has a population of 23,058, a 4.4% decrease from 24,108 in 2019. The demographic breakdown shows a majority, 51%, are White residents, followed by 45% that are Black or African American. Housing in Clarke County includes 11,733 occupied units, with 68% being single-family homes and 25% mobile homes. In total, 97% of units in the county are 1–4-unit dwellings or mobile homes. Homeownership is high, with 72% of residents owning their homes and 28% renting.

Clarke County was significantly impacted by Hurricanes Sally and Zeta, including downed trees that resulted in prolonged power outages and damaged homes that are still in need of repair. The hurricanes also led to localized creek flooding and flash-flooding in low-lying areas, washing out culverts and roads and trapping residents, thereby hindering access to aid and the ability to commute to work post-disaster.

B. Unmet Needs Gap

Through this Local Recovery Plan, the ACCA and Clarke County present unmet need estimates from Hurricane Sally and Hurricane Zeta based on current best available data (see table below). Over time, ACCA, and the county reserve the right to continue to update these estimates as additional assessments are made, and more complete data becomes available.

Table 1 Total Estimated Unmet Need for Clarke County

	Estimated Impact	Amount of Funds from Other Sources	Total Unmet Need
Housing	$8,269,453	$3,207,445	$5,062,008
Infrastructure	$15,842,050	$11,478,452	$3,954,110
Economy	$188,348	$39,700	$148,648
Total	**$24,299,851**	**$14,725,597**	**$9,164,766**

Estimated impact includes added resilience and increased construction costs and may include FEMA Public Assistance Categories A, B and Z, where applicable. Total Unmet Need does not include FEMA PA categories A, B and Z.

[12] 2021 Alabama Forestry Report, https://forestry.alabama.gov/Pages/Management/Forms/Forest_Resource_Report_2021.pdf

[13] https://data.census.gov/ - Tables B02001, B25024, B25003

C. Impact and Unmet Needs Assessment

1. Background

In accordance with HUD guidance, Clarke County completed the following unmet needs assessment to identify priorities for CDBG-DR funding allocated because of impacts from the 2020 storms.

The assessment below utilizes federal and state resources, including data provided by FEMA, and SBA, among other sources, to estimate unmet needs in three main categories of damage: housing, economy, and infrastructure. The unmet needs assessment focuses on Clarke County's housing, infrastructure, and economic impacts, with specific sections detailing needs within the most impacted area, and where relevant, smaller geographic units.

a. Demographic Profile of the Affected Areas

The demographic profile of Clarke County has not changed much since the State Action Plan was published and detailed demographic information can be reviewed in the State Action Plan for the county.

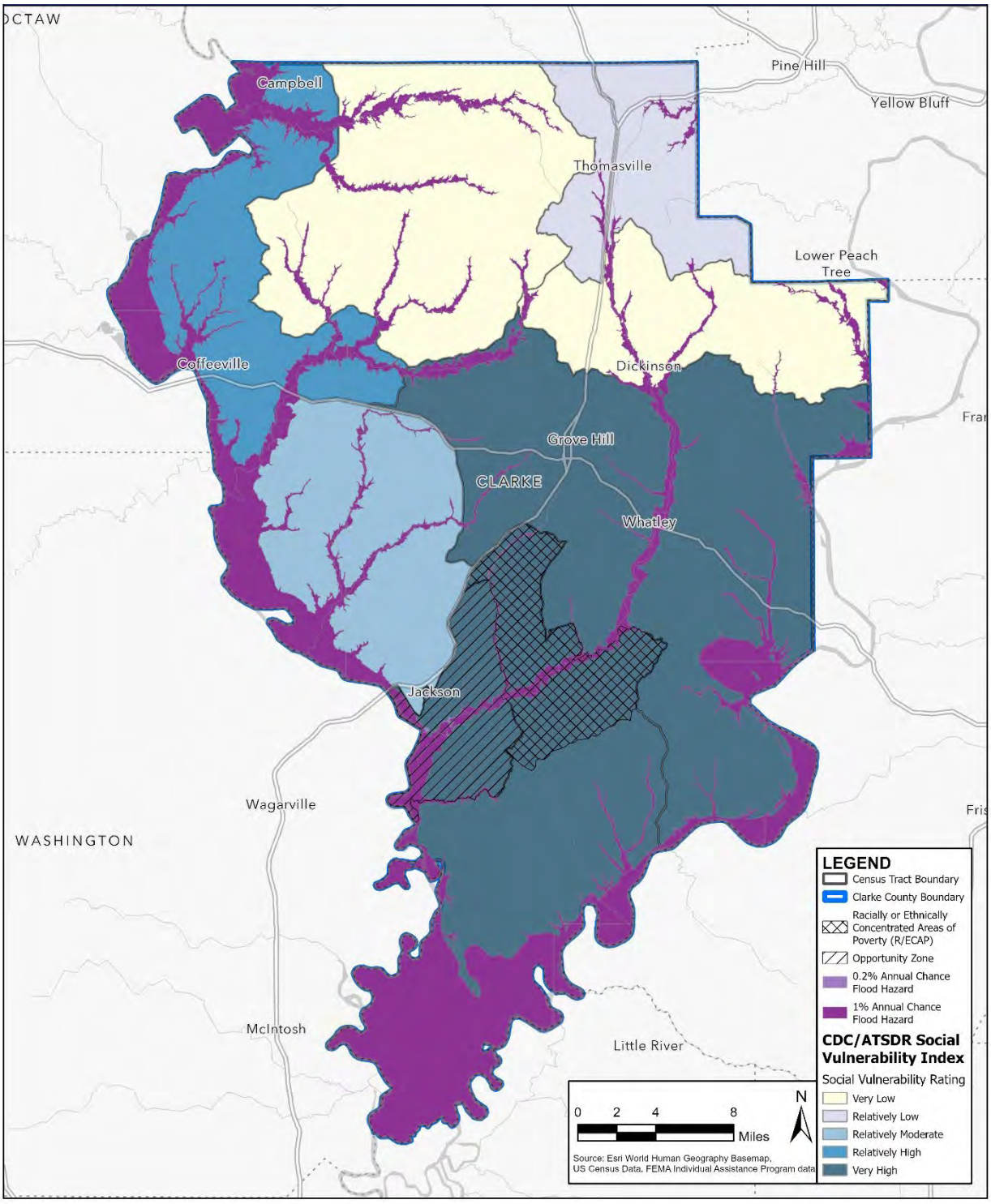
Clarke County identified vulnerable populations within the county as part of the establishment of MID Recovery Zones. Vulnerable populations include those identified as part of a protected class, hard-to-reach, underserved, historically disadvantaged areas, and economically distressed areas.

For the purposes of this LRP, Clarke County has identified vulnerable population areas using the CDC/ATSDR Social Vulnerable Index (SVI) and geographically underserved and historically disadvantaged areas including Opportunity Zones and Racially and Ethnically Concentrated Areas of Poverty (R/ECAP).

The CDC/ATSDR SVI is a place-based index designed to identify and quantify communities experiencing social vulnerability by comparing socio-economic, household composition, minority status and language, housing types and transportation needs, and other adjunct variables such as race and ethnicity and households without an internet subscription at the census tract level. R/ECAPs are defined by HUD where census tracts have a non-white population of 50 percent or more and 40 percent or more of individuals in the census tract are living at or below the poverty line. Opportunity Zones are economically distressed communities, defined by individual census tract, nominated by America's governors, and certified by the U.S. Secretary of the Treasury via his delegation of that authority to the Internal Revenue Service. The Opportunity Zones initiative is not a top-down government program from Washington but an incentive to spur private and public investment in America's underserved communities.

Clarke County does not have any Promise Zones, Neighborhood Revitalization Strategy Areas, or Tribal areas within the county. Figure 18 provides an overview of the vulnerable areas against the flood hazard and floodway zones.

Figure 18 Clarke County Vulnerability Map



2. Housing Impact & Needs

a. Housing Damage and Loss Assessment

Unless otherwise noted, all housing summary data were compiled from these datasets for Hurricane Zeta only.

Per each household determined to have unmet housing needs, their estimated average unmet housing need was calculated using similar variables and calculation methods from the State Action Plan. These variables are:

1. FEMA Damage Category Application Counts of Minor-Low to Major-Low
2. FEMA Damage Category Application Counts of Major-High to Severe
3. FEMA IA Applications without FEMA Verified Loss
4. Public Housing Damages

Total impact tables have been summarized based on owner-occupied vs renter-occupied households, impacted populations with flood and homeowner insurance, impact by residence type, impact by gross income, and impact to housing authorities in the following sections.

b. Total Impact (Owner-Occupied and Renter Households)

The information in the following tables below, outline the total damaged properties population with documented damages. To account for properties that never had an inspection physically to take place due to the COVID-19 pandemic and other reasons no damages were found, likely because they were desktop inspections, the county has classified these applications as “No FVL”. A detailed description is provided in the FEMA IA Applications without Real Property FEMA Verified Loss section.

Table 2 Homeowner/Renter Damaged Properties by All Damage Categories

Damage Category	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Severe	3	0.1%	0	0.0%	3	0.1%
Major-High	1	0.0%	1	0.0%	2	0.1%
Major-Low	76	3.5%	20	0.9%	96	4.4%
Minor-High	475	21.9%	125	5.8%	600	27.7%
Minor-Low	290	13.4%	19	0.9%	309	14.3%
No FVL	960	44.3%	198	9.1%	1,158	53.4%
Total	**1,805**	**83.3%**	**363**	**16.7%**	**2,168**	**100.0%**

FEMA Damage Category Applications - Minor-Low, Minor-High, and Major-Low

For FEMA IA Applications with minor-low, minor-high, and major-low damage, the count of those applications in each county was multiplied by the overall average SBA verified property loss per damage category provided in the State Action Plan to determine the estimated total loss/support for these three damage categories. The below tables outline the total number of properties damaged for homeowners and renters.

Table 3 Minor-Low, Minor-High, and Major-Low Estimated Total Loss – Homeowners

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	290	$1,621	$ 470,090
Minor-High	475	$5,495	$2,610,125
Major-Low	76	$11,502	$874,152
Total	**841**	**N/A**	**$3,954,367**

Table 4 Minor-Low, Minor-High, and Major-Low Estimated Total Loss – Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	19	$1,621	$30,799
Minor-High	125	$5,495	$686,875
Major-Low	20	$11,502	$230,040
Total	**164**	**N/A**	**$947,714**

Table 5 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Homeowners & Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	309	$1,621	$500,889
Minor-High	600	$5,495	$3,297,000
Major-Low	96	$11,502	$1,104,192
Total	**1,005**	**N/A**	**$4,902,081**

FEMA Damage Category Applications - Major-High to Severe

For FEMA IA Applications with major-high to severe damage, it was assumed that those structures were substantially damaged and require reconstruction. To determine the replacement cost of the home, Clarke County replicated ADECA's approach and used the county's Zillow Home Value from August 2020 for All Homes (non-adjusted)[14]. The Zillow home value includes the cost of the land; thus, it is assumed 66% of the value was attributable to the structure on the property. This adjusted home value is multiplied by the total count of applications in the major-high to severe damage categories. The results of these calculations are provided in Table 6 below:

Table 6 Major-High and Severe Estimated Total Loss Homeowners and Renters

Damage Category	Zillow Home Value	66% of Zillow Value	Count	Estimated Total Loss
Major-High	$124,736	$82,326	2	$164,652
Severe	$124,736	$82,326	3	$246,978
Total			**5**	**$411,630**

Of the 5 Major-High and Severe damaged dwellings, 1 renter occupied dwelling is classified as Major-High with a total estimated loss of $82,326.

[14] Clarke County Home Values, https://www.zillow.com/home-values/73903/al-36515/

FEMA IA Applications without FEMA Verified Loss

Clarke County also accounted for the damage to applications without Real Property FEMA verified loss (RPFVL) for owner occupied dwellings and without Personal Property FEMA Verified Loss (PPFVL) for renter occupied dwellings because due to the COVID-19 pandemic and other reasons, an inspection never physically took place or no damages were found, likely because they were desktop inspections. To account for these types of impacts, Clarke County counted applications with no FEMA Verified Loss and multiplied it by the average value for minor-low damage per SBA verified property loss provided in the State Action Plan. Table 7 below provides the results of these calculations.

Table 7 : Estimated Total Loss for IA Applications without FEMA Verified Loss

Occupancy Type	Count of Applications	Average SBA Value	Estimated Total Loss
Owner	960	$1,621	$1,556,160
Renter	198	$1,621	$ 320,958
Total	**1,158**	**$1,621**	**$1,877,118**

c. Impacts of Insurance (NFIP and HOI)

For the purposes of this analysis, households inspected by FEMA and shown to have a 'Water Level' greater than 0.0 inches are considered to have been flooded, while all other units with no 'Water Level' are considered to have been impacted exclusively by wind.

Table 8 Flood Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	0	6	11	5	0	0	22
Renter	2	2	12	6	0	0	22
Total	**2**	**8**	**23**	**11**	**0**	**0**	**44**

Flood Damage and Insurance: An alarmingly high proportion of units with evidence of flood damage were reported in the FEMA IA data not to carry a flood insurance policy through the NFIP as shown in the table below. In total, **100 percent** of the flood-affected homeowner population are reported to not carry flood insurance per the FEMA IA data.

Table 9 Homeowner Flood-Damaged Properties and NFIP Counts

Damage Category	With NFIP	% With NFIP	Without NFIP	% Without NFIP
Severe	0	0%	0	0%
Major-High	0	0%	0	0%
Major-Low	0	0%	5	23%
Minor-High	0	0%	11	50%
Minor-Low	0	0%	6	27%
No FVL	0	0%	0	0%
Total	**0**	**0%**	**22**	**100%**

Wind Damage and Insurance: In the absence of evidence of flood damage, units are assumed to be impacted exclusively by wind. As such, for the proportion of owner-occupied units with no evidence of flooding damage, the county is especially concerned about the high rate of households reported not to carry a standard hazard homeowners insurance policy (HOI) that

would otherwise be expected to offset documented losses. In total, **73 percent** of the wind-impacted homeowner population is reported not to carry hazard insurance as shown in Table 11 below.

Table 10 Wind Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	960	284	464	71	1	3	1,783
Renter	196	17	113	14	1	0	341
Total	**1,156**	**301**	**577**	**85**	**2**	**3**	**2,124**

Table 11 Homeowner Wind-Damaged Properties and HOI Counts

Damage Category	With HOI	% With HOI	Without HOI	% Without HOI
Severe	0	0%	3	0%
Major-High	0	0%	1	0%
Major-Low	8	0%	63	4%
Minor-High	50	3%	414	23%
Minor-Low	28	2%	256	14%
No FVL	398	22%	562	32%
Total	**484**	**27%**	**1,299**	**73%**

d. Impact based on Residence Type

Table 12 illustrates FEMA IA applicants by housing type. The highest number of applicants came from Mobile Home units (49%) and housing/duplex units (46%).

Table 12 FEMA IA Applicants by Residence Type and Occupancy Type

Residence Type	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Apartment	0	0%	50	2%	50	2%
Condo	1	0%	1	0%	2	0%
House/Duplex	804	37%	197	9%	1,001	46%
Military Housing	0	0%	1	0%	1	0%
Mobile Home	953	44%	104	5%	1,057	49%
Other	33	2%	8	0%	41	2%
Travel Trailer	14	1%	2	0%	16	1%
Total	**1,806**	**83%**	**363**	**17%**	**2,168**	**100%**

Table 13 shows FEMA IA flood-damaged properties by housing type who had Flood or Homeowner's insurance. As indicated in the overview of flood-damaged properties, **zero** of the flood-affected homeowner applicants are reported to carry an NFIP policy per the FEMA IA data.

Table 13 Flood Damaged Properties by Residence Type and Count with NFIP

Residence Type	Count of Applications	Count with NFIP	% with NFIP
House/Duplex	11	0	0%
Mobile Home	11	0	0%
Total	**22**	**0**	**0%**

Table 14 shows FEMA IA wind-damaged properties by housing type who had Homeowner's Insurance. As indicated in the overview of wind damaged properties, **27%** of the affected owner-occupied population are reported to carry homeowner's insurance policy per the FEMA IA data.

Table 14 Wind Damaged Properties by Residence Type with HOI

Residence Type	Count of Applications	Count with HOI	% with HOI
Condo	1	0	0%
House/Duplex	793	358	45%
Military Housing	0	0	0%
Mobile Home	942	116	12%
Other	33	9	27%
Travel Trailer	14	1	7%
Total	**1,783**	**484**	**27%**

Total estimated losses have been summarized by residence type in Table 15.

Table 15 Total Estimated Loss by Residence Type

Residence Type	Count	Estimated Total Loss
Apartment	50	$189,522
Condo	2	$3,242
House/Duplex	1,001	$2,933,609
Military Housing	1	$1,621
Mobile Home	1,057	$3,962,690
Other	41	$66,461
Travel Trailer	16	$33,684

e. Impact on LMI Households

The income data provided in the FEMA IA data set was not specific enough to perform a low-and moderate-income (LMI) calculation as income was categorized by general ranges. To summarize the impact of storms had on households based on income, four income groupings are provided in the tables below. Overall, households with lower incomes were disproportionately impacted by Hurricane Zeta, with 73% of the total impacted population making $30,000 or less.

Table 16 Gross Income by Damage Level for Homeowners Only

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	1	0%	2	0%	0	0%	0	0%	3	0%
Major-High	0	0%	0	0%	1	0%	0	0%	1	0%
Major-Low	60	3%	12	1%	3	0%	1	0%	76	4%
Minor-High	396	22%	55	3%	21	1%	3	0%	475	26%
Minor-Low	256	14%	29	2%	4	0%	1	0%	290	16%
No FVL	570	32%	250	14%	136	8%	4	0%	960	53%
Totals	**1,283**	**71%**	**348**	**19%**	**165**	**9%**	**9**	**0%**	**1,805**	**100%**

Table 17 Gross Income by Damage Level for Renters Only

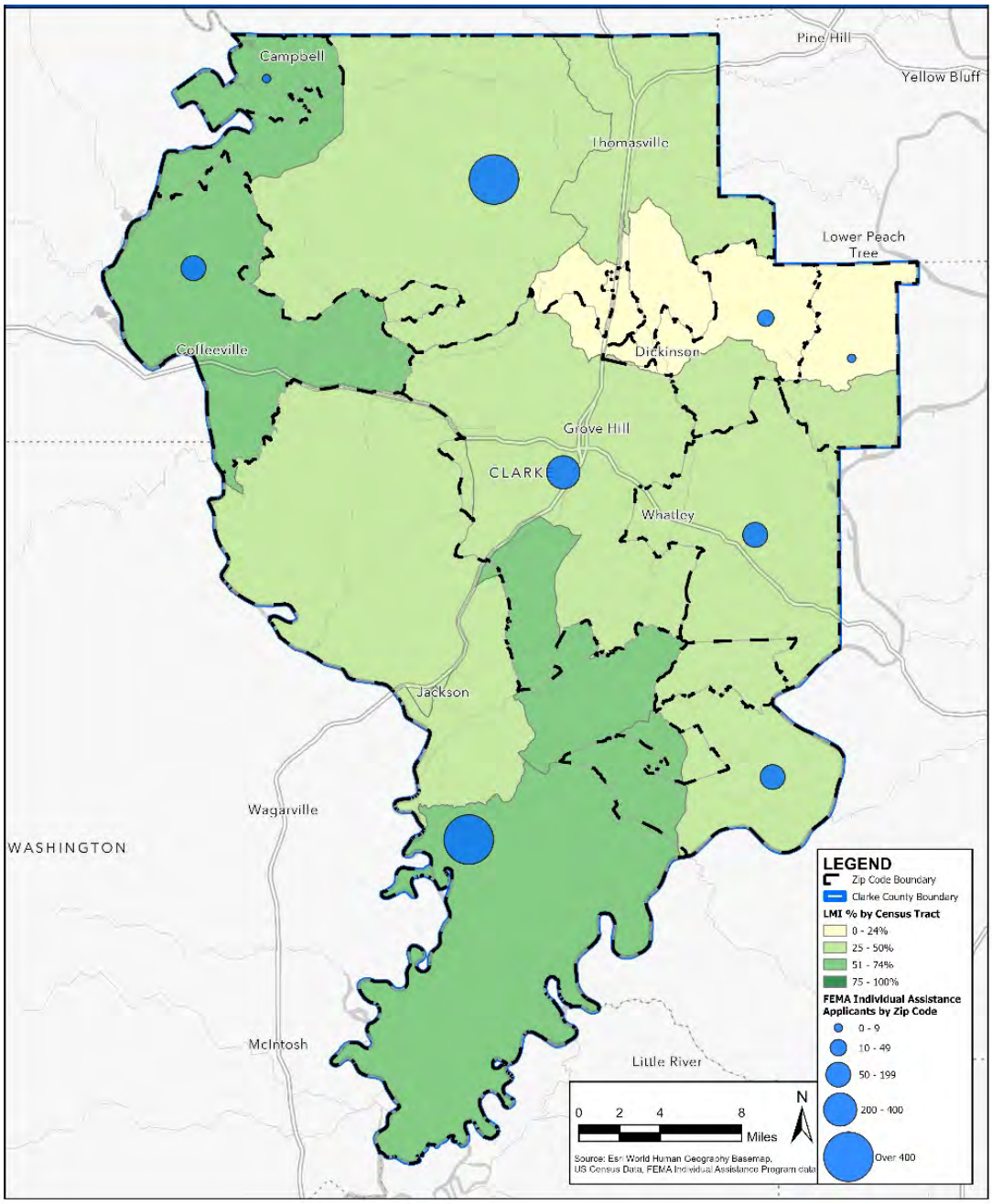
Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0	0	0	0	0	0	0%	0	0%
Major-High	1	0	0	0	0	0	0	0%	1	0%
Major-Low	18	5	0	0	2	1	0	0%	20	6%
Minor-High	111	31	13	4	1	0	0	0%	125	34%
Minor-Low	16	4	2	1	1	0	0	0%	19	5%
No FVL	153	42	31	9	13	4	1	0%	198	55%
Totals	**299**	**82%**	**46**	**13%**	**17**	**5**	**1**	**0%**	**363**	**100%**

Table 18 Gross Income by Damage Level for Homeowners and Renters

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	1	0%	2	0%	0	0%	0	0%	3	0%
Major-High	1	0%	0	0%	1	0%	0	0%	2	0%
Major-Low	78	4%	12	1%	5	0%	1	0%	96	4%
Minor-High	507	23%	68	3%	22	1%	3	0%	600	28%
Minor-Low	272	13%	31	1%	5	0%	1	0%	309	14%
No FVL	723	33%	281	13%	149	7%	5	0%	1,158	53%
Totals	**1,582**	**73%**	**394**	**18%**	**182**	**8%**	**10**	**0%**	**2,168**	**100%**

The map below illustrates the Low-Moderate Income percentage by Census Tract, with heat bubbles of where the FEMA IA applications were located based on the zip code location.

Figure 19 LMI Population and FEMA IA Applicants by Zip Code



f. Impact on Public Housing Authorities

A Public Housing Authority (PHA) for the county does not exist. Clarke County would like to have a PHA in order to access available housing funds through the federal government which restricts the county from assisting vulnerable populations.

g. Unmet Housing Needs

FEMA IA was the primary data source that Clarke County used to determine housing unmet needs. Total estimated losses have been summarized by the data source and calculation

methodology as summarized in previous sections by damage category and for public housing authorities. An additional 15% is added at the end of the calculation to account for resilience costs to make buildings more resilient to future disasters. To calculate total unmet need, received assistance is summarized and subtracted from the estimated total loss including resilience costs.

Table 19 Total Estimated Loss by Damage Category

Data Source/Calculation	Count	Estimated Total Loss
Severe	3	$246,978
Major-High	2	$164,652
Major-Low	96	$1,104,192
Minor-High	600	$3,297,000
Minor-Low	309	$500,889
No FEMA Verified Loss	1,158	$1,877,118
Public Housing	0	$0
Total	**2,168**	**$7,190,829**
	+15% Resilience Costs	**$1,078,624**
Total Estimated Loss with Resilience Costs		**$8,269,453**

To ensure that housing repair assistance is factored into the housing unmet needs calculation, FEMA IA Repair and Replacement, SBA Real Estate and NFIP payment amounts were added together to get the total housing assistance received. See Table 20 for the calculation.

Table 20 Total Housing Assistance Received Calculation

Data	Count	Total Amount
FEMA IA Payments	530	$2,357,595
NFIP Payments	0	$0
SBA Loan Amounts	Insufficient Data	$849,850
Total Housing Assistance	**530**	**$3,207,445**

Total housing assistance was subtracted from the total housing unmet needs with resilience included to get a total housing unmet need of approximately $5 million as result of Hurricane Zeta. See Table 21 for the calculation.

Table 21 Total Housing Unmet Need for Clarke County

Data	Estimated Amount
Total Estimated Loss including 15% Resilience Costs	$8,269,453
Total Housing Assistance	-$3,207,445
Total Housing Unmet Need	**$5,062,008**

3. Infrastructure Impact & Needs

a. Infrastructure Damage & Loss Assessment

Clarke County suffered infrastructure losses from Hurricanes Sally and Zeta. In result of the large number of trees in the county due to the timber industry, the county experienced significant downed trees that isolated communities and cut off power to communities for weeks. Both hurricanes also produced flooding in Rockville, Carlton, Barlow Bend and Indian Ridge which caused culverts and roads to be washed out. Repairs to these culverts and stretches of road have been made multiple times over the years; however, the county lacks the funding needed to make improvements to prevent washouts from happening in the future.

The table below includes the Estimated PA Cost and additional costs for resiliency measures (15%) and increased cost of construction (23.6%) to estimate the Federal Share (90%) and the local share/unmet need (10%) more accurately for Categories C through G, roads and bridges, public facilities and buildings, public utilities, and other public assistance needs.

Table 22 Total Estimated Infrastructure Costs by PA Damage Category

Disaster Name	Damage Category	PA Project Amount	15% Resilience Measures	23.6% Construction Costs	Total PA Project Amount
Hurricane Sally	B - Protective Measures	$18,125	$0	$0	$18,125
	F - Public Utilities	$209,451	$28,276	$49,430	$287,158
	Z - State Management	$7,230	$0	$0	$7,230
	Hurricane Sally Total	**$234,806**	**$28,276**	**$49,430**	**$312,513**
Hurricane Zeta	A - Debris Removal	$3,665,116	$0	$0	$3,665,116
	B - Protective Measures	$403,943	$0	$0	$403,943
	C - Roads and Bridges	$270,104	$36,464	$63,745	$370,313
	E - Public Buildings	$85,149	$11,495	$20,095	$116,739
	F - Public Utilities	$7,714,338	$1,041,436	$1,820,584	$10,576,357
	G - Recreational/Other	$116,097	$15,673	$27,399	$159,170
	Z - State Management	$237,900	$0	$0	$237,900
	Hurricane Zeta Total	**$12,492,647**	**$1,105,068**	**$1,931,822**	**$15,529,537**
	Hurricane Sally and Zeta Total	**$12,727,453**	**$1,133,344**	**$1,981,253**	**$15,842,050**

b. Unmet Economic Needs

The table below includes the Total Estimated PA Cost, consisting of resiliency measures and increased construction costs with the total Federal Obligated Amount and the Non-Federal Share Amount.

Table 23 Total Estimated Non-Federal Share Amount by PA Damage Category

Disaster Name	Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount
Hurricane Sally	B - Protective Measures	$18,125	$16,313	$1,813
	F - Public Utilities	$287,158	$188,506	$98,652
	Z - State Management*	$7,230	$7,230	$0
	Hurricane Sally Total	**$312,513**	**$212,049**	**$100,465**

Hurricane Zeta	A - Debris Removal	$3,665,116	$3,298,605	$366,512
	B - Protective Measures	$403,943	$362,779	$41,164
	C - Roads and Bridges	$370,313	$243,094	$127,219
	E - Public Buildings	$116,739	$76,634	$40,105
	F - Public Utilities	$10,576,357	$6,942,904	$3,633,453
	G - Recreational/Other	$159,170	$104,488	$54,682
	Z - State Management*	$237,900	$237,900	$0
Hurricane Zeta Total		**$15,529,537**	**$11,266,403**	**$4,263,135**
Hurricane Sally and Zeta Total		**$15,842,050**	**$11,478,452**	**$4,363,600**

Based on the analysis performed, there is a potential unmet need of $3,954,110 for identified infrastructure damage eligible under FEMA-PA Categories C-G.

Table 24 Total Estimated Cost PA Unmet Need

Disaster Name	Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount	Unmet Needs Amount
Hurricane Sally	B - Protective Measures*	$18,125	$16,313	$1,813	$0
	F - Public Utilities	$287,158	$188,506	$98,652	$98,652
	Z - State Management*	$7,230	$7,230	$0	$0
Hurricane Sally Total		**$312,513**	**$212,049**	**$100,464**	**$98,652**
Hurricane Zeta	A - Debris Removal*	$3,665,116	$3,298,605	$366,512	$0
	B - Protective Measures*	$403,943	$362,779	$41,164	$0
	C - Roads and Bridges	$370,313	$243,094	$127,219	$127,219
	E - Public Buildings	$116,739	$76,634	$40,105	$40,105
	F - Public Utilities	$10,576,357	$6,942,904	$3,633,453	$3,633,453
	G - Recreational/Other	$159,170	$104,488	$54,682	$54,682
	Z - State Management*	$237,900	$237,900	$0	$0
Hurricane Zeta Total		**$15,529,537**	$11,266,403	**$4,263,134**	**$3,855,459**
Hurricane Sally and Zeta Total		**$15,842,050**	**$11,478,452**	**$4,363,598**	**$3,954,110**

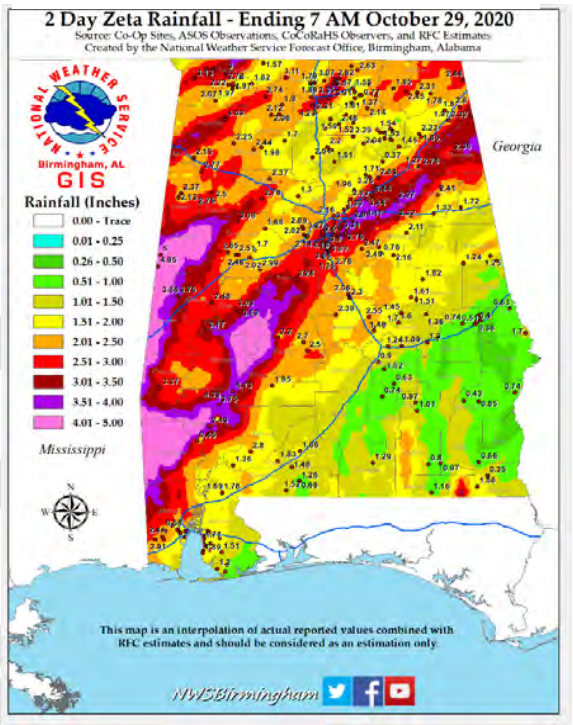
*CDBG-DR Funds are not used for PA costs in Categories A, B and Z.

4. Economic Revitalization Impact and Unmet Need

a. Damage and Impacts

A summary of damage and impacts of Hurricanes Sally and Zeta is provided below, along with an analysis of Small Business Administration loans provided to the business community following Hurricanes Sally and Zeta.

Figure 20 Hurricane Zeta 2 Day Rainfall Total



Agriculture Impacts

Following Hurricane Zeta, USDA designated Clarke County as a primary natural disaster area, which allows producers who suffered losses by Hurricane Zeta to apply for emergency loans with the U.S. Department of Agriculture (USDA) Farm Service Agency (FSA). This natural disaster designation allows FSA to extend much-needed emergency credit to producers recovering from natural disasters. Emergency loans can be used to meet various recovery needs including the replacement of essential items such as equipment or livestock, reorganization of a farming operation or the refinance of certain debts.[15] As reported in the November 2, 2020, Alabama Crop Progress and Condition Report[16], Hurricane Zeta delivered heavy rains and damaging winds. The high soil moisture prevented fieldwork in many areas of the state following the Hurricane. As shown in Figure 20, parts of Clarke County Received upwards of 5 inches of rain across a 48-hour period.

Following Hurricane Sally, USDA did not designate Clarke County as a primary disaster area; however, they did allow eligible producers in Clarke County to still apply for emergency loans due to losses or impacts from Hurricane Sally[17].

b. Unmet Economic Needs

According to an analysis of the Small Business Administration (SBA) business loan data for applications with approved or denied loans that meet a HUD category of loss, the County realized a total verified loss for all businesses of $163,781. Accounting for an additional fifteen percent (15%) in resilience costs, the County's total estimated economic impact is approximately $188,348. According to the SBA business report, the SBA provided $39,700 for real estate losses. Therefore, the County's remaining economic unmet needs are valued at $148,648.

Table 25 Unmet Economic Needs

Total Verified Loss	15% Resilience Costs	Total Estimated Impact	Total SBA Benefits	Remaining Unmet Needs
$163,781	**$24,567**	**$188,348**	**$39,700**	**$148,648**

[15] https://www.fsa.usda.gov/state-offices/Alabama/news-releases/2021/usda-designates-13-alabama-counties-as-primary-natural-disaster-areas
[16] https://www.nass.usda.gov/Statistics_by_State/Alabama/Publications/Crop_Progress_&_Condition/2020/AL-CropProgress-11-02-20.pdf
[17] https://www.fsa.usda.gov/state-offices/Alabama/news-releases/2020/usda-designates-two-alabama-counties-as-primary-natural-disaster-areas

D. Summary of Unmet Needs & MID Recovery Zones

1. Unmet Needs Summary

Based on the above analysis, the county has calculated a total unmet need of **$9.1 Million** attributable to Hurricanes Sally and Zeta.

In summary, this analysis projects unmet needs as follows:

Table 26 Summary of Total Unmet Needs

Category	Estimated Impact	Amount of Funds from Other Sources	Remaining Unmet Need
Housing	$8,269,453	$3,207,445	$5,062,008
Infrastructure	$15,842,050	$11,478,452	$3,954,110
Economy	$188,348	$39,700	$148,648
Total	**$24,299,851**	**$14,725,597**	**$9,164,766**

A detailed analysis of how the unmet needs were calculated based on known losses and investments across each zip code is shown below.

Table 27 Unmet Need Summary by Zip Code

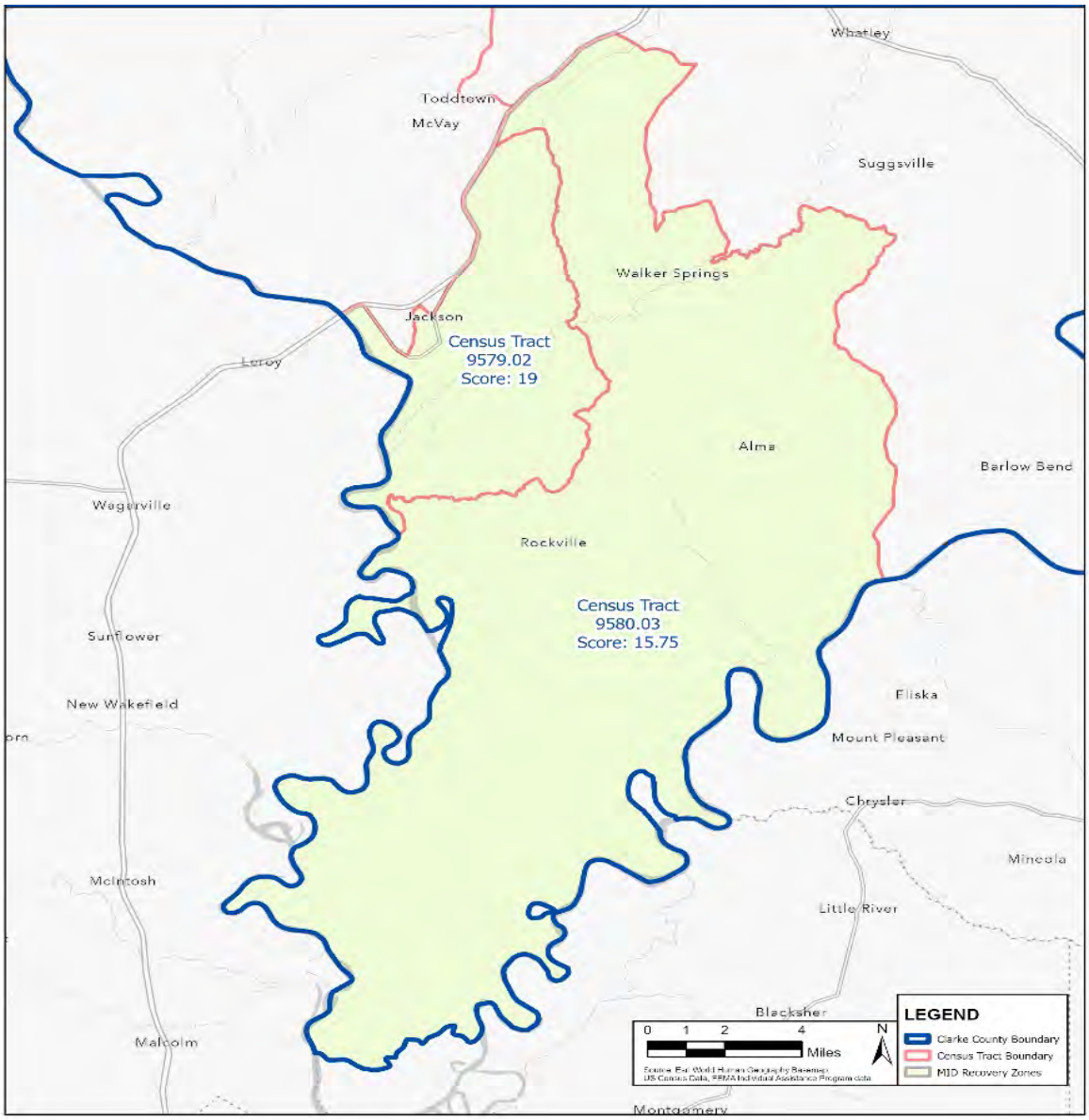
Zip Code	Unmet Housing Need	Unmet Infrastructure Needs	Unmet Economy Needs	Total Unmet Need
36545	$1,923,193	$3,732,105	$93,001	$5,748,298
36784	$1,329,761	$0	$42,235	$1,371,996
36451	$837,543	$222,006	$6,279	$1,065,828
36540	$408,620	$0	$7,133	$415,753
36482	$295,931	$0	$0	$295,931
36524	$204,089	$0	$0	$204,089
36436	$36,382	$0	$0	$36,382
36727	$13,660	$0	$0	$13,660
36751	$12,829	$0	$0	$12,829
Total	**$5,062,008**	**$3,954,111**	**$148,648**	**$9,164,766**

2. MID Recovery Zones

The MID Recovery Zones (MRZ) were identified at the census tract level based on areas with vulnerable populations and zip codes with the most unmet need and where these areas overlap with census tracts. A ranked approach was taken to rate the census tracts in Clarke County based on a score from 0 to 20, with a total possible score of 10 for each category. Census tracts with scores between 15 and 20 are considered a MID Recovery Zone

The MRZ identified for Clarke County are shown in *Figure 21 Clarke County MID Recovery Zones.*

Figure 21 Clarke County MID Recovery Zones



Identified MID Recovery Zones: Census Tracts 9579.02 and 9580.03

E. Mitigation Needs Assessment

In accordance with the LRRP guidance, the county completed the following Mitigation Needs Assessment. Alabama's 2023 State Hazard Mitigation Plan, Clarke County's 2014 Local Hazard Mitigation Plan, *2021-2026 Division A Regional Multi-Jurisdictional Hazard Mitigation Phase I Plan*, and data from the National Oceanic Atmospheric Administration (NOAA) and FEMA were used to assess the mitigation needs. This assessment informs and provides a substantive basis for programs proposed in this Local Recovery Plan, with a focus on addressing and analyzing all significant current and future hazard risks.

1. Historic Overview of Hazards

Since 1973, there have been 16 disaster declarations for Clarke County. The most common natural disasters that cause damage to an extent that results in a federal disaster declaration are hurricanes and severe storms/tornadoes. This historical pattern of extreme weather is expected to continue which means mitigation measures to reduce impacts caused by these types of hazards are critical.

Table 28 Declared Disasters since 1973 and the Associated Total Obligated PA Amount to Date

Declaration	Year Declared	Incident Type	Declaration Title	Total Obligated PA Amount
DR-4573-AL	2021	Hurricane	Hurricane Zeta	$12,107,058
DR-4563-AL	2020	Hurricane	Hurricane Sally	$212,049
DR-4503-AL	2020	Biological	COVID-19 Pandemic	No Data
DR-4349-AL	2018	Hurricane	Hurricane Nate	$12,403
DR-1971-AL	2011	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, & Flooding	$10,540
DR-1870-AL	2010	Severe Storm	Severe Storms and Flooding	$134,889
DR-1835-AL	2009	Severe Storm	Severe Storms, Flooding, Tornadoes & Straight-Line	$216,978
DR-1605-AL	2005	Hurricane	Hurricane Katrina	$374,130
DR-1593-AL	2005	Hurricane	Hurricane Dennis	$246,587
DR-1549-AL	2004	Hurricane	Hurricane Ivan	$1,512,164
DR-1466-AL	2003	Severe Storm	Severe Storms, Tornadoes, & Flooding	No Data
DR-1250-AL	1998	Hurricane	Hurricane Georges - 18 Sep 98	No Data
DR-1070-AL	1996	Hurricane	Hurricane Opal	No Data
DR-861-AL	1990	Severe Storm	Severe Storms, Tornadoes & Flooding	No Data
DR-598-AL	1979	Hurricane	Hurricane Frederic	No Data
DR-369-AL	1973	Tornado	Tornadoes & Flooding	No Data

Source: Open FEMA Data Sets, Disaster Declaration Summary[18] and Public Assistance Funded Project Details[19]

Historic weather patterns can be determined for Clarke County from NOAA's National Centers for Environmental Information (NCEI) Storm Events Database. Table 29 provides an outline of the

[18] https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2

[19] https://www.fema.gov/openfema-data-page/public-assistance-funded-projects-details-v1

number of recorded storm events from January 1953 to June 2023 for Clarke County. If the same event type occurred on the same date, only one event was recorded; however, the number of fatalities, injuries and damages were summed across the multiple events for a single day and event type.

Table 29 NCEI Storm Events Summary (1953 - 2023)

Event Type	Number of Events	Number of Fatalities	Number of Injuries	Property Damage ($)	Crop Damage ($)
Drought	3	0	0	$0	$0
Flash Flood	31	0	1	$2,730,000	$0
Flood	3	0	0	$255,000	$0
Funnel Cloud	5	0	0	$0	$0
Hail	79	0	0	$115,000	$0
Heat	3	1	0	$0	$0
Heavy Rain	4	0	0	$0	$0
Heavy Snow	2	0	0	$0	$0
Hurricane (Typhoon)	3	0	0	$300,000	$0
Ice Storm	3	0	0	$15,000	$0
Lightning	17	0	0	$394,000	$0
Sleet	2	0	0	$0	$0
Strong Wind	4	0	0	$42,000	$0
Thunderstorm Wind	178	0	3	$1,896,000	$5,000
Tornado	35	0	21	$2,830,750	$3,000,000
Tropical Storm	5	0	0	$0	$0
Winter Storm	5	0	0	$0	$0
Winter Weather	3	0	0	$5,000	$0
Cold/Wind Chill	1	1	0	$0	$0
Grand Total	**386**	**2**	**25**	**$8,582,750**	**$3,005,000**

Source: NOAA's National Centers for Environmental Information (NCEI) Storm Events Database[20]

2. Greatest Risk Hazards

The *2021-2026 Division A Regional Multi-Jurisdictional Hazard Mitigation Phase I Plan* identified risks by studying historical events and susceptibility and gathering information and input from local stakeholders. Each hazard was categorized in High, Medium, Low, or Very Low based on the historical trends of the hazards and also the probability of future occurrence and estimated loss. These categories are defined below:

- High: Probable major damage in a 1-10 Year Period
- Medium: Probable major damage in a 10-50 Year Period
- Low: Probable major damage in a 100 Year Period
- Very Low: No probable major damage in a 100 Year Period

The *2021-2026 Division A Regional Multi-Jurisdictional Hazard Mitigation Phase I Plan* identified high winds from strong severe storms, hurricanes, and tornadoes, and flooding as the most significant risks; however, wildfires and dam failures were also identified as great risks.

[20] https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=1%2CALABAMA

Table 30 Clarke County Identified High Hazards and Associated Risks

Hazard	Risk Rating	Area Identified	Associated risk
Extreme Temperatures	TBD	County-wide, the area is especially susceptible to these events during the summer months	Can cause crop loss, threat to health of people living and working in the area
Flooding	TBD	Areas along creeks and rivers, areas with insufficient drainage. Urban areas are especially prone to flash floods but may occur in other areas where there is inadequate, damaged or non-existent drainage infrastructure. Reoccurring flooding issues in Brockville, Carlton Barlow, Bend, and Indian Ridge.	Can wash out roads, threat to health of people living and working in the area
Hurricanes and Coastal Storms	TBD	County-wide	Can cause flood and wind damage to residential property, transportation and utility infrastructure damage, and loss of life
Severe Storms	TBD	County-wide	Can cause crop, property damage, injury, and loss of life
Tornadoes	TBD	County-wide	Can cause forestry, crop, property damage, injury, and loss of life
Wildfires	TBD	County-wide – Grove Hill is at critical risk; Thomasville, Jackson, and Fulton are classified at moderate risk, and Coffeeville is classified at low risk	Can cause forestry, crop, property damage, injury, and loss of life

a. Hurricanes and Coastal Storms

As shown in Tables 28 and 29, hurricanes have historically made landfall in the region and have impacted Clarke County. Due to the county's proximity to the Gulf of Mexico, hurricanes and coastal storms continue to be a high risk for Clarke County. *Figure 4 Hurricane Risk in MID Counties by Census Tract,* in section VII.D, indicates that the majority of Clarke County has a relatively high to very high Hurricane Risk. Additionally, analysis performed by Florida State University's Meteorology Department indicates that the probability of a hurricane of any intensity passing over Alabama is between 60% and 80%[21].

Any increased intensities in the future are likely to exacerbate the county's future vulnerability, given that intense hurricanes and coastal storms have enormous potential to devastate the physical, agricultural, economic, and sociocultural infrastructure of the county. According to the 2014 Clarke County Hazard Mitigation Plan, Hurricanes have a potential for creating losses of $293M for critical facilities in the county.

b. Severe Storms

Severe storms may include lightning, hail, strong winds, intense rainfall and flooding. Since 1953, NCEI has recorded 282 hail, heavy rain, lightning, strong wind, and thunderstorm windstorm

[21] https://moe.met.fsu.edu/tcprob/al.php

events, as shown in Table 28. As this event type has occurred regularly over the years that resulted in damage, and severe storms are expected to continue on a regular basis, Clarke County has identified this event type as a high-risk hazard. The risk for negative impacts from hail across the county is relatively low to relatively moderate, as shown in *Figure 7 Hail Risk in MID Counties by Census Tract.* For strong winds, there is a varied risk across the county and ranges from relatively low in the northern part of the county to relatively high in the central region of the county, as shown in *Figure 8 Strong Winds Risk in MID Counties by Census Tract.*

Severe storms can happen county-wide which can lead to property and crop damage, and at times injuries. According to the *Table 29: NCEI Storm Events Summary,* the combination of hail, strong winds, lightning, and thunderstorms have led to the estimated property damage costs of $2M and $5,000 in crop damages.

c. Flooding

Flooding is a problem for many people across the United States. Enduring the consequences of repetitive flooding can put a strain on residents and on state and local resources. When the water rises, communities face the disruption of life, damaged belongings, and the high cost of rebuilding. FEMA administers the National Flood Insurance Program (NFIP), which pays flood claims. According to the NFIP data, as of April 2024, there is only 1 Repetitive Loss Property and 0 Severe Repetitive Loss Properties in Clarke County.

While repetitive loss flooding is not common in Clarke County, Clarke County does have flood events and is ranked 18th out of the 67 Alabama counties for the number of reported flood events between 2000 and 2022, according to the *2023 Alabama State Hazard Mitigation Plan*. The most common type of flooding event in Clarke County is a flash flood as depicted in the table below.

Flash Flood	Flood	Coastal Flood or Storm Surge	All Flood Events
40	3	0	43

Data Source: 2023 Alabama State Hazard Mitigation Plan

Where the Alabama and Tombigbee Rivers meet at the southern tips of Clarke and Washington Counties, there is a very low risk for coastal flooding as shown in *Figure 5 Coastal Flood Risk in MID Counties by Census Tract.* According to the *Table 29: NCEI Storm Events Summary,* the combination of flash flood and flooding events have led to the estimated property damage of $2.98M.

d. Extreme Temperatures

Extreme cold and heat is often associated with winter weather or droughts that can lead to greater impacts on communities. According to the 2023 State Hazard Mitigation Plan, the observed extreme temperature events in Alabama have ranged in magnitude from a high of 100 F to a low of 2 F.

Extreme heat is very common to Clarke County, as Alabama has a humid subtropical climate, and summers in Alabama are among the hottest in the United States, with high temperatures averaging over 90 °F throughout the state. The risk for negative impacts from heat waves across the majority of county is relatively high, as shown in *Figure 3 Heat Wave Risk in MID Counties by Census Tract.* Prolonged extreme heat periods play a vital role when it comes to droughts, especially when coupled with lack of precipitation resulting in a lack of moisture in agricultural soil. This can lead to negative economic impacts in the county as crop losses occur. Agricultural losses

from droughts are estimated to cost the state annually in damages. As a result, the past events and future probability of heat and droughts are classified as risks but are relatively low as supported by *Figure 2 Drought Risk in MID Counties by Census Tract.*

While extreme cold temperatures are uncommon due to Alabama's mild winter climate, residents are unaccustomed to and less prepared for the severe cold weather, putting residents at a greater risk for dealing with the extreme cold compared to more northern climates. Most crop species in Alabama do not have a tolerance for cold temperatures, making them more susceptible to the impacts of cold weather. Cold weather may also be accompanied by winter weather and storms, and ice storms which can cause downed trees or result in vehicle accidents. Since 1953, 12 cold weather-related events have occurred in Clarke County.

In general, there is a lack of infrastructure in the county to offer dedicated cooling or warming stations for residents, especially populations that are the most vulnerable to extreme temperatures.

e. Tornadoes

Tornadoes are Clarke County's most significant loss producing natural hazards according to the NCEI Storm Events Database. Between 1950 and 2022, Tornadoes caused 21 injuries and more than $5.8 million in property and crop losses.

According to *Figure 9 Tornado Risk in MID Counties by Census Tract*, the majority of Clarke County has a relatively high to very-high Tornado Risk rating. Due to Clarke County's amount of forestry land, Tornadoes could cause a lot of downed trees which can damage property, block roadways and result in power outages.

f. Wildfires

According to the Alabama Forestry Commission Current Wildfire Totals summary[22], between 2000 and June 19, 2024, there were 418 total wildfires in Clarke County. Those fires burned 3,487.6 acres. That translates to a yearly average of 17 fires and 141 acres burned per year. The largest fire recorded in the county between these years was 226 acres and occurred in 2011. Based on past occurrences, every area of the county has a degree of risk based.

According to *Figure 10 Wildfire Risk in MID Counties by Census Tract*, Clarke County has a very low to relatively moderate wildfire risk compared to the rest of the country. However, according to the 2023 Alabama State Hazard Mitigation Plan, as the climate changes, Alabama is projected to become more prone to wildfire occurrences between now and 2050. It is projected that by 2050 the average number of days with high wildfire will double from 25 to 50 days a year.

3. Hazard Risk Analysis

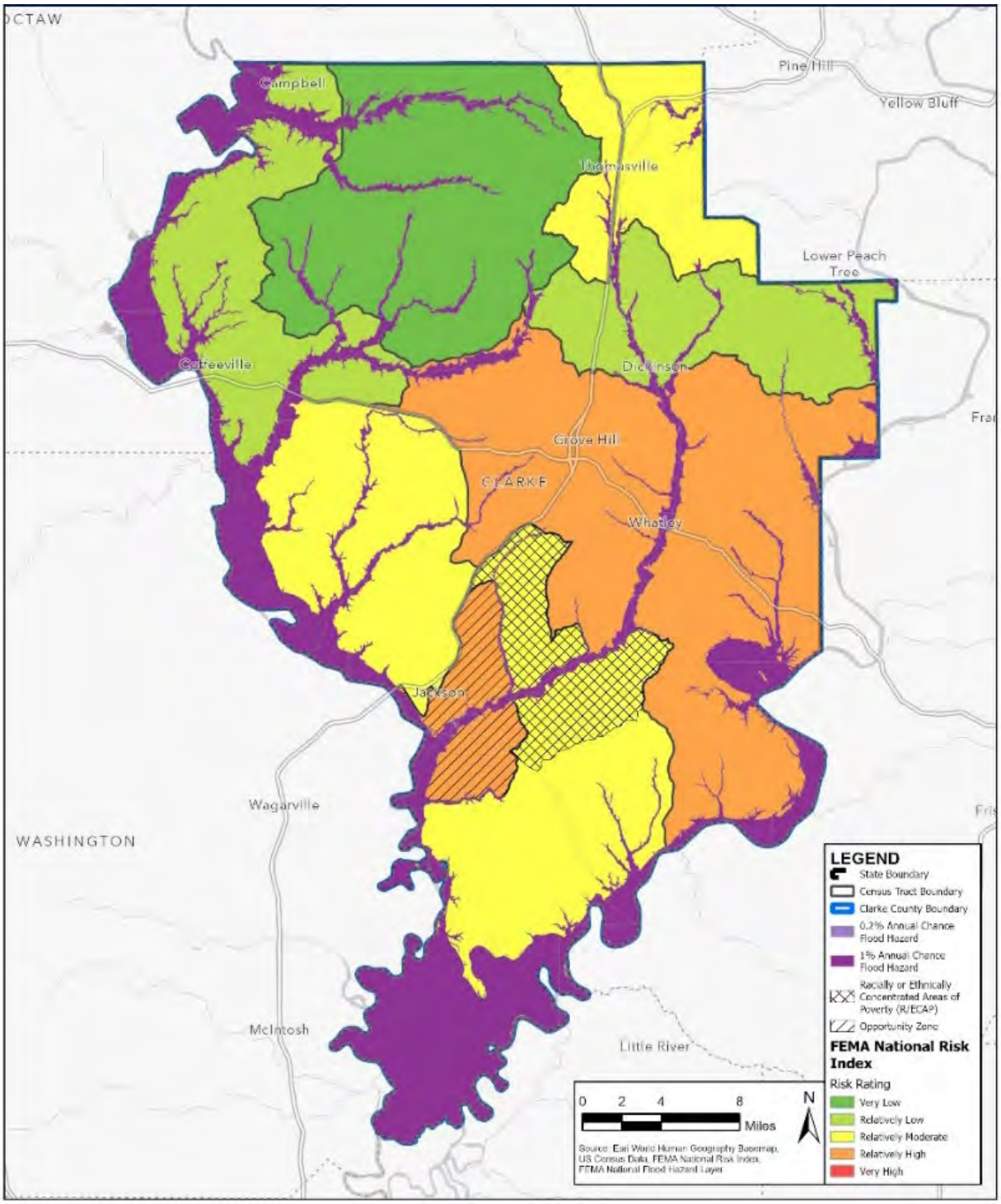
It has long been recognized that risk often corresponds with a high level of social vulnerability, compounding the impact of hazard and storm events. Using the FEMA National Risk index, we can evaluate the potential for negative impacts resulting from natural disasters by combining the expected annual loss due to natural hazards, social vulnerability, and community resilience.

Risk Index = Expected Annual Loss x Social Vulnerability ÷ Community Resilience

[22] https://forestry.alabama.gov/pages/fire/totals.aspx

Based on the composite Risk Index Score provided, we can see that there are parts of the county that have a Relatively High risk score. This area includes Grove Hill and areas south of Jackson. Hazard specific risk indices for the greatest regional and county risks can be found in the maps in Section VII.D of this plan.

Figure 22 Clarke County FEMA National Risk Map



Vulnerability Overview

An overview of the greatest hazards and their risk impact from the *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* is shown below. To quantify the risk classifications of the greatest risk hazard, risk factors (probability, impact, location extent, duration) were evaluated.

Hazard	Probability	Impact	Location Extent	Duration
Dam Failure	Pending	Pending	Pending	Pending
Flooding	Pending	Pending	Pending	Pending
Tornadoes	Pending	Pending	Pending	Pending
Severe Storms	Pending	Pending	Pending	Pending
Extreme Heat and Droughts	Pending	Pending	Pending	Pending
Wildfires	Pending	Pending	Pending	Pending

Probability defined:

- Very Low: Less than 1% annual probability
- Low: Between 1% and 10% annual probability
- Medium: Between 10% and 100% annual probability
- High: 100% annual probability

Impact defined:

- Minor: Very few injuries, if any occur. Only minor property damage and minimal disruption of quality of life. Temporary shutdown of critical facilities.
- Limited: Minor injuries only. More than 10% of property in the affected area was damaged or destroyed. Complete shutdown of critical facilities for more than one day.
- Critical: Multiple deaths/injuries possible. More than 25% of property in the affected area was damaged or destroyed. Complete shutdown of critical facilities for more than one week.
- Catastrophic: High number of deaths/injuries possible. More than 50% of property in the affected area was damaged or destroyed. Complete shutdown of critical facilities for one month or more.

Location Extent defined:

- Negligible: Less than 1% of area affected.
- Small: Between 1% and 10% of the area affected.
- Moderate: Between 10% and 50% of the area affected.
- Large: Between 50% and 100% of the area affected.

Community Lifelines

Community Lifelines are critical business and government functions that are critical in the event of a disaster and are essential to human health, safety, or economic security. The greatest risks identified by the county could disrupt any number of the community lifelines which could impact emergency response and vulnerable populations and communities. Mitigation efforts should address any vulnerabilities across the 7 community lifelines to decrease the impact of the hazards identified in this plan. Maps of the lifeline assets in the county as well as the greatest risks can be found in Section VII.

F. Activity Identification

The 2020 disasters exposed and exacerbated housing, infrastructure, economic, and mitigation needs in many communities that remain at risk following these events. The post-disaster recovery process presents an opportunity to address these long-standing gaps while supporting the communities' efforts to recover and represent a lasting investment in local capacity and resilience. Programs proposed in this Local Recovery Plan are designed to promote long-term mitigation and resiliency standards with a focus on serving the most vulnerable populations.

To address these needs, the State of Alabama identified the following project activity types to be considered by each MID County as part of this planning process:

- Affordable Multifamily Rental Housing
- Homeowner Buyouts
- Homebuyer Assistance
- Mitigation
- Economic Resilience
- Infrastructure & Public Facility Improvements
- Public Services

Clarke County did not identify a need for affordable multifamily rental housing, or homeowner buyouts. Below is an outline of the identified homebuyer assistance, mitigation, economic resilience, infrastructure & public facility improvements and public services projects identified and their associated project descriptions and details.

	Project Name	Eligibility Criteria		Project Description	Project Rank
Housing					
	Homeownership Assistance	**Strategy**	Housing Recovery	• Provide opportunities for vulnerable mobile home renters and owners to purchase more secure housing, with an emphasis on supporting first-time homebuyers located within a MID Recovery Zone. • Intended to pay a portion of the cost of purchasing an eligible new home for eligible applicants, which may be based on need, household size, and the cost of a home.	
		Eligible Activity	Homebuyer Assistance, HCDA Section 105(a) 24		
		National Objective	LMI, UN		
		Benefits vulnerable populations	Yes		
		SVI Score	High		
		Geographic Eligibility	MID Recovery Zone		
		Administering Entity Identified	No, Conceptual Phase		
		Project Amount Identified	No, Conceptual Phase		
		Other Funding Sources Identified	No, Conceptual Phase		
		Project Readiness	Conceptual		
		Operations and Maintenance Feasibility Identified	N/A		
Recovery and Resilience					
	Flood Improvements	**Strategy**	Mitigation	• Implement flood control improvement projects in areas subject to re-occurring flooding, that leave communities cut off from the rest of the county. This was particularly problematic during and after Hurricanes Sally and Zeta.	
		Eligible Activity	Mitigation, HCDA Section 105(a)(2)		
		National Objective	LMI, UN		
		Benefits vulnerable populations	Yes		
		SVI Score	High		
		Geographic Eligibility	MID County – Mitigation		

Project Name	Eligibility Criteria		Project Description	Project Rank
	Administering Entity Identified	No, Conceptual Phase	• Specific areas initially identified are along roadway areas in Brockville, Carlton Barlow, Bend, and Indian Ridge. • These roadways have been repaired multiple times and need significant improvements to be made to mitigate future flooding events along these roadways.	
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Storm Hardening - Tree Trimming	**Strategy**	Mitigation	• Clarke County has significant tree acreage which drives the timber and paper economy. Because of this, power outages are prevalent county-wide due to trees falling on power lines. To help combat this issue, storm hardening techniques in the form of establishing a tree trimming division and program would be established. By removing trees before storm events hit, Clarke County would be able to mitigate against risks of potential power outages. • As part of this tree trimming program, Clarke County would procure equipment (bucket trucks, safety equipment, tree trimming equipment) and cover staffing costs for the first several years of this new project.	
	Eligible Activity	Mitigation, HCDA Section 105(a)(8)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID County – Mitigation		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Small Business Technical Assistance	**Strategy**	Recovery	• Business owners recovering from disasters are often in need of specific technical assistance to respond to losses to their businesses whether it be a loss of employees or customers or a need for a new product that may present a growth opportunity for a business. The county will bolster the grant and loan resources and strengthen the small business community by creating a technical assistance program to support businesses in developing new business continuity plans and creating a disaster resilience plan to help prepare for future disasters. • Grants will be awarded either to separate technical assistance providers or to the entities implementing the loan and grant program. Technical assistance may include the development of business plans; financial	
	Eligible Activity	Economic Resilience, HCDA Section 105(a)8, 15,17, 21, and 22		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	N/A		

Project Name	Eligibility Criteria		Project Description	Project Rank
			management guidance; long-term recovery and sustainability plans; and specialized training.	
Job Training to Support Local Economy	**Strategy**	Recovery	• The county looks to bolster and strengthen the local timber and paper industries by providing grants focused on training mechanical and maintenance technicians. • Grants would be provided to the Coastal Alabama Community College Center for Forestry, Paper, and Chemical Technology to continue the specialized training for these industries. Grants would include providing financial assistance to LMI residents in the MID Recovery zones.	
	Eligible Activity	Economic Resilience, HCDA Section 105(a) 21		
	National Objective	LMI		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, potentially Coastal Alabama CC		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	N/A		
Community Resilience Center	**Strategy**	Recovery & Mitigation	• Develop a community resilience center that provides year-round programming to build overall community resilience, while also being augmented to provide critical services during extreme and disaster events. During a steady state the Center may provide health services, job and workforce training, microenterprise incubation, workshops, and meeting space, among other uses. During or following a disaster event, this center may serve as a cooling or warming center and would be designed with back up solar generators to enable the center to provide critical services to residents when needed, such as energy, water, shelter, food, resources, communication infrastructure, health services, and other post-disaster services.	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Culvert Repairs	**Strategy**	Recovery & Mitigation	• Storm culverts are essential for managing surface runoff across roads and highways, by preventing roadway flooding. If culverts are damaged, unsafe driving conditions may exist and could prevent roadways from being in use which could disrupt several community lifelines. The	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone or MID County – Mitigation		

Project Name	Eligibility Criteria		Project Description	Project Rank
	Administering Entity Identified	No, Conceptual Phase	county identified the need to repair culverts across the county.	
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Establish and Staff Public Housing Authority	**Strategy**	Recovery	• This project would be to establish a Public Housing Authority for the county by funding an office location and staff for the first several years of this new division.	
	Eligible Activity	Public Services, HCDA Section 105(a)(8)		
	National Objective	LMI		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		

On the following page, a matrix overview of identified project activities are provided, including their project ranking.

Figure 23 Clarke County Identified Activities

Project Description	Program Strategy	Eligible Activity	National Objective	Benefits vulnerable population	SVI Score	Geographic Eligibility	Administering Entity Identified	Leverages Other Funds Identified	Project Readiness	O&M Feasibility Identified	Project Rank
Homeownership Assistance	Recovery	Homebuyer Assistance	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	TBD
Flood Improvement Projects	Mitigation	Mitigation	LMI, UN	Yes	High	MID County – Mitigation (County Wide)	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	TBD
Storm Hardening - Tree Trimming	Mitigation	Mitigation	LMI, UN	Yes	High	MID County – Mitigation (County Wide)	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	TBD
Small Business Technical Assistance	Recovery	Economic Resilience	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	TBD
Job Training to Support Local Economy	Recovery	Economic Resilience	LMI	Yes	High	MID Recovery Zone	No, potentially Coastal Alabama CC	No, Conceptual Phase	Conceptual	N/A	TBD
Community Resilience Center	Recovery & Mitigation	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	TBD
Culvert Repairs	Recovery & Mitigation	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zone or MID County – Mitigation (County Wide)	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	TBD
Establish and Staff a PHA	Recovery	Public Services	LMI	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	TBD

IX. Dallas County

A. Introduction

Dallas County is located in the west-central portion of the state where the Alabama and Cahaba River converge. The Cahaba River is the longest free-flowing reiver in Alabama and boasts one of the most biologically diverse rivers in the United States. After emancipation following the Civil War, many African Americans stayed in the area and worked as sharecroppers and tenant farmers. The county has been majority black since before the Civil War.

According to the American Community Survey (ACS) 2022 5-Year Estimates[23], Dallas County has a population of 38,326, a 2% decrease from 39,149 in 2019. The demographic breakdown shows a majority of the population, 69%, are Black or African American residents, followed by 28% identifying as White.

Housing in Dallas County includes 18,992 occupied units, with 62% being single-family homes and 17% mobile homes. In total, 95% of units in the county are 1–4-unit dwellings or mobile homes. Homeownership is high, with 61% of residents owning their homes and 39% renting.

Dallas County primarily experienced damage from Hurricane Zeta which resulted in downed trees that cut off power to communities for weeks and damaged homes which are still in need of repair. Downed trees remain at the Old Cahaba Archaeological Park due to the expensive specialized equipment needed to remove the trees. Additionally, flooding along the Alabama and Cahaba Rivers occurred and caused road washouts, flooding, and riverbank erosion at the Old Cahaba Archeological Park. Due to a lack of sheltering options in the county, many impacted households did not have a safe place to stay or gather after the storm.

B. Unmet Needs Gap

Through this Local Recovery Plan, the ACCA and Dallas County present unmet need estimates from Hurricane Sally and Hurricane Zeta based on current best available data (see Table below). Over time, ACCA and the county reserves the right to continue to update these estimates as additional assessments are made and more complete data becomes available.

Table 31 Total Estimated Unmet Need for Dallas County

	Estimated Impact	Amount of Funds from Other sources	Total Unmet Need
Housing	$7,417,635	$2,529,038	$4,888,597
Infrastructure	$5,386,944	$4,825,549	$44,800
Economy	$3,051,722	$72,000	$2,979,722
Total	**$15,856,301**	**$7,426,587**	**$7,913,119**

Estimated impact includes added resilience and increased construction costs and may include FEMA Public Assistance Categories A, B and Z, where applicable. Total Unmet Need does not include FEMA PA categories A, B and Z.

[23] https://data.census.gov/ - Tables B02001, B25024, B25033

C. Impact and Unmet Needs Assessment

1. Background

In accordance with HUD guidance, Dallas County completed the following unmet needs assessment to identify priorities for CDBG-DR funding allocated as a result of impacts from the 2020 storms.

The assessment below utilizes federal and state resources, including data provided by FEMA, HUD, and the Small Business Administration (SBA), among other sources, to estimate unmet needs in three main categories of damage: housing, economy, and infrastructure. This unmet needs assessment focuses on Dallas County's impacts, with specific sections detailing particular needs within the most impacted area, and where relevant, smaller geographic units.

a. Demographic Profile of the Affected Areas

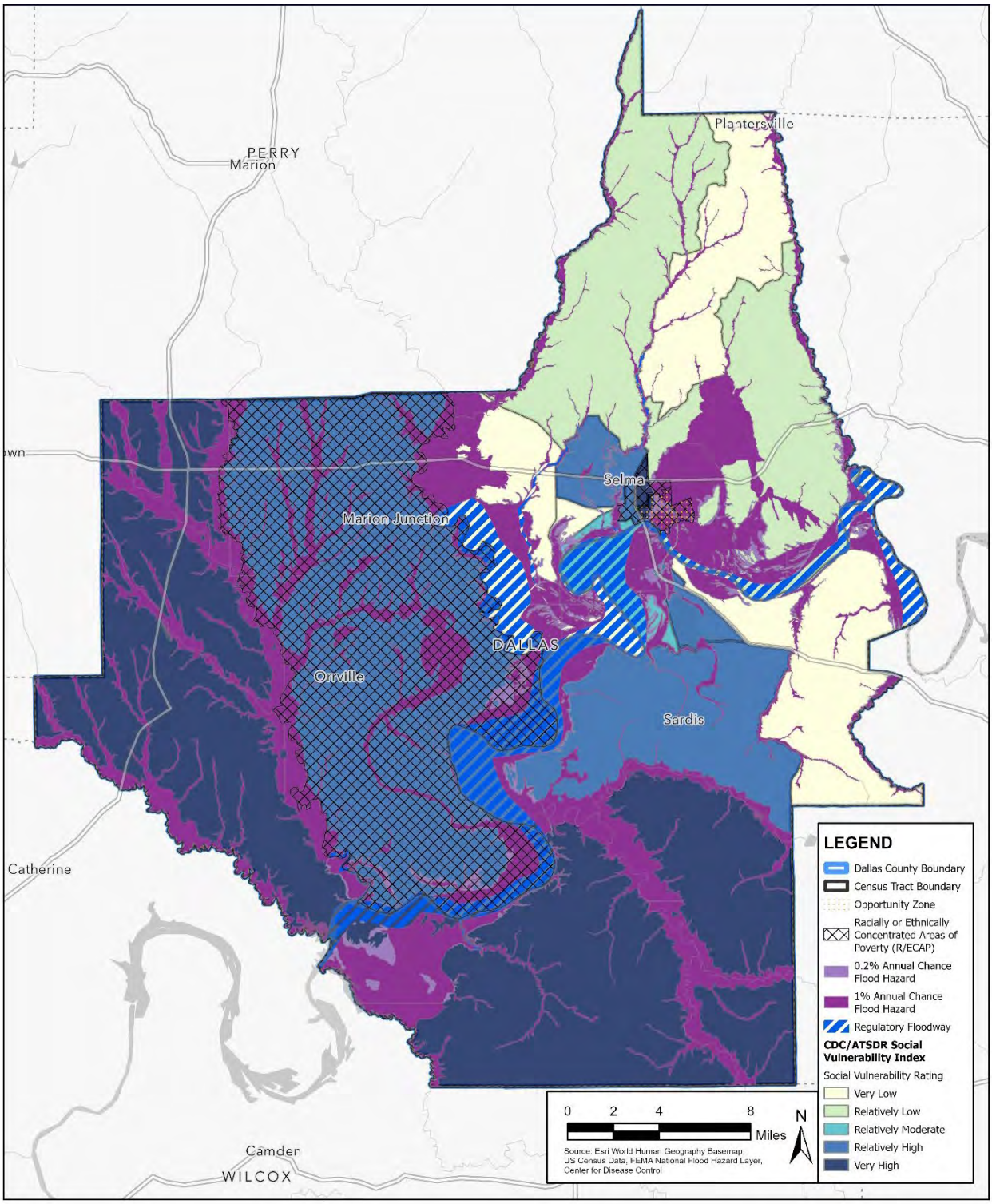
The demographic profile of Dallas County has not changed much since the State Action Plan was published and specific demographic information can be reviewed in the State Action Plan for the county.

Dallas County identified vulnerable populations within the county as part of the establishment of MID Recovery Zones. Vulnerable populations include those identified as part of a protected class, hard-to-reach, underserved, historically disadvantaged areas, and economically distressed areas. For this LRP, Dallas County has identified vulnerable population areas using the CDC/ATSDR Social Vulnerable Index (SVI) and Geographically underserved and historically disadvantaged areas including identified Racially or Ethnically Concentrated Areas of Poverty (R/ECAP) and Opportunity Zones.

The CDC/ATSDR SVI is a place-based index designed to identify and quantify communities experiencing social vulnerability by comparing socio-economic, household composition, minority status and language, housing types and transportation needs, and other adjunct variables such as race and ethnicity and households without an internet subscription at the census tract level. R/ECAPs are defined by HUD where census tracts have a non-white population of 50 percent or more and 40 percent or more of individuals in the census tract are living at or below the poverty line. Opportunity Zones are economically distressed communities, defined by individual census tract, nominated by America's governors, and certified by the U.S. Secretary of the Treasury via his delegation of that authority to the Internal Revenue Service. The Opportunity Zones initiative is not a top-down government program from Washington but an incentive to spur private and public investment in America's underserved communities.

Dallas County does not have any Promise Zones, Neighborhood Revitalization Strategy Areas, or Tribal areas within the county. The map below provides an overview of the SoVI in each census tract as well as the identified Racially or Ethnically Concentrated Areas of Poverty (R/ECAP) and Opportunity Zone against the flood hazard and floodway zones.

Figure 24 Dallas County Vulnerability Map



2. Housing Impact & Needs

a. Housing Damage and Loss Assessment

Unless otherwise noted, all housing summary data were compiled from these datasets for Hurricane Zeta only.

For each household determined to have unmet housing needs, their estimated average unmet housing need was calculated using similar variables and calculation methods from the State Action Plan. These variables are:

1. FEMA Damage Category Application Counts of Minor-Low to Major-Low
2. FEMA Damage Category Application Counts of Major-High to Severe
3. FEMA IA Applications without FEMA Verified Loss
4. Public Housing Damages

Total impact tables have been summarized based on owner-occupied vs renter-occupied households, impacted populations with flood and homeowner insurance, impact by residence type, impact by gross income, and impact to housing authorities in the following sections.

b. Total Impact (Owner-Occupied and Renter Households)

The information in the below tables outlines the total damaged properties population with documented damages. To account for properties that never had an inspection physically take place due to the COVID-19 pandemic and other reasons no damages were found, likely because they were desktop inspections, the county has classified these applications as “No FVL”. A detailed description is provided in the FEMA IA Applications without Real Property FEMA Verified Loss section.

Table 32 Homeowner/Renter Damaged Properties by All Damage Categories

Damage Category	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Severe	2	0.1%	0	0.0%	2	0.1%
Major-High	3	0.1%	0	0.0%	3	0.1%
Major-Low	37	1.7%	23	1.1%	60	2.8%
Minor-High	352	16.5%	205	9.6%	557	26.2%
Minor-Low	189	8.9%	29	1.4%	218	10.3%
No FVL	883	41.5%	406	19.1%	1,289	60.5%
Total	**1,466**	**68.9%**	**663**	**31.1%**	**2,129**	**100.0%**

FEMA Damage Category Applications - Minor-Low, Minor-High, and Major-Low

For FEMA IA Applications with minor-low, minor-high, and major-low damage, the count of those applications in each county was multiplied by the overall average SBA verified property loss per damage category provided in the State Action Plan to determine the estimated total loss/support for these three damage categories. The below tables outline the total number of properties damaged for homeowners and renters.

Table 33 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Homeowners

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	189	$1,621	$306,369
Minor-High	352	$5,495	$1,934,240
Major-Low	37	$11,502	$425,574
Total	**578**	**N/A**	**$2,666,183**

Table 34 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	29	$1,621	$47,009
Minor-High	205	$5,495	$1,126,475
Major-Low	23	$11,502	$264,546
Total	**257**	**N/A**	**$1,438,030**

Table 35 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Homeowners & Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	218	$1,621	$353,378
Minor-High	557	$5,495	$3,060,715
Major-Low	60	$11,502	$690,120
Total	**835**	**N/A**	**$4,104,213**

FEMA Damage Category Applications - Major-High to Severe

For FEMA IA Applications with major-high to severe damage, it was assumed that those structures were substantially damaged and required reconstruction. To determine the replacement cost of the home, Dallas County replicated ADECA's approach and used the county's Zillow Home Value from August 2020 for All Homes (none-adjusted)[24]. Since the Zillow home value includes the cost of the land, it is assumed 66% of the value was attributable to the structure on the property. This adjusted home value is multiplied by the total count of applications in the major-high to severe damage categories. The results of these calculations are provided in Table 36 below.

Table 36 Major-High and Severe Estimated Total Loss Homeowners and Renters

Damage Category	Zillow Home Value	66% of Zillow Value	Count	Estimated Total Loss
Major-High	$77,707	$51,287	3	$153,861
Severe	$77,707	$51,287	2	$102,574
	Total		**5**	**$256,435**

Of the 5 major-high and severely damaged homes, no renter-occupied dwellings are classified as Major-High or Severe.

[24] Dallas County, AL Housing Market, https://www.zillow.com/home-values/974/dallas-county-al/

FEMA IA Applications without FEMA Verified Loss

Dallas County also accounted for the damage to applications without Real Property FEMA verified loss (RPFVL) for owner-occupied dwellings and without Personal Property FEMA Verified Loss (PPFVL) for renter-occupied dwellings because due to the COVID-19 pandemic and other reasons, an inspection never physically took place or no damages were found, likely because they were desktop inspections. To account for these types of impacts, Dallas County counted applications with no FEMA Verified Loss and multiplied it by the average value for minor-low damage per SBA-verified property loss provided in the State Action Plan. The results of these calculations are provided in the table below:

Table 37 Estimated Total Loss for IA Applications without FEMA Verified Loss

Occupancy Type	Count Applications	Average SBA Value	Estimated Total Loss
Owner	883	$1,621	$1,431,343
Renter	406	$1,621	$658,126
Total	**1,289**	**$1,621**	**$2,089,469**

c. Impacts of Insurance (HOI and NFIP)

For this analysis, households inspected by FEMA and shown to have a 'Water Level' greater than 0.0 inches are considered to have been flooded, while all other units with no 'Water Level' are considered to have been impacted exclusively by wind.

See below for flood-damaged properties by damage category and occupancy type.

Table 38 Flood Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	0	10	5	11	1	0	27
Renter	1	2	21	7	0	0	31
Total	**1**	**12**	**26**	**18**	**1**	**0**	**58**

Flood Damage and Insurance (NFIP): An alarmingly high proportion of units with evidence of flood damage were reported in the FEMA IA data not to carry a flood insurance policy through the National Flood Insurance Program (NFIP) as shown in the table below. In total, approximately **100 percent** of the flood-affected homeowner population is reported to not carry an NFIP policy per the FEMA IA data.

Table 39 Homeowner Flood-Damaged Properties and NFIP Counts

Damage Category	With NFIP	% With NFIP	Without NFIP	% Without NFIP
Severe	0	0%	0	0%
Major-High	0	0%	1	4%
Major-Low	0	0%	11	41%
Minor-High	0	0%	5	19%
Minor-Low	0	0%	10	37%
No FVL	0	0%	0	0%
Totals	**0**	**0%**	**27**	**100%**

Wind Damage and Insurance: In the absence of evidence of flood damage, units are assumed to be impacted exclusively by wind. As such, for the proportion of owner-occupied units with no evidence of flooding damage, the county is especially concerned about the high rate of households reported not to carry a standard hazard homeowners insurance policy (HOI) that would otherwise be expected to offset documented losses. In total, 63 percent of the wind-impacted homeowner population is reported not to carry hazard insurance as shown in the table below.

Table 40 Wind Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	883	179	347	26	2	2	1,439
Renter	405	27	184	16	0	0	632
Total	**1,288**	**206**	**531**	**42**	**2**	**2**	**2,071**

Table 41 Homeowner Wind-Damaged Properties and HOI Counts

Damage Category	With HOI	% With HOI	Without HOI	% Without HOI
Severe	0	0%	2	0%
Major-High	0	0%	2	0%
Major-Low	2	0%	24	2%
Minor-High	74	5%	273	19%
Minor-Low	27	2%	152	11%
No FVL	426	30%	457	32%
Totals	**529**	**37%**	**910**	**63%**

d. Impact based on Residence Type

The below table shows FEMA IA applicants by housing type. The highest number of applicants came from House/Duplex units (63%) and Mobile Home units (27%).

Table 42 FEMA IA Applicants by Residence Type and Occupancy Type

Residence Type	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Apartment	0	0	161	8%	161	**8%**
Assisted Living Facility	0	0	1	0%	1	**0%**
Correctional Facility	0	0	1	0%	1	**0%**
House/Duplex	960	45%	375	18%	1,335	**63%**
Mobile Home	463	22%	103	5%	566	**27%**
Other	33	2%	13	0%	46	**2%**
Townhouse	4	0%	7	0%	11	**0%**
Travel Trailer	6	0%	2	0%	8	**0%**
Total	**1,466**	**69%**	**663**	**31%**	**2,129**	**100%**

The below table shows FEMA IA flood-damaged properties by housing type who had Flood or Homeowner's insurance. As indicated in the overview of flood-damaged properties, **zero** of the flood-affected homeowner applicants are reported to carry an NFIP policy per the FEMA IA data.

Table 43 Homeowner Occupied Flood Damaged Properties by Residence Type with NFIP

Residence Type	Count of Applications	Count with NFIP	% with NFIP
House/Duplex	20	0	0%
Mobile Home	7	0	0%
Total	**27**	**0**	**0%**

The below table shows FEMA IA wind-damaged properties by housing type who had Homeowner's insurance. As indicated in the overview of wind-damaged properties, **37%** of the affected homeowner applicants are reported to carry a homeowner's insurance policy per the FEMA IA data.

Table 44 Homeowner Occupied Wind Damaged Properties by Residence Type with HOI

Residence Type	Count of Applications	Count with HOI	% with HOI
Apartment	0	0	0%
Assisted Living Facility	0	0	0%
Correctional Facility	0	0	0%
House/Duplex	940	439	46%
Mobile Home	456	83	18%
Other	33	6	18%
Townhouse	4	1	25%
Travel Trailer	6	0	0%
Total	**1,439**	**529**	**37%**

Total estimated losses have been summarized by residence type below.

Table 45 Total Estimated Loss by Residence Type

Residence Type	Count	Estimated Total Loss
Apartment	161	$475,227
Assisted Living Facility	1	$1,621
Correctional Facility	1	$1,621
House/Duplex	1335	$4,130,031
Mobile Home	556	$1,718,623
Other	46	$74,566
Townhouse	11	$31,586
Travel Trailer	8	$16,842

e. Impact on LMI Households

The income data provided in the FEMA IA data set was not specific enough to perform a low-and moderate-income (LMI) calculation as income was categorized by general ranges. To summarize

the impact of storms on households based on income, four income groupings are provided in the tables below. Overall, households with lower incomes were disproportionately impacted by Hurricane Zeta, with 78% of the total impacted population making $30,000 or less

Table 46 Gross Income by Damage Level for Homeowners Only

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	2	0%	0	0%	0	0%	0	0%	2	0%
Major-High	1	0%	1	0%	1	0%	0	0%	3	0%
Major-Low	32	2%	4	0%	1	0%	0	0%	37	3%
Minor-High	276	19%	61	4%	15	1%	0	0%	352	24%
Minor-Low	166	11%	18	1%	4	0%	1	0%	189	13%
No FVL	597	41%	208	14%	74	5%	4	0%	883	60%
Totals	**1,074**	**73%**	**292**	**20%**	**95**	**6%**	**5**	**0%**	**1,466**	**100%**

Table 47 Gross Income by Damage Level for Renters Only

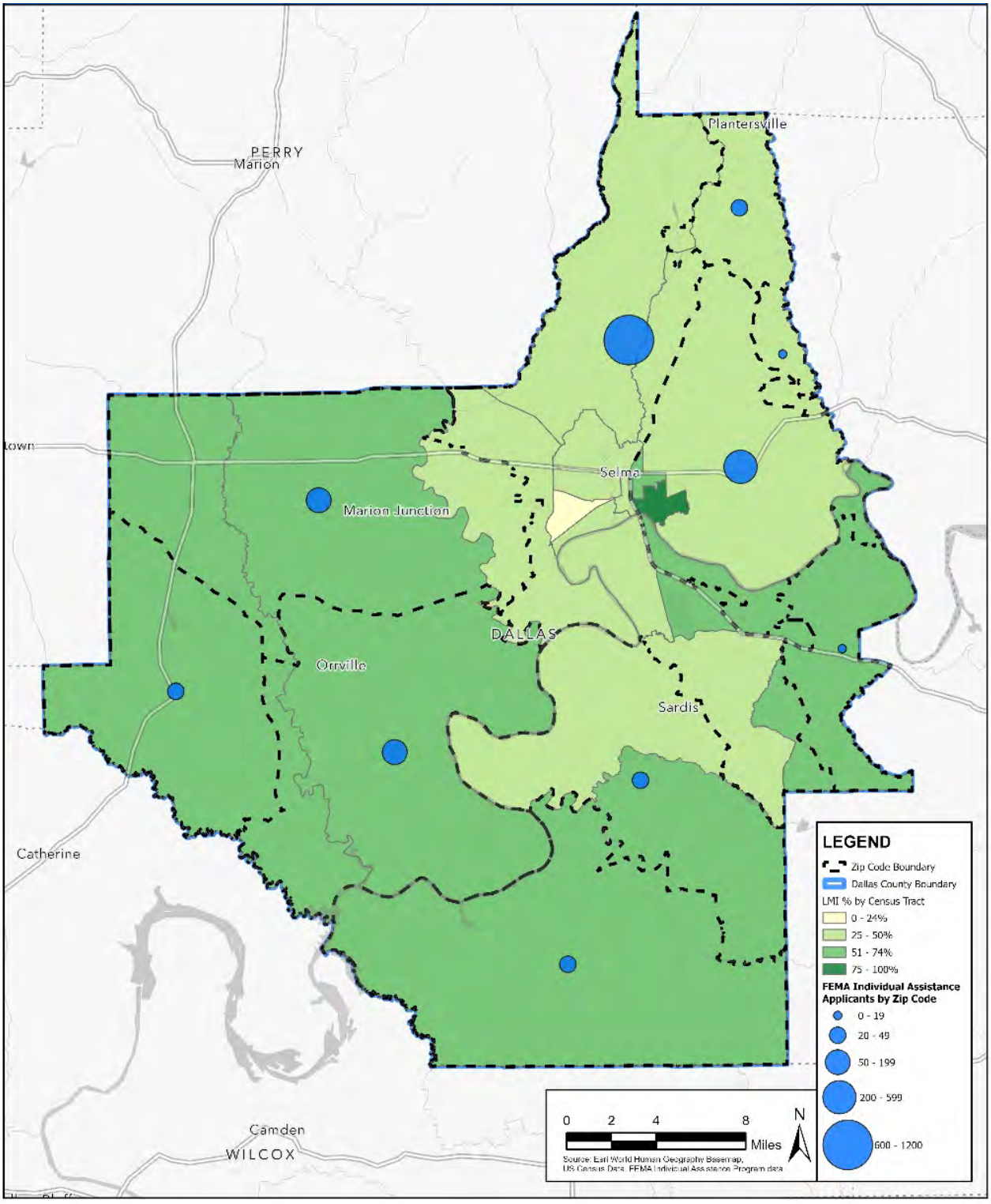
Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	0	0%	0	0%	0	0%	0	0%	0	0%
Major-Low	20	3%	3	1%	0	0%	0	0%	23	4%
Minor-High	186	28%	16	2%	3	1%	0	0%	205	31%
Minor-Low	27	4%	1	0%	0	0%	1	0%	29	4%
No FVL	343	52%	56	8%	6	1%	1	0%	406	61%
Totals	**576**	**87%**	**76**	**11%**	**9**	**2%**	**2**	**0%**	**663**	**100%**

Table 48 Gross Income by Damage Level for Homeowners and Renters

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	2	0%	0	0%	0	0%	0	0%	2	0%
Major-High	1	0%	1	0%	1	0%	0	0%	3	0%
Major-Low	52	2%	7	0%	1	0%	0	0%	60	3%
Minor-High	462	22%	77	4%	18	1%	0	0%	557	26%
Minor-Low	193	9%	19	1%	4	0%	2	0%	218	10%
No FVL	940	44%	264	12%	80	4%	5	0%	1,289	61%
Totals	**1,650**	**78%**	**368**	**17%**	**104**	**5%**	**7**	**0%**	**2,129**	**100%**

The map below illustrates the Low-Moderate Income percentage by Census Tract, with heat bubbles of where the FEMA IA applications are located based on the zip code location.

Figure 25 LMI Populations and FEMA IA Applications by Zip Code for Dallas County



f. Impact on Public Housing Authorities

There is no known unmet need for Public Housing Authorities in Dallas County.

g. Impact on Homeless Populations

The impact of natural disasters on the housed population and people experiencing sheltered homelessness is very different from the impact on people experiencing unsheltered homelessness.

When a natural disaster damages a housing unit, its inhabitants can hypothetically be made whole by insurance or FEMA. When a natural disaster damages a shelter or broader infrastructure, beds can be rendered uninhabitable, but eventually, those beds can be regained via repair and recovery operations.

For people experiencing unsheltered homelessness (e.g. living on the streets), however, the impact is more difficult to see. A natural disaster cannot remove housing or shelter from a person without housing or shelter; instead, it destroys future housing opportunities. One of the primary barriers to permanent housing in any geography is a lack of affordable housing. When a natural disaster damages or destroys an area's affordable housing, it creates a housing cost and availability crisis that prevents people experiencing homelessness from achieving and stabilizing permanent housing.

Alabama Balance of State CoC

The Alabama Balance of State CoC serves 37 rural Alabama Counties, ensuring chronic under-counting of homeless populations in rural counties. According to the *2023 AHAR: Part 1 - PIT Estimates of Homelessness in the U.S.*[25], the Alabama Balance of State CoC counted 283 sheltered and unsheltered homeless persons in 2023 and 140 Emergency Sheltered persons. Dallas County is one of the counties that makes up this CoC and has one homeless shelter in the county that serves only 15 people and is at capacity, which leads to chronic under-serving of people in need of sheltering pre and post-storm. The county struggled to shelter people who lost housing due to Hurricane Zeta, and the housing and shelter crisis will only increase as additional disasters hit the area.

To provide support for those experiencing homelessness, Dallas County will need to:

- create new shelter options which include surge capacity for emergency shelter beds required to shelter people displaced by disasters,
- create outreach and drop-in centers required to serve people experiencing unsheltered homelessness; and
- hire outreach workers and resource navigators to ensure people who are imminently at risk of homelessness are diverted back.

h. Unmet Housing Needs

FEMA IA was the primary data source that Dallas County used to determine housing unmet needs. Total estimated losses have been summarized by the data source and calculation methodology as summarized in previous sections by damage category and for public housing authorities. An additional 15% is added at the end of the calculation to account for resilience costs to make buildings more resilient to future disasters. To calculate total unmet need, received assistance is summarized and subtracted from the estimated total loss including resilience costs.

[25] https://www.huduser.gov/portal/datasets/ahar/2023-ahar-part-1-pit-estimates-of-homelessness-in-the-us.html

Table 49 Total Estimated Loss by Damage Category

Data Source/Calculation	Count	Estimated Total Loss
Severe	2	$102,574
Major-High	3	$153,861
Major-Low	60	$690,120
Minor-High	557	$3,060,715
Minor-Low	218	$353,378
No FEMA Verified Loss	1,289	$2,089,469
Public Housing	0	$0
Total	**2,129**	**$6,450,117**
+15% Resilience Costs		**$967,518**
Total Estimated Loss with Resilience Costs		**$7,417,635**

To ensure that housing repair assistance is factored into the housing unmet needs calculation, FEMA IA repair and replacement, SBA Real Estate and NFIP payment amounts were added together to get the total housing assistance received. See Table 50 for the calculation.

Table 50 Total Housing Assistance Received Calculation

Data	Count	Total Amount
FEMA IA Payments	374	$1,616,237
NFIP Payments	0	$0
SBA Loan Amounts	Unknown	$912,800
Total Housing Assistance	**374**	**$2,529,038**

Total housing assistance was subtracted from the total housing unmet needs with resilience included to get a total housing unmet need of approximately $4.8 million as result of Hurricane Zeta. See Table 51 for the calculation.

Table 51 Total Housing Unmet Need for Dallas County

Data	Estimated Amount
Total Estimated Loss including 15% Resilience Costs	$7,417,635
Total Housing Assistance	**-$2,529,038**
Total Housing Unmet Need	**$4,888,597**

3. Infrastructure Impact & Needs

a. Infrastructure Damage & Loss Assessment

Dallas County suffered infrastructure losses from Hurricane Zeta only. Infrastructure damage included downed trees and associated debris, power and communication disruptions, road washouts, and flooding, with notable impacts on historical sites like Cahaba Park. Numerous downed trees remain at the Cahaba Archeological Park due to the expensive specialized equipment needed to remove the trees.

The table below includes the Estimated PA Cost and additional costs for resiliency measures (15%) and increased cost of construction (23.6%) to estimate the Federal Share (90%) and the local share/unmet need (10%) more accurately for Categories C through G, roads and bridges, public facilities and buildings, public utilities, and other public assistance needs.

Table 52 Total Estimated Infrastructure Costs by PA Damage Category

Damage Category	PA Project Amount	15% Resilience	23.6% Construction	Total Amount
A - Debris Removal	$5,046,393	$0	$0	$5,046,393
B - Protective Measures	$119,558	$0	$0	$119,558
C - Roads and Bridges	$7,000	$945	$1,652	$9,597
E - Public Buildings	$59,862	$8,081	$14,128	$82,071
G - Recreational/Other	$28,254	$3,814	$6,668	$38,737
Z - State Management	$90,588	$0	$0	$90,588
Total	**$5,351,656**	**$12,841**	**$22,448**	**$5,386,944**

a. Unmet Infrastructure Needs

The table below includes the Total Estimated PA Cost, consisting of resiliency measures and increased construction costs with the total Federal Obligated Amount and the Non-Federal Share Amount.

Table 53 Total Estimated Non-Federal Share Amount by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share
A - Debris Removal	$5,046,393	$4,541,753	$504,639
B - Protective Measures	$119,558	$107,602	$11,956
C - Roads and Bridges	$9,597	$6,300	$3,297
E - Public Buildings	$82,071	$53,876	$28,195
G - Recreational/Other	$38,737	$25,429	$13,308
Z - State Management	$90,588	$90,588	$0
Total	**$5,386,944**	**$4,825,549**	**$561,395**

Based on the analysis performed, there is a potential unmet need of $44,800 for identified infrastructure damage eligible under FEMA-PA Categories C-G.

Table 54 Total Estimated Cost PA Unmet Need

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share	Unmet Need Amount
A - Debris Removal*	$5,046,393	$4,541,753	$504,639	$0
B - Protective Measures*	$119,558	$107,602	$11,956	$0
C - Roads and Bridges	$9,597	$6,300	$3,297	$3,297
E - Public Buildings	$82,071	$53,876	$28,195	$28,195
G - Recreational/Other	$38,737	$25,429	$13,308	$13,308
Z - State Management*	$90,588	$90,588	$0	$0
Total	**$5,386,944**	**$4,825,549**	**$561,395**	**$44,800**

*CDBG-DR Funds are not used for PA costs in Categories A, B and Z.

4. Economic Impact & Needs

A summary of damages and impact of Hurricane Zeta is provided below, along with an analysis of Small Business Administration loans provided to the business community following Hurricane Zeta. Hurricane Zeta exacerbated existing economic challenges, particularly in tourism and ecotourism along the Cahaba River. The closure of Cahaba Park had significant effects on staff and tourism, compounded by pre-existing distress due to COVID-19.

Agriculture Impacts

Following Hurricane Zeta, USDA designated Dallas County as a primary natural disaster area, which allows producers who suffered losses by Hurricane Zeta to apply for emergency loans with the U.S. Department of Agriculture (USDA) Farm Service Agency (FSA). This natural disaster designation allows the FSA to extend much-needed emergency credit to producers recovering from natural disasters. Emergency loans can be used to meet various recovery needs including the replacement of essential items such as equipment or livestock, reorganization of a farming operation, or the refinance of certain debts.[26] As reported in the November 2, 2020, Alabama Crop Progress and Condition Report[27], Hurricane Zeta delivered heavy rains and damaging winds. The high soil moisture prevented fieldwork in many areas of the state following the Hurricane. As shown in Figure 26, parts of Dallas County Received upwards of 5 inches of rain across 48 hours.

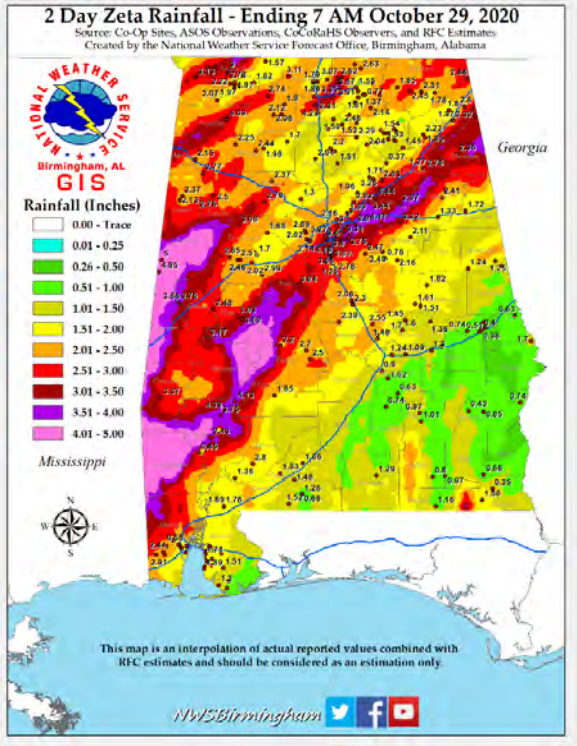


Figure 26 Hurricane Zeta 2 Day Rainfall Total

b. Unmet Economic Needs

According to an analysis of the Small Business Administration (SBA) Business loan data for applications with approved or denied loans that meet a HUD category of loss, the county realized a total verified loss for all businesses of approximately $2.6 million. After accounting for an additional fifteen percent (15%) for resilience costs, the County's total estimated economic impact is approximately $3 million. According to the SBA business report, SBA provided $72,000 in total benefits for real estate losses. Therefore, the County's remaining economic unmet needs are valued at $2.9 million with the majority of the remaining unmet needs in Selma, and the areas east of Selma.

Table 55 Dallas County Economic Unmet Needs

Total Verified Loss	15% Resilience Costs	Total Estimated Impact	Total SBA Benefits	Remaining Unmet Needs
$2,653,671	$398,051	$3,051,722	$72,000	$2,979,722

[26] https://www.fsa.usda.gov/state-offices/Alabama/news-releases/2021/usda-designates-13-alabama-counties-as-primary-natural-disaster-areas
[27] https://www.nass.usda.gov/Statistics_by_State/Alabama/Publications/Crop_Progress_&_Condition/2020/AL-CropProgress-11-02-20.pdf

D. Summary of Unmet Needs & Additional Considerations

1. Unmet Needs Summary

Based on the above analysis, the county has calculated a total unmet need of **$7.9 Million** attributable to Hurricane Zeta.

In summary, this analysis projects unmet needs as follows:

Table 56 Summary of Total Unmet Needs for Dallas County

Category	Estimated Impact	Amount of Funds from other sources	Remaining Unmet Need
Housing	$7,417,635	$2,529,038	$4,888,597
Infrastructure	$5,386,944	$4,825,549	$44,800
Economy	$3,051,722	$72,000	$2,979,722
Total	**$15,856,301**	**$7,426,587**	**$7,913,119**

A detailed analysis of how the unmet needs were calculated based on known losses and investments across each zip code is shown below.

Table 57 Unmet Need Summary by Zip Code

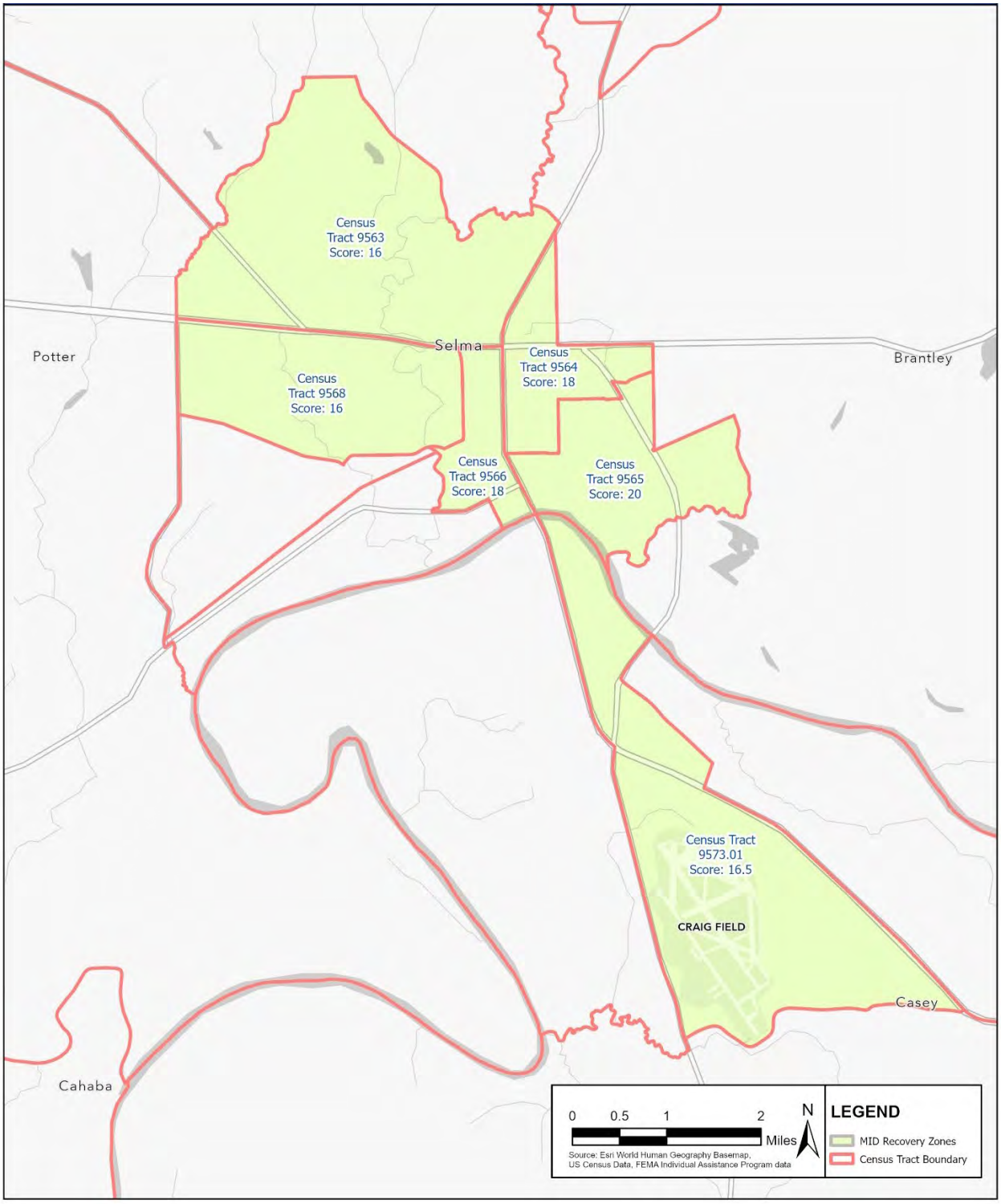
Zip Code	Unmet Housing Need	Unmet Infrastructure Needs	Unmet Economy Needs	Total Unmet Need
36703	$1,423,915	$0	$2,612,267	$4,036,181
36701	$2,445,940	$44,800	$367,455	$2,858,195
36767	$481,690	$0	$0	$481,690
36773	$151,806	$0	$0	$151,806
36758	$121,632	$0	$0	$121,632
36775	$112,362	$0	$0	$112,362
36759	$47,794	$0	$0	$47,794
36761	$43,728	$0	$0	$43,728
36749	$43,364	$0	$0	$43,364
36785	$16,367	$0	$0	$16,367
Total	**$4,888,597**	**$44,800**	**$2,979,722**	**$7,913,118**

2. MID Recovery Zones

The MID Recovery Zones (MRZ) were identified at the census tract level based on areas with vulnerable populations and zip codes with the most unmet need and where these areas overlap with census tracts. A ranked approach was taken to rate the census tracts in Dallas County based on a score from 0 to 20, with a total possible score of 10 for each category. Census tracts with scores between 15 and 20 are considered a MID Recovery Zone

The MRZ identified for Dallas County are shown in *Figure 27 MID Recovery Zones for Dallas County.*

Figure 27 MID Recovery Zones for Dallas County



Identified MID Recovery Zones: Census tracts 9573.01, 9565, 9566, 9568, 9563, and 9564

E. Mitigation Needs Assessment

In accordance with the LRRP guidance, the county completed the following Mitigation Needs Assessment. Alabama's 2023 State Hazard Mitigation Plan, Dallas County's 2014 Local Hazard Mitigation Plan, and data from the National Oceanic Atmospheric Administration (NOAA), and FEMA were used to assess the mitigation needs. This assessment informs and provides a substantive basis for programs proposed in this Local Recovery Plan, with a focus on addressing and analyzing all significant current and future hazards.

1. Historic Overview of Hazards

Since 1973 there have been 18 disaster declarations for Dallas County. The most common natural disasters that cause damage to an extent that results in a federal disaster declaration are hurricanes and severe storms, tornadoes, and flooding. The historical pattern of extreme weather is expected to continue which means mitigation measures to reduce impacts caused by these types of disasters are critical.

Table 58 Declared Disasters since 1973 and the Associated Total Obligated PA Amount to Date

Declaration	Year Declared	Incident Type	Declaration Title	Total Obligated PA Amount
DR-4684-AL	2023	Severe Storm	Severe Storms, Straight-Line Winds, And Tornadoes	$8,461,182
DR-4573-AL	2021	Hurricane	Hurricane Zeta	$4,825,549
DR-4546-AL	2020	Severe Storm	Severe Storms and Flooding	$492,849
DR-4503-AL	2020	Biological	Covid-19 Pandemic	$93,208
DR-4349-AL	2018	Hurricane	Hurricane Nate	$3,236
DR-4082-AL	2012	Hurricane	Hurricane Isaac	$308,789
DR-1971-AL	2011	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, And Flooding	$20,752
DR-1835-AL	2009	Severe Storm	Severe Storms, Flooding, Tornadoes & Straight-Line	$97,942
DR-1687-AL	2007	Severe Storm	Severe Storms and Tornadoes	No Data
DR-1593-AL	2005	Hurricane	Hurricane Dennis	$172,211
DR-1549-AL	2004	Hurricane	Hurricane Ivan	$1,376,623
DR-1108-AL	1996	Severe Storm	Severe Storms, Flooding and Tornadoes	No Data
DR-861-AL	1990	Severe Storm	Severe Storms, Tornadoes & Flooding	No Data
DR-856-AL	1990	Severe Storm	Severe Storms, Tornadoes & Flooding	No Data
DR-695-AL	1984	Severe Storm	Severe Storms, Flooding and Tornadoes	No Data
DR-578-AL	1979	Flood	Storms, Wind, Flooding	No Data
DR-458-AL	1975	Flood	Severe Storms & Flooding	No Data

Source: Open FEMA Data Sets, Disaster Declaration Summary[28] and Public Assistance Funded Project Details[29]

[28] https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2

[29] https://www.fema.gov/openfema-data-page/public-assistance-funded-projects-details-v1

Historic weather patterns can be determined for Dallas County from NOAA's National Centers for Environmental Information (NCEI) Storm Events Database. Table 59 provides an outline of the number of recorded storm events from January 1950 to June 2023 for Dallas County. If the same event type occurred on the same date, only one event was recorded; however, the number of fatalities, injuries, and damages were summed across the multiple events for a single day and event type.

Table 59 NCEI Storm Events Summary (1950 - 2023)

Event Type	Number of Events	Number of Fatalities	Number of Injuries	Property Damage ($)	Crop Damage ($)
Cold/Wind Chill	3	0	0	$0	$1,000,000
Drought	30	0	0	$0	$0
Flash Flood	14	0	0	$240,000	$15,000
Flood	1	0	0	$15,000	$0
Funnel Cloud	2	0	0	$0	$0
Hail	75	0	0	$297,000	$22,000
Heat	6	0	9	$0	$0
Heavy Rain	1	0	0	$0	$0
Heavy Snow	3	0	0	$0	$0
Ice Storm	1	0	0	$0	$0
Lightning	2	0	0	$100,000	$0
Strong Wind	7	0	3	$95,000	$0
Thunderstorm Wind	144	0	16	$831,500	$6,000
Tornado	36	5	69	$17,532,500	$60,000
Tropical Storm	3	0	1	$840,000	$0
Winter Storm	3	0	0	$15,000	$20,000
Winter Weather	2	0	0	$0	$0
Extreme Cold/Wind Chill	1	0	0	$0	$0
High Wind	1	0	0	$10,000,000	$200,000
Tropical Depression	2	0	0	$7,000	$0
Excessive Heat	5	0	0	$0	$0
Grand Total	**342**	**5**	**98**	**$29,973,000**	**$1,323,000**

Source: NOAA's National Centers for Environmental Information (NCEI) Storm Events Database[30]

2. Greatest Risk Hazards

The *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* identified risks by studying historical events and susceptibility and gathering information and input from local stakeholders. Each hazard was categorized as High, Medium, Low, or Very Low based on the historical trends of the hazards and also the probability of future occurrence and estimated loss. These categories are defined below:

- **High**: Probable major damage in a 1-10 Year Period

[30] https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=1%2CALABAMA

- **Medium**: Probable major damage in a 10-50 Year Period
- **Low**: Probable major damage in a 100 Year Period
- **Very Low:** No probable major damage in a 100 Year Period

The 2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan identified high winds from strong severe storms and tornadoes, and flooding as the most significant risks; however, extreme temperatures including drought, and wildfires were also identified as great risks.

Table 60 Greatest Risk Hazards for Dallas County

Hazard	Risk Rating	Locations Impacted	Associated risk
Dam Failure	High	Dean Wilson Pond #3, Robert Free Pond #1 and #2, David Pearce Pond #77, Dean Wilson Pond #21 are all considered High risk dams. 31 Additional dams are considered significant risk.	Flooding of several feet, mainly agricultural areas, infrastructure, and isolated structures would be impacted, and loss of life along with economic, environmental, and lifeline losses could occur.
Flooding	High	Areas along creeks and rivers, and low-lying areas with poor drainage are most at risk. If enough rain falls every area is at risk of flash flooding. Urban areas are especially prone to flash floods but may occur in other areas where there is inadequate, damaged or non-existent drainage infrastructure. The eastern low-lying areas of Selma and populations along the Cahaba River were identified as most susceptible to flooding.	Can cause crop, property and infrastructure damage, injury, and loss of life
Tornadoes	High	County-wide, Tornadoes can occur throughout the year but most likely to occur in the spring (March - May) and fall (November to December). months	Can cause crop, property and infrastructure damage, injury, and loss of life
Severe Storms	High	County-wide, Severe storms can occur throughout the year.	Can cause crop, property damage, injury, and loss of life
Extreme Heat and Droughts	Medium	County-wide, the area is especially susceptible to these events during the summer months	Can cause crop loss, water quality and quantity issues, threaten health (heat stroke, etc.) of people living and working in the area
Wildfires	Medium to High	Urban, more densely populated areas have a higher	Can cause crop and property and infrastructure damage, threated health due to poor air quality and result in injury and loss of life

While extreme cold temperatures are uncommon due to Alabama's mild winter climate and therefore it is not classified as a Medium or High Risk in Dallas County, residents are unaccustomed to and less prepared for the severe cold weather, putting residents at a greater

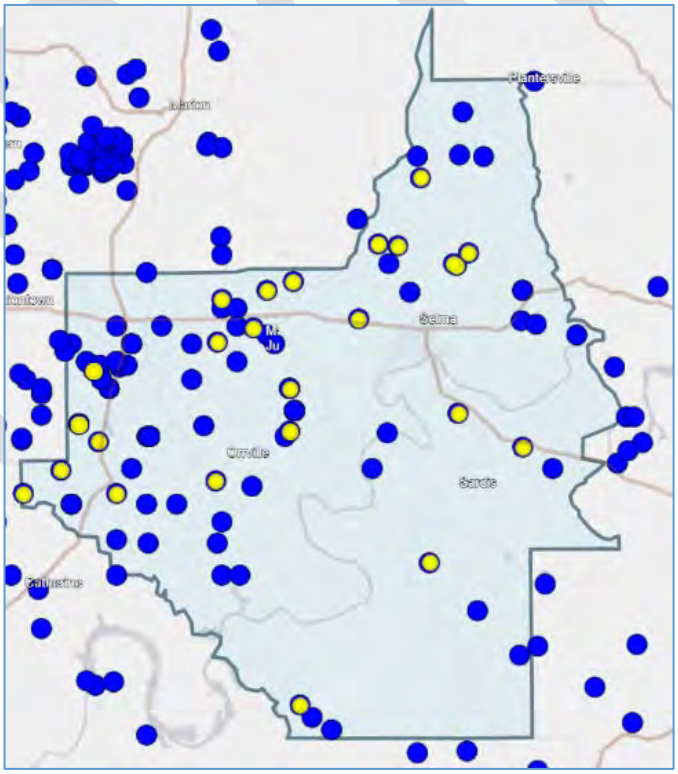
risk for dealing with the extreme cold compared to more northern climates. Most crop species in Alabama do not have a tolerance for cold temperatures, making them more susceptible to the impacts of cold weather. Cold weather may also be accompanied by winter weather, and ice storms which can cause downed trees or result in vehicle accidents. Since 1950, 13 cold weather-related events have occurred in Dallas County.

a. Dam Failure

According to the National Inventory of Dams, Dallas County has 131 known dams. Thirty-one (31) of these dams are identified as having a significant hazard potential and 5 dams have a high hazard potential. The extent of a dam failure may vary based on the storage of the affected dam and its proximity to infrastructure and structures. For larger dams or dams classified with a high hazard potential, the extent of damage could be much greater and lead to loss of life along with economic, environmental, and community lifeline losses.

Historically (until June 7, 2023), Alabama did not have a dam safety program[31] which led to Alabama being disqualified from accessing federal infrastructure funds for dam-related inspections, training, and rehabilitation. Because of this, dams in the county may not have an accurate risk classification and they may not have received adequate funding to prevent and mitigate potential dam failures. This leads to a level of unknown risk associated with each dam. Due to the number of dams with high to significant potential hazards and the predicted damages, dam failure is classified as a high risk.

Figure 28 Significant and High-Hazard Potential Dams



Source: National Inventory of Dams, https://nid.sec.usace.army.mil/

[31] https://www.alabama-asce.org/alabama-establishes-first-state-dam-safety-program/

b. Flooding

Flooding is a problem for many people across the United States. Enduring the consequences of repetitive flooding can put a strain on residents and state and local resources. When the water rises, communities face the disruption of life, damaged belongings, and the high cost of rebuilding. FEMA administers the National Flood Insurance Program (NFIP), which pays flood claims. According to the NFIP data, as of April 2024, there are 11 Repetitive Loss Properties and 0 Severe Repetitive Loss Properties in Dallas County.

While repetitive loss flooding is somewhat uncommon in Dallas County, Dallas County does have flood events. According to the *2023 Alabama State Hazard Mitigation Plan*. The most common type of flooding event in Dallas County is a flash flood as depicted in the table below.

Flash Flood	Flood	Coastal Flood or Storm Surge	All Flood Events
12	1	0	13

Data Source: 2023 Alabama State Hazard Mitigation Plan

c. Severe Storms

Severe storms may include lightning, hail, strong winds, intense rainfall, and flooding. Since 1953, NCEI has recorded 235 hail, heavy rain, lightning, strong wind, thunderstorm windstorms, and tropical depression storm events, as shown in Table 59. Since this event type has occurred regularly over the years resulting in damage, and severe storms are expected to continue regularly, Dallas County has identified this event type as a high-risk hazard. The risk for negative impacts from hail across the majority of the county is relatively low, as shown in *Figure 7 Hail Risk in MID Counties by Census Tract.* For strong winds, the majority of the county has a relatively moderate risk, as shown in *Figure 8 Strong Winds Risk in MID Counties by Census Tract.*

Severe storms can happen county-wide which can lead to property and crop damage and at times injuries. According to *Table 59 NCEI Storm Events Summary (1950 - 2023),* the combination of hail, strong winds, lightning, and thunderstorms has led to estimated property damage costs of $11.9M and $218K in crop damages.

d. Tornadoes

Tornadoes are Dallas County's most significant loss-producing natural hazards according to the NCEI Storm Events Database. Between 1950 and 2022, Tornadoes caused 68 injuries, 5 deaths, and more than $17.3 million in property and crop losses.

According to *Figure 9 Tornado Risk in MID Counties by Census Tract,* the majority of Dallas County has a relatively moderate to relatively high Tornado Risk rating.

e. Extreme Heat and Droughts

Extreme heat is often associated with droughts which can lead to greater impacts on communities. Extreme heat is very common to Dallas County, as Alabama has a humid subtropical climate, and summers in Alabama are among the hottest in the United States, with high temperatures averaging over 90 °F throughout the state. The risk for negative impacts from heat waves across the majority of county is Relatively Moderate, as shown in *Figure 3 Heat Wave Risk in MID Counties by Census Tract.* There is a lack of infrastructure in the county to offer dedicated cooling stations for residents, especially populations that are the most vulnerable to extreme heat.

Prolonged extreme heat periods play a vital role when it comes to droughts, especially when coupled with lack of precipitation resulting in a lack of moisture in agricultural soil. This can lead to negative economic impacts in the county as crops losses occur. Agricultural losses from droughts are estimated to cost the state annually in damages. As a result, the past events and future probability of heat and droughts are classified county-wide as medium risk according to the *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan.*

f. Wildfires

According to the Alabama Forestry Commission's Current Wildfire Totals summary[32], between 2000 and June 19, 2024, there were 528 total wildfires in Dallas County. Those fires burned 3,337 acres. That translates to a yearly average of 22 fires and 143 acres burned per year. The largest fire recorded in the county between these years was 135 acres and occurred in 2007. Based on past occurrences, every area of the county has a degree of risk.

According to *Figure 10 Wildfire Risk in MID Counties by Census Tract*, Dallas County has a relatively low risk for wildfire compared to the rest of the country. However, according to the 2023 Alabama State Hazard Mitigation Plan, as the climate changes, Alabama is projected to become more prone to wildfire occurrences between now and 2050. It is projected that by 2050 the average number of days with high wildfire will double from 25 to 50 days a year.

3. Hazard Risk Analysis

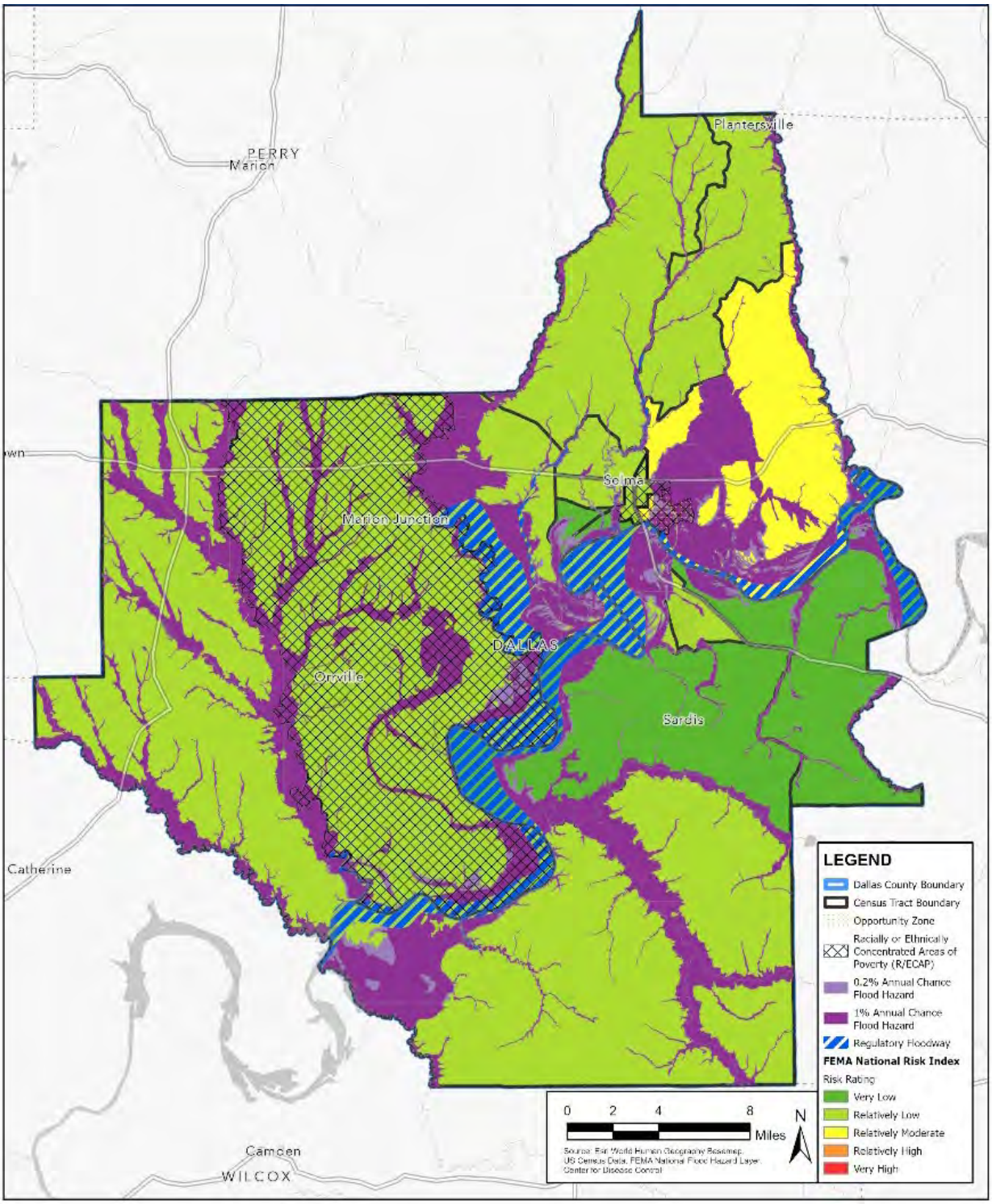
It has long been recognized that risk often corresponds with a high level of social vulnerability, compounding the impact of hazard and storm events. Using the FEMA National Risk Index, we can evaluate the potential for negative impacts resulting from natural disasters by combining the expected annual loss due to natural hazards, social vulnerability, and community resilience.

Risk Index = Expected Annual Loss x Social Vulnerability ÷ Community Resilience

Based on the composite Risk Index Score provided, we can see that there are parts of the county that have a Relatively Moderate risk score as shown in Figure 29. This area includes Selma and areas east of Selma. Hazard-specific risk indices for the greatest regional and county risks can be found in the maps in Section VII.D of this plan.

[32] https://forestry.alabama.gov/pages/fire/totals.aspx

Figure 29 Dallas County FEMA National Risk Index



Vulnerability Overview

An overview of the greatest hazards and their risk impact from the *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* is shown below. To quantify the risk classifications of the greatest risk hazard, risk factors (probability, impact, location extent, duration) were evaluated.

Hazard	Probability	Impact	Location Extent	Duration
Dam Failure	Very Low	Critical	Small	Less than 24 hours
Flooding	High	Critical	Moderate	Less than one week
Tornadoes	High	Critical	Small	Less than 6 hours
Severe Storms	Medium	Minor	Moderate	Less than 6 hours
Extreme Heat and Droughts	Medium	Minor	Small	More than one week
Wildfires	High	Minor	Small	Less than one week

Probability defined:

- **Very Low:** Less than 1% annual probability
- **Low**: Between 1% and 10% annual probability
- **Medium**: Between 10% and 100% annual probability
- **High**: 100% annual probability

Impact defined:

- **Minor**: Very few injuries, if any occur. Only minor property damage and minimal disruption of quality of life. Temporary shutdown of critical facilities.
- **Limited**: Minor injuries only. More than 10% of property in the affected area was damaged or destroyed. Complete shutdown of critical facilities for more than one day.
- **Critical**: Multiple deaths/injuries possible. More than 25% of property in the affected area was damaged or destroyed. Complete shutdown of critical facilities for more than one week.
- **Catastrophic**: High number of deaths/injuries possible. More than 50% of property in the affected area was damaged or destroyed. Complete shutdown of critical facilities for one month or more.

Location Extent defined:

- **Negligible**: Less than 1% of the area affected.
- **Small**: Between 1% and 10% of the area affected.
- **Moderate**: Between 10% and 50% of the area affected.
- **Large**: Between 50% and 100% of the area affected.

Community Lifelines

Community Lifelines are critical business and government functions that are critical in the event of a disaster and are essential to human health, safety, or economic security. The greatest risks identified by the county could disrupt any number of the community lifelines which could impact emergency response and vulnerable populations and communities. Mitigation efforts should address any vulnerabilities across the 7 community lifelines to decrease the impact of the hazards identified in this plan. Maps of the lifeline assets in the county as well as the greatest risks can be found in Section VII.

F. Activity Identification

The 2020 disasters exposed, and exacerbated housing, infrastructure, economic, and mitigation needs in many communities that remain at risk following these events. The post-disaster recovery process presents an opportunity to address these long-standing gaps while supporting the communities' efforts to recover and represent a lasting investment in local capacity and resilience. Programs proposed in this Local Recovery Plan are designed to promote long-term mitigation and resiliency standards with a focus on serving the most vulnerable populations.

To address these needs, the State of Alabama identified the following project activity types to be considered by each MID County as part of this planning process:

- Affordable Multifamily Rental Housing
- Homeowner Buyouts
- Homebuyer Assistance
- Mitigation
- Economic Resilience
- Infrastructure & Public Facility Improvements
- Public Services

Dallas County did not identify a need for homeowner buyouts or public services. Below is an outline of the identified affordable multifamily housing, homebuyer assistance, mitigation, economic resilience, and infrastructure & public facility improvements projects identified and their associated project descriptions and details.

Project Name	Eligibility Criteria		Project Description	Project Rank
Affordable Multifamily Housing	**Strategy**	Housing Recovery	• Dallas County identified the need to create and rehabilitate affordable multifamily housing.	
	Eligible Activity	Affordable Multifamily Rental, HCDA Section 105(a)(4)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual Phase		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Homeownership Assistance	**Strategy**	Housing Recovery	• The county would like to provide opportunities for renters to purchase more secure housing, with an emphasis on supporting first-time homebuyers located within a MID Recovery Zone. • Intended to pay a portion of the cost of purchasing an eligible new home for	
	Eligible Activity	Homebuyer Assistance, HCDA Section 105(a) 24		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		

Project Name	Eligibility Criteria		Project Description	Project Rank
	SVI Score	High	eligible applicants, which may be based on need, household size, and the cost of a home.	
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	N/A		
Flood Management Improvements	**Strategy**	Mitigation	• Implement flood control improvement projects in areas subject to re-occurring flooding, that leave communities cut off from the rest of the county. This was particularly problematic during and after Hurricanes Zeta.	
	Eligible Activity	Mitigation, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID County – Mitigation		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Residential Solar Generator Program	**Strategy**	Mitigation	• The county has identified the need for backup power supply for vulnerable, rural residents in the form of solar panels or generators.	
	Eligible Activity	Mitigation, HCDA Section 105(a)(4)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID County – Mitigation		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Job Training	**Strategy**	Recovery		

Project Name	Eligibility Criteria		Project Description	Project Rank
	Eligible Activity	Economic Resilience, HCDA Section 105(a) 21	• Many of the buildings throughout the County, particularly in downtown Selma are historically preserved. Because of this, specialized tradespeople are needed to properly maintain and rehabilitate the historical buildings that meet the architecture and design standards. In the event of damage to these buildings due to a disaster, it is especially important to have local resources to be able to quickly recover. • The county looks to bolster and strengthen the local labor force that supports the historical preservation of buildings in Selma. Grants would include providing financial assistance to LMI residents in the MID Recovery zones looking to receive job training and apprenticeships in trades specializing in the historical preservation of buildings.	
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Community Resilience Center	**Strategy**	Recovery & Mitigation	• Develop a community resilience center that provides year-round programming to build overall community resilience, while also being augmented to provide critical services during extreme and disaster events. During a steady state the Center may provide health services, job and workforce training, microenterprise incubation, workshops, and meeting space, among other uses. During or following a disaster event, this center may serve as a cooling or warming center and would be designed with back up solar generators to enable the center to provide critical services to residents when needed, such as energy, water, shelter, food, resources, communication infrastructure, health services, and other post-disaster services. •	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Homeless Shelter	**Strategy**	Recovery	• Dallas County does not have adequate homeless shelters to serve vulnerable populations pre- and post-disaster. The county would like to propose creating a new homeless shelter as a project as part of this LRP and may also be doubled to be used as a community resilience center if the right conditions are met.	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		

Project Name	Eligibility Criteria		Project Description	Project Rank
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	No, Conceptual Phase		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Infrastructure improvements along economic thoroughfares	**Strategy**	Recovery & Mitigation	• The economic thoroughfare along Broad Street in Selma is prone to flooding issues. To help incentivize businesses to thrive in this area, improvements to help prevent flooding and improve the general area will be implemented.	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone or MID County – Mitigation		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Debris Removal at Old Cahaba Archaeological Park	**Strategy**	Recovery	• Situated along the Cahaba River, the Old Cahaba Archaeological Park is a historical park that offers a variety of outdoor activities and is at the center of the ecotourism and historical tourism industry in Dallas County. During Hurricane Zeta, numerous trees were downed which remain primarily in the burial grounds portion of the park. Due to the archaeological status of the burial grounds, expensive specialized equipment is needed to remove the trees to restore the area to pre-disaster condition. • The county would like to propose a project to assist in the removal of the debris at this site to support the local tourism industry.	
	Eligible Activity	Economic Revitalization, Public Facilities		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone or MID County – Mitigation		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		

Project Name	Eligibility Criteria		Project Description	Project Rank
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		

On the following page, a matrix overview of identified project activity types is provided.

Table 61 Dallas County Identified Activities

Project Description	Program Strategy	Project Activity Type	National Objective	Benefits vulnerable population	SVI Score	Geographic Eligibility	Administering Entity Identified	Leverages Other Funds Identified	Project Readiness	O&M Feasibility Identified	Project Rank
Affordable Multifamily Housing	Recovery	Affordable Rental Housing	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Homeownership assistance programs	Recovery	Homebuyer Assistance	LMI	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	
Flood Mitigation Projects	Mitigation	Mitigation	LMI, UN	Yes	High	Mitigation - County Wide	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Residential Solar and Generator Program	Mitigation	Mitigation	LMI, UN	Yes	High	Mitigation - County Wide	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	
Job Training	Recovery	Economic Revitalization	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Specialized Debris Removal	Recovery	Economic Revitalization	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	
Community Resilience Center	Recovery & Mitigation	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Homeless Shelter	Recovery	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Improvements along economic thoroughfares	Recovery	Infrastructure & Public Facility Improvements, Economic Revitalization	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	

X. Escambia County

A. Introduction

Escambia County is a county located within the southcentral portion of Alabama, neighboring the State of Florida. Escambia County is home to portions of the Conecuh National Forest and the Poarch Creek Indian Reservation, the only federally recognized Native American group in the state of Alabama. Due to Escambia county's proximity to the Gulf Mexico, many rivers, creeks and their tributaries flow through Escambia County including the Conecuh River and Sepulga Rivers.

According to the American Community Survey (ACS) 2022 5-Year Estimates[33], Escambia County has a population of 36,755, a 1% decrease from 37,057 in 2019. The demographic breakdown shows most residents (62%) are White, followed by 30% identifying as Black or African American. Housing in Escambia County includes 16,715 occupied units, with 70% being single-family homes and 20% mobile homes. In total, 95% of units in the county are 1–4-unit dwellings or mobile homes. Homeownership is high, with 67% of residents owning their homes and 33% renting

Escambia County primarily experienced damage from Hurricane Sally which resulted in downed trees and flooding. Debris pileups occurred in rivers that pushed up against bridges which in turn weakened the structure integrity of the bridges. Many homes were damaged by high winds and falling trees and remain in need of repair. In Brewton, public buildings including the county jail were damaged and may still need repair. Water and sewage systems were affected in Flomaton causing service interruptions and water quality concerns.

B. Unmet Needs Gap

Through this Local Recovery Plan, the ACCA and Escambia County presents unmet need estimates from Hurricane Sally and Hurricane Zeta based on current best available data (see table below). Over time, ACCA and the county reserves the right to continue to update these estimates as additional assessments are made and more complete data becomes available.

Table 62 Total Estimated Unmet Need for Escambia County

	Estimated Impact	Amount of Funds from other sources	Total Unmet Need
Housing	$12,711,012	$3,476,515	$9,234,497
Infrastructure	$5,119,439	$3,839,293	$1,098,936
Economy	$628,115	$87,600	$540,515
Total	**$18,458,566**	**$7,403,408**	**$10,873,948**

Estimated impact includes added resilience and increased construction costs and may include FEMA Public Assistance Categories A, B and Z, where applicable. Total Unmet Need does not include FEMA PA categories A, B and Z.

[33] https://data.census.gov/ - Tables B02001, B25024, B25033

C. Impact and Unmet Needs Assessment

1. Background

In accordance with HUD guidance, Escambia County completed the following unmet needs assessment to identify priorities for CDBG-DR funding allocated as a result of impacts from the 2020 storms.

The assessment below utilizes federal and state resources, including data provided by FEMA, HUD, and the Small Business Administration (SBA), among other sources, to estimate unmet needs in three main categories of damage: housing, economy, and infrastructure. These unmet needs assessment focuses on Escambia County's impacts, with specific sections detailing particular needs within the most impacted area, and where relevant, smaller geographic units.

a. Demographic Profile of the Affected Areas

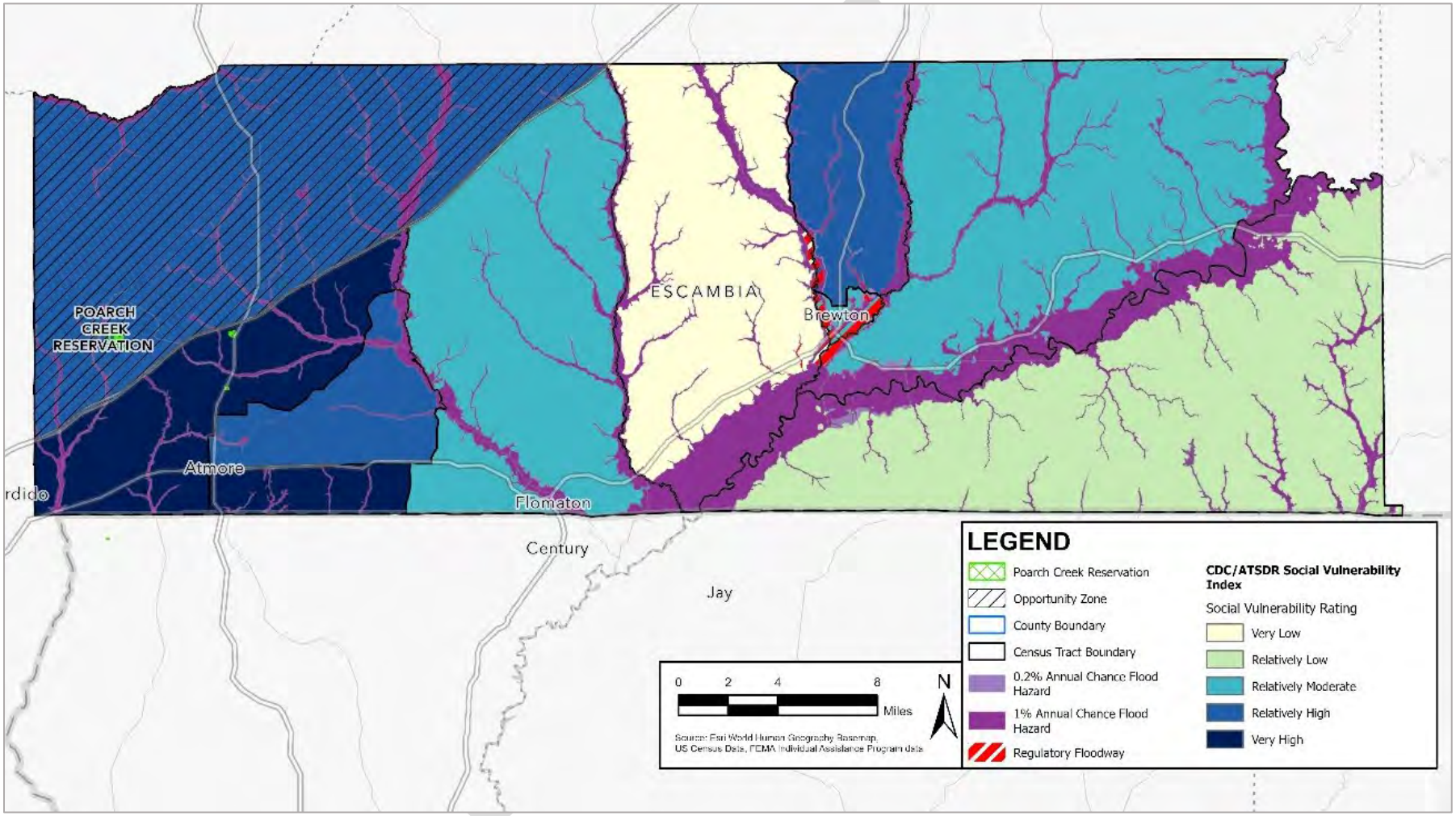
The demographic profile of Escambia County has not changed much since the State Action Plan was published and specific demographic information can be reviewed in the State Action Plan for the county.

Escambia County identified vulnerable populations within the county as part of the establishment of MID Recovery Zones. Vulnerable populations include those identified as part of a protected class, hard-to-reach, underserved, historically disadvantaged areas, and economically distressed areas. For this LRP, Escambia County has identified vulnerable population areas using the CDC/ATSDR Social Vulnerable Index (SoVI) and Geographically underserved and historically disadvantaged areas including Opportunity Zones and Tribal areas.

The CDC/ATSDR SVI is a place-based index designed to identify and quantify communities experiencing social vulnerability by comparing socio-economic, household composition, minority status and language, housing types and transportation needs, and other adjunct variables such as race and ethnicity and households without an internet subscription at the census tract level. Opportunity Zones are economically distressed communities, defined by individual census tracts, nominated by America's governors, and certified by the U.S. Secretary of the Treasury via his delegation of that authority to the Internal Revenue Service. The Opportunity Zones initiative is not a top-down government program from Washington but an incentive to spur private and public investment in America's underserved communities.

Escambia County does not have any Racially or Ethnically Concentrated Areas of Poverty (R/ECAP), Promise Zones, or Neighborhood Revitalization Strategy Areas within the county. The map below provides an overview of the SoVI in each census tract as well as the identified Opportunity Zone and Tribal areas against the flood hazard and floodway zones.

Figure 30 Escambia County Vulnerability Map



2. Housing Impact & Needs

a. Housing Damage and Loss Assessment

Unless otherwise noted, all housing summary data were compiled from these datasets for Hurricane Sally only.

For each household determined to have unmet housing needs, their estimated average unmet housing need was calculated using similar variables and calculation methods from the State Action Plan. These variables are:

1. FEMA Damage Category Application Counts of Minor-Low to Major-Low
2. FEMA Damage Category Application Counts of Major-High to Severe
3. FEMA IA Applications without FEMA Verified Loss
4. Public Housing Damages

Total impact tables have been summarized based on owner-occupied vs renter-occupied households, impacted populations with flood and homeowner insurance, impact by residence type, impact by gross income, and impact to housing authorities in the following sections.

b. Total Impact (Owner-Occupied and Renter Households)

The information in the below tables outlines the total damaged properties population with documented damages. To account for properties that never had an inspection physically take place due to the COVID-19 pandemic and other reasons no damages were found, likely because they were desktop inspections, the county has classified these applications as “No FVL”. A detailed description is provided in the FEMA IA Applications without Real Property FEMA Verified Loss section.

Table 63 Homeowner/Renter Damaged Properties by All Damage Categories

Damage Category	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Severe	9	0.3%	0	0%	9	0.3%
Major-High	23	0.9%	0	0%	23	0.9%
Major-Low	89	3.3%	63	2.3%	152	5.6%
Minor-High	407	15.1%	308	11.4%	715	26.4%
Minor-Low	230	8.5%	30	1.1%	260	9.6%
No FVL	995	36.8%	550	20.3%	1545	57.1%
Total	**1753**	**64.8%**	**951**	**35.2%**	**2704**	**100%**

FEMA Damage Category Applications - Minor-Low, Minor-High, and Major-Low

For FEMA IA Applications with minor-low, minor-high, and major-low damage, the count of those applications in each county was multiplied by the overall average SBA verified property loss per damage category provided in the State Action Plan to determine the estimated total loss/support for these three damage categories. The below tables outline the total number of properties damaged for homeowners and renters.

Table 64 Minor-Low, Minor-High, and Major-Low Estimated Total Loss Homeowners

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	230	$1,621	$372,830
Minor-High	407	$5,495	$2,236,465
Major-Low	89	$11,502	$1,023,678
Total	**726**	**N/A**	**$3,632,973**

Table 65 Minor-Low, Minor-High, and Major-Low Estimated Total Loss Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	30	$1,621	$48,630
Minor-High	308	$5,495	$1,692,460
Major-Low	63	$11,502	$724,626
Total	**401**	**N/A**	**$2,465,716**

Table 66 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Homeowners & Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	260	$1,621	$421,460
Minor-High	715	$5,495	$3,928,925
Major-Low	152	$11,502	$1,748,304
Total	**1,127**	**N/A**	**$6,098,689**

FEMA Damage Category Applications - Major-High to Severe

The FEMA IA Applications with major-high to severe damage, are assumed to include structures substantially damaged and to require reconstruction. To determine the replacement cost of the home, Escambia County replicated ADECA's approach and used the county's Zillow Home Value from August 2020 for All Homes (none-adjusted)[34]. Since the Zillow home value includes the cost of the land, it is assumed 66% of the value was attributable to the structure on the property. This adjusted home value is multiplied by the total count of applications in the major-high to severe damage categories. The results of these calculations are provided below.

Table 67 Major-High and Severe Estimated Total Loss Homeowners and Renters

Damage Category	Zillow Home Value	66% of Zillow Value	Count	Estimated Total Loss
Major-High	$116,000	$76,560	23	$1,760,880
Severe	$116,000	$76,560	9	$689,040
	Total		**32**	**$2,449,920**

Of the 32 major-high and severely damaged homes, no renter occupied dwellings are classified as Major-High or Severe.

[34] Escambia County Home Values, https://www.zillow.com/home-values/2258/al/

FEMA IA Applications without FEMA Verified Loss

Escambia County, accounted for the damage to applications without Real Property FEMA verified loss (RPFVL) for owner-occupied dwellings and without Personal Property FEMA Verified Loss for renter-occupied dwellings because due to the COVID-19 pandemic and other reasons, an inspection never physically took place or no damages were found, likely because they were desktop inspections. To account for these types of impacts, Escambia County accounted for applications by county with no FEMA Verified Loss and multiplied it by the average value for minor-low damage per SBA. The results of these calculations are provided below.

Table 68 Estimated Total Loss for IA Applications without FEMA Verified Loss

Occupancy Type	Count of Applications	Average SBA Value	Estimated Total Loss
Owner	995	$1,621	$1,612,895
Renter	550	$1,621	$891,550
Total	**1,545**	**$1,621**	**$2,504,445**

c. Impacts of Insurance (HOI and NFIP)

For the purposes of this analysis, households inspected by FEMA and shown to have a 'Water Level' greater than 0.0 inches are considered to have been flooded, while all other units with no 'Water Level' are considered to have been impacted exclusively by wind.

See the below table flood flood-damaged properties by damage category and occupancy type.

Table 69 Flood Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	3	35	41	54	23	9	165
Renter	3	1	70	37	0	0	111
Total	**6**	**36**	**111**	**91**	**23**	**9**	**276**

Flood Damage and Insurance: An alarmingly high proportion of units with evidence of flood damage were reported in the FEMA IA data not to carry a flood insurance policy through the National Flood Insurance Program (NFIP) as shown in the table below. In total, **96 percent** of the flood-affected population is reported to not carry an NFIP policy per the FEMA IA data.

Table 70 Homeowner Flood-Damaged Properties and NFIP Counts

Damage Category	With NFIP	% With NFIP	Without NFIP	% Without NFIP
Severe	0	0%	9	5%
Major-High	0	0%	23	14%
Major-Low	2	1%	52	32%
Minor-High	3	2%	38	23%
Minor-Low	1	1%	34	21%
No FVL	0	0%	3	2%
Total	**6**	**4%**	**159**	**96%**

Wind Damage and Insurance (HOI): In the absence of evidence of flood damage, units are assumed to be impacted exclusively by wind. As such, for the proportion of owner-occupied units with no evidence of flooding damage, the county is especially concerned about the high rate of households reported not to carry a standard hazard homeowners insurance policy (HOI) that would otherwise be expected to offset documented losses. In total, 66 percent of the wind-impacted homeowner population is reported not to carry hazard insurance as shown below.

Table 71 Wind Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	992	195	366	35	0	0	1,588
Renter	547	29	238	26	0	0	840
Total	**1,539**	**224**	**604**	**61**	**0**	**0**	**2,428**

Table 72 Homeowner Wind-Damaged Properties and HOI Counts

Damage Category	With HOI	% With HOI	Without HOI	% Without HOI
Severe	0	0%	0	0%
Major-High	0	0%	0	0%
Major-Low	2	0%	33	2%
Minor-High	65	4%	301	19%
Minor-Low	22	1%	173	11%
No FVL	458	29%	534	34%
Total	**547**	**34%**	**1,041**	**66%**

d. Impact based on Residence Type

The table below shows FEMA IA applicants by housing type. The highest number of applicants came from House/Duplex units (56%) and Mobile Home units (30%).

Table 73 FEMA IA Applicants by Residence Type and Occupancy Type

Residence Type	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Apartment	1	0%	215	8%	216	8%
Assisted Living Facility	0	0%	1	0%	1	0%
Condo	3	0%	1	0%	4	0%
House/Duplex	1,083	40%	442	16%	1,525	56%
Military Housing	0	0%	1	0%	1	0%
Mobile Home	579	21%	244	9%	823	30%
Other	48	2%	32	1%	80	3%
Townhouse	6	0%	5	0%	11	0%
Travel Trailer	33	1%	10	1%	43	2%
Total	**1,753**	**65%**	**951**	**35%**	**2,704**	**100%**

The below table shows FEMA IA flood-damaged properties by housing type that had flood insurance. As indicated in the overview of flood-damaged properties, **98%** of the flood-affected homeowner applicants are reported to not carry an NFIP policy per the FEMA IA data.

Table 74 Homeowner Occupied Flood Damaged Properties by Residence Type with NFIP

Residence Type	Count of Applications	Count with NFIP	% with NFIP
Apartment	0	0	0%
House/Duplex	121	6	5%
Mobile Home	41	0	0%
Townhouse	0	0	0%
Travel Trailer	3	0	0%
Total	**165**	**6**	**4%**

The below table shows FEMA IA wind-damaged properties by housing type who had Homeowner's insurance. As indicated in the overview of wind-damaged properties, **26%** of the affected population is reported to not carry homeowner's insurance policy per the FEMA IA data.

Table 75 Homeowner Occupied Wind Damaged Properties by Residence Type with HOI

Residence Type	Count of Applications	Count with HOI	% with HOI
Apartment	1	0	0%
Assisted Living Facility	0	0	0%
Condo	3	2	67%
House/Duplex	962	446	46%
Military Housing	0	0	0%
Mobile Home	538	83	15%
Other	48	13	27%
Townhouse	6	1	17%
Travel Trailer	30	2	7%
Total	**1,588**	**547**	**35%**

Total estimated losses have been summarized by residence type below.

Table 76 Total Estimated Loss by Residence Type

Residence Type	Count	Estimated Total Loss
Apartment	216	$662,016
Assisted Living Facility	1	$1,621
Condo	4	$6,484
House/Duplex	1,525	$6,805,485
Military Housing	1	$1,621
Mobile Home	823	$3,278,216
Other	80	$137,428
Townhouse	11	$35,460
Travel Trailer	43	$124,723

e. Impact on LMI Households

The income data provided in the FEMA IA data set was not specific enough to perform a low-and moderate-income (LMI) calculation, as income was categorized by general ranges. To summarize

the impact of storms had on households based on income, four income groupings are provided in the tables below. Overall, households with lower incomes were disproportionately impacted by Hurricane Sally, with 77% of the total impacted population making $30,000 or less.

Table 77 Gross Income by Damage Level for Homeowners Only

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	5	0%		0%	4	0%		0%	9	1%
Major-High	18	1%	4	0%		0%	1	0%	23	1%
Major-Low	74	4%	12	1%	3	0%		0%	89	5%
Minor-High	332	19%	57	3%	17	1%	1	0%	407	23%
Minor-Low	194	11%	30	2%	6	0%		0%	230	13%
No FVL	650	37%	233	13%	109	6%	3	0%	995	57%
Totals	**1,273**	**73%**	**336**	**19%**	**139**	**8%**	**5**	**0%**	**1,753**	**100%**

Table 78 Gross Income by Damage Level for Renters Only

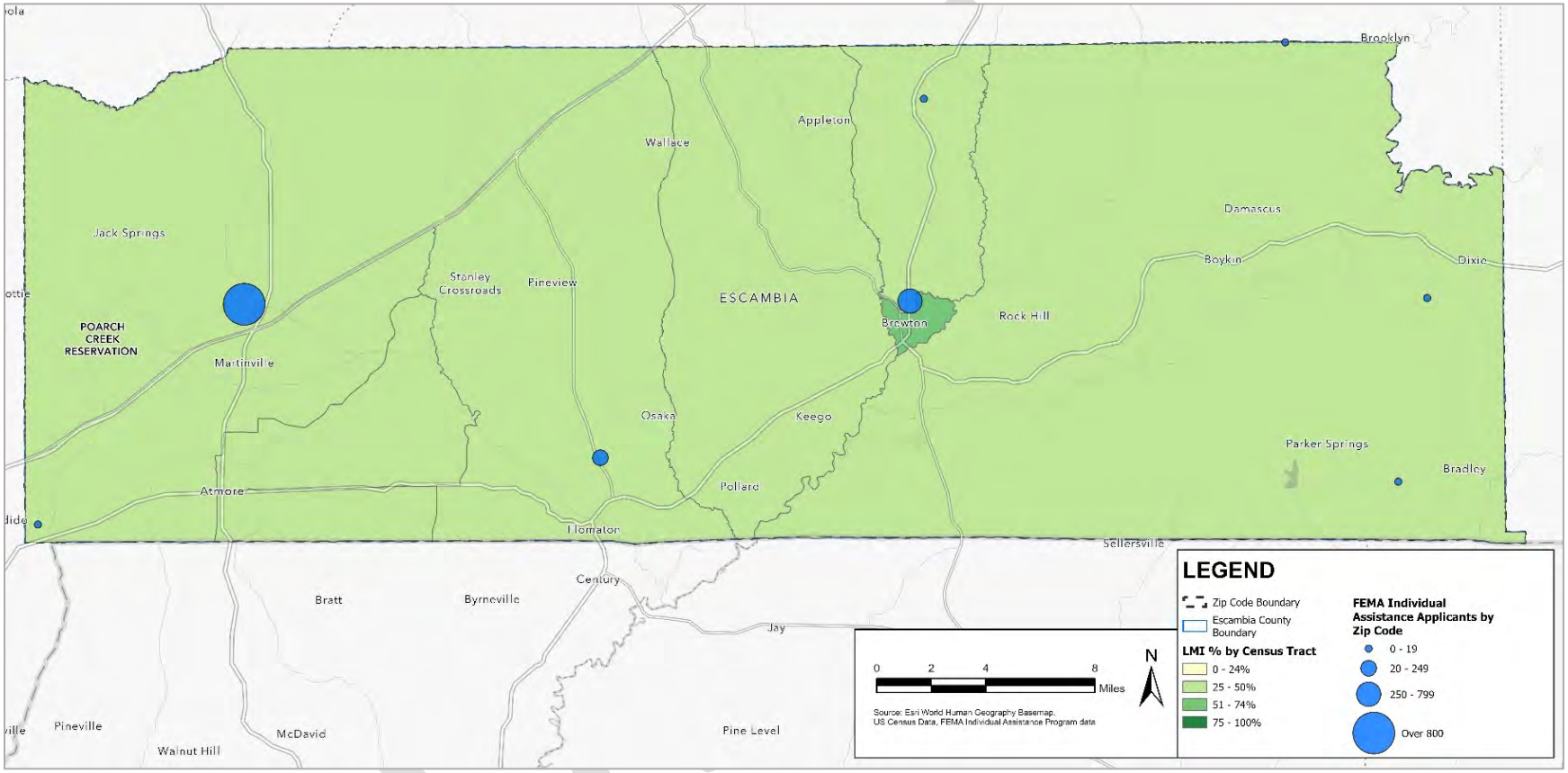
Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	0	0%	0	0%	0	0%	0	0%	0	0%
Major-Low	58	6%	3	0%	2	0%	0	0%	63	7%
Minor-High	277	29%	26	3%	5	1%	0	0%	308	32%
Minor-Low	26	3%	4	0%		0%	0	0%	30	3%
No FVL	446	47%	83	9%	16	2%	5	1%	550	58%
Totals	**807**	**85%**	**116**	**12%**	**23**	**2%**	**5**	**1%**	**951**	**100%**

Table 79 Gross Income by Damage Level for Homeowners and Renters

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	5	0%	0	0%	4	0%	0	0%	9	0%
Major-High	18	1%	4	0%	0	0%	1	0%	23	1%
Major-Low	132	5%	15	1%	5	0%	0	0%	152	6%
Minor-High	609	23%	83	3%	22	1%	1	0%	715	26%
Minor-Low	220	8%	34	1%	6	0%	0	0%	260	10%
No FVL	1,096	41%	316	12%	125	5%	8	0%	1,545	57%
Totals	**2,080**	**77%**	**452**	**17%**	**162**	**6%**	**10**	**0%**	**2,704**	**100%**

The map below illustrates the Low-Moderate Income percentage by Census Tract, with heat bubbles of where the FEMA IA applications are located based on the zip code location.

Figure 31 LMI Populations and FEMA IA Applications by Zip Code for Escambia County



f. Impact on Public Housing Authorities

A Public Housing Authority (PHA) for the county does not exist. There is no known unmet need for PHAs that are operated by the cities.

g. Unmet Housing Needs

FEMA IA was the primary data source that Escambia County used to determine housing unmet needs. Total estimated losses have been summarized by the data source and calculation methodology, as summarized in previous sections. An additional 15% is added at the end of the calculation to account for resilience, costs to make buildings more resilient to future disasters. To calculate total unmet need, received assistance is also summarized and subtracted from the estimated total loss, including resilience costs.

Table 80 Total Estimated Loss by Damage Category

Data Source/ Calculation	Count	Estimated Total Loss
Severe	9	$689,040
Major-High	23	$1760,880
Major-Low	152	$1748,304
Minor-High	715	$3,928,925
Minor-Low	260	$421,460
No FEMA Verified Loss	1,545	$2,504,445
Public Housing	0	$0
Total	**2,704**	**$11,053,054**
+15% Resilience Costs		**$1,657,958**
Total Estimated Loss with Resilience Costs		**$12,711,012**

To ensure the housing repair assistance is factored into the housing unmet needs calculation, the following amounts were added together: FEMA IA repair and replacement, SBA Real Estate, and NFIP payment to determine the total housing assistance received. See below for the calculation.

Table 81 Total Housing Assistance Received Calculation

Data	Count	Total Amount
FEMA IA Payments	350	$1,885,233
NFIP Payments	2	$29,383
SBA Loan Amounts	Unknown	$1,561,900
Total Housing Assistance	**352**	**$3,476,516**

The total housing assistance was subtracted from the total housing unmet needs with resilience included to find a total housing unmet need of approximately $9.2 million as a result of Hurricane Sally. See below for the calculation.

Table 82 Total Housing Unmet Need for Escambia County

Data	Estimated Amount
Total Estimated Loss including 15% Resilience Costs	$12,711,012
Total Housing Assistance	-$3,476,516
Total Housing Unmet Need	**$9,234,496**

3. Infrastructure Impact & Needs

a. Infrastructure Damage & Loss Assessment

Escambia County suffered infrastructure damage from Hurricane Sally only. Hurricane Sally damaged many roads and bridges including several bridges on Wallace Road, Grissett Bridge Road, as well as in the northeastern part of the county that are still in need of repair. Damage at these locations were not initially reported in the FEMA PA request, as it was not evident immediately following the disaster and was later discovered during later inspections that debris pile ups lead to the degradation of the bridges. Additionally, the county jail was damaged and is still not fully repaired. Localized flooding in Brewton, East Brewton and Flomaton also occurred.

The table below includes the Estimated PA Cost and additional costs for resiliency measures (15%) and increased cost of construction (23.6%) to estimate the Federal Share (90%) and the local share/unmet need (10%) more accurately for Categories C through G, roads and bridges, public facilities and buildings, public utilities, and other public assistance needs.

Table 83 Total Estimated Infrastructure Costs by PA Damage Category

Damage Category	PA Project Amount	15% Resilience Measures	23.6% Construction Costs	Total PA Project Amount
A - Debris Removal	$1,487,336	$0	$0	$1,487,336
B - Protective Measures	$324,769	$0	$0	$324,769
C - Roads and Bridges	$1,235,971	$166,856	$291,689	$1,694,517
E - Public Buildings	$1,009,170	$136,238	$238,164	$1,383,573
F – Public Utilities	$17,927	$2,420	$4,231	$24,579
G - Recreational/Other	$70,127	$9,467	$16,550	$96,145
Z - State Management	$108,522	$0	$0	$108,522
Total	**$4,253,823**	**$314,982**	**$550,634**	**$5,119,439**

b. Unmet Infrastructure Needs

The table below includes the Total Estimated PA Cost, consisting of resiliency measures and increased construction costs with the total Federal Obligated Amount and the Non-Federal Share Amount.

Table 84 Total Estimated Non-Federal Share Amount by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount
A - Debris Removal	$1,487,336	$1,338,603	$148,734
B - Protective Measures	$324,769	$292,292	$32,477
C - Roads and Bridges	$1,694,517	$1,112,374	$582,143
E - Public Buildings	$1,383,573	$908,253	$475,319
F – Public Utilities	$24,579	$16,135	$8,444
G - Recreational/Other	$96,145	$63,115	$33,030
Z - State Management	$108,522	$108,522	$0
Total	**$5,119,439**	**$3,839,293**	**$1,280,146**

Based on the analysis performed, there is a potential unmet need of approximately **$1.1 million** for identified infrastructure damage eligible under FEMA-PA Categories C-G.

Table 85 Total Estimated Unmet Need Amount by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount	Unmet Need Amount
A - Debris Removal*	$1,487,336	$1,338,603	$148,734	$0
B - Protective Measures*	$324,769	$292,292	$32,477	$0
C - Roads and Bridges	$1,694,517	$1,112,374	$582,143	$582,143
E - Public Buildings	$1,383,573	$908,253	$475,319	$475,319
F – Public Utilities	$24,579	$16,135	$8,444	$8,444
G - Recreational/Other	$96,145	$63,115	$33,030	$33,030
Z - State Management*	$108,522	$108,522	$0	$0
Total	**$5,119,439**	**$3,839,293**	**$1,280,146**	**$1,098,936**

*CDBG-DR Funds are not used for PA costs in Categories A, B and Z.

4. Economic Impact & Needs

A summary of damage and impacts of Hurricane Sally is provided below, along with an analysis of Small Business Administration loans provided to the business community following Hurricane Sally.

Agricultural Impacts

The Escambia Farm Service Agency identified via survey, that because of Hurricane Sally at least 85% of row crops were lost. Specifically, 560 farms were affected, due to high winds, flash flooding and anywhere from 9-18" of rain over a short period. Over 80 farms had physical damage such as fence damage, cropland eroding, trees down, trees and debris in fields, timberland damage.

This is supported by USDA designating Escambia County as a primary natural disaster area, which allows producers who suffered losses by Hurricane Sally to apply for emergency loans with the U.S. Department of Agriculture (USDA) Farm Service Agency (FSA). This natural disaster designation allows FSA to extend much-needed emergency credit to producers recovering from natural disasters. Emergency loans can be used to meet various recovery needs including the replacement of essential items such as equipment or livestock, reorganization of a farming operation or the refinance of certain debts.[35]

a. Unmet Economic Needs

According to an analysis of the SBA Business loan data, applications with approved or denied loans that meet a HUD category of loss, the county realized a total verified loss for all businesses of approximately $546,000, after accounting for an additional fifteen percent (15%) resilience costs, the County's total estimated economic impact is approximately $628,000. According to the SBA business report, the SBA provided $87,600 in total benefits for real estate losses. Therefore, the County's remaining economic unmet needs are valued at $540,515 million.

[35] https://www.fsa.usda.gov/state-offices/Alabama/news-releases/2020/usda-designates-two-alabama-counties-as-primary-natural-disaster-areas

Table 86 Economic Unmet Need Summary

Total Verified Loss	15% Resilience Costs	Total Estimated Impact	Total SBA Benefits	Remaining Unmet Needs
$546,187	**$81,928**	**$628,115**	**$87,600**	**$540,515**

D. Summary of Unmet Needs & Additional Considerations

1. Unmet Needs Summary

Based on the above analysis, the county has calculated a total unmet need of **$10.8 Million** attributable to Hurricane Sally.

In summary, this analysis projects unmet needs as follows:

Table 87 Summary of Total Unmet Needs

Category	Estimated Impact	Amount of Funds from other sources	Remaining Unmet Need
Housing	$12,711,012	$3,476,515	$9,234,497
Infrastructure	$5,119,439	$3,839,293	$1,098,936
Economy	$628,115	$87,600	$540,515
Total	**$18,458,566**	**$7,403,408**	**$10,873,948**

See below for a more detailed analysis of how the unmet needs were calculated based on known losses and investments across each zip code.

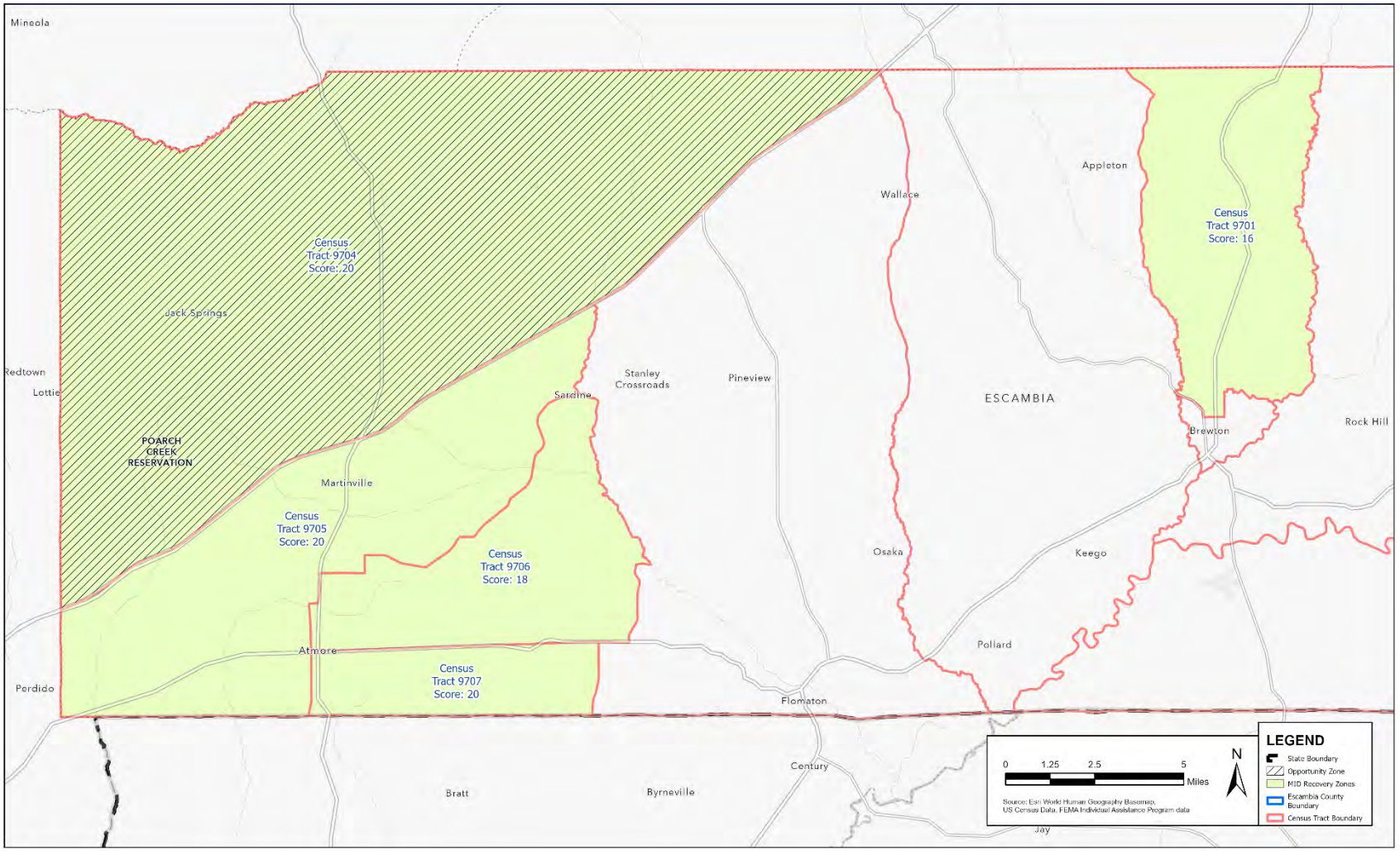
Table 88 Summary of Total Unmet Needs

Zip Code	Unmet Housing Need	Unmet Infrastructure Needs	Unmet Economy Needs	Total Unmet Need
36502	$5,716,488	$27,912	$129,290	$5,873,689
36426	$2,878,496	$1,020,703	$327,436	$4,226,634
36441	$550,410	$50,321	$83,789	$684,521
36562	$55,825	$0	$0	$55,825
36483	$14,165	$0	$0	$14,165
36401	$12,639	$0	$0	$12,639
36432	$4,611	$0	$0	$4,611
36420	$1,864	$0	$0	$1,864
Total	**$9,234,497**	**$1,098,936**	**$540,515**	**$10,873,947**

2. MID Recovery Zones

The MID Recovery Zones (MRZ) were identified at the census tract level based on areas with vulnerable populations and zip codes with the most unmet need and where these areas overlap with census tracts. A ranked approach was taken to rate the census tracts in Escambia County based on a score from 0 to 20, with a total possible score of 10 for each category. Census tracts with scores between 15 and 20 are considered a MID Recovery Zone. The MRZ identified for Escambia County are shown in Figure 32.

Figure 32 MID Recovery Zones for Escambia County



Identified MID Recovery Zones: Census Tracts: 9704, 9705, 9706, 9707 and 9701

E. Mitigation Needs Assessment

In accordance with the LRRP guidance, the county completed the following Mitigation Needs Assessment. Alabama's 2023 State Hazard Mitigation Plan, 2021-2026 Division A Regional Multi-Jurisdictional Hazard Mitigation Plan, data from the National Oceanic Atmospheric Administration (NOAA) and FEMA, and stakeholder input was used to assess the mitigation needs. This assessment informs and provides a substantive basis for programs proposed in this Local Recovery Plan, with a focus on addressing and analyzing all significant current and future hazard risks.

1. Historic Overview of Hazards

Since 1973, there have been 15 disaster declarations for Escambia County. The most common natural disasters that cause damage to an extent that results in a federal disaster declaration are hurricanes and severe storms/tornadoes. This historical pattern of extreme weather is expected to continue which means mitigation measures to reduce impacts caused by these types of hazards is critical.

Table 89 Declared Disasters since 1973 and the Associated Total Obligated PA Amount to Date for Escambia County

Declaration	Year Declared	Incident Type	Declaration Title	Total Obligated PA Amount
DR-4563-AL	2020	Hurricane	Hurricane Sally	$3,839,293
DR-4503-AL	2020	Biological	Covid-19 Pandemic	No Data
DR-4251-AL	2016	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	$508,237
DR-1971-AL	2011	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	No Data
DR-1870-AL	2010	Severe Storm	Severe Storms and Flooding	$7,058,099
DR-1593-AL	2005	Hurricane	Hurricane Dennis	$2,175,952
DR-1549-AL	2004	Hurricane	Hurricane Ivan	$2,396,592
DR-1466-AL	2003	Severe Storm	Severe Storms, Tornadoes, and Flooding	No Data
DR-1250-AL	1998	Hurricane	Hurricane Georges - 18 Sep 98	No Data
DR-1208-AL	1998	Severe Storm	Severe Storms and Flooding	No Data
DR-1070-AL	1996	Hurricane	Hurricane Opal	No Data
DR-861-AL	1990	Severe Storm	Severe Storms, Tornadoes & Flooding	No Data
DR-598-AL	1979	Hurricane	Hurricane Frederic	No Data
DR-464-AL	1975	Flood	Severe Storms & Flooding	No Data
DR-369-AL	1973	Tornado	Tornadoes & Flooding	No Data

Source: OpenFEMA Data Sets, Disaster Declaration Summary[36] and Public Assistance Funded Project Details[37]

Historic weather patterns can be determined for Escambia County from NOAA's National Centers for Environmental Information (NCEI) Storm Events Database. Table 29 provides an outline of the number of recorded storm events from January 1950 to December 2023 for Escambia County.

[36] https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2

[37] https://www.fema.gov/openfema-data-page/public-assistance-funded-projects-details-v1

If the same event type occurred on the same date, only one event was recorded; however, the number of fatalities, injuries and damages were summed across the multiple events for a single day and event type. It must be noted that the information provided by NCEI may not paint the full picture of storm events in Escambia County, as the event is a partial record of other significant meteorological events and storm events may be recorded in the neighboring counties.

Table 90 NCEI Storm Events Summary (1950 - 2023)

Event Type	Number of Events	Number of Fatalities	Number of Injuries	Property Damage ($)	Crop Damage ($)
Drought	2	0	0	$0	$0
Flash Flood	30	0	0	$3,148,000	$0
Flood	2	0	0	$767,000	$0
Funnel Cloud	1	0	0	$0	$0
Hail	50	0	0	$57,000	$0
Heat	4	2	1	$0	$0
Hurricane (Typhoon)	4	0	0	$400,000	$0
Lightning	5	2	0	$23,000	$0
Thunderstorm Wind	131	0	13	$3,018,000	$0
Tornado	27	0	25	$8,376,000	$0
Tropical Storm	3	0	0	$0	$0
Winter Storm	2	0	0	$0	$0
Winter Weather	1	0	0	$0	$0
Grand Total	**262**	**4**	**39**	**$15,789,000**	**$0**

Source: NOAA's National Centers for Environmental Information (NCEI) Storm Events Database[38]

2. Greatest Risk Hazards

The *2021-2026 Division A Regional Multi-Jurisdictional Hazard Mitigation Phase II Plan* identified risks by studying historical events and susceptibility and gathering information and input from local stakeholders. Each hazard was categorized in High, Medium, Low, or Very Low based on the historical trends of the hazards and also the probability of future occurrence and estimated loss. These categories are defined below:

- High: Probable major damage in a 1-10 Year Period
- Medium: Probable major damage in a 10-50 Year Period
- Low: Probable major damage in a 100 Year Period
- Very Low: No probable major damage in a 100 Year Period

The *2021-2026 Division S Regional Multi-Jurisdictional Hazard Mitigation Phase II Plan* identified high winds from strong severe storms, hurricanes, and tornadoes, and flooding as the most significant risks; however, wildfires and dam failures were also identified as great risks.

[38] https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=1%2CALABAMA

Table 91 Greatest Hazards for Escambia County

Hazard	Risk Rating	Locations Identified	Associated risk
Dam Failure	Medium	WJ Ellis/Bill's Lake Dam is classified as high risk; Marshall Patterson, Randolph Jernigan #1 and #2, Odie Sherrer, and Little River State Park are classified as significant risk	Flooding of several feet, mainly agricultural areas, infrastructure, and isolated structures would be impacted, and loss of life along with economic, environmental, and lifeline losses could occur.
Flooding	High	Areas along creeks and rivers, and low-lying areas. Urban areas are especially prone to flash floods but may occur in other areas where there is inadequate, damaged or non-existent drainage infrastructure. Brewton is especially susceptible due to the convergence of Murder Creek and Burnt Corn Creek. The Conecuh River is a major river that bisects the County	Can cause crop, property and infrastructure damage, injury, and loss of life
Hurricanes and Coastal Storms	High	County-wide with the greatest risk in the central and western portions of the county	Can cause crop, property and infrastructure damage, injury, and loss of life
Severe Storms	High	County-wide with the greatest risk in the central and western portions of the county	Can cause crop, property damage, injury, and loss of life
Tornado	High	County-wide with the greatest risk in the central and western portions of the county	Can cause crop, property damage, injury, and loss of life
Wildfires	Medium	County-wide	Can cause crop and property and infrastructure damage, threated health due to poor air quality and result in injury and loss of life

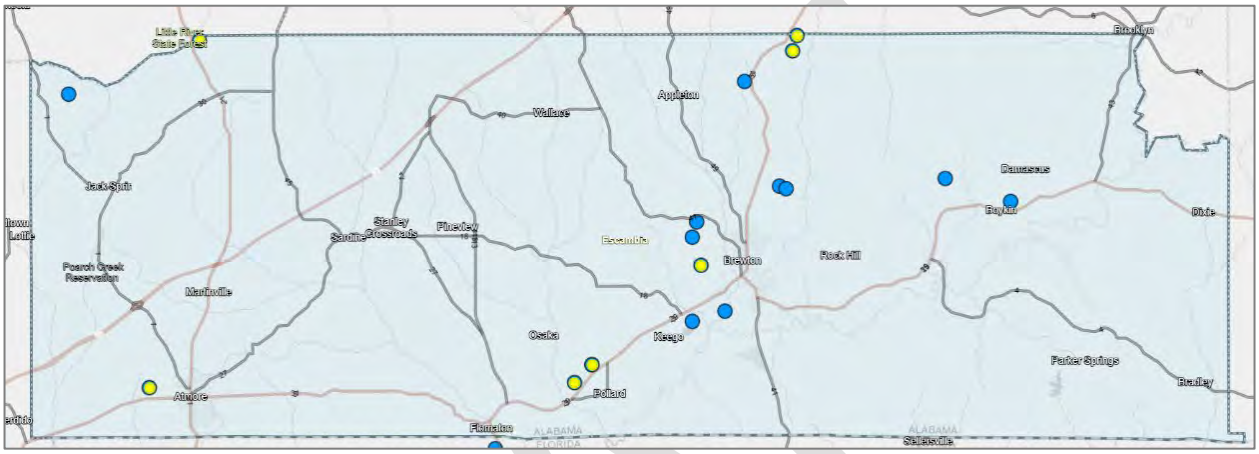
While extreme cold temperatures are uncommon due to Alabama's mild winter climate, residents are unaccustomed to and less prepared for the severe cold weather, putting residents at a greater risk for dealing with the extreme cold compared to more northern climates. Most crop species in Alabama do not have a tolerance for cold temperatures, making them more susceptible to the impacts of cold weather. Cold weather may also be accompanied by winter weather and storms, and ice storms which can cause downed trees or result in vehicle accidents. Since 1950, 3 cold weather-related events have occurred in Escambia County

b. Dam Failure

According to the National Inventory of Dams, Escambia County has 18 known dams. Six of these dams are identified as having a significant hazard potential and 1 (WJ Ellis Dam) has having a high hazard potential. The extent of a dam failure may vary based on the storage of the affected dam and its proximity to infrastructure and structures. For larger dams or dams classified with a high hazard potential, the extent of damage could be much greater and lead to loss of life along with economic, environmental, and community lifeline losses.

Historically (until June 7, 2023), Alabama did not have a dam safety program[39] which led to Alabama being disqualified from accessing federal infrastructure funds for dam-related inspections, training, and rehabilitation. Because of this, dams in the county may not have an accurate risk classification and they may not have received adequate funding to prevent and mitigate potential dam failures. This leads to a level of unknown risk associated with each dam. Due to the number dams with high to significant potential hazard and the predicted damages, dam failure is classified as a high risk.

Figure 33 Significant and High Hazard Potential Dams



Source: National Inventory of Dams, https://nid.sec.usace.army.mil/

c. Flooding

The county has experienced past flash and riverine flooding events. As development increases in the county and the drainage infrastructure ages, flash flooding events are predicted to be more frequent and intense. Historically, flood events have led to property and crop damage.

Enduring the consequences of repetitive flooding can put a strain on residents and on state and local resources. When the water rises, communities face the disruption of life, damaged belongings, and the high cost of rebuilding. FEMA administers the National Flood Insurance Program (NFIP), which pays flood claims. According to the NFIP data, as of April 2024, there are **42 Repetitive Loss Properties** and **6 Severe Repetitive Loss Properties** in Escambia County.

According to the *2023 Alabama State Hazard Mitigation Plan*. The most common type of flooding event in Escambia County is a flash flood as depicted in the table below.

Flash Flood	Flood	Coastal Flood or Storm Surge	All Flood Events
36	3	0	39

Data Source: 2023 Alabama State Hazard Mitigation Plan

Brewton has the greatest risk of flooding events as it is situated in a regulatory floodway between Murder Creek and Burnt Corn Creek as shown in *Figure 34 Escambia County FEMA National Risk Index*. Of the 7 counties included in this LRP, the Brewton area is the only area with a relatively high riverine flooding risk as shown in *Figure 6 Riverine Flooding Risk in MID Counties by Census Tract.*

[39] https://www.alabama-asce.org/alabama-establishes-first-state-dam-safety-program/

d. Hurricanes and Coastal Storms

As shown in Tables 90 and 91, hurricanes have historically made landfall in the region and have impacted Escambia County. Due to the county's proximity to the Gulf of Mexico, hurricanes and coastal storms continue to be a high risk for Escambia County. *Figure 4 Hurricane Risk in MID Counties by Census Tract,* in section VII.D, indicates that the majority of Escambia County has a Very High Hurricane Risk. Additionally, analysis performed by Florida State University's Meteorology Department, indicates that the probability of a hurricane of any intensity passing over Alabama is between 60% and 80%[40].

Any increased intensities in the future are likely to exacerbate the county's future vulnerability, given that intense hurricanes and coastal storms have enormous potential to devastate the physical, agricultural, economic, and sociocultural infrastructure of the county.

e. Severe Storms

Severe storms may include lightning, hail, strong winds, intense rainfall, and flooding. Severe storms can happen county-wide which can lead to property and crop damage and at times injuries. Since 1950, NCEI has recorded 189 hail, heavy rain, lightning, strong wind, thunderstorm windstorms, and tropical depression and storm events resulting in $2.6 million in damage, as shown in Table 91. Since this event type has occurred regularly over the years resulting in damage, and severe storms are expected to continue regularly, Escambia County has identified this event type as a high-risk hazard. The risk for negative impacts from hail across the majority of the county is relatively low, as shown in *Figure 7 Hail Risk in MID Counties by Census Tract.* For strong winds, the majority of the county has a relatively moderate to relatively high risk with the highest risk generally in the western portion on the county, as shown in *Figure 8 Strong Winds Risk in MID Counties by Census Tract.*

f. Tornadoes

Tornadoes are Escambia County's most significant loss-producing natural hazards according to the NCEI Storm Events Database. Between 1950 and 2022, tornadoes caused 25 injuries, and more than $8.3 million in property and crop losses.

According to *Figure 9 Tornado Risk in MID Counties by Census Tract,* the majority of Escambia County has a relatively high to very high tornado risk rating.

g. Wildfires

According to the Alabama Forestry Commission's Current Wildfire Totals summary[41], between 2000 and June 19, 2024, there were 856 total wildfires in Escambia County. Those fires burned 12,954 acres. That translates to a yearly average of 36 fires and 551 acres burned per year. The largest fire recorded in the county between these years was 428 acres and occurred in 2011. Over 100 wildfires occurred in 2011, burning 3,800 acres that year. According to *Figure 10 Wildfire Risk in MID Counties by Census Tract*, Escambia County has a relatively moderate risk for wildfire compared to the rest of the country.

[40] https://moe.met.fsu.edu/tcprob/al.php
[41] https://forestry.alabama.gov/pages/fire/totals.aspx

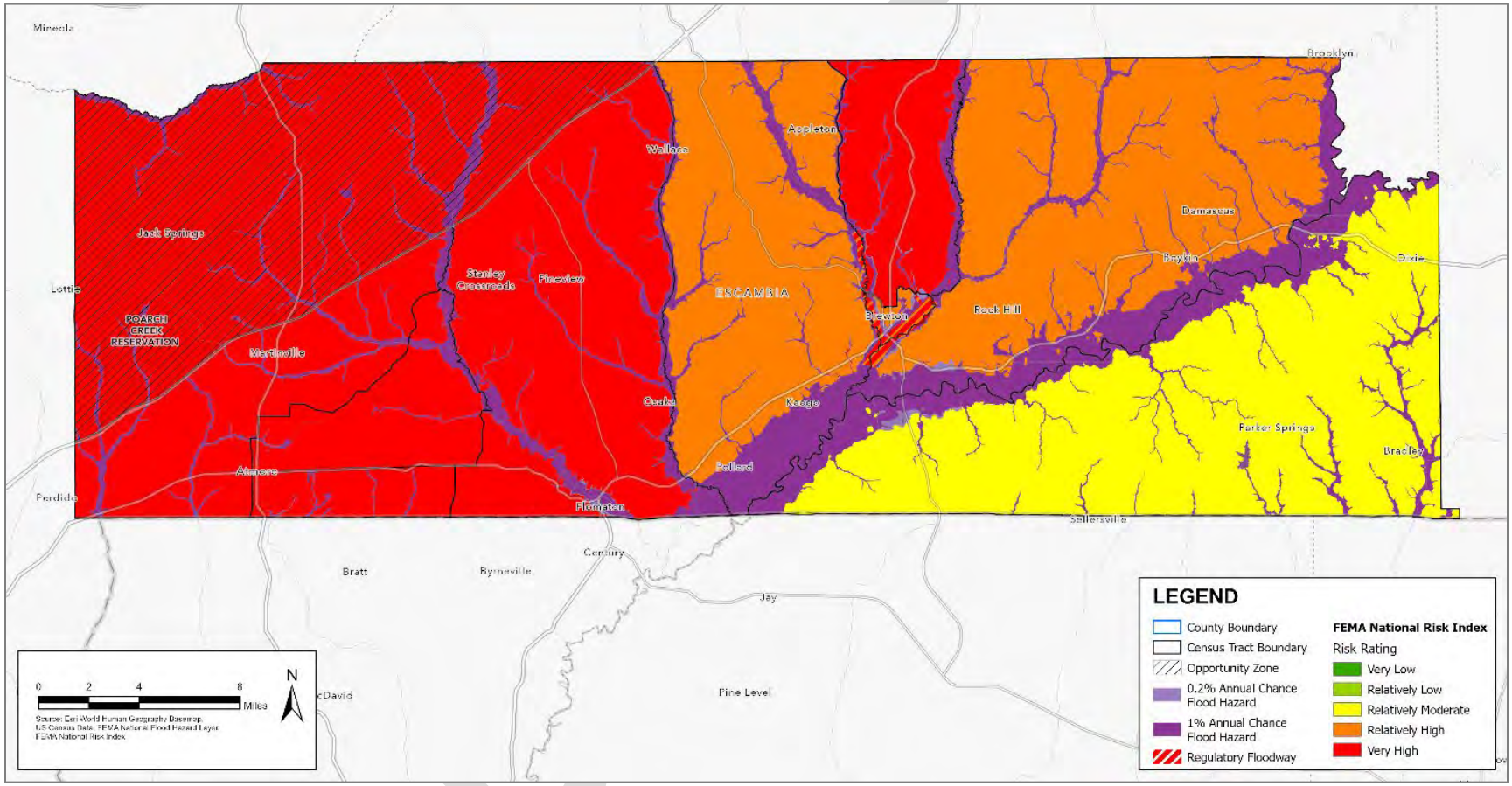
3. Hazard Risk Analysis

It has long been recognized that risk often corresponds with a high level of social vulnerability, compounding the impact of hazard and storm events. Using the FEMA National Risk index, we can evaluate the potential for negative impacts resulting from natural disasters by combining the expected annual loss due to natural hazards, social vulnerability and community resilience.

Risk Index = Expected Annual Loss x Social Vulnerability ÷ Community Resilience

Based on the composite Risk Index Score provided, we can see that most of the county has considered Relatively High or Very High-risk score as shown in Figure 34. Hazard specific risk indices for the greatest regional and county risks can be found in the maps in Section VII.D of this plan.

Figure 34 Escambia County FEMA National Risk Index



Vulnerability Overview

An overview of the greatest hazards and their risk impact from the *2021-2026 Division A Regional Multi-Jurisdictional Hazard Mitigation Plan* is shown below. To quantify the risk classifications of the greatest risk hazard, risk factors (probability, impact, location extent, duration) were evaluated.

Hazard	Probability	Impact	Location Extent	Duration
Dam Failure	Very Low	Critical	Small	Less than 4 hours
Flooding	High	Critical	Moderate	Less than one week
Hurricanes (High Winds)	Medium	Catastrophic	Large	Less than34 hours
Tornadoes (High Winds)	High	Critical	Small	Less than 6 hours
Severe Storms (High Winds)	High	Minor	Moderate	Less than 6 hours
Wildfires	High	Minor	Moderate	Less than one week

Probability defined:

- Very Low: Less than 1% annual probability
- Low: Between 1% and 10% annual probability
- Medium: Between 10% and 100% annual probability
- High: 100% annual probability

Impact defined:

- Minor: Very few injuries, if any occur. Only minor property damage and minimal disruption of quality of life. Temporary shutdown of critical facilities.
- Limited: Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.
- Critical: Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one week.
- Catastrophic: High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for one month or more.

Location Extent defined:

- Negligible: Less than 1% of area affected.
- Small: Between 1% and 10% of area affected.
- Moderate: Between 10% and 50% of area affected.
- Large: Between 50% and 100% of area affected.

Community Lifelines

Community Lifelines are critical business and government functions that are critical in the event of a disaster and are essential to human health, safety, or economic security. The greatest risks identified by the county could disrupt any number of the community lifelines which could impact emergency response and vulnerable populations and communities. Mitigation efforts should address any vulnerabilities across the 7 community lifelines to decrease the impact from the hazards identified in this plan. Maps of the lifeline assets in the county as well as the greatest risks can be found in Section VII.

F. Activity Identification

The 2020 disasters exposed, and exacerbated housing, infrastructure, economic and mitigation needs in many communities that remain at risk following these events. The post-disaster recovery process presents an opportunity to address these long-standing gaps while supporting the communities' efforts to recover and represent a lasting investment in local capacity and resilience. Programs proposed in this Local Recovery Plan are designed to promote long-term mitigation and resiliency standards with a focus on serving the most vulnerable populations.

In order to address these needs, the State of Alabama identified the following project activity types to be considered by each MID County as part of this planning process:

- Affordable Multifamily Rental Housing
- Homeowner Buyouts
- Homebuyer Assistance
- Mitigation
- Economic Resilience
- Infrastructure & Public Facility Improvements
- Public Services

Escambia County did not identify a need for affordable multifamily housing, homeowner buyouts, homeowner assistance, economic assistance or public services. Below is an outline of the identified mitigation, and infrastructure & public facility improvements projects identified and their associated project descriptions and details.

Project Name	Eligibility Criteria		Project Description	Project Rank
Floodplain Management	**Strategy**	Mitigation	• The county has identified the need to implement flood control improvement projects in areas subject to re-occurring flooding.	
	Eligible Activity	Mitigation, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID County – Mitigation		
	Administering Entity Identified	County Engineer		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Bridge/Road Repairs & improvements	**Strategy**	Recovery & Mitigation	• The county has identified the need for bridge and road repair and improvement projects. Several bridges including (X Bridges) was damaged as result of debris pile ups during and following Hurricane Sally.	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		

Project Name	Eligibility Criteria		Project Description	Project Rank
	SVI Score	High	• Additionally, to mitigate against future flooding, roadways also need to be improved (raised or additional culverts added).	
	Geographic Eligibility	MID Recovery Zones or MID County - Mitigation		
	Administering Entity Identified	County Engineer		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Rehabilitation of County Jail Roof	**Strategy**	Recovery	• The county jail in Brewton was damaged by Hurricane Sally and the roof is still in need of repair. • As part of this project, the roof will be repaired and hardened to better withstand future storms and will be built with energy efficiency in mind	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	Yes, existing O&M budget		

On the following page, a matrix overview of identified project activity types is provided.

Project Description	Program Strategy	Project Activity Type	National Objective	Benefits vulnerable population	SVI Score	Geographic Eligibility	Administering Entity Identified	Leverages Other Funds Identified	Project Readiness	O&M Feasibility Identified	Project Rank
Floodplain management	Mitigation	Mitigation	LMI, UN	Yes	High	Mitigation - County Wide	County Engineer	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Bridge and road repairs and improvements	Recovery & Mitigation	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zone	County Engineer	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Rehabilitation of county Jail roof	Recovery	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	Yes	

XI. Marengo County

A. Introduction

Marengo County is located within the west-central portion of Alabama and is at the center of the West Alabama Corridor Highway project. This project's goal is to connect Tuscaloosa to Mobile which will drive traffic and people through Marengo, which will hopefully lead to new economic opportunities within the county. Demopolis will be home to the Alabama School of Health Sciences, a residential high school focused on developing the state's healthcare workforce. The school is slated to open in 2026 and bring an economic boost to the area.

According to the American Community Survey (ACS) 2022 5-Year Estimates[42], Marengo County has a population of 19,180, a 0.7% decrease from 19,321 in 2019. The demographic breakdown shows most residents (51%) are Black or African American, followed by 45% identifying as White. Housing in Marengo County includes 9,834 occupied units, with 59% being single-family homes and 29% mobile homes. In total, 95% of units in the county are 1–4-unit dwellings or mobile homes. Homeownership is high, with 68% of residents owning their homes and 32% renting.

Marengo County experienced damage Hurricane Zeta which mainly resulted in downed trees that cut off power to communities and damaged homes and damaged homes which are still in need of repair. Additionally, due to lack of sheltering options in the County, many impacted households did not have a safe place to stay or gather after the storm.

B. Unmet Needs Gap

Through this Local Recovery Plan, the ACCA and Marengo County presents unmet need estimates from Hurricane Sally and Hurricane Zeta based on current best available data (see table below). Over time, ACCA and the county reserve the right to continue to update these estimates as additional assessments are made and more complete data becomes available.

Table 92 Total Estimated Unmet Need for Marengo County

	Estimated Impact	Amount of Funds from other sources	Total Unmet Need
Housing	$3,075,657	$888,091	$2,187,566
Infrastructure	$2,014,370	$1,813,047	$0
Economy	$82,23	$0	$82,236
Total	**$5,090,027**	**$2,701,138**	**$2,269,802**

Estimated impact includes added resilience and increased construction costs and may include FEMA Public Assistance Categories A, B and Z, where applicable. Total Unmet Need does not include FEMA PA categories A, B and Z.

[42] https://data.census.gov/ - Tables B02001, B25024, B25033

C. Impact and Unmet Needs Assessment

1. Background

In accordance with HUD guidance, Marengo County completed the following unmet needs assessment to identify priorities for CDBG-DR funding allocated as a result of impacts from the 2020 storms.

The assessment below utilizes federal and state resources, including data provided by FEMA, HUD, and the Small Business Administration (SBA), among other sources, to estimate unmet needs in three main categories of damage: housing, economy, and infrastructure. The unmet needs assessment focuses on Marengo County's impacts, with specific sections detailing the needs within the most impacted area, and where relevant, smaller geographic units.

a. Demographic Profile of the Affected Areas

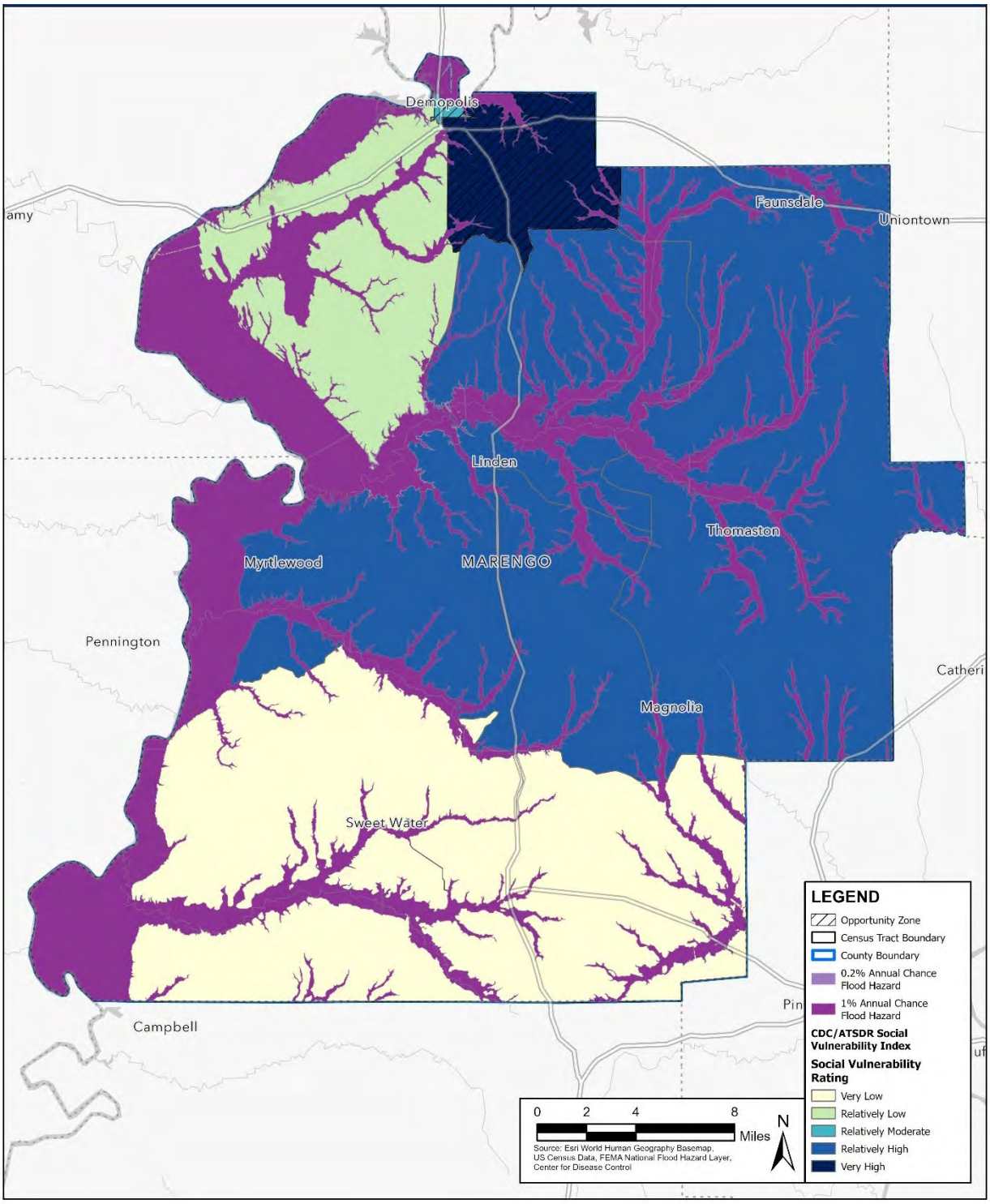
The demographic profile of Marengo County has not changed much since the State Action Plan was published and specific demographic information can be reviewed in the State Action Plan for the county.

Marengo County identified vulnerable populations within the county as part of the establishment of MID Recovery Zones. Vulnerable populations include those identified as part of a protected class, hard-to-reach, underserved, historically disadvantaged areas, and economically distressed areas. For the purposes of this LRP, Marengo County has identified vulnerable population areas using the CDC/ATSDR Social Vulnerable Index (SVI) and Opportunity Zones.

The CDC/ATSDR SVI is a place-based index designed to identify and quantify communities experiencing social vulnerability by comparing socio-economic, household composition, minority status and language, housing types and transportation needs, and other adjunct variables such as race and ethnicity and households without an internet subscription at the census tract level. Opportunity Zones are economically distressed communities, defined by individual census tract, nominated by America's governors, and certified by the U.S. Secretary of the Treasury via his delegation of that authority to the Internal Revenue Service. The Opportunity Zones initiative is not a top-down government program from Washington but an incentive to spur private and public investment in America's underserved communities.

Marengo County does not have any Racially or Ethnically Concentrated Areas of Poverty (R/ECAP), Promise Zones, Neighborhood Revitalization Strategy Areas or Tribal areas within the county. The map below provides an overview of the SoVI in each census tract against the flood hazard and floodway zones.

Figure 35 Marengo County Vulnerability Map



2. Housing Impact & Needs

a. Housing Damage and Loss Assessment

Unless otherwise noted, all housing summary data were compiled from these datasets for Hurricane Zeta only.

For each household determined to have unmet housing needs, their estimated average unmet housing need was calculated using similar variables and calculation methods from the State Action Plan. These variables are:

1. FEMA Damage Category Application Counts of Minor-Low to Major-Low
2. FEMA Damage Category Application Counts of Major-High to Severe
3. FEMA IA Applications without FEMA Verified Loss
4. Public Housing Damages

Total impact tables have been summarized based on owner-occupied vs renter-occupied households, impacted populations with flood and homeowner insurance, impact by residence type, impact by gross income, and impact to housing authorities in the following sections.

b. Total Impact (Owner-Occupied and Renter Households)

The information in the below tables outlines the total number of damaged properties population with documented damages. The information in the below tables outlines the total damaged properties population with documented damages. To account for properties that never had an inspection physically take place due to the COVID-19 pandemic and other reasons no damages were found, likely because they were desktop inspections, the county has classified these applications as “No FVL”. A detailed description is provided in the FEMA IA Applications without Real Property FEMA Verified Loss section.

Table 93 Homeowner/Renter Damaged Properties by All Damage Categories

Damage Category	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Severe	0	0.0%	0	0.0%	0	0.0%
Major-High	2	0.2%	0	0.0%	2	0.2%
Major-Low	15	1.8%	5	0.6%	20	2.4%
Minor-High	203	24.5%	46	5.5%	249	30.0%
Minor-Low	123	14.8%	3	0.4%	126	15.2%
No FVL	370	44.6%	63	7.6%	433	52.2%
Total	**713**	**85.9%**	**117**	**14.1%**	**830**	**100.0%**

FEMA Damage Category Applications - Minor-Low, Minor-High, and Major-Low

For FEMA IA Applications with minor-low, minor-high, and major-low damage, the count of those applications in each county was multiplied by the overall average SBA verified property loss per damage category provided in the State Action Plan. This calculation was used to determine the estimated total loss or support for these three damage categories. The tables below outline the total number of properties damaged for homeowners and renters.

Table 94 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Homeowners

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	123	$1,621	$199,383
Minor-High	203	$5,495	$1,115,485
Major-Low	15	$11,502	$172,530
Total	**341**	**N/A**	**$1,487,398**

Table 95 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	3	$1,621	$4,863
Minor-High	46	$5,495	$252,770
Major-Low	5	$11,502	$57,510
Total	**54**	**N/A**	**$315,143**

Table 96 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Homeowners & Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	126	$1,621	$204,246
Minor-High	249	$5,495	$1,368,255
Major-Low	20	$11,502	$230,040
Total	**395**	**N/A**	**$1,802,541**

FEMA Damage Category Applications - Major-High to Severe

For FEMA IA Applications with major-high to severe damage, it was assumed that those structures were substantially damaged and require reconstruction. To determine the replacement cost of the home, Marengo County replicated ADECA's approach and used the county's Zillow Home Value from August 2020 for All Homes (none-adjusted)[43]. Since the Zillow home value includes the cost of the land, it is assumed 66% of the value was attributable to the structure on the property. This adjusted home value is multiplied by the total count of applications in the major-high to severe damage categories. The results of these calculations are provided in below.

Table 97 Major-High and Severe Estimated Total Loss Homeowners and Renters

Damage Category	Zillow Home Value	66% of Zillow Value	Count	Estimated Total Loss
Major-High	$128,826	$85,025	2	$170,050
Severe	$128,826	$85,025	0	$0
	Total		**2**	**$170,050**

Of the 2 major-high and severely damaged homes, no renter occupied dwellings are classified as Major-High or Severe.

[43] Marengo County Home Values, https://www.zillow.com/home-values/1917/marengo-county-al/

FEMA IA Applications without FEMA Verified Loss

Marengo County also accounted for the damage to applications without Real Property FEMA verified loss (RPFVL) for owner-occupied dwellings and without Personal Property FEMA Verified Loss (PPFVL) for renter-occupied dwellings. Due to the COVID-19 pandemic and other reasons, inspections never physically took place, or no damages were found, likely because they were desktop inspections. To account for these types of impacts, Marengo counted applications with no FEMA Verified Loss and multiplied them by the average value for minor-low damage per SBA verified property loss provided in the State Action Plan. The results of these calculations are provided in Table X below:

Table 98 Estimated Total Loss for IA Applications without FEMA Verified Loss

Occupancy Type	Count of Applications	Average SBA Value	Estimated Total Loss
Owner	370	$1,621	$599,770
Renter	63	$1,621	$102,123
Total	**433**	**$1,621**	**$701,893**

c. Impacts of Insurance (HOI and NFIP)

For the purposes of this analysis, households inspected by FEMA and shown to have a 'Water Level' greater than 0.0 inches are considered to have been flooded, while all other units with no 'Water Level' are considered to have been impacted exclusively by wind.

See the table below for flood-damaged properties by damage category and occupancy type.

Table 99 Flood Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	0	2	8	5	2	0	17
Renter	0	0	6	2	0	0	8
Total	**0**	**2**	**14**	**7**	**2**	**0**	**25**

Flood Damage and Insurance (NFIP): An alarmingly high proportion of units with evidence of flood damage were reported in the FEMA IA data not to carry a flood insurance policy through the National Flood Insurance Program (NFIP) as shown in the table below. In total, **100 percent** of the flood-affected homeowner population is reported to not carry flood insurance per the FEMA IA data.

Table 100 Homeowner Flood-Damaged Properties and NFIP Counts

Damage Category	With NFIP	% With NFIP	Without NFIP	% Without NFIP
Severe	0	0%	0	0%
Major-High	0	0%	2	12%
Major-Low	0	0%	5	29%
Minor-High	0	0%	8	47%
Minor-Low	0	0%	2	12%
No FVL	0	0%	0	0%
Totals	**0**	**0%**	**17**	**100%**

Wind Damage and Insurance (HOI): In the absence of evidence of flood damage, units are assumed to be impacted exclusively by wind. As such, for the proportion of owner-occupied units with no evidence of flooding damage, the county is especially concerned about the high rate of households reported not to carry a standard hazard homeowners insurance policy (HOI) that would otherwise be expected to offset documented losses. In total, 78 percent of the wind-impacted homeowner population is reported not to carry hazard insurance as shown below.

Table 101 Wind Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	370	121	195	10	0	0	696
Renter	63	3	40	3	0	0	109
Total	**433**	**124**	**235**	**13**	**0**	**0**	**805**

Table 102 Homeowner Wind-Damaged Properties and HOI Counts

Damage Category	With HOI	% With HOI	Without HOI	% Without HOI
Severe	0	0%	0	0%
Major-High	0	0%	0	0%
Major-Low	0	0%	10	1%
Minor-High	16	2%	179	26%
Minor-Low	13	2%	108	16%
No FVL	126	18%	244	35%
Totals	**155**	**22%**	**541**	**78%**

d. Impact based on Residence Type

Below are FEMA IA applicants by housing type. The highest number of applicants came from Mobile Home units (64%) and housing/duplex units (33%).

Table 103 FEMA IA Applicants by Residence Type and Occupancy Type

Residence Type	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Apartment	0	0%	9	1%	9	1%
Assisted Living Facility	0	0%	1	0%	1	0%
House/Duplex	216	26%	60	7%	276	33%
Mobile Home	485	59%	42	5%	527	64%
Other	9	1%	4	1%	13	2%
Townhouse	1	0%	0	0%	1	0%
Travel Trailer	2	0%	1	0%	3	0%
Total	**713**	**86%**	**117**	**14%**	**830**	**100%**

The below table shows FEMA IA flood-damaged properties by housing type who had Flood or Homeowner's insurance. As indicated in the overview of flood-damaged properties, 0**%** of the flood-affected population are reported to carry an NFIP policy per the FEMA IA data.

Table 104 Flood Damaged Properties by Residence Type with NFIP

Residence Type	Count of Applications	Count with NFIP	% with NFIP
Apartment	0	0	0%
House/Duplex	7	0	0%
Mobile Home	10	0	0%
Total	**17**	**0**	**0%**

The below table shows FEMA IA wind-damaged properties by housing type who had Homeowner's insurance. As indicated in the overview of wind-damaged properties, 22**%** of the affected population are reported to carry homeowner's insurance policy per the FEMA IA data.

Table 105 Wind Damaged Properties by Residence Type with HOI

Residence Type	Count of Applications	Count with HOI	% with HOI
Apartment	0	0	0%
Assisted Living Facility	0	0	0%
House/Duplex	209	76	29%
Mobile Home	475	74	15%
Other	9	5	39%
Townhouse	1	0	0%
Travel Trailer	2	0	0%
Total	**696**	**155**	**22%**

Total estimated losses have been summarized by residence type.

Table 106 Total Estimated Loss by Residence Type

Residence Type	Count	Estimated Total Loss
Apartment	9	$22,337
Assisted Living Facility	1	$1,621
House/Duplex	276	$956,292
Mobile Home	527	$1,666,677
Other	13	$21,073
Townhouse	1	$1,621
Travel Trailer	3	$4,863

e. Impact on LMI Households

The income data provided in the FEMA IA data set was not specific enough to perform a low-and moderate-income (LMI) calculation, as income was categorized by general ranges. To summarize the impact of storms on households based on income, four income groupings are provided in the tables below. Overall, households with lower incomes were disproportionately impacted by Hurricane Zeta, with 81% of the total impacted population making $30,000 or less.

Table 107 Gross Income by Damage Level for Homeowners Only

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	0	0%	2	0%	0	0%	0	0%	2	0%
Major-Low	14	2%	0	0%	1	0%	0	0%	15	2%
Minor-High	174	24%	25	4%	4	1%	0	0%	203	28%
Minor-Low	114	16%	7	1%	2	0%	0	0%	123	17%
No FVL	269	38%	77	11%	23	3%	1	0%	370	52%
Totals	**571**	**80%**	**111**	**16%**	**30**	**4%**	**1**	**0%**	**713**	**100%**

Table 108 Gross Income by Damage Level for Renters Only

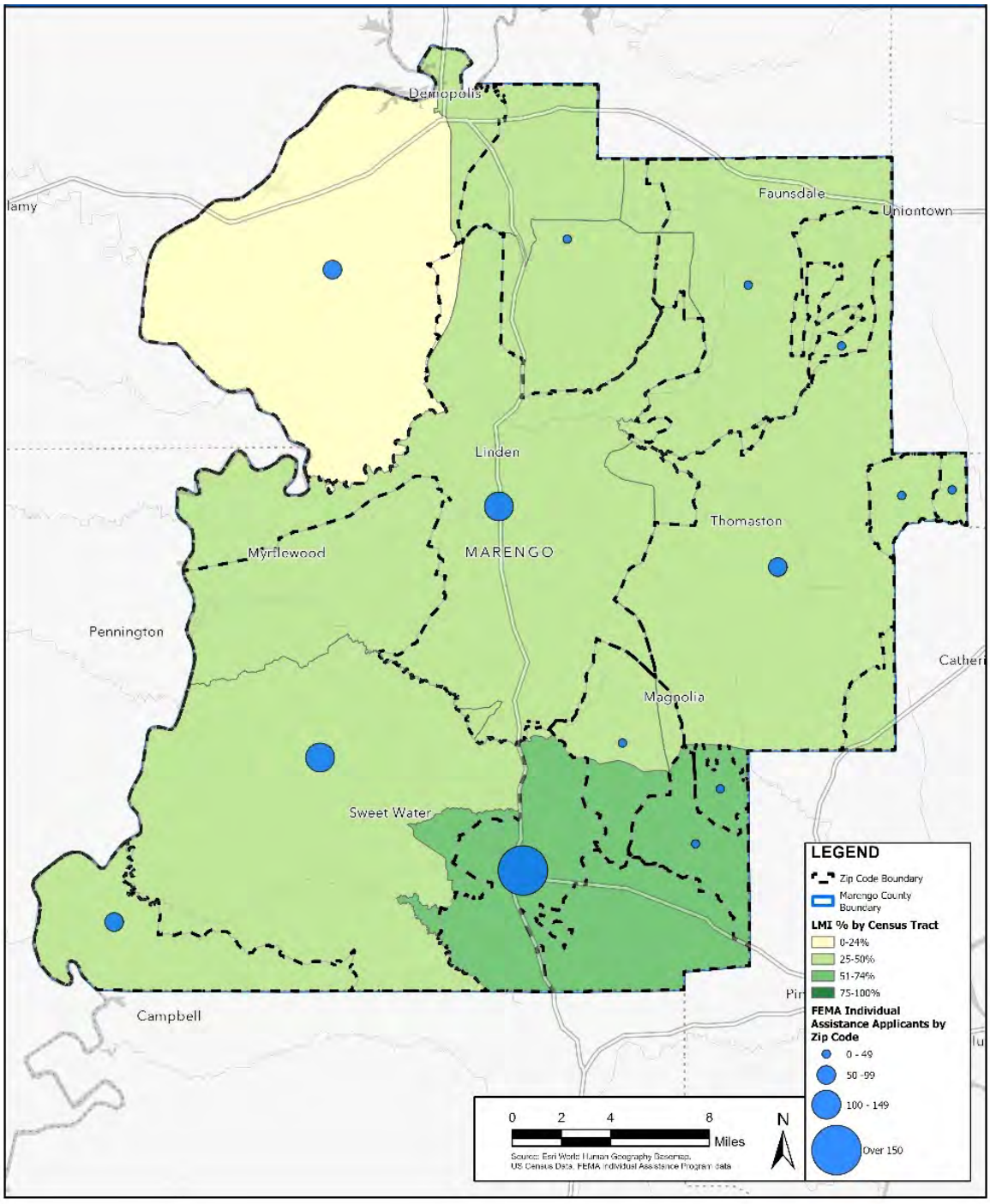
Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	0	0%	0	0%	0	0%	0	0%	0	0%
Major-Low	3	3%	2	2%	0	0%	0	0%	5	4%
Minor-High	39	33%	6	5%	1	1%	0	0%	46	39%
Minor-Low	3	3%	0	0%	0	0%	0	0%	3	3%
No FVL	53	45%	9	8%	1	1%	0	0%	63	54%
Totals	**98**	**84%**	**17**	**15%**	**2**	**2%**	**0**	**0%**	**117**	**100%**

Table 109 Gross Income by Damage Level for Homeowners and Renters

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	0	0%	2	0%	0	0%	0	0%	2	0%
Major-Low	17	2%	2	0%	1	0%	0	0%	20	2%
Minor-High	213	26%	31	4%	5	1%	0	0%	249	30%
Minor-Low	117	14%	7	1%	2	0%	0	0%	126	15%
No FVL	322	39%	86	10%	24	3%	1	0%	433	52%
Totals	**669**	**81%**	**128**	**15%**	**32**	**4%**	**1**	**0%**	**830**	**100%**

The map below illustrates the Low-Moderate Income percentage by Census Tract, with heat bubbles of where the FEMA IA applications are located based on the zip codes.

Figure 36 LMI Populations and FEMA IA Applications by Zip Code for Marengo County



f. Impact on Public Housing Authorities

A Public Housing Authority (PHA) for the county does not exist. There are PHAs in Linden and Demopolis; there is no known unmet need for these PHAs.

g. Impact on Homeless Populations

The impact of natural disasters on the housing population and people experiencing sheltered homelessness is very different from the impact on people experiencing unsheltered homelessness.

When a natural disaster damages a housing unit, its inhabitants can hypothetically be made whole by insurance or FEMA. When a natural disaster damages a shelter or broader infrastructure, beds can be rendered uninhabitable, but eventually, those beds can be regained via repair and recovery operations.

For people experiencing unsheltered homelessness (e.g. living on the streets), however, the impact is more difficult to see. A natural disaster cannot remove housing or shelter from a person without housing or shelter; instead, it destroys future housing opportunities. One of the primary barriers to permanent housing in any geography is a lack of affordable housing. When a natural disaster damages or destroys an area's affordable housing, it creates a housing cost and availability crisis that prevents people experiencing homelessness from achieving and stabilizing permanent housing.

Alabama Balance of State CoC

The Alabama Balance of State CoC serves 37 rural Alabama Counties, ensuring chronic under-counting of homeless populations in rural counties. According to the *2023 AHAR: Part 1 - PIT Estimates of Homelessness in the U.S.*[44], the Alabama Balance of State CoC counted 283 sheltered and unsheltered homeless persons in 2023 and 140 Emergency Sheltered persons. Marengo County is one of the counties that makes up this CoC and does not have a homeless shelter located within the county, which leads to chronic under-serving of people in need of sheltering pre and post storms. The county struggled to shelter people who lost housing due to Hurricane Zeta, and the housing and shelter crisis will only increase as additional disasters hit the area.

To provide support for those experiencing homelessness, Marengo County will need to:

- create new shelter options which include surge capacity for emergency shelter beds required to shelter people displaced disasters,
- create outreach and drop-in centers required to serve people experiencing unsheltered homelessness; and
- hire outreach workers and resource navigators to ensure people who are imminently at risk of homelessness are diverted back to permanent housing, including via homelessness prevention direct assistance.

h. Summary of Housing Impacts

FEMA IA was the primary data source that Marengo County used to determine housing unmet needs. Total estimated losses have been summarized by the data source and calculation methodology, as summarized in previous sections. An additional 15% is added at the end of the calculation to account for resilience, costs to make buildings more resilient to future disasters. To

[44] https://www.huduser.gov/portal/datasets/ahar/2023-ahar-part-1-pit-estimates-of-homelessness-in-the-us.html

calculate the total unmet need, received assistance is also summarized and subtracted from the estimated total loss, including resilience costs.

Table 110 Total Estimated Loss by Damage Category

Data Source/Calculation	Count	Estimated Total Loss
Severe	0	$0
Major-High	2	$170,050
Major-Low	20	$230,040
Minor-High	249	$1,368,255
Minor-Low	126	$204,246
No FEMA Verified Loss	433	$701,893
Public Housing	0	$0
Total	**830**	**$2,674,484**
+15% Resilience Costs		**$401,173**
Total Estimated Loss with Resilience Costs		**$3,075,657**

To ensure that housing repair assistance is factored into the housing unmet needs calculation, FEMA IA repair and replacement, SBA Real Estate[45] and NFIP payment amounts were added together to get the total housing assistance received. See below for the calculation.

Table 111 Total Housing Assistance Received Calculation

Data	Count	Total Amount
FEMA IA Payments	195	$765,091
NFIP Payments	0	$0
SBA Loan Amounts	Unknown	$123,000
Total Housing Assistance	**195**	**$888,091**

The total housing assistance was subtracted from the total housing unmet needs with resilience included to determine the total housing unmet need of approximately $2.1 million as a result of Hurricane Zeta. See Table 113 for the calculation.

Table 112 Total Housing Unmet Need for Marengo County

Data	Estimated Amount
Total Estimated Loss including 15% Resilience Costs	$3,075,657
Total Housing Assistance	-$888,091
Total Housing Unmet Need	**$2,187,566**

[45] SBA Disaster Loan Data, Public Access: https://www.sba.gov/document/report-sba-disaster-loan-data

3. Infrastructure Impact & Needs

a. Infrastructure Damage & Loss Assessment

The southwest part of the county experienced significant tree damage which resulted in power outages lasting three to seven days, as well as localized flooding which caused some damage to the roads and bridge. The most significant flooding in the southern part of the county occurred in the Marengo area near the High School. Parts of Demopolis which are prone to flooding due to its proximity to the Black Warrior River, particularly in the Brickyard area along Ash Avenue, flooded due to Hurricane Zeta.

Marengo County was impacted by Hurricane Zeta only. The table below includes the Estimated PA Cost and additional costs for resiliency measures (15%) and increased cost of construction (23.6%) to accurately estimate the Federal Share (90%) and the local share/unmet need (10%) more accurately for Categories C through G, including roads and bridges, public facilities and buildings, public utilities, and other public assistance needs.

Table 113 Total Estimated Infrastructure Costs by PA Damage Category

Damage Category	PA Project Amount	15% Resilience Measures	23.6% Construction Costs	Total PA Project Amount
A - Debris Removal	$1,998,591	$0	$0	$1,998,591
B - Protective Measures	$14,645	$0	$0	$14,645
Z - State Management	$1,135	$0	$0	$1,135
Total	**$2,014,370**	**$0**	**$0**	**$2,014,370**

b. Unmet Infrastructure Needs

The table below includes the Total Estimated PA Cost, consisting of resiliency measures and increased construction costs with the total Federal Obligated Amount and the Non-Federal Share Amount.

Table 114 Total Estimated Non-Federal Share Amount by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount
A - Debris Removal	$1,998,591	$1,798,731	$199,859
B - Protective Measures	$14,645	$13,181	$1,465
Z - State Management	$1,135	$1,135	$0
Total	**$2,014,370**	**$1,813,047**	**$201,324**

Based on the analysis performed, there is a potential unmet need of **$0** for identified infrastructure damage eligible under FEMA-PA Categories C-G.

Table 115 Total Estimated Non-Federal Share Amount by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount	Unmet Need
A - Debris Removal*	$1,998,591	$1,798,731	$199,859	$0
B - Protective Measures*	$14,645	$13,181	$1,465	$0
Z - State Management*	$1,135	$1,135	$0	$0
Total	**$2,014,370**	**$1,813,047**	**$201,324**	**$0**

*CDBG-DR Funds are not used for PA costs in Categories A, B, and Z.

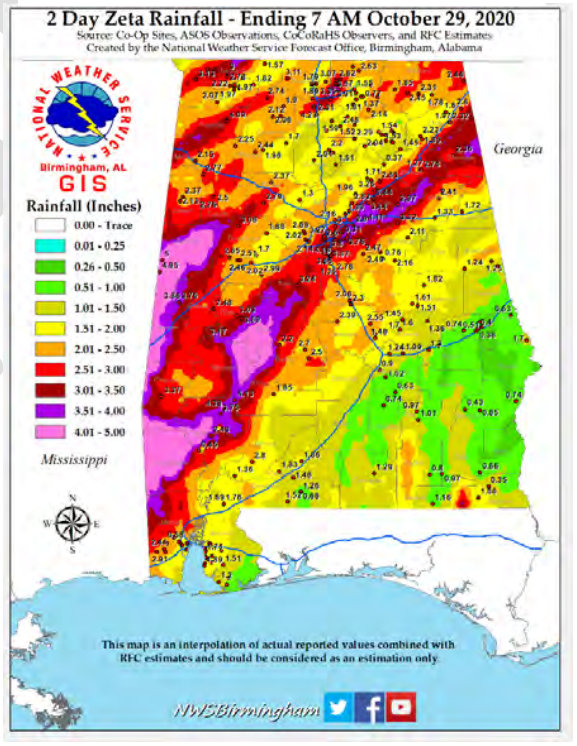
4. Economic Impact & Needs

A summary of the damage and impacts of Hurricane Zeta is provided below, along with an analysis of Small Business Administration loans provided to the business community following Hurricanes Sally and Zeta. While difficult to quantify, Hurricane Zeta likely exacerbated existing economic challenges compounded by pre-existing distress due to COVID-19.

Agricultural Impact

Following Hurricane Zeta, USDA designated Marengo County as a primary natural disaster area, which allows producers who suffered losses by Hurricane Zeta to apply for emergency loans with the U.S. Department of Agriculture (USDA) Farm Service Agency (FSA). This natural disaster designation allows the FSA to extend much-needed emergency credit to producers recovering from natural disasters. Emergency loans can be used to meet various recovery needs including the replacement of essential items such as equipment or livestock, reorganization of a farming operation, or the refinance of certain debts.[46] As reported in the November 2nd, 2020, Alabama Crop Progress and Condition Report[47], Hurricane Zeta delivered heavy rains and damaging winds. The high soil moisture prevented fieldwork in many areas of the state following the Hurricane. As shown in Figure 20, parts of Marengo County Received upwards of 5 inches of rain across a 48-hour period.

Figure 37 Hurricane Zeta 2 Day Rainfall Total



a. Unmet Economic Needs

According to an analysis of the Small Business Administration (SBA) Business loan data for applications with approved or denied loans that meet a HUD category of loss, the county realized a total verified loss for all businesses of $71,510. After accounting for an additional fifteen percent (15%) for resilience costs, the County's total estimated economic impact is $82,236. According to

[46] https://www.fsa.usda.gov/state-offices/Alabama/news-releases/2021/usda-designates-13-alabama-counties-as-primary-natural-disaster-areas

[47] https://www.nass.usda.gov/Statistics_by_State/Alabama/Publications/Crop_Progress_&_Condition/2020/AL-CropProgress-11-02-20.pdf

the SBA business report, the SBA provided $0 in total benefits for real estate losses. Therefore, the County's remaining economic unmet needs are valued at $82,236.

Table 116 Unmet Economic Needs Summary

Total Verified Loss	15% Resilience Costs	Total Estimated Impact	Total SBA Benefits	Remaining Unmet Needs
$71,510	**$10,726**	**$82,236**	**$0**	**$82,236**

D. Summary of Unmet Needs & MID Recovery Zones

1. Unmet Needs Summary

Based on the above analysis, the county has calculated a total unmet need of **$2.26 Million** attributable to Hurricane Zeta.

In summary, this analysis projects unmet needs as follows:

Table 117 Summary of Total Unmet Needs

Category	Estimated Impact	Amount of Funds from other sources	Remaining Unmet Need
Housing	$3,075,657	$888,091	$2,187,566
Infrastructure	$2,014,370	$1,813,047	$0
Economy	$82,23	$0	$82,236
Total Unmet Needs	**$5,090,027**	**$2,701,138**	**$2,269,802**

View the table below for a more detailed analysis of how the unmet needs were calculated based on known losses and investments across each zip code.

Table 118 Unmet Need Summary by Zip Code

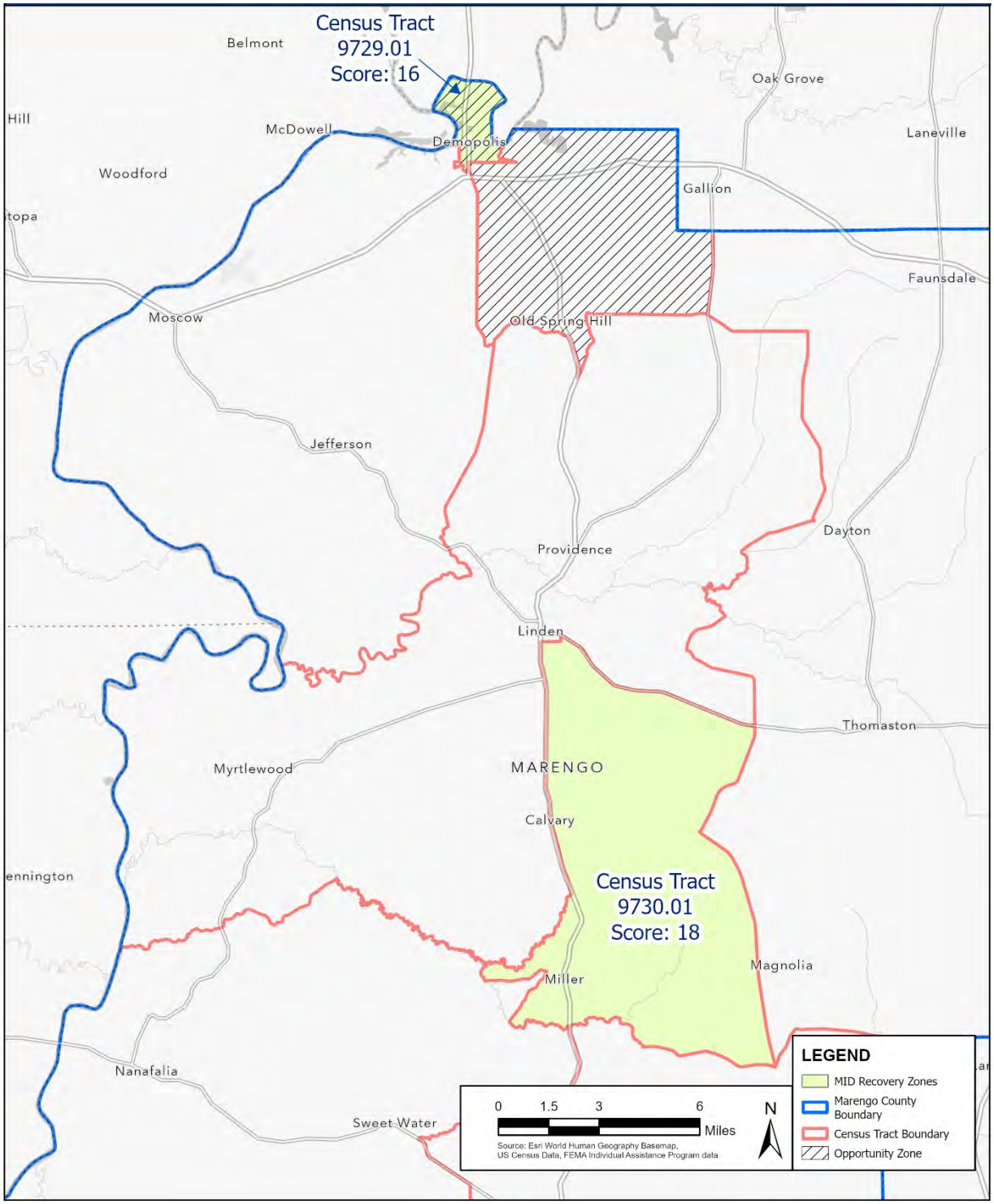
Zip Code	Unmet Housing Need	Unmet Infrastructure Needs	Unmet Economy Needs	Total Unmet Need
36782	$419,651	$0	$40,004	$459,656
36736	$351,383	$0	$23,499	$374,883
36732	$371,080	$0	$0	$371,080
36748	$348,542	$0	$18,732	$367,274
36784	$116,240	$0	$0	$116,240
36738	$114,356	$0	$0	$114,356
36783	$100,706	$0	$0	$100,706
36769	$99,489	$0	$0	$99,489
36742	$86,151	$0	$0	$86,151
36754	$85,929	$0	$0	$85,929
36728	$44,826	$0	$0	$44,826
36773	$29,930	$0	$0	$29,930
36786	$11,144	$0	$0	$11,144
36722	$8,138	$0	$0	$8,138
Total	**$2,187,566**	**$0**	**$82,236**	**$2,269,802**

2. MID Recovery Zones

The MID Recovery Zones (MRZ) were identified at the census tract level based on areas with vulnerable populations and zip codes with the most unmet need and where these areas overlap with census tracts. A ranked approach was taken to rate the census tracts in Marengo County based on a score from 0 to 20, with a total possible score of 10 for each category. Census tracts with scores between 15 and 20 are considered a MID Recovery Zone

The MRZ identified for Marengo County are shown in Figure 38 MID Recovery Zones for Marengo County.

Figure 38 MID Recovery Zones for Marengo County



MID Recovery Zones Identified: Census Tracts 9730.01 and 9729.01

E. Mitigation Needs Assessment

In accordance with the LRRP guidance, the county completed the following Mitigation Needs Assessment. Alabama's 2023 State Hazard Mitigation Plan, 2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan, data from the National Oceanic Atmospheric Administration (NOAA) and FEMA, and stakeholder input was used to assess the mitigation needs. This assessment informs and provides a substantive basis for programs proposed in this Local Recovery Plan, with a focus on addressing and analyzing all significant current and future hazard risks.

1. Historic Overview of Hazards

Since 1973, there have been 10 disaster declarations for Marengo County. The most common natural disasters that cause damage to an extent that results in a federal disaster declaration are hurricanes and severe storms/tornadoes. This historical pattern of extreme weather is expected to continue which means mitigation measures to reduce impacts caused by these types of hazards is critical.

Table 119 Declared Disasters since 1973 and the Associated Total Obligated PA Amount to Date

Declaration	Year Declared	Incident Type	Declaration Title	Total Obligated PA Amount
DR-4573-AL	2021	Hurricane	Hurricane Zeta	$1,813,047
DR-4503-AL	2020	Biological	COVID-19 Pandemic	$6,187
DR-1971-AL	2011	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	$341,260
DR-1835-AL	2009	Severe Storm	Severe Storms, Flooding, Tornadoes, and Straight-Line Winds	$90,998
DR-1605-AL	2005	Hurricane	Hurricane Katrina	$230,711
DR-1593-AL	2005	Hurricane	Hurricane Dennis	$91,258
DR-1549-AL	2004	Hurricane	Hurricane Ivan	$766,877
DR-856-AL	1990	Severe Storm	Severe storms, tornadoes & flooding	No Data
DR-598-AL	1979	Hurricane	Hurricane Frederic	No Data
DR-578-AL	1979	Flood	Storms, wind, flooding	No Data

Source: OpenFEMA Data Sets, Disaster Declaration Summary[48] and Public Assistance Funded Project Details[49]

Historic weather patterns can be determined for Marengo County from NOAA's National Centers for Environmental Information (NCEI) Storm Events Database. Table 120 provides an outline of the number of recorded storm events from January 1953 to December 2023 for Marengo County. If the same event type occurred on the same date, only one event was recorded; however, the number of fatalities, injuries, and damages were summed across the multiple events for a single day and event type.

[48] https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2

[49] https://www.fema.gov/openfema-data-page/public-assistance-funded-projects-details-v1

Table 120 Marengo County NCEI Storm Events Summary (1953 - 2023)

Event Type	Number of Events	Number of Fatalities	Number of Injuries	Property Damage ($)	Crop Damage ($)
Cold/Wind Chill	3	0	0	$0	$1,000,000
Drought	24	0	0	$0	$0
Flash Flood	7	0	0	$174,000	$5,000
Flood	6	0	0	$5,000	$0
Funnel Cloud	1	0	0	$0	$0
Hail	54	0	0	$124,000	$4,000
Heat	7	1	0	$0	$0
Heavy Rain	1	0	0	$0	$0
Heavy Snow	3	0	0	$0	$0
Ice Storm	1	0	0	$0	$0
Lightning	3	0	1	$250,000	$0
Sleet	1	0	0	$0	$0
Strong Wind	1	0	0	$7,000	$0
Thunderstorm Wind	90	0	5	$468,700	$0
Tornado	35	2	16	$26,736,500	$0
Tropical Storm	3	0	1	$3,300,000	$0
Winter Storm	4	0	0	$0	$0
Extreme Cold/Wind Chill	1	0	0	$0	$0
High Wind	1	0	0	$10,015,000	$250,000
Tropical Depression	2	0	0	$1,000	$0
Excessive Heat	4	0	0	$0	$0
Grand Total	**252**	**3**	**23**	**$41,081,200**	**$1,259,000**

Source: NOAA's National Centers for Environmental Information (NCEI) Storm Events Database[50]

2. Greatest Risk Hazards

The *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* identified risks by studying historical events and susceptibility and gathering information and input from local stakeholders. Each hazard was categorized in High, Medium, Low, or Very Low based on the historical trends of the hazards and also the probability of future occurrence and estimated loss. These categories are defined below:

- **High**: Probable major damage in a 1-10 Year Period
- **Medium**: Probable major damage in a 10-50 Year Period
- **Low**: Probable major damage in a 100 Year Period
- **Very Low**: No probable major damage in a 100 Year Period

[50] https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=1%2CALABAMA

The *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* identified high winds from strong severe storms and tornadoes, and flooding as the most significant risks; however, extreme temperatures including drought were also identified as a great risk.

Table 121 Greatest Risk Hazards for Marengo County

Hazard	Risk Rating	Locations Impacted	Associated risk
Dam Failures	Medium	Glass Lake Dam #1 is classified as high risk; Demopolis Lock and Dam, Sweet Water Dam, Owensby Number One Dam, Willis Lake Dam, Paul S Owensby Dam #2, Walker Catfish Pone #1 and #3, Spencer Dam #2, Cochran Lake Dam, Devere Dam, Gulf States Paper Company Dam, and N B Fields Lake Dam are classified as significant risk	Flooding of several feet, mainly agricultural areas, infrastructure, and isolated structures would be impacted, and loss of life along with economic, environmental, and lifeline losses could occur.
Flooding	High	Areas along creeks and rivers, and low-lying areas with poor drainage are most at risk. Urban areas are especially prone to flash floods but may occur in other areas where there is inadequate, damaged or non-existent drainage infrastructure. The Black Warrior River makes up the western border of the county and borders Demopolis which puts these areas at greater risk compared to other parts of the county.	Can cause crop, property and infrastructure damage, injury, and loss of life
Tornadoes	High	County-wide, Tornadoes can occur throughout the year but are most likely to occur in the spring (March-May) and fall (November to December).	Can cause crop, property, and infrastructure damage, injury, and loss of life
Severe Storms	High	County-wide, Severe storms can occur throughout the year.	Can cause crop, property damage, injury, and loss of life
Extreme Heat and Droughts	Medium	County-wide, the area is especially susceptible to these events during the summer months.	Can cause crop loss, water quality, and quantity issues, threaten health (heat stroke, etc.) of people living and working in the area

Source: 2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan

While extreme cold temperatures are uncommon due to Alabama's mild winter climate and therefore it is not classified as a Medium or High Risk in Marengo County, residents are unaccustomed to and less prepared for the severe cold weather, putting residents at a greater risk for dealing with the extreme cold compared to more northern climates. Recent events lead to decreased water supply due to homes running water, or due to burst pipes, which put a strain on the water supply systems. The lack of water can lead to a lack of water supply and pressure for firefighters to combat house fires. Most crop species in Alabama do not have a tolerance for cold temperatures, making them more susceptible to the impacts of cold weather. Cold weather may also be accompanied by winter weather, and ice storms which can cause downed trees, snapped

power lines, or result in vehicle accidents. Since 1953, 12 cold weather-related events have occurred in Marengo County.

b. Dam Failures

According to the National Inventory of Dams, Marengo County has 51 known dams. Twelve (12) of these dams are identified as having a significant hazard potential and 1 dam has a high hazard potential. The extent of a dam failure may vary based on the storage of the affected dam and its proximity to infrastructure and structures. For larger dams or dams classified with a high hazard potential, the extent of damage could be much greater and lead to loss of life along with economic, environmental, and community lifeline losses.

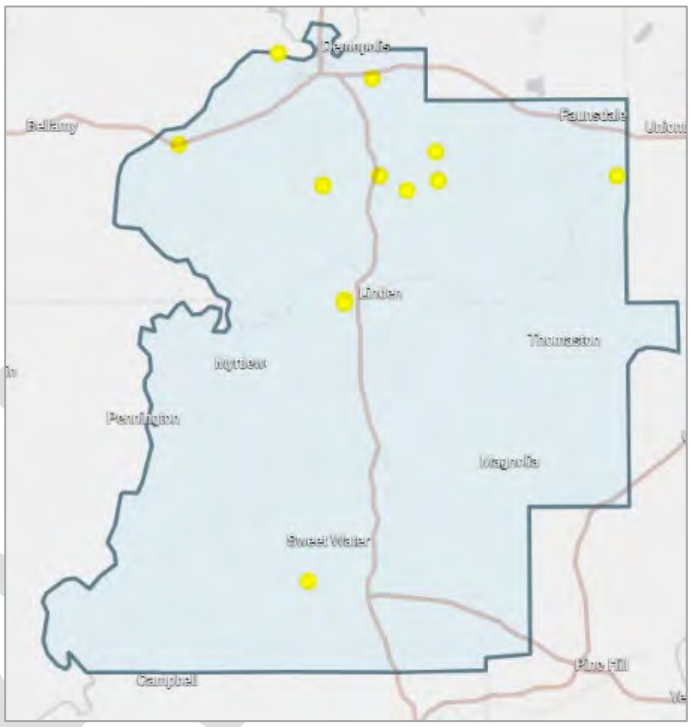


Figure 39 Significant and High Hazard Potential Dams
Source: National Inventory of Dams, https://nid.sec.usace.army.mil/

Historically (until June 7, 2023), Alabama did not have a dam safety program[51] which led to Alabama being disqualified from accessing federal infrastructure funds for dam-related inspections, training, and rehabilitation. Because of this, dams in the county may not have an accurate risk classification and they may not have received adequate funding to prevent and mitigate potential dam failures. This leads to a level of unknown risk associated with each dam. Due to the number of dams with high to significant potential hazards and the predicted damages, dam failure is classified as a high risk.

c. Flooding

Flooding is a problem for many people across the United States. Enduring the consequences of repetitive flooding can put a strain on residents and on state and local resources. When the water rises, communities face the disruption of life, damaged belongings, and the high cost of rebuilding. FEMA administers the National Flood Insurance Program (NFIP), which pays flood claims. According to the NFIP data, as of April 2024, there are 0 Repetitive Loss Properties and 0 Severe Repetitive Loss Properties in Marengo County.

While repetitive loss flooding is not recorded in Marengo County, Marengo County does experience flooding events. Table 120 shows that there have been 13 recorded flood and flash flood events in the county. According to the *2023 Alabama State Hazard Mitigation Plan*, the most common type of flooding event in Marengo County from 2000-2022 is a flash flood as depicted in the table below.

[51] https://www.alabama-asce.org/alabama-establishes-first-state-dam-safety-program/

Flash Flood	Flood	Coastal Flood or Storm Surge	All Flood Events
6	0	0	6

Data Source: 2023 Alabama State Hazard Mitigation Plan

According to *Figure 6 Riverine Flooding Risk in MID Counties by Census Tract,* the risk for riverine flooding in Marengo County is relatively low with the exception of the northwest corner of the county, where the Spillway Falls of the Black Warrior River is located, which has a relatively moderate risk of riverine flooding. Parts of Demopolis, particularly the Brickyard area is prone to flooding due to its proximity to the Black Warrior River. Other low-lying areas across the county are also prone to localized flooding events.

d. Severe Storms

Severe storms may include lightning, hail, strong winds, intense rainfall, and flooding. Since 1953, NCEI has recorded 102 hail, heavy rain, lightning, strong wind, thunderstorm windstorms, and tropical depression and storm events, as shown in Table 120. Since this event type has occurred regularly over the years resulting in damage, and severe storms are expected to continue regularly, Marengo County has identified this event type as a high-risk hazard. The risk for negative impacts from hail across the majority of the county is relatively low, as shown in *Figure 7 Hail Risk in MID Counties by Census Tract.* For strong winds, the county has a relatively moderate to relatively high risk, as shown in *Figure 8 Strong Winds Risk in MID Counties by Census Tract.*

Severe storms can happen county-wide which can lead to property and crop damage and at times injuries. According to the Table 120, the combination of hail, strong winds, lightning, and thunderstorms has led to estimated property damage costs of $14M and $250K in crop damages.

e. Tornadoes

Tornadoes are Marengo County's most significant loss-producing natural hazards according to the NCEI Storm Events Database. Between 1961 and 2023, Tornadoes caused 16 injuries, 2 deaths, and more than $26.7 million in property and crop losses.

According to *Figure 9 Tornado Risk in MID Counties by Census Tract,* Marengo County has a relatively moderate to very high Tornado Risk rating, with the greatest risk in the central and northwestern portions of the county.

f. Extreme Heat and Droughts

Extreme heat is often associated with droughts which can lead to greater impacts on communities. Extreme heat is very common in Marengo County, as Alabama has a humid subtropical climate, and summers in Alabama are among the hottest in the United States, with high temperatures averaging over 90 °F throughout the state. The risk for negative impacts from heat waves across the majority of the county is Relatively Moderate, as shown in *Figure 3 Heat Wave Risk in MID Counties by Census Tract.* There is a lack of infrastructure in the county to offer dedicated cooling stations for residents, especially populations that are the most vulnerable to extreme heat.

Prolonged extreme heat periods play a vital role when it comes to droughts, especially when coupled with a lack of precipitation resulting in a lack of moisture in agricultural soil. This can lead to negative economic impacts in the county as crop losses occur. Agricultural losses from droughts are estimated to cost the state annually in damages. As a result, the past events and

future probability of heat and droughts are classified county-wide as medium risk according to the *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan.*

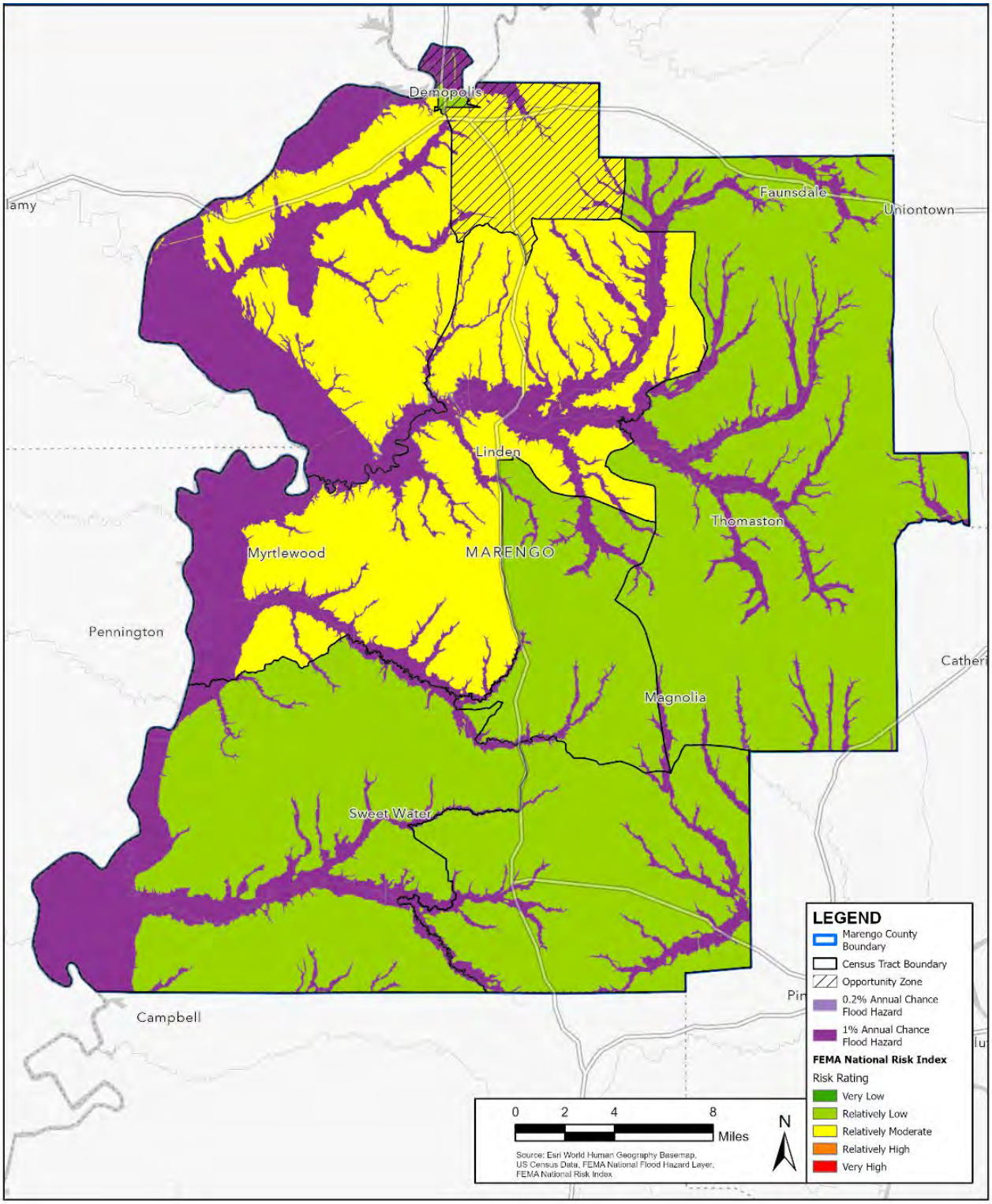
3. Hazard Risk Analysis

It has long been recognized that risk often corresponds with a high level of social vulnerability, compounding the impact of hazard and storm events. Using the FEMA National Risk index, we can evaluate the potential for negative impacts resulting from natural disasters by combining the expected annual loss due to natural hazards, social vulnerability and community resilience.

Risk Index = Expected Annual Loss x Social Vulnerability ÷ Community Resilience

Based on the composite Risk Index Score provided, we can see that there are parts of the county that have a Relatively Moderate risk score as shown in Figure 40. This area is between Linden Demopolis. Hazard specific risk indices for the greatest regional and county risks can be found in the maps in Section VII.D of this plan.

Figure 40 Marengo County FEMA National Risk Index Mapp



Vulnerability Overview

An overview of the greatest hazards and their risk impact from the *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* is shown below. To quantify the risk classifications of the greatest risk hazard, risk factors (probability, impact, location extent, duration) were evaluated.

Hazard	Probability	Impact	Location Extent	Duration
Dam Failures	Very Low	Critical	Small	Less than 24 hours
Flooding	High	Critical	Moderate	Less than one week
Tornadoes	High	Critical	Small	Less than 6 hours
Severe Storms	Medium	Minor	Moderate	Less than 6 hours
Extreme Heat and Droughts	Medium	Minor	Small	More than one week

Probability defined

- **Very Low**: Less than 1% annual probability
- **Low**: Between 1% and 10% annual probability
- **Medium**: Between 10% and 100% annual probability
- **High**: 100% annual probability

Impact defined:

- **Minor**: Very few injuries, if any occur. Only minor property damage and minimal disruption of quality of life. Temporary shutdown of critical facilities.
- **Limited**: Minor injuries only. More than 10% of property in affected area is damaged or destroyed. Complete shutdown of critical facilities for more than one day.
- **Critical**: Multiple deaths/injuries possible. More than 25% of property in affected area is damaged or destroyed. Complete shutdown of critical facilities for more than one week.
- **Catastrophic**: High number of deaths/injuries possible. More than 50% of property in affected area was damaged or destroyed. Complete shutdown of critical facilities for one month or more.

Location Extent defined:

- **Negligible**: Less than 1% of area affected.
- **Small**: Between 1% and 10% of area affected.
- **Moderate**: Between 10% and 50% of area affected.
- **Large**: Between 50% and 100% of area affected.

Community Lifelines

Community Lifelines are critical business and government functions that are critical in the event of a disaster and are essential to human health, safety, or economic security. The greatest risks identified by the county could disrupt any number of the community lifelines which could impact emergency response and vulnerable populations and communities. Mitigation efforts should address any vulnerabilities across the 7 community lifelines to decrease the impact from the hazards identified in this plan. Maps of the lifeline assets in the county as well as the greatest risks can be found in Section VII.

F. Activity Identification

The 2020 disasters exposed, and exacerbated housing, infrastructure, economic and mitigation needs in many communities that remain at risk following these events. The post-disaster recovery process presents an opportunity to address these long-standing gaps while supporting the communities' efforts to recover and represent a lasting investment in local capacity and resilience. Programs proposed in this Local Recovery Plan are designed to promote long-term mitigation and resiliency standards with a focus on serving the most vulnerable populations.

In order to address these needs, the State of Alabama identified the following project activity types to be considered by each MID County as part of this planning process:

- Affordable Multifamily Rental Housing
- Homeowner Buyouts
- Homebuyer Assistance
- Mitigation
- Economic Resilience
- Infrastructure & Public Facility Improvements
- Public Services

Marengo County did not identify a need for public services or affordable multifamily housing projects; however, they identified a need to create affordable small rental units (1-4). Under this LRP, only multifamily housing activities are considered eligible and therefore a project summary is not provided for the small rental units. Below is an outline of the identified homeowner buyout, homebuyer assistance, mitigation, and infrastructure & public facility improvements projects identified and their associated project descriptions and details.

Project Name	Eligibility Criteria		Project Description	Project Rank
Voluntary Homeowner Buyout	**Strategy**	Recovery	• Marengo County would like to provide opportunities for homeowners in floodways or floodplains the option of a voluntary buyout program. • The land acquired during a buyout would remain undeveloped and return to the floodplain, turned into a flood control structure, or turned into an outdoor recreational area (park, campground, etc.)	
	Eligible Activity	HCDA Section 105(a)(7-8)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Medium		
	Geographic Eligibility	MID Recovery Zones		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Homeownership Assistance	**Strategy**	Housing Recovery	• The county would like to provide opportunities for renters to purchase more secure housing, with an emphasis on supporting first-time homebuyers located within a MID Recovery Zone. • Intended to pay a portion of the cost of purchasing an eligible new home for eligible applicants, which may be based	
	Eligible Activity	Homebuyer Assistance, HCDA Section 105(a) 24		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		

Project Name	Eligibility Criteria		Project Description	Project Rank
	SVI Score	Medium	on need, household size, and the cost of a home.	
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	N/A		
Flood Mitigation	**Strategy**	Mitigation	• Implement flood control improvement projects in areas subject to re-occurring flooding, particularly in the Faunsdale and Marengo areas. • During Hurricane Zeta, these areas experienced flooding due to nearby creeks overflowing which caused the culverts and roads to wash out and strand communities. These roadways have been repaired multiple times and need significant improvements to be made to mitigate future flooding events along these roadways.	
	Eligible Activity	Mitigation, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Medium		
	Geographic Eligibility	MID County – Mitigation		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Small Business Technical Assistance	**Strategy**	Recovery	• Business owners recovering from disasters are often in need of specific technical assistance to respond to losses to their businesses whether it be a loss of employees or customers or a need for a new product that may present a growth opportunity for a business • . • The county will bolster the grant and loan resources and strengthen the small business community by creating a technical assistance program to support businesses to develop new business and continuity plans and create a disaster resilience plan to help prepare for future disasters. • Grants will be awarded either to separate technical assistance providers or to the entities implementing the loan and grant program. Technical assistance may include development of business plans; financial management guidance; long-term recovery and sustainability plans; and specialized training.	
	Eligible Activity	Economic Resilience, HCDA Section 105(a)8, 15,17, 21, and 22		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Medium		
	Geographic Eligibility	MID Recovery Zones		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		

Project Name	Eligibility Criteria		Project Description	Project Rank
Job Training	**Strategy**	Recovery	• The county looks to bolster and strengthen the local economy by retaining local talent. With the new West Alabama Corridor Highway and Alabama School of Health Sciences projects underway, the county would like to be able to support local residents in job training options to help expand their local economy. • Grants would include providing financial assistance to LMI residents in the MID Recovery zones.	
	Eligible Activity	Economic Resilience, HCDA Section 105(a) 21		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Medium		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Community Resilience Center	**Strategy**	Recovery & Mitigation	• Develop a community resilience center that provides year-round programming to build overall community resilience, while also being augmented to provide critical services during extreme and disaster events. During a steady state the Center may provide health services, job and workforce training, microenterprise incubation, workshops, and meeting space, among other uses. During or following a disaster event, this center may serve as a cooling or warming center and would be designed with back up solar generators to enable the center to provide critical services to residents when needed, such as energy, water, shelter, food, resources, communication infrastructure, health services, and other post-disaster services.	
	Eligible Activity	Infrastructure & Public Facility, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Medium		
	Geographic Eligibility	MID Recovery Zone & MID County - Mitigation		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Stormwater Infrastructure Improvements	**Strategy**	Recovery	• Following Hurricanes Sally and Zeta, parts of Demopolis, particularly the Brickyard area flooded due to its proximity to the Black Warrior River. The county identified the need to make significant stormwater infrastructure improvements in this area to allow for better drainage and prevent future flooding.	
	Eligible Activity	Infrastructure & Public Facility, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Medium		

Project Name	Eligibility Criteria		Project Description	Project Rank
	Geographic Eligibility	MID Recovery Zone & MID County - Mitigation		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	No, Conceptual Phase		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		

On the following page, a matrix overview of identified project activity types is provided.

Project Description	Program Strategy	Project Activity Type	National Objective	Benefits Vulnerable Population	SVI Score	Geographic Eligibility	Administering Entity Identified	Leverages Other Funds Identified	Project Readiness	O&M Feasibility Identified	Project Rank
Voluntary Homeowner Buyout	Recovery	Homeowner Buyouts	LMI, UN	Yes	Medium	MID Recovery Zones	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Homeownership Assistance	Recovery	Homebuyer Assistance	LMI, UN	Yes	Medium	MID Recovery Zones	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	
Flood Mitigation	Mitigation	Mitigation	LMI, UN	Yes	Medium	MID County - Mitigation	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Small Business Technical Assistance	Recovery	Economic Resilience	LMI, UN	Yes	Medium	MID Recovery Zones	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	
Job Training	Recovery	Economic Resilience	LMI	Yes	Medium	MID Recovery Zones	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	
Community Resilience Center	Recovery & Mitigation	Infrastructure & Public Facility Improvements	LMI, UN	Yes	Medium	MID Recovery Zone or MID County – Mitigation (County Wide)	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Stormwater Infrastructure Improvements	Recovery & Mitigation	Infrastructure & Public Facility Improvements	LMI, UN	Yes	Medium	MID Recovery Zone or MID County – Mitigation (County Wide)	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	

XII. Perry County

A. Introduction

Perry County is located within the west-central portion of Alabama and is the second least populous County in Alabama. Perry County is home to the Marion Military Academy, a junior college. The Cahaba River, the longest free-flowing river in Alabama, flows through the east-central part of the county.

According to the American Community Survey (ACS) 2022 5-Year Estimates[52], Perry County has a population of 8,479, a 9% decrease from 9,293 in 2019. Perry County experienced the largest percentage decline for any county in Alabama from 2019 to 2022. The demographic breakdown shows most residents (71%) are Black or African American, followed by 28% identifying as White. Housing in Perry County includes 3,985 occupied units, with 56% being single-family homes and 29% mobile homes. In total, 98% of units in the county are 1–4-unit dwellings or mobile homes. Homeownership is high, with 70% of residents owning their homes and 30% renting.

Perry County experienced damage from Hurricane Zeta which mainly resulted in downed trees that cut off power to communities and damaged homes which are still in need of repair. Flooding in Uniontown and the eastern portion of the county along Oakmulgee Creek also occurred. Additionally, due to the lack of sheltering options in the County, many impacted households did not have a safe place to stay or gather after the storm.

B. Unmet Needs Gap

Through this Local Recovery Plan, the ACCA and Perry County present unmet need estimates from Hurricane Sally and Hurricane Zeta based on current best available data (see table below). Over time, ACCA and the county reserves the right to continue to update these estimates as additional assessments are made and more complete data becomes available.

Table 122 Total Estimated Unmet Need for Perry County

	Estimated Impact	Amount of Funds from other sources	Total Unmet Need
Housing	$2,315,708	$740,142	$1,575,566
Infrastructure	$507,662	$397,637	$85,128
Economy	$45,396	$25,800	$19,596
Total	**$2,868,766**	**$1,163,579**	**$1,680,290**

Estimated impact includes added resilience and increased construction costs and may include FEMA Public Assistance Categories A, B and Z, where applicable. Total Unmet Need does not include FEMA PA categories A, B and Z.

[52] https://data.census.gov/ - Tables B02001, B25024, B25033

C. Impact and Unmet Needs Assessment

1. Background

In accordance with HUD guidance, Perry County completed the following unmet needs assessment to identify priorities for CDBG-DR funding allocated as a result of the impacts from the 2020 storms.

The assessment below utilizes federal and state resources, including data provided by FEMA, HUD, and the Small Business Administration (SBA), among other sources. The estimate of unmet needs is in three main categories of damage: housing, economy, and infrastructure. Specifically, the assessment, focuses on Perry County's impacts with specific sections detailing specific unmet needs within the most impacted area, and where relevant, smaller geographic units.

2. Housing Impact & Needs

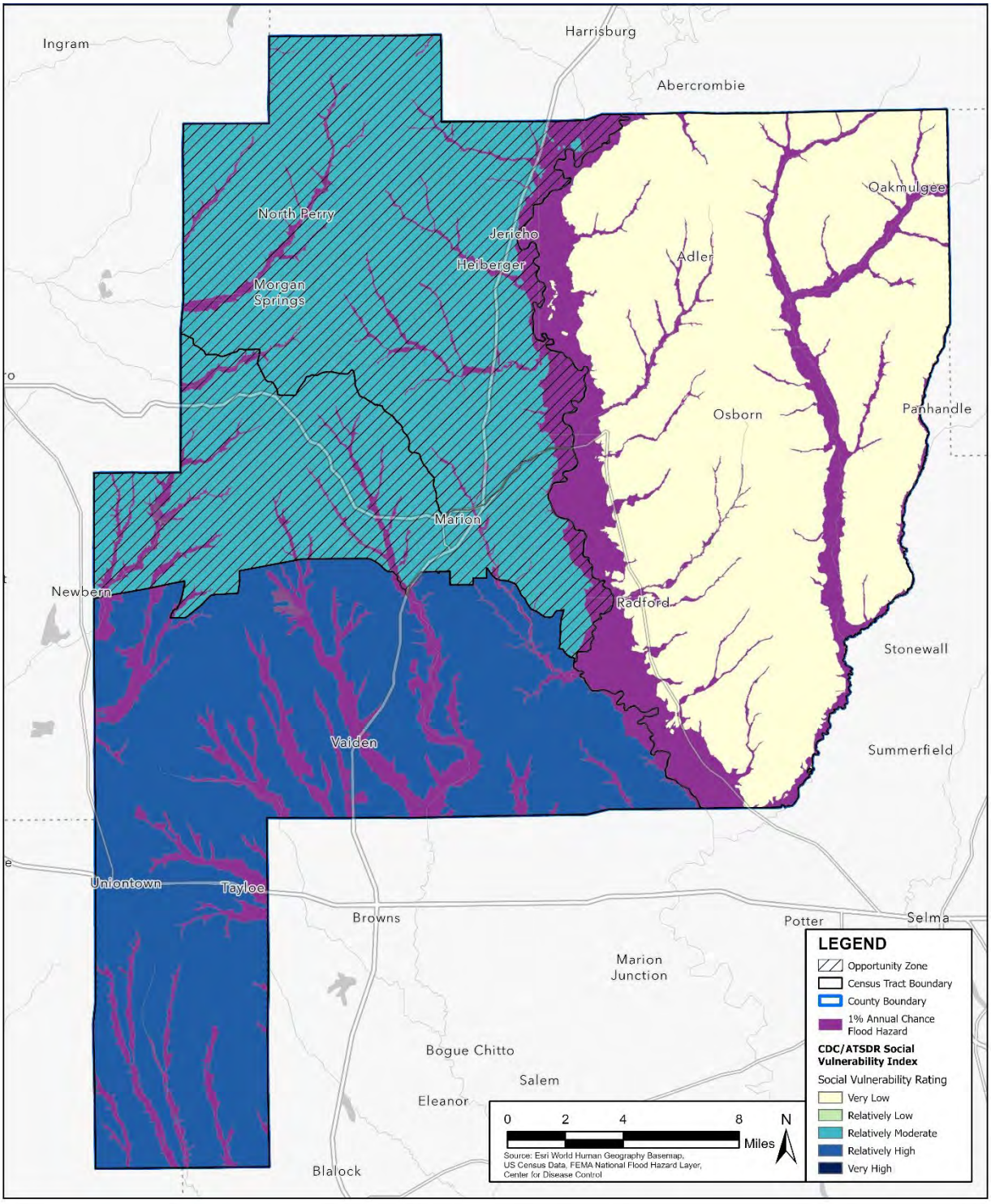
The demographic profile of Perry County has not changed significantly since the State Action Plan was published. Specific demographic information can be reviewed in the State Action Plan for the county.

Perry County identified vulnerable populations within the county as part of the establishment of MID Recovery Zones. These vulnerable populations include those identified as part of a protected class, hard-to-reach, underserved, historically disadvantaged areas, and economically distressed areas. For the purposes of this LRP, Perry County has identified vulnerable population areas using the CDC/ATSDR Social Vulnerable Index (SVI) and Opportunity Zones.

The CDC/ATSDR SVI is a place-based index designed to identify and quantify communities experiencing social vulnerability by comparing socio-economic, household composition, minority status and language, housing types and transportation needs, and other adjunct variables such as race and ethnicity and households without an internet subscription at the census tract level. Opportunity Zones are economically distressed communities, defined by an individual census tract, nominated by America's governors, and certified by the U.S. Secretary of the Treasury via his delegation of that authority to the Internal Revenue Service. The Opportunity Zones initiative is not a top-down government program from Washington but an incentive to spur private and public investment in America's underserved communities.

Most notably, Perry County does not have any Racially or Ethnically Concentrated Areas of Poverty (R/ECAP), Promise Zones, Neighborhood Revitalization Strategy Areas, or Tribal Areas within the county. The map below provides an overview of the SoVI in each census tract in relation to the flood hazard and floodway zones.

Figure 41 Perry County Vulnerability Map



a. Housing Damage and Loss Assessment

Unless otherwise noted, all housing summary data were compiled from these datasets for Hurricane Zeta only.

For each household identified to have unmet housing needs, their estimated average unmet housing need was calculated using similar variables and calculation methods from the State Action Plan. These variables are:

1. FEMA Damage Category Application Counts of Minor-Low to Major-Low
2. FEMA Damage Category Application Counts of Major-High to Severe
3. FEMA IA Applications without FEMA Verified Loss
4. Public Housing Damages

Total impact tables have been summarized based on owner-occupied vs renter-occupied households, impacted populations with flood and homeowner insurance, impact by residence type, impact by gross income, and impact to housing authorities in the following sections.

b. Total Impact (Owner-Occupied and Renter Households)

The information in the tables below outlines the total damaged properties population with documented damages. To account for properties that never had an inspection physically take place due to the COVID-19 pandemic and other reasons, no damages were found (likely because they were desktop inspections), the county has classified these applications as “No FVL”. A detailed description is provided in the FEMA IA Applications without Real Property FEMA Verified Loss section.

Table 123 Homeowner/Renter Damaged Properties by All Damage Categories

Damage Category	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Severe	0	0.0%	0	0.0%	0	0.0%
Major-High	3	0.5%	0	0.0%	3	0.5%
Major-Low	10	1.7%	3	0.5%	13	2.2%
Minor-High	133	22.0%	42	6.9%	175	28.9%
Minor-Low	73	12.1%	5	0.8%	78	12.9%
No FVL	250	41.3%	86	14.2%	336	55.5%
Total	**469**	**77.5%**	**136**	**22.5%**	**605**	**100.0%**

FEMA Damage Category Applications - Minor-Low, Minor-High, and Major-Low

For FEMA IA Applications with minor-low, minor-high, and major-low damage, the count of those applications in each county was multiplied by the overall average SBA verified property loss per damage category provided in the State Action Plan, to determine the estimated total loss/support for these three damage categories. The tables below outline the total number of properties damaged for homeowners and renters.

Table 124 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Homeowners

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	73	$1,621	$118,333
Minor-High	133	$5,495	$730,835
Major-Low	10	$11,502	$115,020
Total	**216**	**N/A**	**$964,188**

Table 125 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	5	$1,621	$8,105
Minor-High	42	$5,495	$230,790
Major-Low	3	$11,502	$34,506
Total	**50**	**N/A**	**$273,401**

Table 126 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Homeowners & Renter

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	78	$1,621	$126,438
Minor-High	175	$5,495	$961,625
Major-Low	13	$11,502	$149,526
Total	**266**	**N/A**	**$1,237,589**

FEMA Damage Category Applications - Major-High to Severe

For FEMA IA Applications with major-high to severe damage, it was assumed that those structures were substantially damaged and required reconstruction. To determine the replacement cost of the home, Perry County replicated ADECA's approach and used the county's Zillow Home Value from August 2020 for All Homes (none-adjusted)[53]. Since the Zillow home value includes the cost of the land, it is assumed 66% of the value was attributable to the structure on the property. This adjusted home value is multiplied by the total count of applications in the major-high to severe damage categories. The results of these calculations are provided in the table below.

Table 127 Major-High and Severe Estimated Total Loss Homeowners and Renters

Damage Category	Zillow Home Value	66% of Zillow Value	Count	Estimated Total Loss
Major-High	$116,876	$77,138	3	$231,414
Severe	$116,876	$77,138	0	$0
	Total		**3**	**$231,414**

Of the 3 major-high and severely damaged homes, none of the renter-occupied dwellings are classified as Major-High or Severe.

[53] Perry County Home Values, https://www.zillow.com/home-values/42944/sprott-al/

FEMA IA Applications without FEMA Verified Loss

Perry County also accounted for the damage to applications without the Real Property FEMA verified loss (RPFVL) for owner-occupied dwellings and without Personal Property FEMA Verified Loss (PPFVL) for renter-occupied dwellings. Due to the COVID-19 pandemic and other reasons, inspections never physically took place, and no damages were found – most likely because they were desktop inspections. To account for these types of impacts, Perry County counted applications with no FEMA Verified Loss and multiplied it by the average value for minor-low damage per SBA-verified property loss, provided in the State Action Plan. The results of these calculations are provided in Table X below:

Table 128 Estimated Total Loss for IA Applications without FEMA Verified Loss

Occupancy Type	Count of Applications	Average SBA Value	Estimated Total Loss
Owner	250	$1,621	$405,250
Renter	86	$1,621	$139,406
Total	**336**	**$1,621**	**$544,656**

c. Impacts of Insurance (HOI and NFIP)

For the purposes of this analysis, households inspected by FEMA and shown to have a 'Water Level' greater than 0.0 inches are considered to have been flooded, while all other units with no 'Water Level' are considered to have been impacted exclusively by wind.

See Table 130 for flood-damaged properties by damage category and occupancy type.

Table 129 Flood Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	0	1	8	4	1	0	14
Renter	0	0	2	1	0	0	3
Total	**0**	**1**	**10**	**5**	**1**	**0**	**17**

Flood Damage and Insurance: An alarmingly high proportion of units with evidence of flood damage were reported in the FEMA IA data not to carry a flood insurance policy through the National Flood Insurance Program (NFIP), as shown in the table below. In total, **100 percent** of the flood-affected homeowner population is reported to not carry flood insurance per the FEMA IA data.

Table 130 Homeowner Flood-Damaged Properties and NFIP Counts

Damage Category	With NFIP	% With NFIP	Without NFIP	% Without NFIP
Severe	0	0%	0	0%
Major-High	0	0%	1	7%
Major-Low	0	0%	4	29%
Minor-High	0	0%	8	57%
Minor-Low	0	0%	1	7%
No FVL	0	0%	0	0%
Totals	**0**	0%	**14**	**100%**

Wind Damage and Insurance (HOI): In the absence of evidence of flood damage, units are assumed to be impacted exclusively by wind. As such, for the proportion of owner-occupied units with no evidence of flooding damage, the county is especially concerned about the high rate of households reported not to carry a standard hazard homeowners insurance policy (HOI) that would otherwise be expected to offset documented losses. In total, 77 percent of the wind-impacted homeowner population is reported not to carry hazard insurance as shown below.

Table 131 Wind Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	250	72	125	6	2	0	455
Renter	86	5	40	2	0	0	133
Total	**336**	**77**	**165**	**8**	**2**	**0**	**588**

Table 132 Homeowner Wind-Damaged Properties and HOI Counts

Damage Category	With HOI	% With HOI	Without HOI	% Without HOI
Severe	0	0%	0	0%
Major-High	0	0%	2	0%
Major-Low	1	0%	5	1%
Minor-High	14	3%	111	24%
Minor-Low	5	1%	67	15%
No FVL	86	19%	164	36%
Totals	106	23%	**349**	77%

d. Impact based on Residence Type

The below table shows FEMA IA applicants by housing type. The highest number of applicants came from Mobile Home units (49%) and housing/duplex units (42%).

Table 133 FEMA IA Applicants by Residence Type and Occupancy Type

Residence Type	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Apartment	1	0%	32	5%	33	5%
Condo	0	0%	1	0%	1	0%
House/Duplex	189	31%	66	11%	255	42%
Mobile Home	265	44%	31	5%	296	49%
Other	8	1%	4	1%	12	2%
Townhouse	1	0%	2	0%	3	1%
Travel Trailer	5	1%	0	0%	5	1%
Total	**469**	**78%**	**136**	**19%**	**605**	**100%**

The below table shows FEMA IA flood-damaged properties by housing type who had Flood or Homeowner's insurance. As indicated in the overview of flood-damaged properties, **zero** of the flood-affected homeowner applicants are reported to carry an NFIP policy per the FEMA IA data.

Table 134 Homeowner Flood Damaged Properties by Residence Type with NFIP

Residence Type	Count of Applications	Count with NFIP	% with NFIP
House/Duplex	5	0	0%
Mobile Home	9	0	0%
Total	**14**	**0**	**0%**

The below table shows FEMA IA wind-damaged properties by housing type, who had Homeowner's Insurance. As indicated in the overview of wind-damaged properties, **23%** of the affected population are reported to carry homeowner's insurance policy per the FEMA IA data.

Table 135 Homeowner Wind Damaged Properties by Residence Type with HOI

Residence Type	Count of Applications	Count with HOI	% with HOI
Apartment	1	0	0%
Condo	0	0	0%
House/Duplex	184	63	34%
Mobile Home	256	41	16%
Other	8	1	13%
Townhouse	1	0	0%
Travel Trailer	5	1	20%
Total	**455**	**106**	**23%**

Total estimated losses have been summarized by residence type.

Table 136 Total Estimated Loss by Residence Type

Residence Type	Count	Estimated Total Loss
Apartment	33	$68,989
Condo	1	$1,621
House/Duplex	255	$925,847
Mobile Home	296	$980,908
Other	12	$19,452
Townhouse	3	$8,737
Travel Trailer	5	$8,105

e. Impact on LMI Households

The income data provided in the FEMA IA data set was not specific enough to perform a low-and moderate-income (LMI) calculation, as income was categorized by general ranges. To summarize the impact of storms on households based on income, four income groupings are provided in the tables below. Overall, households with lower incomes were disproportionately impacted by Hurricane Zeta, and 84% of the total impacted population making $30,000 or less.

Table 137 Gross Income by Damage Level for Homeowners Only

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	3	1%	0	0%	0	0%	0	0%	3	1%
Major-Low	8	2%	2	0%	0	0%	0	0%	10	2%
Minor-High	120	26%	11	2%	2	0%	0	0%	133	28%
Minor-Low	66	14%	4	1%	3	1%	0	0%	73	16%
No FVL	191	41%	44	9%	14	3%	1	0%	250	53%
Totals	**388**	**83%**	**61**	**13%**	**19**	**4%**	**1**	**0%**	**469**	**100%**

Table 138 Gross Income by Damage Level for Renters Only

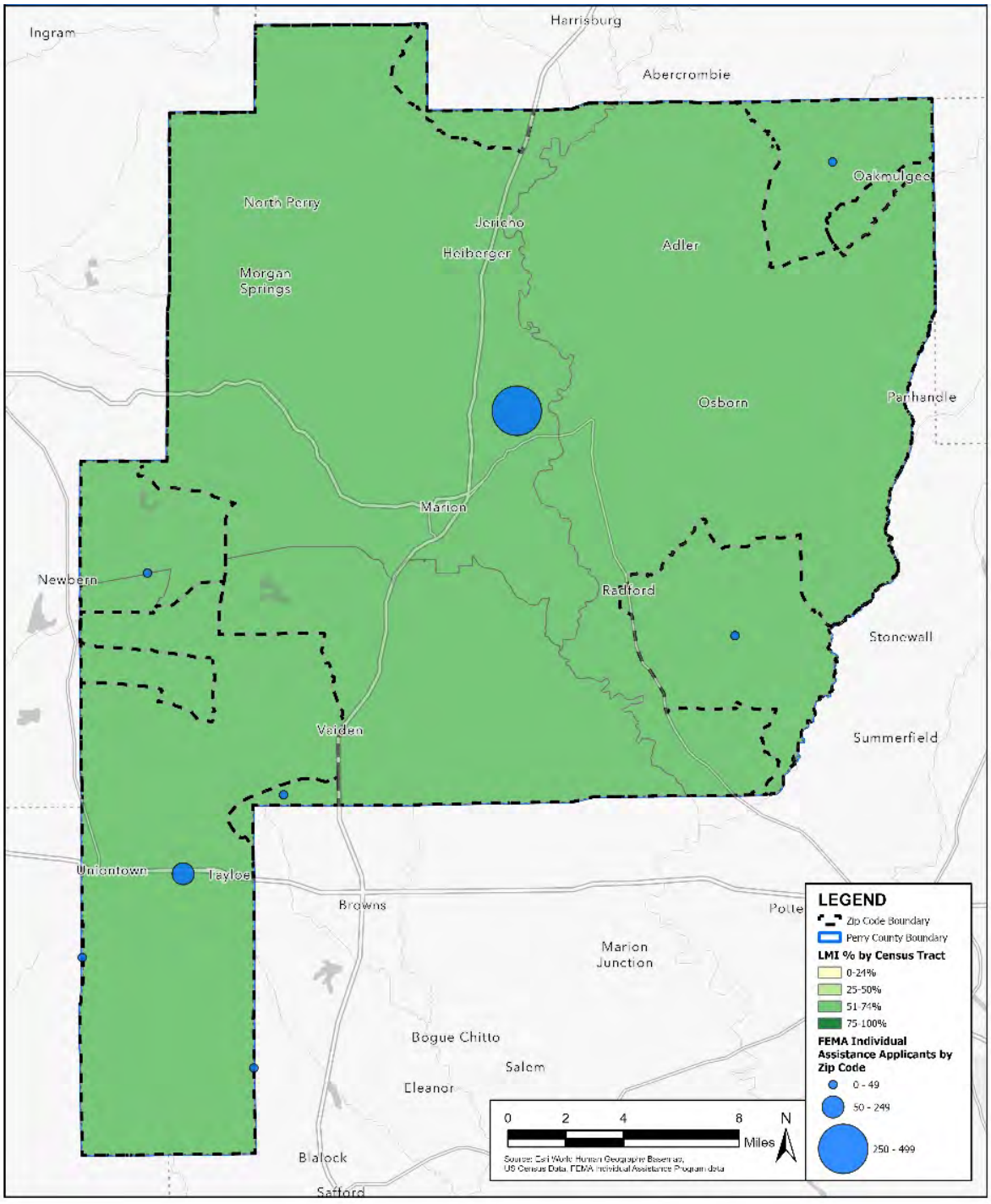
Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	0	0%	0	0%	0	0%	0	0%	0	0%
Major-Low	2	2%	1	1%	0	0%	0	0%	3	2%
Minor-High	36	27%	6	4%	0	0%	0	0%	42	31%
Minor-Low	4	3%	1	1%	0	0%	0	0%	5	4%
No FVL	76	56%	9	7%	0	0%	1	1%	86	63%
Totals	**118**	**87%**	**17**	**13%**	0	0%	**1**	**1%**	**136**	**100%**

Table 139 Gross Income by Damage Level for Homeowners and Renters

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	3	0%	0	0%	0	0%	0	0%	3	0%
Major-Low	10	2%	3	0%	0	0%	0	0%	13	2%
Minor-High	156	26%	17	3%	2	0%	0	0%	175	29%
Minor-Low	70	12%	5	1%	3	0%	0	0%	78	13%
No FVL	267	44%	53	9%	14	2%	2	0%	336	56%
Totals	**506**	**84%**	**78**	**13%**	**19**	**3%**	**2**	**0%**	**605**	**100%**

The map below illustrates the Low-Moderate Income percentage by Census Tract, with heat bubbles indicating the locations of the FEMA IA applications based on the zip codes.

Figure 42 LMI Populations and FEMA IA Applications by Zip Code for Perry County



f. Impact on Public Housing Authorities

Perry County has Section 8 and affordable housing options, with sufficient rental properties for the population. There is no known unmet need for Public Housing Authorities in Perry County.

g. Impact on Homeless Populations

The impact of natural disasters on the housed population and on people experiencing sheltered homelessness is very different from the impact on people experiencing unsheltered homelessness.

When a natural disaster damages a housing unit, its inhabitant can hypothetically be made whole by insurance or FEMA. When a natural disaster damages a shelter or broader infrastructure, beds can be rendered uninhabitable, but eventually, those beds can be regained via repair and recovery operations.

For people experiencing unsheltered homelessness (e.g. living on the streets), however, the impact is more difficult to see. A natural disaster cannot remove housing or shelter from a person without housing or shelter; instead, it destroys future housing opportunities. One of the primary barriers to permanent housing in any geography is a lack of affordable housing. When a natural disaster damages or destroys an area's affordable housing, it creates a housing cost and availability crisis that prevents people experiencing homelessness from achieving and stabilizing permanent housing.

Alabama Balance of State CoC

The Alabama Balance of State CoC serves 37 rural Alabama Counties, ensuring chronic under-counting of homeless populations in rural counties. According to the *2023 AHAR: Part 1 - PIT Estimates of Homelessness in the U.S.*[54], the Alabama Balance of State CoC counted 283 sheltered and unsheltered homeless persons in 2023 and 140 Emergency Sheltered persons. Perry County is one of the counties that makes up this CoC and does not have any homeless shelters, which leads to chronic under-serving of people in need of sheltering pre and post storms. The county struggled to shelter people who lost housing due to Hurricane Zeta, and the housing and shelter crisis will only increase as additional disasters hit the area.

To provide support for those experiencing homelessness, Perry County will need to:

- create new shelter options which include surge capacity for emergency shelter beds required to shelter people displaced by disasters,
- create outreach and drop-in centers required to serve people experiencing unsheltered homelessness; and
- hire outreach workers and resource navigators.

h. Summary of Housing Impacts

FEMA IA was the primary data source that Perry County used to determine housing unmet needs. Total estimated losses have been summarized by the data source and calculation methodology as summarized in previous sections, categorized by damage and for public housing authorities. An additional 15% is added at the end of the calculation to account for resilience costs, making buildings more resilient to future disasters. To calculate the total unmet need, received assistance is also summarized and subtracted from the estimated total loss, including resilience costs.

[54] https://www.huduser.gov/portal/datasets/ahar/2023-ahar-part-1-pit-estimates-of-homelessness-in-the-us.html

Table 140 Total Estimated Loss by Damage Category

Data Source/Calculation	Count	Estimated Total Loss
Severe	0	$0
Major-High	3	$231,414
Major-Low	13	$149,526
Minor-High	175	$961,625
Minor-Low	78	$126,438
No FEMA Verified Loss	336	$544,656
Public Housing	0	$0
Total	**605**	**$2,013,659**
	+15% Resilience Costs	**$302,049**
Total Estimated Loss with Resilience Costs		**$2,315,708**

To ensure that housing repair assistance is factored into the housing unmet needs calculation, FEMA IA repair and replacement, SBA Real Estate[55] and NFIP payment amounts were added together to determine the total housing assistance received. View below for the calculation.

Table 141 Total Housing Assistance Received Calculation

Data	Count	Total Amount
FEMA IA Payments	145	$547,941
NFIP Payments	0	$0
SBA Loan Amounts	Uknown	$192,200
Total Housing Assistance	**145**	**$740,142**

Total housing assistance was subtracted from the total housing unmet needs with resilience costs included to determine the total housing unmet need of approximately $1.5 million, as result of Hurricane Zeta. See below for the calculation.

Table 142 Total Housing Unmet Need for Perry County

Data	Estimated Amount
Total Estimated Loss including 15% Resilience Costs	**$2,315,708**
Total Housing Assistance	**-$740,142**
Total Housing Unmet Need	**$1,575,566**

[55] SBA Disaster Loan Data, Public Access: https://www.sba.gov/document/report-sba-disaster-loan-data

3. Infrastructure Impact & Needs

a. Infrastructure Damage & Loss Assessment

Perry County suffered infrastructure damage only from Hurricane Zeta. Several roads and culverts were damaged due to flooding; these roads include Dobyne Road, Jim Foundry Road, St. Mary's Spur, and Medline Road. Dobyne Road, Jim Foundry Road, and St. Mary's Spur are still in need of repair and were not accounted for in the FEMA PA data. In total the unmet need for these roads is estimated to be $470,545. Additionally, during Hurricane Zeta Uniontown and Marion experience street flooding because the capacity of the wastewater systems is inadequate to handle intense rainfall events.

The table below includes the Estimated PA Cost and additional costs for resiliency measures (15%) and increased cost of construction (23.6%) to estimate the Federal Share (90%) and the local share/unmet need (10%) more accurately for Categories C through G, which includes roads and bridges, public facilities and buildings, public utilities, and other public assistance needs.

Table 143 Total Estimated Infrastructure Costs by PA Damage Category

Damage Category	PA Project Amount	15% Resilience Measures	23.6% Construction Costs	Total PA Project Amount
A - Debris Removal	$141,213	$0	$0	$141,213
B - Protective Measures	$104,199	$0	$0	$104,199
C - Roads and Bridges	$78,922	$10,655	$18,626	$108,202
E - Public Buildings	$50,000	$6,750	$11,800	$68,550
F - Public Utilities	$51,817	$6,995	$12,229	$71,041
Z - State Management	$14,456	$0	$0	$14,456
Total	**$440,608**	**$24,400**	**$42,654**	**$507,662**

b. Unmet Infrastructure Needs

The table below includes the Total Estimated PA Cost, consisting of resiliency measures, and increased construction costs with the total Federal Obligated Amount and the Non-Federal Share Amount.

Table 144 Total Estimated Non-Federal Share Amount by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount
A - Debris Removal	$141,213	$127,092	$14,121
B - Protective Measures	$104,199	$93,424	$10,775
C - Roads and Bridges	$108,202	$71,030	$37,172
E - Public Buildings	$68,550	$45,000	$23,550
F - Public Utilities	$71,041	$46,635	$24,406
Z - State Management	$14,456	$14,456	$0
Total	**$507,662**	**$397,637**	**$110,025**

Based on the analysis performed, there is a potential unmet need of $85,128 for identified infrastructure damage eligible under FEMA-PA Categories C-G. However, including the 3 roads that require repair, the total unmet infrastructure need for the county is **$555,673.**

Table 145 Total Estimated Unmet Need by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount	Unmet Need
A - Debris Removal*	$141,213	$127,092	$14,121	$0
B - Protective Measures*	$104,199	$93,424	$10,775	$0
C - Roads and Bridges	$108,202	$71,030	$37,172	$37,172
E - Public Buildings	$68,550	$45,000	$23,550	$23,550
F - Public Utilities	$71,041	$46,635	$24,406	$24,406
Z - State Management*	$14,456	$14,456	$0	$0
Total	**$507,662**	**$397,637**	**$110,025**	**$85,128**

*CDBG-DR Funds are not used for PA costs in Categories A, B, and Z.

4. Economic Impact & Needs

A summary of the damage and impacts of Hurricane Zeta is provided below, along with an analysis of Small Business Administration loans provided to the business community following Hurricane Zeta.

Agricultural Impact

Following Hurricane Zeta, USDA did not designate Perry County as a primary disaster area; however, they did allow eligible producers in Perry County to still apply for emergency loans due to losses or impacts from Hurricane Zeta.[56]

a. Unmet Economic Needs

According to an analysis of the Small Business Administration (SBA) Business loan data for applications with approved or denied loans that meet a HUD category of loss, the county realized a total verified loss for all businesses of $39,475. Accounting for an additional fifteen percent (15%) in resilience costs, the County's total estimated economic impact is $45,396. According to the SBA business report, the SBA provided $25,800 in total benefits for real estate losses. Therefore, the County's remaining economic unmet needs are valued at $19,596.

Table 146 Unmet Economic Needs Summary

Total Verified Loss	15% Resilience Costs	Total Estimated Impact	Total SBA Benefits	Remaining Unmet Needs
$39,475	**$5,921**	**$45,396**	**$25,800**	**$19,596**

[56] https://www.fsa.usda.gov/state-offices/Alabama/news-releases/2021/usda-designates-13-alabama-counties-as-primary-natural-disaster-areas

D. Summary of Unmet Needs & MID Recovery Zones

1. Unmet Needs Summary

Based on the above analysis, the county has calculated a total unmet need of **$2.1 Million** attributable to Hurricane Zeta.

In summary, this analysis projects unmet needs as follows:

Table 147 Summary of Total Unmet Needs

Category	Estimated Impact	Amount of Funds from other sources	Remaining Unmet Need
Housing	**$2,315,708**	**$740,142**	**$1,575,566**
Infrastructure	**$507,662**	**$397,637**	**$85,128**
Economy	**$45,396**	**$25,800**	**$19,596**
Total Unmet Needs	**$2,868,766**	**$1,163,579**	**$1,680,290**

See below for a more detailed analysis of how the unmet needs were calculated based on known losses and investments across each zip code.

Table 148 Unmet Need Summary by Zip Code

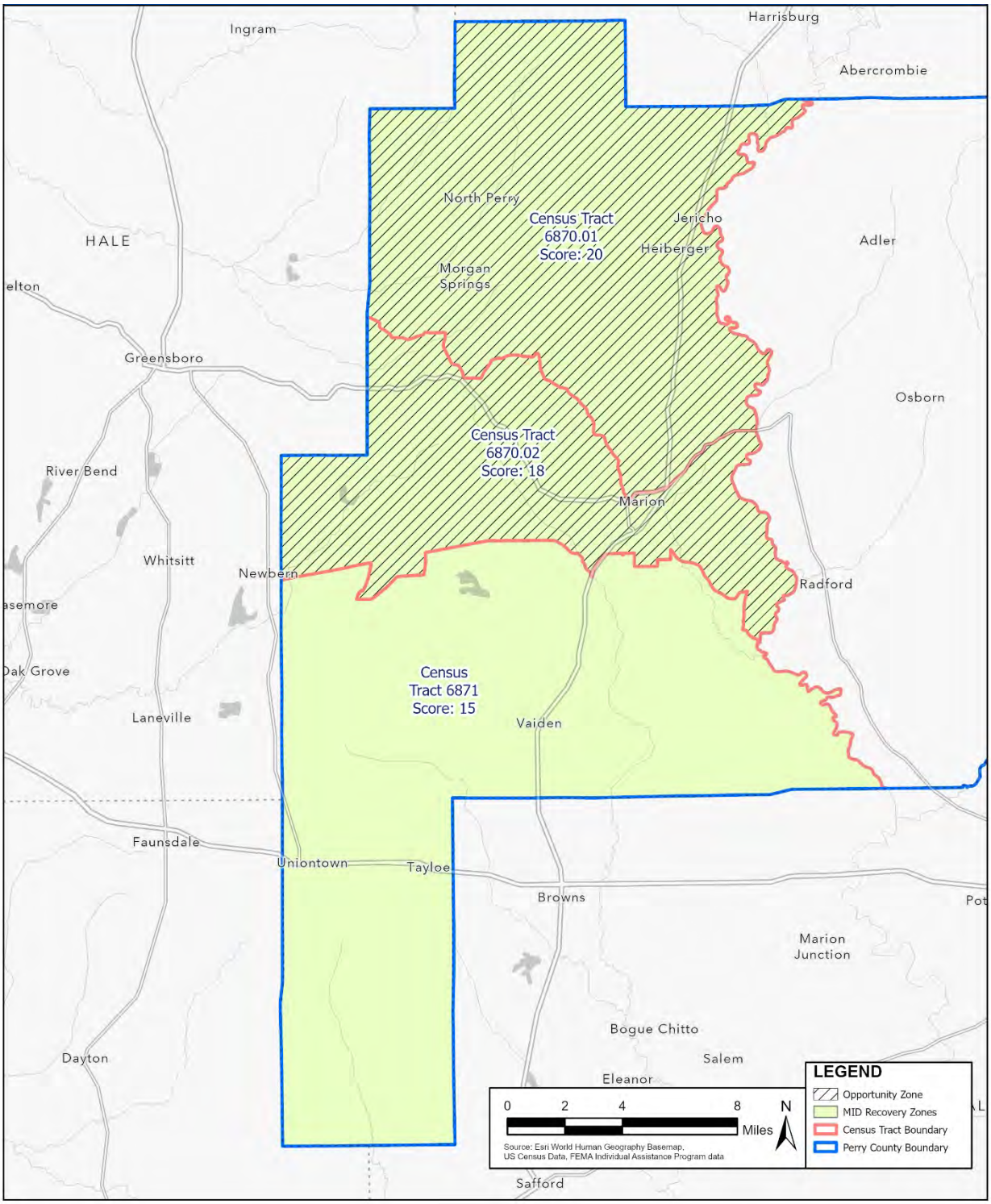
Zip Code	Unmet Housing Need	Unmet Infrastructure Needs	Unmet Economy Needs	Total Unmet Need
36756	$835,554	$85,128	$3,870	$924,552
36786	$598,791	$0	$15,726	$614,517
36765	$40,985	$0	$0	$40,985
36701	$40,559	$0	$0	$40,559
36759	$39,726	$0	$0	$39,726
36773	$16,222	$0	$0	$16,222
35042	$1,864	$0	$0	$1,864
36783	$1,864	$0	$0	$1,864
Total	**$1,575,566**	**$85,128**	**$19,596**	**$1,680,290**

2. MID Recovery Zones

The MID Recovery Zones (MRZ) were identified at the census tract level based on areas with vulnerable populations and zip codes with the most unmet needs and where these areas overlap with census tracts. A ranked approach was taken to rate the census tracts in Perry County based on a score from 0 to 20, with a total possible score of 10 for each category. Census tracts with scores between 15 and 20 are considered a MID Recovery Zone

The MRZ identified for Perry County is shown in Figure 43 MID Recovery Zones for Perry County.

Figure 43 MID Recovery Zones for Perry County



E. Mitigation Needs Assessment

In accordance with the LRRP guidance, the county completed the following Mitigation Needs Assessment. Alabama's 2023 State Hazard Mitigation Plan, 2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan, data from the National Oceanic Atmospheric Administration (NOAA) and FEMA, and stakeholder input were used to assess the mitigation needs. This assessment informs and provides a substantive basis for programs proposed in this Local Recovery Plan, with a focus on addressing and analyzing all significant current and future hazard risks.

1. Historic Overview of Hazards

Since 1973, there have been 14 disaster declarations for Perry County. The most common natural disasters that cause damage to an extent that results in a federal disaster declaration are severe storms/tornadoes and Hurricanes. This historical pattern of extreme weather is expected to continue which means mitigation measures to reduce impacts caused by these types of hazards are critical.

Table 149 Declared Disasters since 1973 and the Associated Total Obligated PA Amount to Date for Perry County

Declaration	Year Declared	Incident Type	Declaration Title	Total Obligated PA Amount
DR-4596-AL	2021	Severe Storm	Severe Storms, Straight-Line Winds, & Tornadoes	$667,173
DR-4573-AL	2021	Hurricane	Hurricane Zeta	$397,637
DR-4546-AL	2020	Severe Storm	Severe Storms and Flooding	$880,161
DR-4503-AL	2020	Biological	Covid-19 Pandemic	No Data
DR-4251-AL	2016	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, And Flooding	$359,822
DR-4176-AL	2014	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, & Flooding	$210,398
DR-4082-AL	2012	Hurricane	Hurricane Isaac	$91,591
DR-4052-AL	2012	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, & Flooding	No Data
DR-1971-AL	2011	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, & Flooding	$155,833
DR-1835-AL	2009	Severe Storm	Severe Storms, Flooding, Tornadoes & Straight-Line	$109,184
DR-1605-AL	2005	Hurricane	Hurricane Katrina	$32,742
DR-1593-AL	2005	Hurricane	Hurricane Dennis	$85,423
DR-1549-AL	2004	Hurricane	Hurricane Ivan	$355,317
DR-388-AL	1973	Flood	Severe Storms & Flooding	No Data

Source: OpenFEMA Data Sets, Disaster Declaration Summary[57] and Public Assistance Funded Project Details[58]

Historic weather patterns can be determined for Perry County from NOAA's National Centers for Environmental Information (NCEI) Storm Events Database. Table 151 provides an outline of the number of recorded storm events from January 1950 to December 2023 for Perry County. If the

[57] https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2

[58] https://www.fema.gov/openfema-data-page/public-assistance-funded-projects-details-v1

same event type occurred on the same date, only one event was recorded; however, the number of fatalities, injuries, and damages were summed across the multiple events for a single day and event type.

Table 150 NCEI Storm Events Summary (1950 - 2023)

Event Type	Number of Events	Number of Fatalities	Number of Injuries	Property Damage ($)	Crop Damage ($)
Cold/Wind Chill	3	0	0	$0	$1,000,000
Drought	30	0	0	$0	$0
Flash Flood	9	0	0	$69,000	$5,000
Flood	1	0	0	$0	$0
Hail	34	0	0	$436,000	$24,000
Heat	6	0	0	$0	$0
Heavy Rain	1	0	0	$0	$0
Heavy Snow	2	0	0	$0	$0
Ice Storm	1	0	0	$0	$0
Strong Wind	2	0	0	$7,000	$0
Thunderstorm Wind	48	0	1	$399,000	$0
Tornado	29	0	5	$30,610,000	$25,000
Tropical Storm	3	0	0	$1,240,000	$0
Winter Storm	4	0	0	$22,000	$1,000
Winter Weather	1	0	0	$0	$0
Extreme Cold/Wind Chill	1	0	0	$0	$0
High Wind	4	0	0	$3,506,000	$200,000
Tropical Depression	2	0	0	$6,000	$0
Excessive Heat	3	0	0	$0	$0
Frost/Freeze	2	0	0	$0	$0
Grand Total	**186**	**0**	**6**	**$36,295,000**	**$1,255,000**

Source: NOAA's National Centers for Environmental Information (NCEI) Storm Events Database[59]

2. Greatest Risk Hazards

The *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* identified risks by studying historical events and susceptibility and gathering information and input from local stakeholders. Each hazard was categorized as High, Medium, Low, or Very Low based on the historical trends of the hazards and also the probability of future occurrence and estimated loss. These categories are defined below:

- High: Probable major damage in a 1-10 Year Period
- Medium: Probable major damage in a 10-50 Year Period
- Low: Probable major damage in a 100 Year Period
- Very Low: No probable major damage in a 100 Year Period

The *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* identified high winds from strong severe storms and tornadoes, and flooding as the most significant risks;

[59] https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=1%2CALABAMA

however, extreme temperatures including drought, and wildfires were also identified as great risks.

Table 151 Greatest Risk Hazards for Perry County

Hazard	Risk Rating	Locations Impacted	Associated risk
Flooding	High	Areas along creeks and rivers, and low-lying areas with poor drainage are most at risk. If enough rain falls every area is at risk of flash flooding. The Cahaba River, the Oakmulgee Creek and their tributaries are prone to reoccurring flooding events. Urban areas of Uniontown and Marion also flood in high rain events.	Can cause crop, property and infrastructure damage, injury, and loss of life
Tornadoes	High	County-wide, Tornadoes can occur throughout the year but most likely to occur in the spring (March - May) and fall (November to December). Mobile home communities are most vulnerable.	Can cause crop, property and infrastructure damage, injury, and loss of life
Severe Storms	High	County-wide, Severe storms can occur throughout the year. Downtown structures are susceptible to roof damage along with glass storefronts.	Can cause crop, property damage, injury, and loss of life
Extreme Heat and Droughts	Medium	County-wide, the area is especially susceptible to these events during the summer months. The Southern part of the county is most susceptible. No cooling stations within the county to support residents.	Can cause crop loss, water quality and quantity issues, threaten health (heat stroke, etc.) of people living and working in the area
Wildfires	Medium to High	Urban, more densely populated areas have a higher	Can cause crop and property and infrastructure damage, threaten health due to poor air quality and result in injury and loss of life

While extreme cold temperatures are uncommon due to Alabama's mild winter climate and therefore it is not classified as a Medium or High Risk in Perry County, residents are unaccustomed to and less prepared for the severe cold weather, putting residents at a greater risk for dealing with the extreme cold compared to more northern climates. Most crop species in Alabama do not have a tolerance for cold temperatures, making them more susceptible to the impacts of cold weather. Cold weather may also be accompanied by winter weather, and ice storms which can cause downed trees or result in vehicle accidents. Since 1950, 13 cold weather-related events have occurred in Perry County which has led to over $1 million in reported crop damages. There is a lack of infrastructure in the county to offer dedicated warming stations for residents, especially populations that are the most vulnerable to extreme cold.

a. Flooding

Flooding is a problem for many people across the United States. Enduring the consequences of repetitive flooding can put a strain on residents and state and local resources. When the water rises, communities face the disruption of life, damaged belongings, and the high cost of rebuilding. FEMA administers the National Flood Insurance Program (NFIP), which pays flood claims.

According to the NFIP data, as of April 2024, there are 0 Repetitive Loss Properties and 0 Severe Repetitive Loss Properties in Perry County.

While repetitive loss flooding is not recorded in Perry County, Perry County does experience flooding events. Table 150 shows that there have been 10 recorded flood and flash flood events in the county. According to the *2023 Alabama State Hazard Mitigation Plan*, the most common type of flooding event in Perry County from 2000-2022 is a flash flood as depicted in the table below.

Flash Flood	Flood	Coastal Flood or Storm Surge	All Flood Events
8	1	0	9

Data Source: 2023 Alabama State Hazard Mitigation Plan

According to *Figure 6 Riverine Flooding Risk in MID Counties by Census Tract,* the risk for riverine flooding in Perry County is relatively low; however, the Cahaba River runs through the county which puts the area at risk for flooding events. Other low-lying areas across the county, especially along Oakmulgee Creek and its tributaries are prone to reoccurring localized flooding events which can lead to road washouts that leave communities stranded for significant periods. Additionally, the water and sewer systems in Uniontown and Marion do not have the capacity to handle runoff during significant rainfall events.

b. Extreme Heat and Drought

Extreme heat is often associated with droughts which can lead to greater impacts on communities. Extreme heat is very common to Perry County, as Alabama has a humid subtropical climate, and summers in Alabama are among the hottest in the United States, with high temperatures averaging over 90 °F throughout the state. The risk for negative impacts from heat waves across the Relatively Low to Relatively Moderate, with the relatively moderate risk in the more populated areas, as shown in *Figure 3 Heat Wave Risk in MID Counties by Census Tract.* There is a lack of infrastructure in the county to offer dedicated cooling stations for residents, especially populations that are the most vulnerable to extreme heat.

Prolonged extreme heat periods play a vital role when it comes to droughts, especially when coupled with a lack of precipitation resulting in a lack of moisture in agricultural soil. This can lead to negative economic impacts in the county as crop losses occur. Agricultural losses from droughts are estimated to cost the state annually in damages. The southern parts of the county have the greatest risk of drought impacts, as shown in *Figure 2 Drought Risk in MID Counties by Census Tract.* As a result, the past events and future probability of heat and droughts are classified county-wide as medium risk according to the *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan.*

c. Severe Storms

Severe storms may include lightning, hail, strong winds, intense rainfall, and flooding. Severe storms can happen county-wide which can lead to property and crop damage and at times injuries. Since 1950, NCEI has recorded 94 hail, heavy rain, lightning, strong wind, thunderstorm windstorms, and tropical depression and storm events, with recorded damages of more than $5.8 million as shown in Table 150. Since this event type has occurred regularly over the years resulting in damage, and severe storms are expected to continue regularly, Perry County has identified this event type as a high-risk hazard. The risk for negative impacts from hail across the county is relatively low to relatively moderate, as shown in *Figure 7 Hail Risk in MID Counties by*

Census Tract. For strong winds, the county has a relatively low to relatively moderate risk, as shown in *Figure 8 Strong Winds Risk in MID Counties by Census Tract.*

d. Tornadoes

Tornadoes are Perry County's most significant loss-producing natural hazards according to the NCEI Storm Events Database. Between 1950 and 2022, Tornadoes have led to 68 injuries and more than $30.6 million in property and crop losses.

According to *Figure 9 Tornado Risk in MID Counties by Census Tract,* Perry County has a varying degree of risk of Tornadoes, ranging from Relatively low to Very High. The greatest risk is in the central part of the county where Marion is located followed by the southern portion of the county where Uniontown is located.

There is a lack of infrastructure in the county to offer post-disaster shelter assistance for residents, who may be displaced due to Tornadoes, or other storm events.

e. Wildfires

According to the Alabama Forestry Commission's Current Wildfire Totals summary[60], between 2000 and June 19, 2024, there were 582 total wildfires in Perry County. Those fires burned 8,184 acres. That translates to a yearly average of 24 fires and 348 acres burned per year. The largest fire recorded in the county between these years was 1,644 acres and occurred in 2022. Based on past occurrences, every area of the county has a degree of risk.

According to *Figure 10 Wildfire Risk in MID Counties by Census Tract*, Perry County has a relatively low risk for wildfire compared to the rest of the country. However, according to the 2023 Alabama State Hazard Mitigation Plan, as the climate changes, Alabama is projected to become more prone to wildfire occurrences between now and 2050. It is projected that by 2050 the average number of days with high wildfire will double from 25 to 50 days a year.

3. Hazard Risk Analysis

It has long been recognized that risk often corresponds with a high level of social vulnerability, compounding the impact of hazard and storm events. Using the FEMA National Risk Index, we can evaluate the potential for negative impacts resulting from natural disasters by combining the expected annual loss due to natural hazards, social vulnerability, and community resilience.

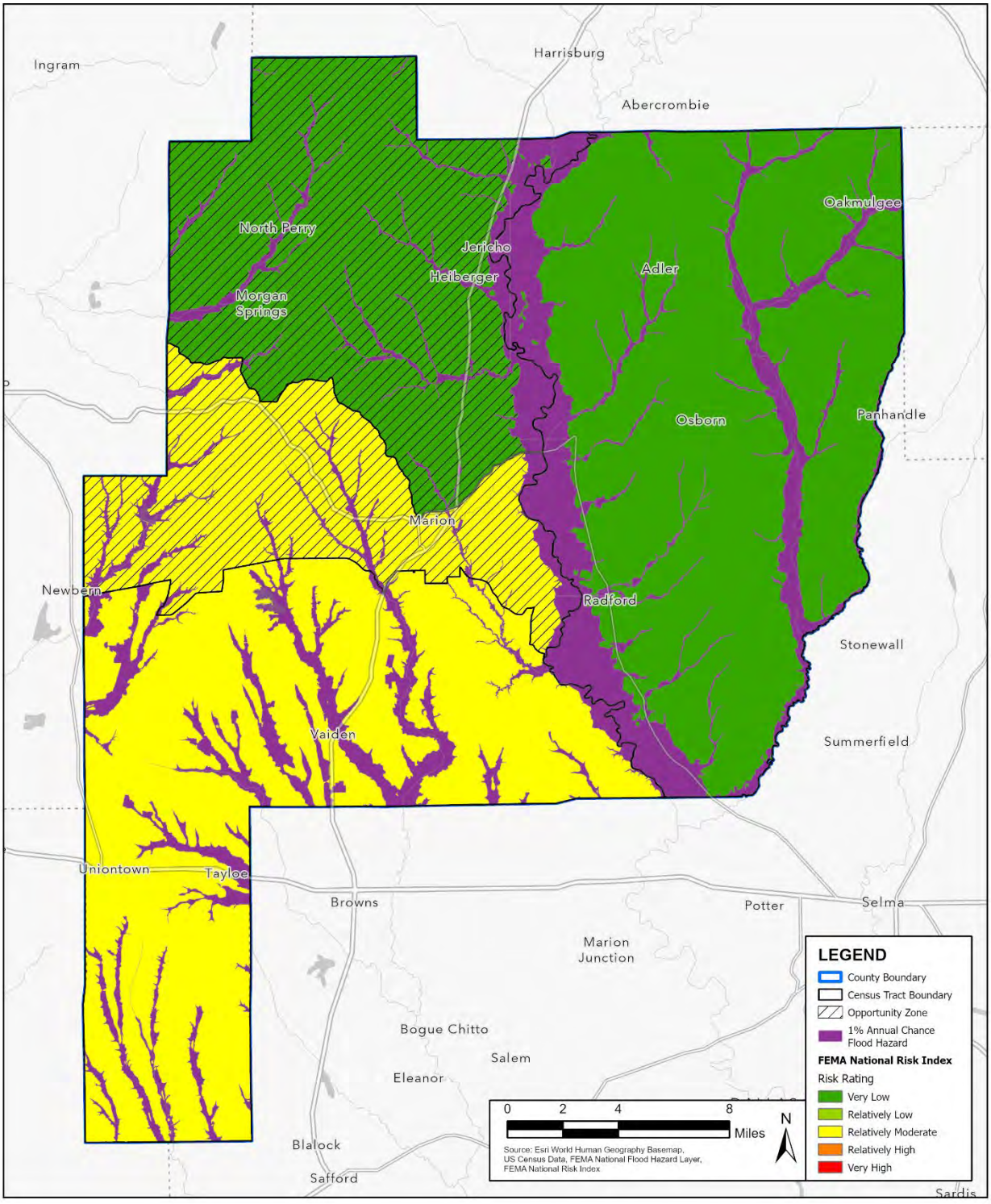
Risk Index = Expected Annual Loss x Social Vulnerability ÷ Community Resilience

Based on the composite Risk Index Score provided, we can see that there are parts of the county that have a Relatively Moderate risk score as shown in

Figure 44. This area includes Marion and Uniontown. Hazard-specific risk indices for the greatest regional and county risks can be found in the maps in Section VII.D of this plan.

[60] https://forestry.alabama.gov/pages/fire/totals.aspx

Figure 44 FEMA National Risk Index Map for Perry County



Vulnerability Overview

An overview of the greatest hazards and their risk impact from the *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* is shown below. To quantify the risk classifications of the greatest risk hazard, risk factors (probability, impact, location extent, duration) were evaluated.

Hazard	Probability	Impact	Location Extent	Duration
Flooding	High	Critical	Moderate	Less than one week
Tornadoes	High	Critical	Small	Less than 6 hours
Severe Storms	Medium	Minor	Moderate	Less than 6 hours
Extreme Heat and Droughts	Medium	Minor	Small	More than one week
Wildfires	High	Minor	Small	Less than one week

Probability defined

- **Very Low**: Less than 1% annual probability
- **Low**: Between 1% and 10% annual probability
- **Medium**: Between 10% and 100% annual probability
- **High**: 100% annual probability

Impact defined:

- **Minor**: Very few injuries, if any occur. Only minor property damage and minimal disruption of quality of life. Temporary shutdown of critical facilities.
- **Limited**: Minor injuries only. More than 10% of property in affected area is damaged or destroyed. Complete shutdown of critical facilities for more than one day.
- **Critical**: Multiple deaths/injuries possible. More than 25% of property in affected area is damaged or destroyed. Complete shutdown of critical facilities for more than one week.
- **Catastrophic**: High number of deaths/injuries possible. More than 50% of property in affected area was damaged or destroyed. Complete shutdown of critical facilities for one month or more.

Location Extent defined:

- **Negligible**: Less than 1% of area affected.
- **Small**: Between 1% and 10% of the area affected.
- **Moderate**: Between 10% and 50% of the area affected.
- **Large**: Between 50% and 100% of the area affected.

Community Lifelines

Community Lifelines are critical business and government functions that are critical in the event of a disaster and are essential to human health, safety, or economic security. The greatest risks identified by the county could disrupt any number of the community lifelines which could impact emergency response and vulnerable populations and communities. Mitigation efforts should address any vulnerabilities across the 7 community lifelines to decrease the impact from the hazards identified in this plan. Maps of the lifeline assets in the county as well as the greatest risks can be found in Section VII.

F. Activity Identification

The 2020 disasters exposed, and exacerbated housing, infrastructure, economic and mitigation needs in many communities that remain at risk following these events. The post-disaster recovery process presents an opportunity to address these long-standing gaps while supporting the communities' efforts to recover and represent a lasting investment in local capacity and resilience. Programs proposed in this Local Recovery Plan are designed to promote long-term mitigation and resiliency standards with a focus on serving the most vulnerable populations.

To address these needs, the State of Alabama identified the following project activity types to be considered by each MID County as part of this planning process:

- Affordable Multifamily Rental Housing
- Homeowner Buyouts
- Homebuyer Assistance
- Mitigation
- Economic Resilience
- Infrastructure & Public Facility Improvements
- Public Services

Perry County did not identify a need for affordable multifamily housing, homeowner buyout, homeowner assistance or public service projects. Below is an outline of the identified homebuyer assistance, mitigation, economic resilience, and infrastructure & public facility improvement projects identified and their associated project descriptions and details.

Project Name	Eligibility Criteria		Project Description	Project Rank
Flood Mitigation	**Strategy**	Mitigation	• Implement flood control improvement projects in areas subject to re-occurring flooding, that leave communities cut off from the rest of the county. This was particularly problematic during and after Hurricanes Zeta. • Specific areas initially identified are along Dobyne Road, Jim Foundry Road, Medline Road, and St. Mary's Spur. • While they were restored to passable through the FEMA PA program, there is a need to return the roads to pre-disaster condition and to redesign and raise these roads to prevent future flooding events	
	Eligible Activity	Mitigation, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score (County Wide)	High		
	Geographic Eligibility	MID County - Mitigation		
	Administering Entity Identified	Perry County Engineering / Highway		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual Phase		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Small Business Technical Assistance	**Strategy**	Recovery	• Business owners recovering from disasters are often in need of specific technical assistance to respond to losses to their businesses whether it be a loss of employees or customers or a need for a new product that may present a growth opportunity for a business. The county will bolster the grant and loan resources and	
	Eligible Activity	Economic Resilience, HCDA Section 105(a)8, 15,17, 21, and 22		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		

Project Name	Eligibility Criteria		Project Description	Project Rank
	SVI Score	High	strengthen the small business community by creating a technical assistance program to support businesses with financial literacy programs, develop new business and continuity plans, and create a disaster resilience plan to help prepare for future disasters. • Grants will be awarded either to separate technical assistance providers or to the entities implementing the loan and grant program. Technical assistance may include the development of business plans; financial management guidance; long-term recovery and sustainability plans; and specialized training.	
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	N/A		
Community Resilience Center	**Strategy**	Recovery & Mitigation	• Perry County would like to develop a community resilience center in Marion. Community resilience centers provide year-round programming to build overall community resilience, while also being augmented to provide critical services during extreme and disaster events. During a steady state the Center may provide health services, job and workforce training, microenterprise incubation, workshops, and meeting space, among other uses. During or following a disaster event, this center may serve as a cooling or warming center and would be designed with back up solar generators to enable the center to provide critical services to residents when needed, such as energy, water, shelter, food, resources, communication infrastructure, health services, and other post-disaster services.	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Stormwater Infrastructure Improvements	**Strategy**	Recovery & Mitigation	• Following Hurricanes Sally and Zeta, parts of Uniontown and Marion flooded as the stormwater system was unable to handle the capacity of the runoff produced by the amount of rainfall. The county identified the need to make significant stormwater infrastructure improvements in these towns to be able to handle stormwater runoff and prevent future flooding.	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		

Project Name	Eligibility Criteria		Project Description	Project Rank
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Homeless Shelter	**Strategy**	Recovery	• Perry County does not have a homeless shelter that can serve vulnerable populations pre- and post-disaster. The county would like a homeless shelter that may also be doubled to be used as a community resilience center if the right conditions are met.	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zones		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	Conceptual Phase		
	Project Readiness	No, Conceptual Phase		
	Operations and Maintenance Feasibility Identified	Recovery		

On the following page, a matrix overview of identified project activity types is provided.

Project Description	Program Strategy	Project Activity Type	National Objective	Benefits vulnerable population	SVI Score	Geographic Eligibility	Administering Entity Identified	Leverages Other Funds Identified	Project Readiness	O&M Feasibility Identified	Project Rank
Flood Mitigation	Mitigation	Mitigation	LMI, UN	Yes	High	MID County - Mitigation	Yes, Perry County Engineering	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Small Business Technical Assistance	Recovery	Economic Resilience	LMI, UN	Yes	High	MID Recovery Zones	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	
Community Resilience Center	Recovery & Mitigation	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zones	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Stormwater Infrastructure Improvements	Recovery & Mitigation	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zones or MID County - Mitigation	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Homeless Shelter	Recovery	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zones	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	

XIII. Washington County

A. Introduction

Washington County is located in the southwestern part of Alabama and borders Mississippi on the county's western border and the Tombigbee River, which is a tributary of the Mobile River, on the county's eastern border. Washinton County boasts a strong timber industry and has over 625,000 timberland acres.[61] Washington County is also the home of the state-recognized tribe, MOWA Band of Choctaw Indians, which is in the southeastern part of the county.

According to the American Community Survey (ACS) 2022 5-Year Estimates[62], Washington County has a population of 15,434, a 7% decrease from 16,541 in 2019. The demographic breakdown shows most residents (67%) are White, followed by 23% identifying as Black or African American. Housing in Washington County includes 7,779 occupied units, with 71% being single-family homes and 27% mobile homes. In total, 99.7% of units in the county are 1–4-unit dwellings or mobile homes. Homeownership is extremely high, with 88% of residents owning their homes and 12% renting. In general, there is a lack of rental and affordable housing stock to support the needs of the county which has been exacerbated by transient labor from manufacturing and chemical plants. Approximately 38% of the households in Washington County have one or more people 65 years and over. Currently, there is only 1 assisted living facility in Camden that has 88 beds, presenting a potential shortage of living options for county residents in future years as the population continues to age.

Washington County experienced damage from Hurricane Zeta which mainly resulted in downed trees that cut off power to communities for weeks, and damaged homes which are still in need of repair including in the MOWA tribal area. The debris that was required to be removed led to roadways being damaged due to the frequency and weight of debris vehicles driving over them. Generators were borrowed from neighboring counties to be used for water pumps, radio towers, and for fire departments. Flooding also occurred in low-lying areas including on some roadways.

B. Unmet Needs Gap

Through this Local Recovery Plan, the ACCA and Washington County present unmet need estimates from Hurricane Sally and Hurricane Zeta based on current best available data (see table below). Over time, ACCA and the county reserves the right to continue to update these estimates as additional assessments are made, and more complete data becomes available.

Table 152 Total Estimated Unmet Need for Washington County

	Estimated Impact	Amount of Funds from other sources	Total Unmet Need
Housing	**$4,755,659**	**$2,246,539**	**$2,509,120**
Infrastructure	**$3,280,941**	**$2,943,430**	**$13,389**
Economy	**$834,278**	**$0**	**$834,278**
Total	**$8,870,878**	**$5,189,969**	**$3,356,787**

[61] 2021 Alabama Forestry Report, https://forestry.alabama.gov/Pages/Management/Forms/Forest_Resource_Report_2021.pdf
[62] https://data.census.gov/ - Tables B02001, B25024, B25033

Estimated impact includes added resilience and increased construction costs and may include FEMA Public Assistance Categories A, B and Z, where applicable. Total Unmet Need does not include FEMA PA categories A, B and Z.

C. Impact and Unmet Needs Assessment

1. Background

In accordance with HUD guidance, Washington County completed the following unmet needs assessment to identify priorities for CDBG-DR funding allocated as a result of impacts from the 2020 storms.

The assessment below utilizes federal and state resources, including data provided by FEMA, HUD, and the Small Business Administration (SBA), among other sources, to estimate unmet needs in three main categories of damage: housing, economy, and infrastructure. This particular unmet needs assessment focuses on Washington County's impacts with specific sections detailing particular needs within the most impacted area, and where relevant, smaller geographic units.

2. Housing Impact & Needs

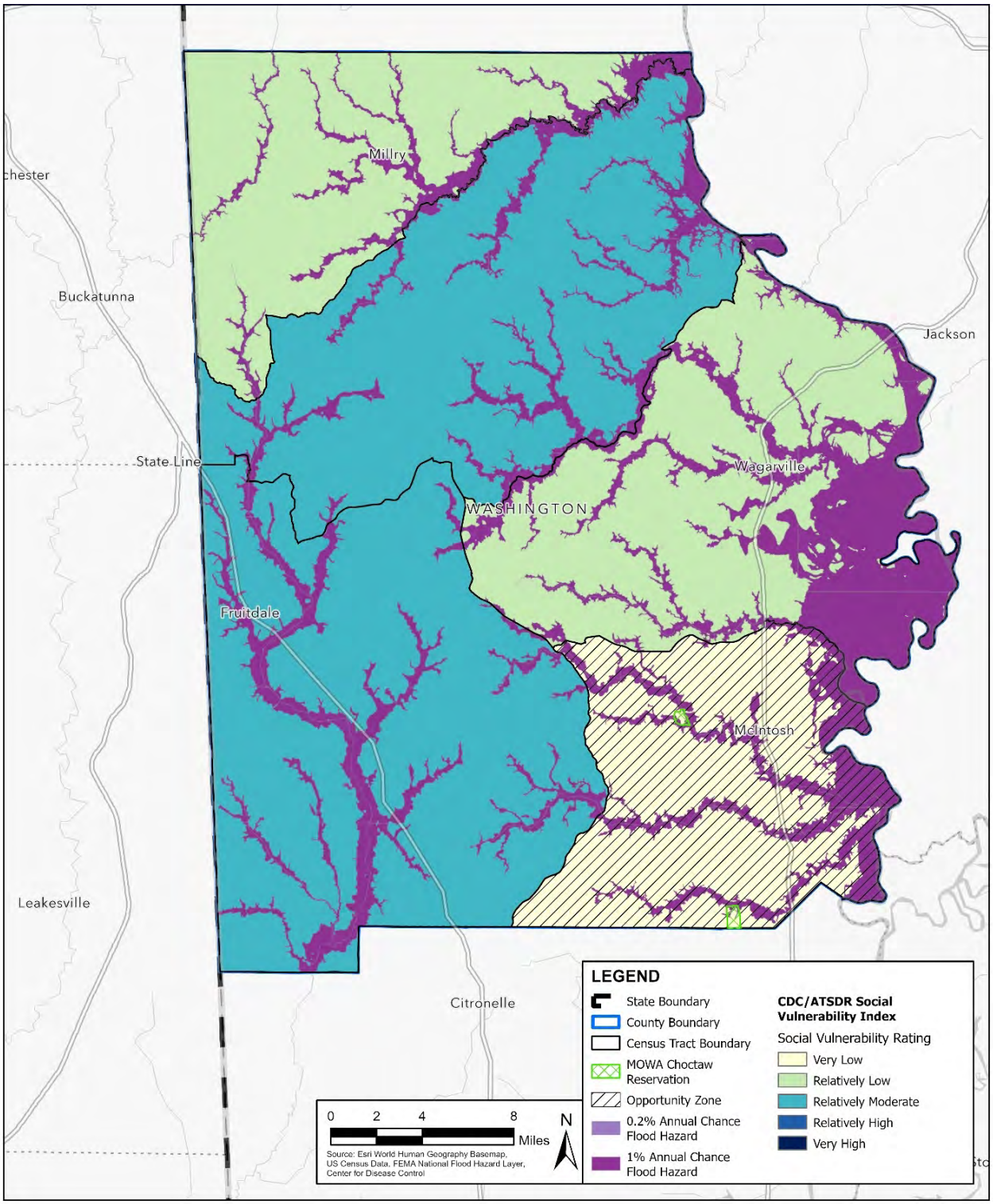
The demographic profile of Washington County has not changed significantly since the State Action Plan was published. Demographic information can be reviewed in the State Action Plan for the county.

Washington County identified vulnerable populations within the county as part of the establishment of MID Recovery Zones. Vulnerable populations include those identified as part of a protected class, hard-to-reach, underserved, historically disadvantaged areas, and economically distressed areas. For the purposes of this LRP, Washington County has identified vulnerable population areas using the CDC/ATSDR Social Vulnerable Index (SoVI), Opportunity Zones, and Tribal Areas.

The CDC/ATSDR SVI is a place-based index designed to identify and quantify communities experiencing social vulnerability by comparing socio-economic, household composition, minority status and language, housing types and transportation needs, and other adjunct variables such as race and ethnicity and households without an internet subscription at the census tract level. Opportunity Zones are economically distressed communities, defined by individual census tracts, nominated by America's governors, and certified by the U.S. Secretary of the Treasury via his delegation of that authority to the Internal Revenue Service. The Opportunity Zones initiative is not a top-down government program from Washington but an incentive to spur private and public investment in America's underserved communities.

Washington County does not have any Racially or Ethnically Concentrated Areas of Poverty (R/ECAP), Promise Zones, or Neighborhood Revitalization Strategy Areas within the county. The map below provides an overview of the vulnerable populations in each census tract against the flood hazard and floodway zones.

Figure 45 Washington County Vulnerability Map



a. Housing Damage and Loss Assessment

Unless otherwise noted, all housing summary data were compiled from these datasets for Hurricane Zeta only.

For each household determined to have unmet housing needs, their estimated average unmet housing need was calculated using similar variables and calculation methods from the State Action Plan. These variables are:

1. FEMA Damage Category Application Counts of Minor-Low to Major-Low
2. FEMA Damage Category Application Counts of Major-High to Severe
3. FEMA IA Applications without FEMA Verified Loss
4. Public Housing Damages

Total impact tables have been summarized based on owner-occupied vs renter-occupied households, impacted populations with flood and homeowner insurance, impact by residence type, impact by gross income, and impact to housing authorities in the following sections.

b. Total Impact (Owner-Occupied and Renter Households)

The information in the below tables outlines the total damaged properties population with documented damages. To account for properties that never had an inspection physically take place due to the COVID-19 pandemic and other reasons no damages were found, likely because they were desktop inspections, the county has classified these applications as “No FVL”. A detailed description is provided in the FEMA IA Applications without Real Property FEMA Verified Loss section

Table 153 Homeowner/Renter Damaged Properties by All Damage Categories

Damage Category	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Severe	4	0.3%	0	0.0%	4	0.3%
Major-High	0	0.0%	0	0.0%	0	0.0%
Major-Low	42	3.4%	5	0.4%	47	3.8%
Minor-High	288	23.1%	48	3.8%	336	26.9%
Minor-Low	144	11.5%	4	0.3%	148	11.8%
No FVL	650	52%	64	5.1%	714	57.2%
Total	**1,128**	**90.3%**	**121**	**9.7%**	**1,249**	**100.0%**

FEMA Damage Category Applications - Minor-Low, Minor-High, and Major-Low

For FEMA IA Applications with minor-low, minor-high, and major-low damage, the count of those applications in each county was multiplied by the overall average SBA verified property loss per damage category provided in the State Action Plan to determine the estimated total loss/support for these three damage categories. The below tables outline the total number of properties damaged for homeowners and renters.

Table 154 Minor-Low, Minor-High, and Major-Low Estimated Total Loss Homeowners

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	144	$1,621	$233,424
Minor-High	288	$5,495	$1,582,560
Major-Low	42	$11,502	$483,084
Total	**471**	**N/A**	**$2,299,068**

Table 155 Minor-Low, Minor-High, and Major-Low Estimated Total Loss Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	4	$1,621	$6,484
Minor-High	48	$5,495	$263,760
Major-Low	5	$11,502	$57,510
Total	**57**	**N/A**	**$327,754**

Table 156 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Homeowners & Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	148	$1,621	$239,908
Minor-High	336	$5,495	$1,846,320
Major-Low	47	$11,502	$540,594
Total	**531**	**N/A**	**$2,626,822**

FEMA Damage Category Applications - Major-High to Severe

For FEMA IA Applications with major-high to severe damage, it was assumed that those structures were substantially damaged and required reconstruction. To determine the replacement cost of the home, Washington County replicated ADECA's approach and used the county's Zillow Home Value from August 2020 for All Homes (none-adjusted)[63]. Since the Zillow home value includes the cost of the land, it is assumed 66% of the value was attributable to the structure on the property. This adjusted home value is multiplied by the total count of applications in the major-high to severe damage categories. The results of these calculations are provided below.

Table 157 Major-High and Severe Estimated Total Loss Homeowners and Renters

Damage Category	Zillow Home Value	66% of Zillow Value	Count	Estimated Total Loss
Major-High	$133,008	$87,785	0	$0
Severe	$133,008	$87,785	4	$351,140
	Total		**4**	**$351,140**

Of the 4 severely damaged homes, no renter occupied dwellings are classified as Severe.

FEMA IA Applications without FEMA Verified Loss

[63] Washington County Home Values, https://www.zillow.com/home-values/3047/washington-county-al/

Washington County also accounted for the damage to applications without Real Property FEMA verified loss (RPFVL) for owner occupied dwellings and without Personal Property FEMA Verified Loss (PPFVL) for renter-occupied dwellings because due to the COVID-19 pandemic and other reasons, an inspection never physically took place or no damages were found, likely because they were desktop inspections. To account for these types of impacts, Washington County counted applications with no FEMA Verified Loss and multiplied it by the average value for minor-low damage per SBA-verified property loss provided in the State Action Plan. The results of these calculations are provided in Table 159 below:

Table 158 Estimated Total Loss for IA Applications without FEMA Verified Loss

Occupancy Type	Count of Applications	Average SBA Value	Estimated Total Loss
Owner	650	$1,621	$1,053,650
Renter	64	$1,621	$103,744
Total	**714**	**$1,621**	**$1,157,394**

c. Impacts of Insurance (HOI and NFIP)

For the purposes of this analysis, households inspected by FEMA and shown to have a 'Water Level' greater than 0.0 inches are considered to have been flooded, while all other units with no 'Water Level' are considered to have been impacted exclusively by wind.

See below for flood-damaged properties by damage category and occupancy type.

Table 159 Flood Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	0	2	11	4	0	0	17
Renter	0	0	3	0	0	0	3
Total	**0**	**2**	**14**	**4**	**0**	**0**	**20**

Flood Damage and Insurance (NFIP): An alarmingly high proportion of units with evidence of flood damage were reported in the FEMA IA data not to carry a flood insurance policy through the National Flood Insurance Program (NFIP) as shown in the table below. In total, **100 percent** of the flood-affected population are reported to not carry an NFIP policy per the FEMA IA data.

Table 160 Flood Damaged Owner-Occupied Properties with Flood Insurance

Damage Category	With NFIP	% With NFIP	Without NFIP	% Without NFIP
Severe	0	0%	0	0%
Major-High	0	0%	0	0%
Major-Low	4	0%	4	24%
Minor-High	11	0%	11	65%
Minor-Low	2	0%	2	12%
No FVL	0	0%	0	0%
Total	**17**	**0%**	**17**	**100%**

Wind Damage and Insurance (HOI): In the absence of evidence of flood damage, units are assumed to be impacted exclusively by wind. As such, for the proportion of owner-occupied units

with no evidence of flooding damage, the county is especially concerned about the high rate of owner-occupied households reported not to carry a standard hazard insurance policy that would otherwise be expected to offset documented losses. In total, 72 percent of the wind-impacted owner-occupied population is reported not to carry hazard insurance as shown below.

Table 161 Wind Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	650	142	277	38	0	4	1,111
Renter	64	4	45	5	0	0	118
Total	**714**	**146**	**322**	**43**	**0**	**4**	**1,229**

Table 162 Wind Damaged Owner-Occupied Properties with Flood Insurance

Damage Category	With NFIP	% With NFIP	Without NFIP	% Without NFIP
Severe	0	0.0%	4	0.4%
Major-High	0	0.0%	0	0.0%
Major-Low	1	0.1%	37	3.3%
Minor-High	10	0.9%	267	24.0%
Minor-Low	13	1.2%	129	11.6%
No FVL	291	26.2%	359	32.3%
Totals	**315**	**28.4%**	**796**	**71.6%**

d. Impact based on Residence Type

The below table shows FEMA IA applicants by housing type. The highest number of applicants came from housing/duplex units (49%) and Mobile Home units (46%).

Table 163 FEMA IA Applicants by Residence Type and Occupancy Type

Residence Type	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Apartment	0	0%	5	0%	5	0%
Boat	1	0%	0	0%	1	0%
House/Duplex	542	43%	66	5%	608	49%
Mobile Home	528	42%	43	3%	571	46%
Other	29	2%	5	0%	34	3%
Travel Trailer	28	2%	2	0%	30	2%
Total	**1,128**	**90%**	**121**	**10%**	**1,249**	**100%**

The below table shows FEMA IA flood-damaged properties by housing type that had Flood or Homeowner's insurance. As indicated in the overview of flood-damaged properties, 0**%** of the flood-affected population is reported to carry an NFIP policy per the FEMA IA data.

Table 164 Flood Damaged Properties by Residence Type and Count with NFIP

Residence Type	Count of Applications	Count with NFIP	% with NFIP
House/Duplex	12	0	0%
Mobile Home	5	0	0%
Total	**17**	**0**	**0%**

The below table shows FEMA IA wind-damaged properties by housing type who had Homeowner's insurance. As indicated in the overview of wind-damaged properties, 19**%** of the affected population are reported to carry homeowner's insurance policy per the FEMA IA data.

Table 165 Wind Damaged Properties by Residence Type and Count with HOI

Residence Type	Count of Applications	Count with HOI	% with HOI
Boat	1	0	0%
House/Duplex	530	232	44%
Mobile Home	523	71	14%
Other	29	11	38%
Travel Trailer	28	1	4%
Total	**1,111**	**315**	**28%**

Total estimated losses have been summarized by residence type.

Table 166 Total Estimated Loss by Residence Type

Residence Type	Count	Estimated Total Loss
Apartment	5	$8,105
Boat	1	$1,621
House/Duplex	608	$1,817,327
Mobile Home	571	$2,192,937
Other	34	$55,114
Travel Trailer	30	$60,252

e. Impact on LMI Households

The income data provided in the FEMA IA data set was not specific enough to perform a low-and moderate-income (LMI) calculation as some of the data overlapped LMI and non-LMI category classifications for a specific household. To summarize the impact of storms had on households based on income, four income groupings are provided in the tables below. Overall, households with lower incomes were disproportionately impacted by Hurricane Zeta, with 69% of the total impacted population making $30,000 or less.

Table 167 Gross Income by Damage Level for Homeowners Only

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	3	0%	1	0%	0	0%	0	0%	4	0%
Major-High	0	0%	0	0%	0	0%	0	0%	0	0%
Major-Low	35	3%	4	0%	3	0%	0	0%	42	4%
Minor-High	240	21%	43	4%	5	0%	0	0%	288	26%
Minor-Low	116	10%	17	2%	11	1%	0	0%	144	13%
No FVL	360	32%	166	15%	118	10%	6	1%	650	58%
Totals	**754**	**67%**	**231**	**20%**	**137**	**12%**	**6**	**1%**	**1,128**	**100%**

Table 168 Gross Income by Damage Level for Renters Only

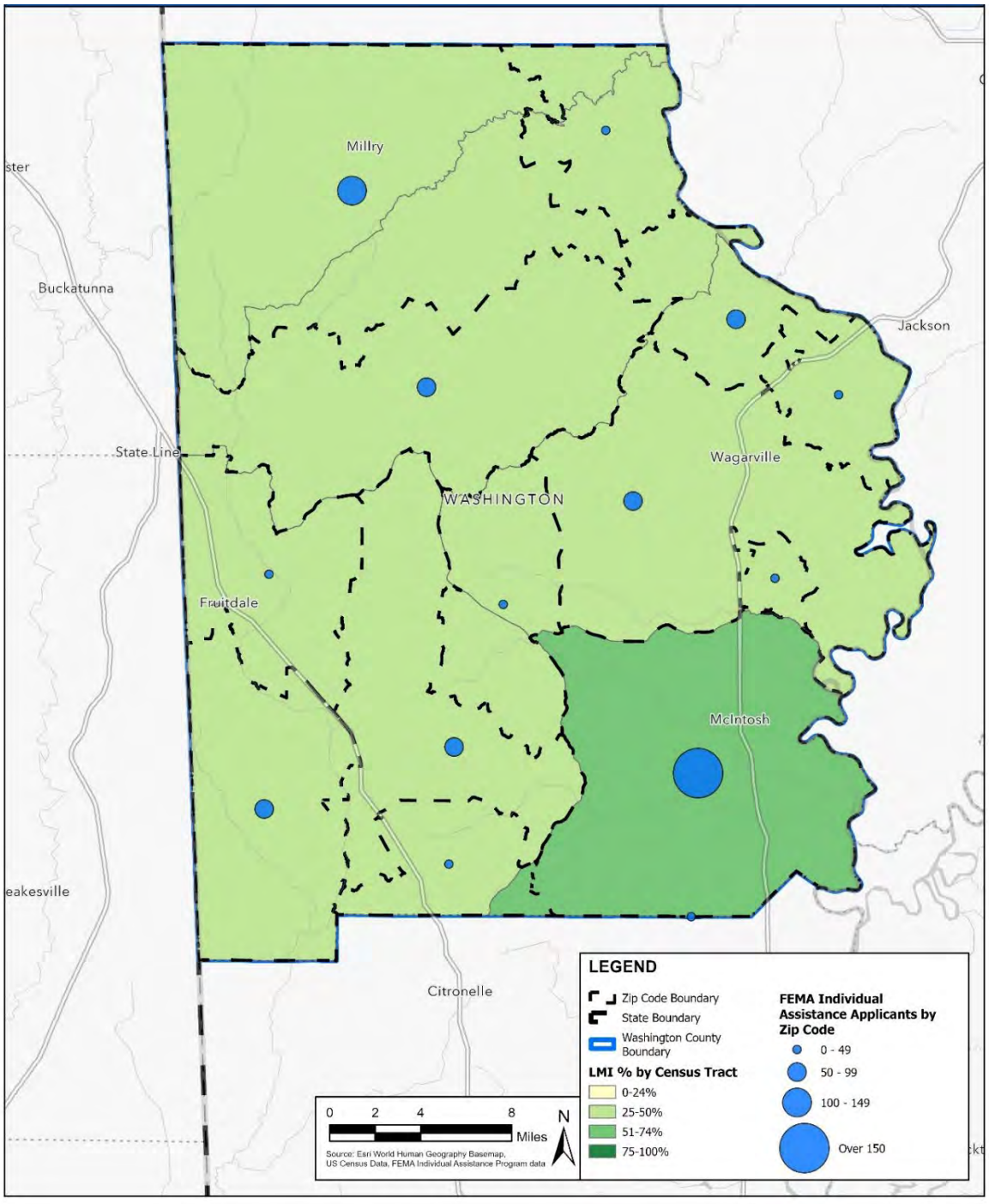
Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	0	0%	0	0%	0	0%	0	0%	0	0%
Major-Low	5	4%	0	0%	0	0%	0	0%	5	4%
Minor-High	43	36%	3	2%	2	2%	0	0%	48	40%
Minor-Low	3	2%	1	1%		0%	0	0%	4	3%
No FVL	52	43%	7	6%	5	4%	0	0%	64	53%
Totals	**103**	**85%**	**11**	**9%**	**7**	**6%**	**0**	**0%**	**121**	**100%**

Table 169 Gross Income by Damage Level for Homeowners and Renters

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	3	0%	1	0%	0	0%	0	0%	4	0%
Major-High	0	0%	0	0%	0	0%	0	0%	0	0%
Major-Low	40	3%	4	0%	3	0%	0	0%	47	4%
Minor-High	283	23%	46	4%	7	1%	0	0%	336	27%
Minor-Low	119	10%	18	1%	11	1%	0	0%	148	12%
No FVL	412	33%	173	14%	123	10%	6	0%	714	57%
Totals	**857**	**69%**	**242**	**19%**	**144**	**12%**	**6**	**0%**	**1,249**	**100%**

The map below illustrates the Low-Moderate Income percentage by Census Tract, with heat bubbles of where the FEMA IA applications are located based on the zip code location.

Figure 46 LMI Populations and FEMA IA Applications by Zip Code for Washington County



f. Impact on Public Housing Authorities

A Public Housing Authority (PHA) for the county does not exist. Washington County would like to have a PHA in order to access available housing funds through the federal government which restricts the county from assisting vulnerable populations.

g. Summary of Housing Impacts

FEMA IA was the primary data source that Washington County used to determine housing unmet needs. Total estimated losses have been summarized by the data source and calculation methodology as summarized in previous sections by damage category and for public housing authorities. An additional 15% is added at the end of the calculation to account for resilience costs to make buildings more resilient to future disasters. To calculate the total unmet need, received assistance is also summarized and subtracted from the estimated total loss including resilience costs.

Table 170 Total Estimated Loss by Damage Category

Data Source/Calculation	Count	Estimated Total Loss
Severe	4	$351,140
Major-High	0	$0
Major-Low	47	$540,594
Minor-High	336	$1,846,320
Minor-Low	148	$239,908
No FEMA Verified Loss	714	$1,157,394
Public Housing	0	$0
Total	**1,249**	**$4,135,356**
+15% Resilience Costs		**$620,303**
Total Estimated Loss with Resilience Costs		**$4,755,659**

To ensure that housing repair assistance is factored into the housing unmet needs calculation, FEMA IA repair and replacement, SBA Real Estate, and NFIP payment amounts were added together to get the total housing assistance received. See below for the calculation.

Table 171 Total Housing Assistance Received Calculation

Data	Count	Total Amount
FEMA IA Payments	301	1,436,439
NFIP Payments	0	0
SBA Loan Amounts	Unknown	$810,100
Total Housing Assistance	**301**	**$2,246,539**

Total housing assistance was subtracted from the total housing unmet needs with resilience included to get a total housing unmet need of approximately $2.5 million as a result of Hurricane Zeta. See below for the calculation.

Table 172 Total Housing Unmet Need for Washington County

Data	Estimated Amount
Total Estimated Loss including 15% Resilience Costs	$4,755,659
Total Housing Assistance Received	-$2,246,539
Total Housing Unmet Need	**$2,509,120**

3. Infrastructure Impact & Needs

a. Infrastructure Damage & Loss Assessment

Washington County experienced damage from Hurricane Zeta which mainly resulted in downed trees that cut off power to communities for weeks, and the debris removal process led to damaged roadways due to the frequency and weight of debris vehicles driving over them. Generators were borrowed from neighboring counties to be used for water pumps, radio towers, and for fire departments. Flooding also occurred in low-lying areas and damaged roadways and bridges, primarily in the southern and eastern portions of the counties.

The table below includes the Estimated PA Cost and additional costs for resiliency measures (15%) the increased cost of construction (23.6%) to estimate the Federal Share (90%) and the local share/unmet need (10%). More accurately, this applies to Categories C through G: roads and bridges, public facilities and buildings, public utilities, and other public assistance needs

Table 173 Total Estimated Infrastructure Costs by PA Damage Category

Damage Category	PA Project Amount	15% Resilience Measures	23.6% Construction Costs	Total PA Project Amount
A - Debris Removal	$3,202,127	$0	$0	$3,202,127
B - Protective Measures	$36,014	$0	$0	$36,014
C - Roads and Bridges	$7,003	$945	$1,653	$9,601
E - Public Buildings	$12,152	$1,640	$2,868	$16,660
G - Recreational / Other	$9,272	$1,252	$2,188	$12,713
Z - State Management	$3,826	$0	$0	$3,826
Total	**$3,270,394**	**$3,838**	**$6,709**	**$3,280,941**

b. Unmet Infrastructure Needs

The table below includes the Total Estimated PA Cost, consisting of resiliency measures, increased construction costs with the total Federal Obligated Amount, and the Non-Federal Share Amount.

Table 174 Total Estimated Non-Federal Share Amount by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount
A - Debris Removal	$3,202,127	$2,881,914	$320,213
B - Protective Measures	$36,014	$32,105	$3,909
C - Roads and Bridges	$9,601	$6,303	$3,298
E - Public Buildings	$16,660	$10,936	$5,723
G - Recreational / Other	$12,713	$8,345	$4,367
Z - State Management	$12,713	$8,345	$4,367
Total	**$3,280,941**	**$2,943,430**	**$337,511**

Based on the analysis performed, there is a potential unmet need of $**13,389** for identified infrastructure damage eligible under FEMA-PA Categories C-G.

Table 175 Total Estimated Unmet Need by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount	Unmet Need
A - Debris Removal*	$3,202,127	$2,881,914	$320,213	$0
B - Protective Measures*	$36,014	$32,105	$3,909	$0
C - Roads and Bridges	$9,601	$6,303	$3,298	$3,298
E - Public Buildings	$16,660	$10,936	$5,723	$5,723
G - Recreational / Other	$12,713	$8,345	$4,367	$4,367
Z - State Management*	$3,826	$3,826	$0	$0
Total	**$3,280,941**	**$2,943,430**	**$337,511**	**$13,389**

*CDBG-DR Funds are not used for PA costs in Categories A, B and Z.

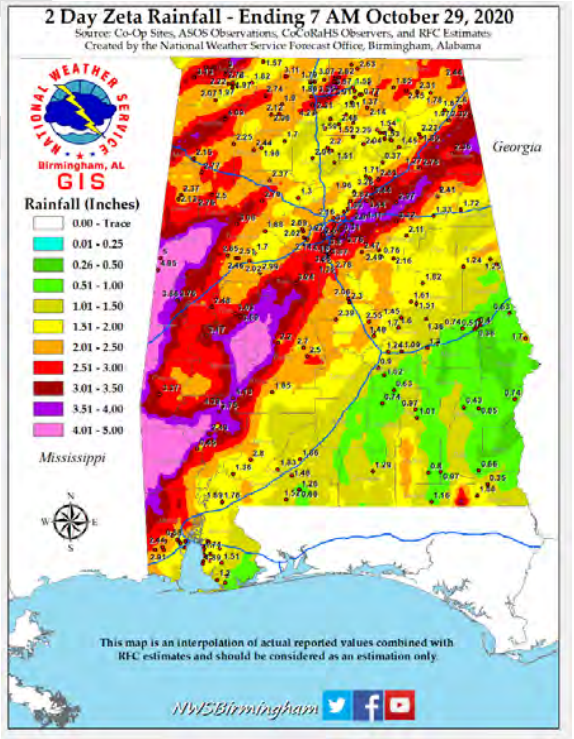
4. Economic Impact & Needs

A summary of the damage and impacts of Hurricane Zeta is provided below, along with an analysis of Small Business Administration loans provided to the business community following Hurricane Zeta.

Agricultural Impact

Following Hurricane Zeta, USDA designated Washington County as a primary natural disaster area, which allows producers who suffered losses by Hurricane Zeta to apply for emergency loans with the U.S. Department of Agriculture (USDA) Farm Service Agency (FSA). This natural disaster designation allows the FSA to extend much-needed emergency credit to producers recovering from natural disasters. Emergency loans can be used to meet various recovery needs including the replacement of essential items such as equipment or livestock, reorganization of a farming operation or the refinance of certain debts.[64] As reported in the November 2nd, 2020, Alabama Crop Progress and Condition Report[65], Hurricane Zeta delivered heavy rains and damaging winds. The high soil moisture prevented fieldwork in many areas of the state following the Hurricane. As shown in Figure 47, the majority of Washington County received upwards of 5 inches of rain across a 48-hour period.

Figure 47 Hurricane Zeta 2 Day Rainfall Total



a. Unmet Economic Needs

According to an analysis of the Small Business Administration (SBA) Business loan data for applications with approved or denied loans that meet a HUD category of loss, the county realized

64 https://www.fsa.usda.gov/state-offices/Alabama/news-releases/2021/usda-designates-13-alabama-counties-as-primary-natural-disaster-areas

65 https://www.nass.usda.gov/Statistics_by_State/Alabama/Publications/Crop_Progress_&_Condition/2020/AL-CropProgress-11-02-20.pdf

a total verified loss of $725,459 across all businesses. After accounting for an additional fifteen percent (15%) in resilience costs, the County's total estimated economic impact stands at $834,278. According to the SBA business report, the SBA provided $0 in total benefits for real estate losses. Therefore, the County's remaining economic unmet needs are valued at $834,278.

Table 176 Unmet Economic Needs Summary

Total Verified Loss	15% Resilience Costs	Total Estimated Impact	Total SBA Benefits	Remaining Unmet Needs
$725,459	**$108,819**	**$834,278**	**$0**	**$834,278**

D. Summary of Unmet Needs & MID Recovery Zones

1. Unmet Needs Summary

Based on the above analysis, the county has calculated a total unmet need of **$3.35 Million** attributable to Hurricane Zeta. In summary, this analysis projects unmet needs as follows:

Table 177 Summary of Total Unmet Needs

Category	Estimated Impact	Amount of Funds from other sources	Remaining Unmet Need
Housing	**$4,755,659**	**$2,246,539**	**$2,509,120**
Infrastructure	**$3,280,941**	**$2,943,430**	**$13,389**
Economy	**$834,278**	**$0**	**$834,278**
Total	**$8,870,878**	**$5,189,969**	**$3,356,787**

See below for a more detailed analysis of how the unmet needs were calculated based on known losses and investments across each zip code.

Table 178 Unmet Need Summary by Zip Code

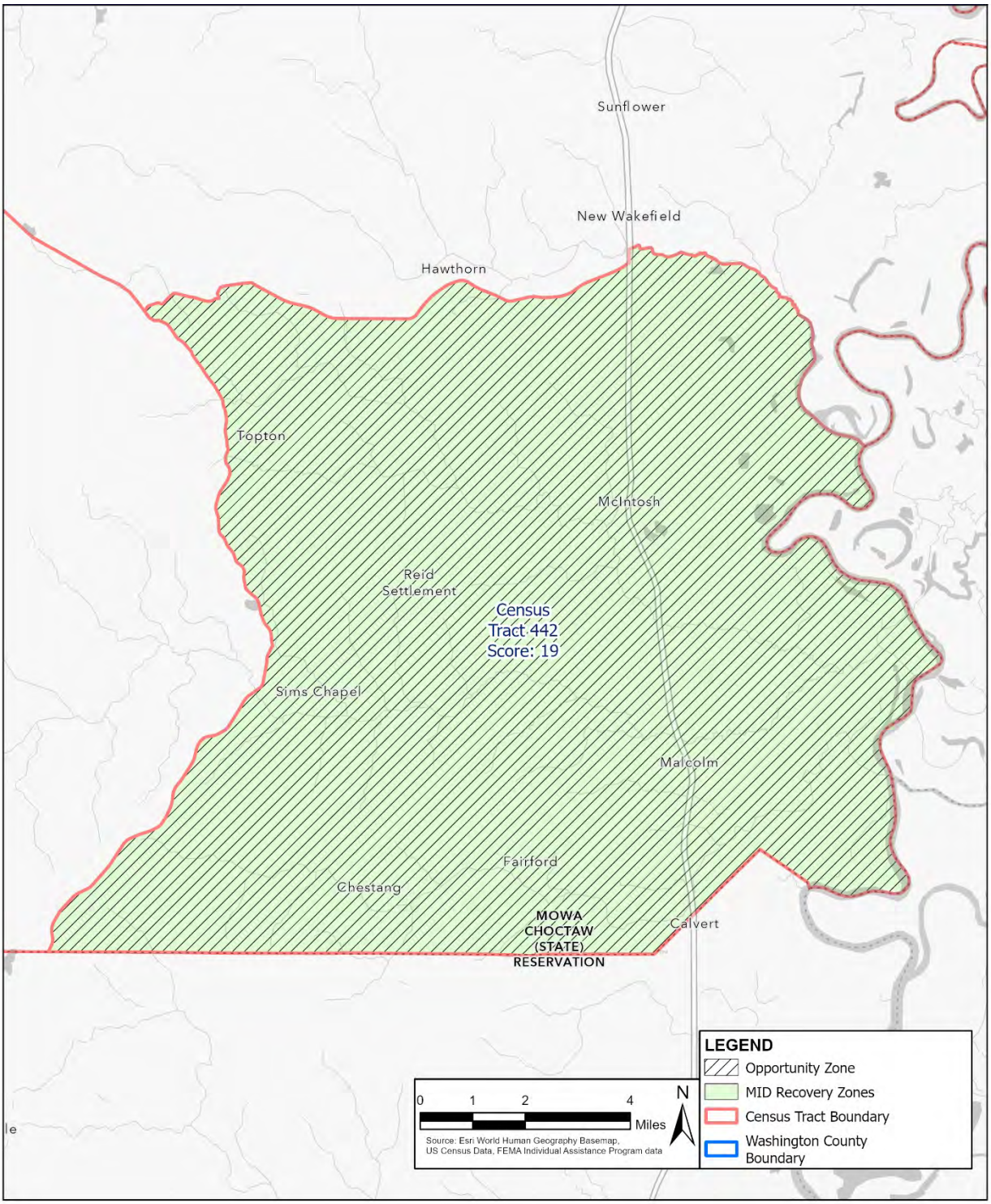
Zip Code	Unmet Housing Need	Unmet Infrastructure Needs	Unmet Economy Needs	Total Unmet Need
36553	$1,256,813	$0	$40,661	$1,297,474
36585	$122,574	$0	$685,882	$808,457
36558	$299,821	$0	$0	$299,821
36518	$167,710	$3,298	$0	$171,008
36548	$144,369	$0	$0	$144,369
36529	$106,418	$0	$14,962	$121,380
36569	$86,244	$10,091	$24,923	$121,258
36539	$32,703	$0	$67,850	$100,553
36583	$91,373	$0	$0	$91,373
36584	$67,330	$0	$0	$67,330
36538	$60,490	$0	$0	$60,490
36522	$57,925	$0	$0	$57,925
36581	$32,386	$0	$0	$32,386
36560	-$17,036	$0	$0	-$17,036
Total	**$2,509,120**	**$13,389**	**$834,278**	**$3,356,787**

2. MID Recovery Zones

The MID Recovery Zones (MRZ) were identified at the census tract level based on areas with vulnerable populations and zip codes with the most unmet needs and where these areas overlap with census tracts. A ranked approach was taken to rate the census tracts in Washington County based on a score from 0 to 20, with a total possible score of 10 for each category. Census tracts with scores between 15 and 20 are considered a MID Recovery Zone

The MRZ identified for Washington County is shown in Figure 48 MID Recovery Zones for Washington County.

Figure 48 MID Recovery Zones for Washington County



E. Mitigation Needs Assessment

In accordance with the LRRP guidance, the county completed the following Mitigation Needs Assessment. Alabama's 2023 State Hazard Mitigation Plan, X Local Hazard Mitigation Plan, and data from the National Oceanic Atmospheric Administration (NOAA) and FEMA were used to assess the mitigation needs. This assessment informs and provides a substantive basis for programs proposed in this Local Recovery Plan, with a focus on addressing and analyzing all significant current and future hazard risks

1. Historic Overview of Hazards

Since 1973, there have been 14 disaster declarations for Washington County. The most common natural disasters that cause damage to an extent that results in a federal disaster declaration are hurricanes and severe storms/tornadoes. This historical pattern of extreme weather is expected to continue which means mitigation measures to reduce impacts caused by these types of hazards are critical.

Table 179 Declared Disasters since 1973 and the Associated Total Obligated PA Amount to Date for Washington County

Declaration	Year Declared	Incident Type	Declaration Title	Total Obligated PA Amount
DR-4573-AL	2021	Hurricane	Hurricane Zeta	$2,943,430
DR-4503-AL	2020	Biological	Covid-19 Pandemic	No Data
DR-4349-AL	2018	Hurricane	Hurricane Nate	$12,634
DR-4176-AL	2014	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	$15,864
DR-1971-AL	2011	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, and Flooding	$17,036
DR-1835-AL	2009	Severe Storm	Severe Storms, Flooding, Tornadoes & Straight-Line	$329,472
DR-1605-AL	2005	Hurricane	Hurricane Katrina	$714,657
DR-1593-AL	2005	Hurricane	Hurricane Dennis	$130,772
DR-1549-AL	2004	Hurricane	Hurricane Ivan	$299,002
DR-1466-AL	2003	Severe Storm	Severe Storms, Tornadoes, and Flooding	No Data
DR-1250-AL	1998	Hurricane	Hurricane Georges - 18 Sep 98	No Data
DR-861-AL	1990	Severe Storm	Severe Storms, Tornadoes & Flooding	No Data
DR-598-AL	1979	Hurricane	Hurricane Frederic	No Data
DR-458-AL	1975	Flood	Severe Storms & Flooding	No Data

Source: OpenFEMA Data Sets, Disaster Declaration Summary[66] and Public Assistance Funded Project Details[67]

Historic weather patterns can be determined for Washington County from NOAA's National Centers for Environmental Information (NCEI) Storm Events Database. Table 291 provides an outline of the number of recorded storm events from January 1950 to December 2023 for Washington County. If the same event type occurred on the same date, only one event was

[66] https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2

[67] https://www.fema.gov/openfema-data-page/public-assistance-funded-projects-details-v1

recorded; however, the number of fatalities, injuries, and damages were summed across the multiple events for a single day and event type.

Table 180 NCEI Storm Events Summary (1953 - 2023)

Event Type	Number of Events	Number of Fatalities	Number of Injuries	Property Damage ($)	Crop Damage ($)
Drought	3	0	0	$0	$0
Flash Flood	22	0	0	$1,792,000	$0
Hail	65	0	0	$1,470,000	$25,000
Heat	2	0	0	$0	$0
Heavy Snow	2	0	0	$0	$0
Hurricane (Typhoon)	3	0	0	$100,000	$0
Lightning	10	0	1	$239,000	$0
Sleet	2	0	0	$0	$0
Thunderstorm Wind	111	0	7	$4,079,000	$0
Tornado	25	3	4	$6,219,250	$0
Tropical Storm	4	0	0	$25,000	$0
Winter Storm	5	0	0	$15,000	$0
Funnel Cloud	2	0	0	$0	$0
Winter Weather	1	0	0	$0	$0
Strong Wind	1	0	0	$5,000	$0
Grand Total	**258**	**3**	**12**	**$13,944,250**	**$25,000**

Source: NOAA's National Centers for Environmental Information (NCEI) Storm Events Database[68]

2. Greatest Hazard Risks

The *2021-2026 Division A Regional Multi-Jurisdictional Hazard Mitigation Phase I Plan* identified risks by studying historical events and susceptibility and gathering information and input from local stakeholders. Each hazard was categorized in High, Medium, Low, or Very Low based on the historical trends of the hazards and also the probability of future occurrence and estimated loss. These categories are defined below:

- High: Probable major damage in a 1-10 Year Period
- Medium: Probable major damage in a 10-50 Year Period
- Low: Probable major damage in a 100 Year Period
- Very Low: No probable major damage in a 100 Year Period

The *2021-2026 Division A Regional Multi-Jurisdictional Hazard Mitigation Phase I Plan* identified dam failures, strong severe storms, hurricanes, and tornadoes, and extreme temperatures and drought as the most significant risks; however, flooding was also identified as a great risk.

[68] https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=1%2CALABAMA

Figure 49 Greatest Risk Hazards for Washington County

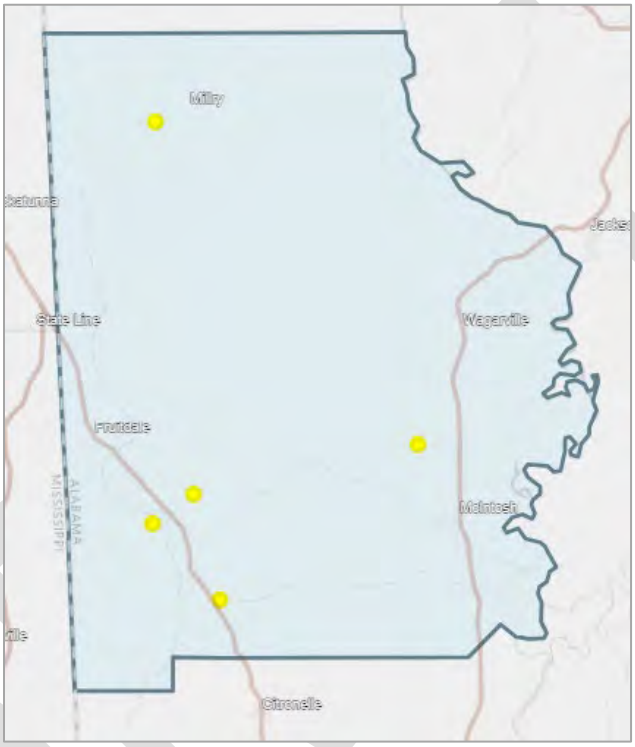
Hazard	Risk Rating	Locations Impacted	Associated risk
Dam Failure	High	Washington County Public Lake, Stallworth Dam, D R Stallworth Dam, Henson Dam and Wade H Odom Dam are all identified as significant hazard dams. The failure of the Coffeeville Lock and Dam in Choctow County could also affect Washington County.	Flooding of several feet, mainly agricultural areas, infrastructure, and isolated structures would be impacted, and loss of life along with economic, environmental, and lifeline losses could occur.
Extreme Temperatures and Drought	High	County-wide; the area is especially susceptible to extreme heat and drought events during the summer months and extreme cold during the winter months.	Can cause crop loss, threat to health of people living and working in the area
Hurricanes & Tropical Storms	High	County-wide; however, the impact of these events can range from localized to extensive.	Can lead to crop and property damage, disruption in utility services, roadway damage, injury to residents, and loss of life.
Severe Storms	High	County-wide, Severe storms can occur throughout the year.	Can lead to crop and property damage, disruption in utility services, roadway damage, injury to residents, and loss of life.
Tornadoes	High	County-wide; however, there is generally higher frequency of tornado warnings, particularly in Yarbo, Tibbie, Fruitdale, and Deer Park. Northern portion of the County is Zone IV with a higher ultimate design wind speed (load a structure will experience).	Can lead to crop and property damage, disruption in utility services, roadway damage, injury to residents, and loss of life.
Flooding	Medium	Areas along creeks and rivers, and low-lying areas with poor drainage are most at risk. Urban areas are especially prone to flash floods but may occur in other areas where there is inadequate, damaged, or non-existent drainage infrastructure. Riverine flooding occurs along Tomibgbee and Escatawpa Rivers and their tributaries and usually occurs after periods of heavy rainfall	Can cause crop, property and infrastructure damage, injury, and loss of life

b. Dam Failure

According to the National Inventory of Dams, Washington County has 15 known dams. Five (5) of these dams are identified as having a significant hazard. The Coffeeville Lock and Dam in Choctow County, rated a significant hazard potential, could also affect Washington County. The extent of a dam failure may vary based on the storage of the affected dam and its proximity to infrastructure and structures. For larger dams or dams classified with a high hazard potential, the extent of damage could be much greater and lead to loss of life along with economic, environmental, and community lifeline losses.

Historically (until June 7, 2023), Alabama did not have a dam safety program[69] which led to Alabama being disqualified from accessing federal infrastructure funds for dam-related inspections, training, and rehabilitation. Because of this, dams in the county may not have an accurate risk classification and they may not have received adequate funding to prevent and mitigate potential dam failures. This leads to a level of unknown risk associated with each dam. Due to the number of dams with high to significant potential hazards and the predicted damages, dam failure is classified as a high risk.

Figure 50 Significant and High-Hazard Potential Dams



Source: National Inventory of Dams, https://nid.sec.usace.army.mil/

c. Extreme Temperatures and Drought

Extreme cold and heat is often associated with winter weather or droughts that can lead to greater impacts on communities. According to the 2023 State Hazard Mitigation Plan, the observed extreme temperature events in Alabama have ranged in magnitude from a high of 100 F to a low of 2 F.

Extreme heat is very common in Washington County, as Alabama has a humid subtropical climate, and summers in Alabama are among the hottest in the United States, with high temperatures averaging over 90 °F throughout the state. The risk for negative impacts from heat waves across parts of the county is relatively high, as shown in *Figure 3 Heat Wave Risk in MID Counties by Census Tract.* Prolonged extreme heat periods play a vital role when it comes to droughts, especially when coupled with a lack of precipitation resulting in a lack of moisture in agricultural soil. This can lead to negative economic impacts in the county as crop losses occur. Agricultural losses from droughts are estimated to cost the state annually in damages. As a result,

[69] https://www.alabama-asce.org/alabama-establishes-first-state-dam-safety-program/

the past events and future probability of heat and droughts are classified risks with parts of the county having a relatively moderate risk as supported by *Figure 2 Drought Risk in MID Counties by Census Tract.*

While extreme cold temperatures are uncommon due to Alabama's mild winter climate, residents are unaccustomed to and less prepared for the severe cold weather, putting residents at a greater risk for dealing with the extreme cold compared to more northern climates. Most crop species in Alabama do not have a tolerance for cold temperatures, making them more susceptible to the impacts of cold weather. Cold weather may also be accompanied by winter weather and storms, and ice storms which can cause downed trees or result in vehicle accidents. Since 1950, 8 cold weather-related events have occurred in Washington County.

d. Hurricane/Tropical Storms

As shown in Tables 180 and 181, hurricanes have historically made landfall in the region and have impacted Washington County. Due to the county's proximity to the Gulf of Mexico, hurricanes and coastal storms continue to be a high risk for Washington County. *Figure 4 Hurricane Risk in MID Counties by Census Tract,* in section VII.D, indicates that the county has a relatively high Hurricane Risk. Additionally, analysis performed by Florida State University's Meteorology Department, indicates that the probability of a hurricane of any intensity passing over Alabama is between 60% and 80%[70].

Any increased intensities in the future are likely to exacerbate the county's future vulnerability, given that intense hurricanes and coastal storms have enormous potential to devastate the physical, agricultural, economic, and sociocultural infrastructure of the county.

e. Severe Storms

Severe storms may include lightning, hail, strong winds, intense rainfall, and flooding. Since 1950, NCEI has recorded 187 hail, lightning, strong wind, and thunderstorm windstorm events, as shown in Table 181. Since this event type has occurred regularly over the years resulting in damage, and severe storms are expected to continue regularly, Washington County has identified this event type as a high-risk hazard. The risk for negative impacts from hail across the county is relatively moderate to relatively high, as shown in *Figure 7 Hail Risk in MID Counties by Census Tract.* For strong winds, the entirety of the county has a relatively high risk, as shown in *Figure 8 Strong Winds Risk in MID Counties by Census Tract.*

Severe storms can happen county-wide which can lead to property and crop damage and at times injuries. According to *Table 29: NCEI Storm Events Summary,* the combination of hail, strong winds, lightning, and thunderstorms has led to an estimated $5.8 million in property and crop damages.

f. Tornadoes

Tornadoes are Washington County's most significant loss-producing natural hazards according to the NCEI Storm Events Database. Tornadoes can damage homes, businesses, utility

[70] https://moe.met.fsu.edu/tcprob/al.php

infrastructure and may require substantial debris cleanup. Between 1950 and 2022, Tornadoes caused 12 injuries, 3 deaths, and more than $6.2 million in property and crop losses.

According to *Figure 9 Tornado Risk in MID Counties by Census Tract*, the majority of Washington County has a relatively high to very-high Tornado Risk rating. Due to Washington County's amount of forestry land, Tornadoes could cause a lot of downed trees which can damage property, block roadways, and result in power outages.

Washington County faces a unique challenge related to strong storms and tornadoes due to a meteorological radar gap, which leads to insufficient tornado alerts in certain areas along the Alabama and Mississippi state border.

g. Flooding

Flooding is a problem for many people across the United States. Enduring the consequences of repetitive flooding can put a strain on residents and on state and local resources. When the water rises, communities face the disruption of life, damaged belongings, and the high cost of rebuilding. FEMA administers the National Flood Insurance Program (NFIP), which pays flood claims. According to the NFIP data, as of April 2024, there is only 1 Repetitive Loss Property and 0 Severe Repetitive Loss Properties in Washington County.

While repetitive loss flooding is not common in Washington County, Washington County does have flood events, according to the *2023 Alabama State Hazard Mitigation Plan* between 2000 and 2022 the most common flood event is flash flooding as depicted in the table below.

Flash Flood	Flood	Coastal Flood or Storm Surge	All Flood Events
19	0	0	19

Data Source: 2023 Alabama State Hazard Mitigation Plan

Where the Alabama and Tombigbee Rivers meet at the southern tips of Clarke and Washington Counties, there is a very low risk for coastal flooding as shown in *Figure 5 Coastal Flood Risk in MID Counties by Census Tract.* According to *Table 181: NCEI Storm Events Summary,* the flash flooding events have led to the estimated property damage of $1.7M.

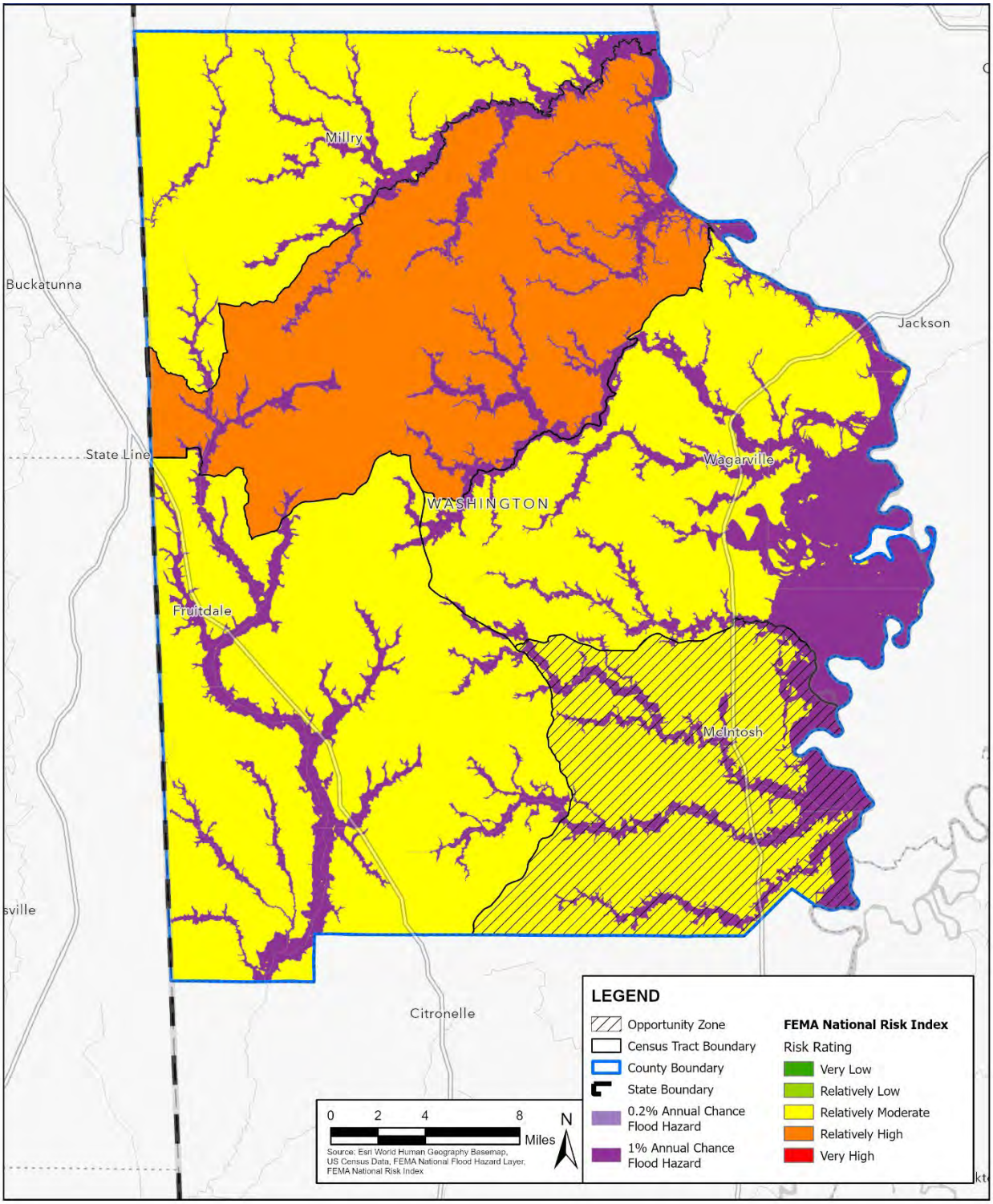
3. Hazard Risk Analysis

It has long been recognized that risk often corresponds with a high level of social vulnerability, compounding the impact of hazard and storm events. Using the FEMA National Risk index, we can evaluate the potential for negative impacts resulting from natural disasters by combining the expected annual loss due to natural hazards, social vulnerability and community resilience.

Risk Index = Expected Annual Loss x Social Vulnerability ÷ Community Resilience

Based on the composite Risk Index Score provided in Figure 51, we can see that there are parts of the county that have a relatively high-risk score; this area includes the Chatom area. Hazard specific risk indices for the greatest regional and county risks can be found in the maps in Section VII.D of this plan.

Figure 51 Washington County FEMA National Risk Index Map



Vulnerability Overview

An overview of the greatest hazards and their risk impact from the *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* is shown below. To quantify the risk classifications of the greatest risk hazard, risk factors (probability, impact, location extent, duration) were evaluated.

Hazard	Probability	Impact	Location Extent	Duration
Dam Failure	Pending	Pending	Pending	Pending
Flooding	Pending	Pending	Pending	Pending
Tornadoes	Pending	Pending	Pending	Pending
Severe Storms	Pending	Pending	Pending	Pending
Extreme Temperatures and Droughts	Pending	Pending	Pending	Pending
Hurricane/Tropical Storms	Pending	Pending	Pending	Pending

Probability defined:

- Very Low: Less than 1% annual probability
- Low: Between 1% and 10% annual probability
- Medium: Between 10% and 100% annual probability
- High: 100% annual probability

Impact defined:

- Minor: Very few injuries, if any occur. Only minor property damage and minimal disruption of quality of life. Temporary shutdown of critical facilities.
- Limited: Minor injuries only. More than 10% of property in affected areas is damaged or destroyed. Complete shutdown of critical facilities for more than one day.
- Critical: Multiple deaths/injuries possible. More than 25% of property in affected areas is damaged or destroyed. Complete shutdown of critical facilities for more than one week.
- Catastrophic: High number of deaths/injuries possible. More than 50% of property in the affected area was damaged or destroyed. Complete shutdown of critical facilities for one month or more.

Location Extent defined:

- Negligible: Less than 1% of area affected.
- Small: Between 1% and 10% of the area affected.
- Moderate: Between 10% and 50% of the area affected.
- Large: Between 50% and 100% of the area affected.

Community Lifelines

Community Lifelines are critical business and government functions that are critical in the event of a disaster and are essential to human health, safety, or economic security. The greatest risks identified by the county could disrupt any number of the community lifelines which could impact emergency response and vulnerable populations and communities. Mitigation efforts should address any vulnerabilities across the 7 community lifelines to decrease the impact of the hazards identified in this plan. Maps of the lifeline assets in the county as well as the greatest risks can be found in Section VII.

F. Activity Identification

The 2020 disasters exposed, and exacerbated housing, infrastructure, economic, and mitigation needs in many communities that remain at risk following these events. The post-disaster recovery process presents an opportunity to address these long-standing gaps while supporting the communities' efforts to recover and represent a lasting investment in local capacity and resilience. Programs proposed in this Local Recovery Plan are designed to promote long-term mitigation and resiliency standards with a focus on serving the most vulnerable populations.

In order to address these needs, the State of Alabama identified the following project activity types to be considered by each MID County as part of this planning process:

- Affordable Multifamily Housing
- Homeowner Buyouts
- Homebuyer Assistance
- Mitigation
- Economic Resilience
- Infrastructure & Public Facility Improvements
- Public Services

Washington County did not identify a need for homeowner buyouts, economic resilience or affordable multifamily housing; however, they identified a need to create affordable small rental units (1-4). Under this LRP, only multifamily housing activities are considered eligible and therefore a project summary is not provided for the small rental units. Below is an outline of the identified homebuyer assistance, mitigation, and infrastructure & public facility improvement projects identified and their associated project descriptions and details.

Project Name	Eligibility Criteria		Project Description	Project Rank
Homeownership Assistance	**Strategy**	Housing Recovery	• Provide opportunities for vulnerable mobile home renters and owners to purchase more secure housing, with an emphasis on supporting first-time homebuyers located within a MID Recovery Zone. • Homeownership assistance programs typically subsidize down payments, interest rates, or mortgage principal amounts to LMI households to assist in purchasing a home.	
	Eligible Activity	Homebuyer Assistance, HCDA Section 105(a) 24		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Low		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	N/A		
	Strategy	Mitigation		

Project Name	Eligibility Criteria		Project Description	Project Rank
Public Facilities Generators	**Eligible Activity**	Mitigation, HCDA Section 105(a)(2)	• The county has identified the need for providing backup generators at several critical public infrastructure sites including pumping stations and fire stations.	
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Low		
	Geographic Eligibility	MID County – Mitigation		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Flood Mitigation	**Strategy**	Mitigation	• The county has identified flood control improvement projects as a mitigation strategy type.	
	Eligible Activity	Mitigation, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Low		
	Geographic Eligibility	MID County - Mitigation		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual Phase		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Community Resilience Center	**Strategy**	Recovery & Mitigation	• Develop a community resilience center that provides year-round programming to build overall community resilience, while also being augmented to provide critical services during extreme and disaster events. During a steady state the Center may	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA		

Project Name	Eligibility Criteria		Project Description	Project Rank
		Section 105(a)(2)	provide health services, job and workforce training, microenterprise incubation, workshops, and meeting space, among other uses. During or following a disaster event, this center may serve as a cooling or warming center and would be designed with back up solar generators to enable the center to provide critical services to residents when needed, such as energy, water, shelter, food, resources, communication infrastructure, health services, and other post-disaster services.	
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Low		
	Geographic Eligibility	MID Recovery Zones		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual Phase		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Assisted Living Facility	**Strategy**	Recovery	• Washington County does not have adequate assisted living facilities to serve the aged population. The county would like to propose creating a new assisted living facility as a project of this LRP and may also be doubled to be used as a community resilience center if the right conditions are met.	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	Low		
	Geographic Eligibility	MID Recovery Zones		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual Phase		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		

Project Name	Eligibility Criteria		Project Description	Project Rank
Planning and Zoning Regulations	**Strategy**	No, Conceptual Phase	• Washington County does not have planning and zoning codes outside of Chatom and other cities to ensure that structures undergoing construction and rehabilitation are built to resilient standards. The county would like to develop a set of planning and zoning codes that would be implemented across the county.	
	Eligible Activity	No, Conceptual Phase		
	National Objective	No, Conceptual Phase		
	Benefits vulnerable populations	Conceptual Phase		
	SVI Score	No, Conceptual Phase		
	Geographic Eligibility	Recovery		
	Administering Entity Identified	Public Service, HCDA Section 105(a)(8)		
	Project Amount Identified	LMI, UN		
	Other Funding Sources Identified	Yes		
	Project Readiness	Low		
	Operations and Maintenance Feasibility Identified	MID Recovery Zones		
Establish and Staff Public Housing Authority	**Strategy**	No, Conceptual Phase	• The county only has 1 to 3 ambulances available for use for over 15,000 residents, and often only 1 ambulance is available. This shortage of ambulance services puts the health and safety of residents at risk pre- and post-disaster. The county would like to add EMS and ambulance services and potentially include a job training program as a component of this project.	
	Eligible Activity	No, Conceptual Phase		
	National Objective	No, Conceptual Phase		
	Benefits vulnerable populations	Conceptual Phase		
	SVI Score	No, Conceptual Phase		
	Geographic Eligibility	No, Conceptual Phase		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual Phase		

Project Name	Eligibility Criteria		Project Description	Project Rank
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		

On the following page, a matrix overview of identified project activity types is provided, including their project ranking.

Project Description	Program Strategy	Project Activity Type	National Objective	Benefits vulnerable population	SVI Score	Geographic Eligibility	Administering Entity Identified	Leverages Other Funds Identified	Project Readiness	O&M Feasibility Identified	Project Rank
Homeownership program	Recovery	Homebuyer Assistance	LMI, UN	Yes	Low	MID Recovery Zones	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	
Generators	Mitigation	Mitigation	LMI, UN	Yes	Low	MID County - Mitigation	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Flood Mitigation	Mitigation	Mitigation	LMI, UN	Yes	Low	MID County - Mitigation	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Community Resilience Centers	Recovery & Mitigation	Infrastructure & Public Facility Improvements	LMI, UN	Yes	Low	MID Recovery Zones or MID County - Mitigation	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Assisted Living Facility	Recovery	Infrastructure & Public Facility Improvements	LMI, UN	Yes	Low	MID Recovery Zones	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Planning and Zoning Regulations	Recovery & Mitigation	Public Service	LMI, UN	Yes	Low	MID Recovery Zones or MID County - Mitigation	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
EMS Ambulance Service	Recovery	Public Service	LMI, UN	Yes	Low	MID Recovery Zones	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	

XIV. Wilcox County

A. Introduction

Wilcox County is in the southwestern part of Alabama and is split by the Alabama River with only one bridge in the county connecting it from one side of the river to the other. To get from one side of the river to the other, it can take upwards of 45 minutes by car or a few minutes by ferry, when the ferry is working.

According to the American Community Survey (ACS) 2022 5-Year Estimates[71], Wilcox County has a population of 10,441, a 2% decrease from 10,681 in 2019. The demographic breakdown shows most residents (70%) are Black or African American, followed by 28% that are White. Housing in Wilcox County includes 5,314 occupied units, with 59% being single-family homes and 38% mobile homes. In total, 99% of units in the county are 1–4-unit dwellings or mobile homes. Homeownership is extremely high, with 79% of residents owning their homes and 21% renting.

Wilcox County experienced damage from Hurricane Zeta which mainly resulted in downed trees that cut off power to communities for weeks, and damaged homes which are still in need of repair. Residents faced challenges in accessing FEMA assistance due to literacy issues. The housing stock shortages were exacerbated because of the storms with no homeless shelters available to provide post-disaster assistance. Flooding was a significant issue, particularly in low-lying areas like Meadowbrook, where drainage and sewage problems persisted. County-owned buildings, including a vital Community Center, also sustained damage.

B. Unmet Needs Gap

Through this Local Recovery Plan, the ACCA and Wilcox County present unmet needs estimates from Hurricane Sally and Hurricane Zeta based on current best available data (see Table 182 below). Over time, ACCA and the county reserve the right to continue to update these estimates as additional assessments are made, and more complete data becomes available.

Table 181 Total Estimated Unmet Need for Wilcox County

	Estimated Impact	Amount of Funds from other sources	Total Unmet Need
Housing	$4,455,169	$1,475,950	$2,979,219
Infrastructure	$1,186,050	$1,053,707	$23,550
Economy	$139,868	$0	$139,868
Total	**$5,781,087**	**$2,529,657**	**$3,142,636**

Estimated impact includes added resilience and increased construction costs and may include FEMA Public Assistance Categories A, B and Z, where applicable. Total Unmet Need does not include FEMA PA categories A, B and Z.

[71] https://data.census.gov/ - Tables B02001, B25024, B25033

C. Impact and Unmet Needs Assessment

1. Background

In accordance with HUD guidance, Wilcox County completed the following unmet needs assessment to identify priorities for CDBG-DR funding allocated as a result of the impact from the 2020 storms.

The assessment below utilizes federal and state resources, including data provided by FEMA, HUD, and the Small Business Administration (SBA), and among other sources to estimate unmet needs in three main categories of damage: housing, economy, and infrastructure. The unmet needs assessment focuses on the impacts upon Wilcox County, with specific sections detailing needs within the most impacted area, and where relevant, smaller geographic units.

2. Housing Impact & Needs

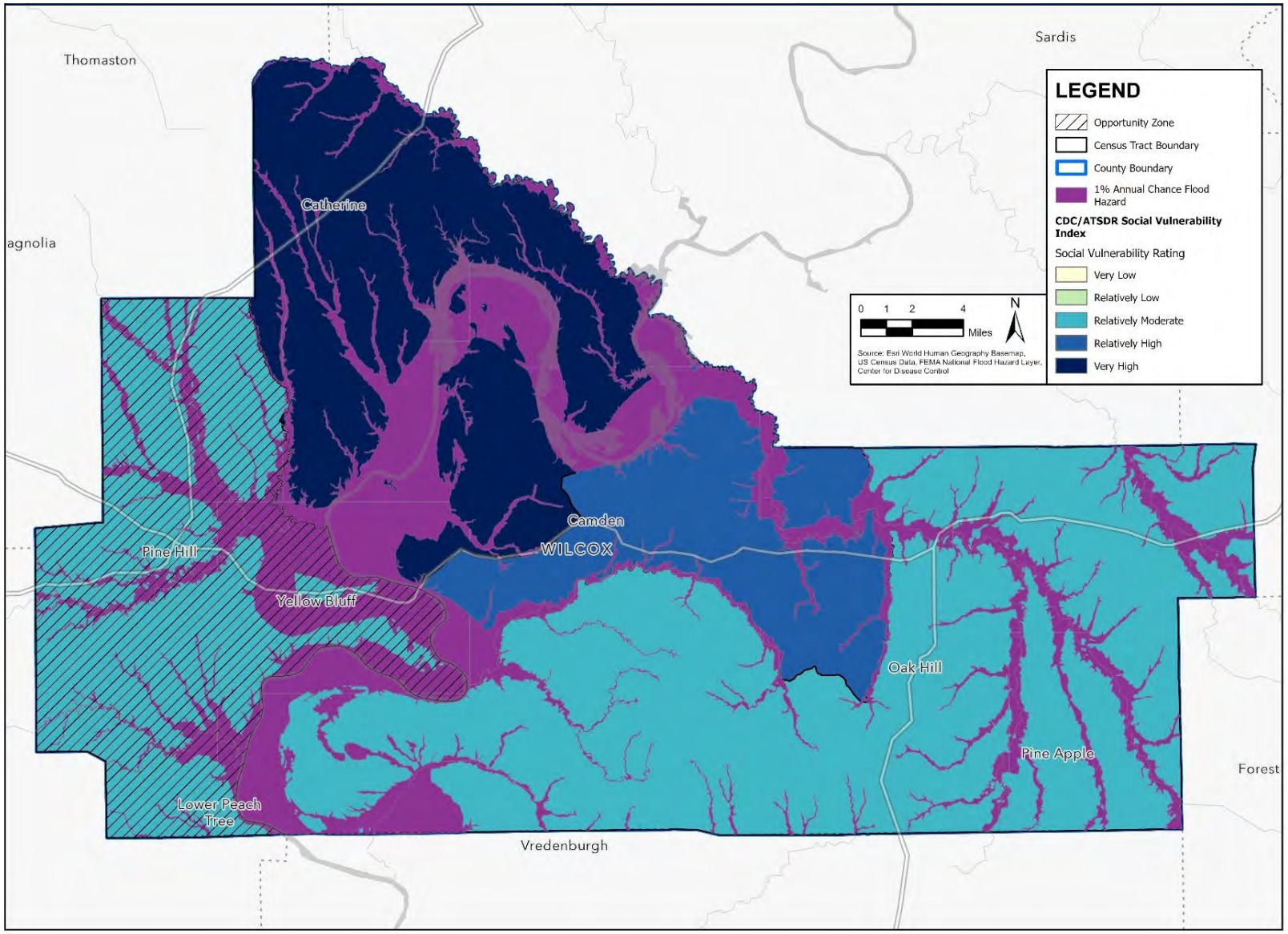
The demographic profile of Wilcox County has not changed significantly since the State Action Plan was published. Specific demographic information can be reviewed in the State Action Plan for the county.

Wilcox County has identified vulnerable populations within the county as part of the establishment of MID Recovery Zones. Vulnerable populations include those identified as part of a protected class, hard-to-reach, underserved, historically disadvantaged areas, and economically distressed areas. For the purposes of this LRP, Wilcox County has identified vulnerable population areas using the CDC/ATSDR Social Vulnerable Index (SoVI), and Opportunity Zones.

The CDC/ATSDR SVI is a place-based index designed to identify and quantify communities experiencing social vulnerability by comparing socio-economic, household composition, minority status and language, housing types and transportation needs, and other adjunct variables such as race and ethnicity and households without an internet subscription at the census tract level. Opportunity Zones are economically distressed communities, defined by individual census tract, nominated by America's governors, and certified by the U.S. Secretary of the Treasury via his delegation of that authority to the Internal Revenue Service. The Opportunity Zones initiative is not a top-down government program from Washington but an incentive to spur private and public investment in America's underserved communities.

The county does not have any Racially or Ethnically Concentrated Areas of Poverty (R/ECAP), Promise Zones, Neighborhood Revitalization Strategy Areas, or Tribal Areas within the county. The map below provides an overview of the vulnerable populations in each census tract against the flood hazard and floodway zones.

Figure 52 Wilcox County Vulnerability Map



a. Housing Damage and Loss Assessment

Unless otherwise noted, all housing summary data were compiled from these datasets for Hurricane Zeta only.

For each household determined to have unmet housing needs, their estimated average unmet housing need was calculated using similar variables and calculation methods from the State Action Plan. These variables are:

1. FEMA Damage Category Application Counts of Minor-Low to Major-Low
2. FEMA Damage Category Application Counts of Major-High to Severe
3. FEMA IA Applications without FEMA Verified Loss
4. Public Housing Damages

The total impact tables have been summarized based on owner-occupied vs renter-occupied households, impacted populations with flood and homeowner insurance, impact by residence type, impact by gross income, and impact to housing authorities in the following sections.

b. Total Impact (Owner-Occupied and Renter Households)

The information in the following table outlines the total damaged properties population with documented damages. To account for properties that never had an inspection physically take place due to the COVID-19 pandemic and other reasons no damages were found, likely because they were desktop inspections, the county has classified these applications as “No FVL”. A detailed description is provided in the FEMA IA Applications without Real Property FEMA Verified Loss section.

Table 182 Homeowner/Renter Damaged Properties by All Damage Categories

Damage Category	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Severe	0	0.0%	0	0.0%	0	0.0%
Major-High	3	0.3%	0	0.0%	3	0.3%
Major-Low	36	3.2%	1	0.1%	37	3.2%
Minor-High	318	27.8%	42	3.7%	360	31.5%
Minor-Low	178	15.6%	6	0.5%	184	16.1%
No FVL	482	42.2%	76	6.7%	558	48.9%
Total	**1,017**	**89.1%**	**125**	**10.9%**	**1,142**	**100%**

FEMA Damage Category Applications - Minor-Low, Minor-High, and Major-Low

The count for FEMA IA Applications with minor-low, minor-high, and major-low damage in each county was multiplied by the overall average of SBA-verified property loss per damage category. The information is provided in the State Action Plan to determine the estimated total loss/support for these three damage categories. The tables below demonstrate the total number of properties of the county’s homeowners and renters damaged.

Table 183 Minor-Low, Minor-High, and Major-Low Estimated Total Loss Homeowners

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	178	$1,621	$288,38
Minor-High	318	$5,495	$1,747,410
Major-Low	36	$11,502	$414,072
Total	**532**	**N/A**	**$2,450,020**

Table 184 Minor-Low, Minor-High, and Major-Low Estimated Total Loss Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	5	$1,621	$9,726
Minor-High	42	$5,495	$230,790
Major-Low	1	$11,502	$11,502
Total	**49**	**N/A**	$**252,018**

Table 185 Minor-Low, Minor-High, and Major-Low Estimated Total Loss - Homeowners & Renters

Damage Category	Count	Average SBA Verified Property Loss	Estimated Total Loss
Minor-Low	184	$1,621	$298,264
Minor-High	360	$5,495	$1,978,200
Major-Low	37	$11,502	$425,574
Total	**581**	**N/A**	**$2,702,038**

FEMA Damage Category Applications - Major-High to Severe

For FEMA IA Applications with major-high to severe damage, it was assumed that those structures were substantially damaged and required reconstruction. To determine the replacement cost of the homes, Wilcox County replicated ADECA's approach and utilized the county's Zillow Home Value from August 2020 for All Homes (none-adjusted)[72]. Since the Zillow home value includes the cost of the land, it is assumed 66% of the value was attributable to the structure on the property. This adjusted home value is multiplied by the total count of applications in the major-high to severe damage categories. The results of these calculations are provided in the table below.

Table 186 Major-High and Severe Estimated Total Loss Homeowners and Renters

Damage Category	Zillow Home Value	66% of Zillow Value	Count	Estimated Total Loss
Major-High	$135,103	$89,168	3	$267,504
Severe	$135,103	$89,168	0	$0
	Total		**3**	**$267,504**

[72] Wilcox County Home Values, https://www.zillow.com/home-values/105012/kimbrough-pine-hill-al/

From the 3 Major-High damaged homes, no renter-occupied dwellings are classified as Severe.

FEMA IA Applications without FEMA Verified Loss

Wilcox County also accounted for the damage to applications without Real Property FEMA verified loss (RPFVL) for owner-occupied dwellings and without Personal Property FEMA Verified Loss (PPFVL) for renter-occupied dwellings because due to the COVID-19 pandemic and other reasons, an inspection never physically took place or no damages were found, likely because they were desktop inspections. To account for these types of impacts, Wilcox County had the applications with no FEMA Verified Loss and multiplied them by the average value for minor-low damage per SBA verified property loss, as provided in the State Action Plan. The results of these calculations are provided in Table 188 below:

Table 187 Estimated Total Loss for IA Applications without FEMA Verified Loss

Occupancy Type	Count of Applications	Average SBA Value	Estimated Total Loss
Owner	482	$1,621	$781,322
Renter	76	$1,621	$123,196
Total	**558**	**$1,621**	**$904,518**

c. Impacts of Insurance (HOI and NFIP)

For the purposes of this analysis, households inspected by FEMA and shown to have a 'Water Level' greater than 0.0 inches are considered to have been flooded, while all other units with no 'Water Level' are considered to have been impacted exclusively by wind.

See Table 189 for flood-damaged properties by damage category and occupancy type.

Table 188 Flood Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	2	4	8	7	1	0	22
Renter	0	0	1	1	0	0	2
Total	**2**	**4**	**9**	**8**	**1**	**0**	**24**

Flood Damage and Insurance (NFIP): An alarmingly high proportion of units with evidence of flood damage were reported in the FEMA IA data not to carry a flood insurance policy through the National Flood Insurance Program (NFIP) as shown in the table below. In total, **100 percent** of the flood-affected population is reported to not carry an NFIP policy per the FEMA IA data.

Table 189 Flood Damaged Owner-Occupied Properties with Flood Insurance

Damage Category	With NFIP	% With NFIP	Without NFIP	% Without NFIP
Severe	0	0%	0	0%
Major-High	0	0%	1	5%
Major-Low	0	0%	7	32%
Minor-High	0	0%	8	36%
Minor-Low	0	0%	4	18%
No FVL	0	0%	2	9%
Totals	**0**	0%	**22**	**100%**

Wind Damage and Insurance (HOI): In the absence of evidence of flood damage, units are assumed to be impacted exclusively by wind. As such, for the proportion of owner-occupied units with no evidence of flooding damage, the county is especially concerned about the high rate of owner-occupied households reported not to carry a standard hazard insurance policy that would otherwise be expected to offset documented losses. In total, 81 percent of the wind-impacted owner-occupied population is reported not to carry hazard insurance as shown in the table below.

Table 190 Wind Damaged Properties by Damage Category

Occupancy Type	No FVL	Minor-Low	Minor-High	Major-Low	Major-High	Severe	Total
Owner	480	174	310	29	2	0	995
Renter	76	6	41	0	0	0	123
Total	**556**	**180**	**351**	**29**	**2**	**0**	**1,118**

Table 191 Wind Damaged Owner-Occupied Properties with Homeowners Insurance

Damage Category	With HOI	% With HOI	Without HOI	% Without HOI
Severe	0	0%	0	0%
Major-High	0	0%	2	0%
Major-Low	1	0%	28	3%
Minor-High	25	3%	285	29%
Minor-Low	14	1%	160	16%
No FVL	147	15%	333	33%
Total	**187**	**19%**	**808**	**81%**

d. Impact based on Residence Type

The table below shows FEMA IA applicants by housing type. The highest number of applicants came from mobile home units (68%) and housing/duplex units (29%).

Table 192 FEMA IA Applicants by Residence Type and Occupancy Type

Residence Type	Owner		Renter		Total	
	Count	% of Total	Count	% of Total	Count	% of Total
Apartment	0	0%	8	1%	8	**1%**
House/Duplex	283	25%	46	4%	329	**29%**
Mobile Home	706	62%	65	6%	771	**68%**
Other	18	2%	5	0%	23	**2%**
Travel Trailer	10	1%	1	0%	11	**1%**
Total	**1,017**	**89%**	**125**	**11%**	**1,142**	**100%**

The table below shows FEMA IA flood-damaged properties by housing type that had Flood or Homeowner's insurance. As indicated in the overview of flood-damaged properties, 0**%** of the flood-affected population is reported to carry an NFIP policy per the FEMA IA data.

Table 193 Flood Damaged Properties by Residence Type and Count with NFIP

Residence Type	Count of Applications	Count with NFIP	% with NFIP
House/Duplex	11	0	0%
Mobile Home	13	0	0%
Total	**24**	**0**	**0%**

The table below shows FEMA IA wind-damaged properties by housing type who had Homeowner's insurance. As indicated in the overview of wind-damaged properties, 17**%** of the affected population is reported to carry a homeowner's insurance policy per the FEMA IA data.

Table 194 Wind Damaged Properties by Residence Type and Count with HOI

Residence Type	Count of Applications	Count with HOI	% with HOI
Apartment	8	0	0%
House/Duplex	318	91	29%
Mobile Home	758	94	12%
Other	23	7	30%
Travel Trailer	11	2	18%
Total	**1,118**	**194**	**17%**

Total estimated losses have been summarized by residence type.

Table 195 Total Estimated Loss by Residence Type

Residence Type	Count	Estimated Total Loss
Apartment	8	$16,842
House/Duplex	329	$1,045,082
Mobile Home	771	$2,753,148
Other	23	$37,283
Travel Trailer	11	$21,705

e. Impact on LMI Households

The income data provided in the FEMA IA data set was not specific enough to perform a low- and moderate-income (LMI) calculation as some of the data overlapped with LMI and non-LMI category classifications for a specific household. To summarize, the impact of storms on households based on income includes four income groupings provided in the tables below. Overall, households with lower incomes were disproportionately impacted by Hurricane Zeta, with 86% of the total impacted population making $30,000 or less.

Table 196 Gross Income by Damage Level for Homeowners Only

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	3	0%	0	0%	0	0%	0	0%	3	0%
Major-Low	32	3%	4	0%	0	0%	0	0%	36	4%
Minor-High	293	29%	21	2%	4	0%	0	0%	318	31%
Minor-Low	162	16%	13	1%	3	0%	0	0%	178	18%
No FVL	392	39%	74	7%	12	1%	4	0%	482	47%
Totals	**882**	**87%**	**112**	**11%**	**19**	**2%**	**4**	**0%**	**1,017**	**100%**

Table 197 Gross Income by Damage Level for Renters Only

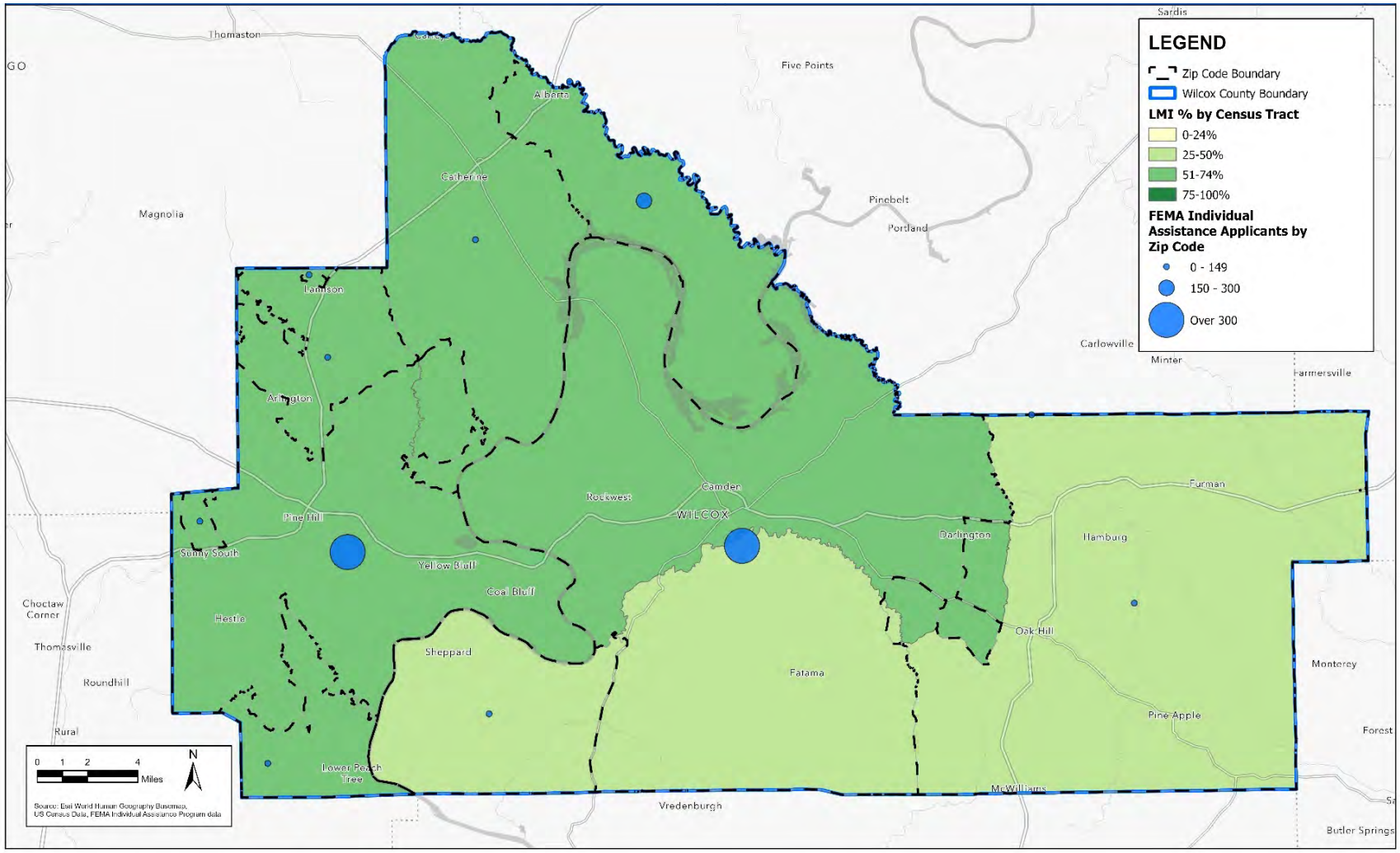
Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	0	0%	0	0%	0	0%	0	0%	0	0%
Major-Low	1	1%	0	0%	0	0%	0	0%	1	1%
Minor-High	35	28%	7	6%	0	0%	0	0%	42	34%
Minor-Low	5	4%	1	1%	0	0%	0	0%	6	5%
No FVL	59	47%	16	13%	1	1%	0	0%	76	61%
Totals	**100**	**80%**	**24**	**19%**	**1**	**1%**	0	0%	**125**	**100%**

Table 198 Gross Income by Damage Level for Homeowners and Renters

Damage Category	Less than $30,000		$30,001-$60,000		$60,001-$120,000		Greater than $120,000		Total Over All Categories	
	#	%	#	%	#	%	#	%	#	%
Severe	0	0%	0	0%	0	0%	0	0%	0	0%
Major-High	3	0%	0	0%	0	0%	0	0%	3	0%
Major-Low	33	3%	4	0%	0	0%	0	0%	37	3%
Minor-High	328	29%	28	2%	4	0%	0	0%	360	32%
Minor-Low	167	15%	14	1%	3	0%	0	0%	184	16%
No FVL	451	39%	90	8%	13	1%	4	0%	558	49%
Totals	**982**	**86%**	**136**	**12%**	**20**	**2%**	**4**	**0%**	**1,142**	**100%**

The following map illustrates the Low-Moderate Income percentage by Census Tract with heat bubbles, of which the location of the FEMA IA applications is based on the zip code.

Figure 53 LMI Populations and FEMA IA Applications by Zip Code for Wilcox County



f. Impact on Public Housing Authorities

A Public Housing Authority (PHA) for the county was recently re-established; however, the county does not own any buildings. Wilcox County needs to add additional PHA staff to better support the community.

g. Impact on Homeless Populations

The impact of natural disasters on the housed population and people experiencing sheltered homelessness is very different from the impact on people experiencing unsheltered homelessness.

When a natural disaster damages a housing unit, its inhabitants can hypothetically be made whole by insurance or FEMA. When a natural disaster damages a shelter or broader infrastructure, beds can be rendered uninhabitable, but eventually, those beds can be regained via repair and recovery operations.

For people experiencing unsheltered homelessness (e.g. living on the streets), however, the impact is more difficult to see. A natural disaster cannot remove housing or shelter from a person without housing or shelter; instead, it destroys future housing opportunities. One of the primary barriers to permanent housing in any geography is a lack of affordable housing. When a natural disaster damages or destroys an area's affordable housing, it creates a housing cost and availability crisis that prevents people experiencing homelessness from achieving and stabilizing permanent housing.

Alabama Balance of State CoC

The Alabama Balance of State CoC serves 37 rural Alabama Counties, ensuring chronic under-counting of homeless populations in rural counties. According to the *2023 AHAR: Part 1 - PIT Estimates of Homelessness in the U.S.*[73], the Alabama Balance of State CoC counted 283 sheltered and unsheltered homeless persons in 2023 and 140 Emergency Sheltered persons. Wilcox County is one of the counties that makes up this CoC and does not have any homeless shelters, which leads to chronic under-serving of people in need of sheltering pre and post-storms. The county struggled to shelter people who lost housing due to Hurricane Zeta, and the housing and shelter crisis will only increase as additional disasters hit the area.

To provide support for those experiencing homelessness, Wilcox County will need to:

- create new shelter options which include surge capacity for emergency shelter beds required to shelter people displaced by disasters,
- create outreach and drop-in centers required to serve people experiencing unsheltered homelessness; and
- hire outreach workers and resource navigators.

h. Summary of Housing Impacts

FEMA IA was the primary data source that Wilcox County used to determine housing unmet needs. Total estimated losses have been summarized by the data source and calculation methodology as mentioned in previous sections, sorted by damage category and for public

[73] https://www.huduser.gov/portal/datasets/ahar/2023-ahar-part-1-pit-estimates-of-homelessness-in-the-us.html

housing authorities. Additionally, 15% is added at the end of the calculation to account for resilience costs, leading to buildings becoming more resilient to future disasters. To calculate the total unmet need, received assistance is also summarized and subtracted from the estimated total loss, including resilience costs.

Table 199 Total Estimated Loss by Damage Category

Data Source/Calculation	Count	Estimated Total Loss
Severe	0	$0
Major-High	3	$267,504
Major-Low	37	$425,574
Minor-High	360	$1978,200
Minor-Low	184	$298,264
No FEMA Verified Loss	558	$904,518
Public Housing	0	$0
Total	**1,142**	**$3,874,060**
+15% Resilience Costs		**$581,109**
Total Estimated Loss with Resilience Costs		**$4,455,169**

To ensure that housing repair assistance is factored into the housing unmet needs calculation, FEMA IA repair and replacement, SBA Real Estate[74] and NFIP payment amounts were added to determine the total housing assistance received. Refer to Table 201 for the calculation.

Table 200 Total Housing Assistance Received Calculation

Data	Count	Total Amount
FEMA IA Payments	347	$1,362,550
NFIP Payments	0	0
SBA Loan Amounts	Unknown	$113,400
Total Housing Assistance	**301**	**$1,475,950**

The total housing assistance was subtracted from the total housing unmet needs, including resilience costs, resulting in a total housing unmet need of approximately $2.9 million due to Hurricane Zeta. See Table 202 for the calculation.

Table 201 Total Housing Unmet Need for Wilcox County

Data	Estimated Amount
Total Estimated Loss including 15% Resilience Costs	$4,455,169
Total Housing Assistance	-$1,475,950
Total Housing Unmet Need	**$2,979,219**

[74] SBA Disaster Loan Data, Public Access: https://www.sba.gov/document/report-sba-disaster-loan-data

3. Infrastructure Impact & Needs

a. Infrastructure Damage & Loss Assessment

Wilcox County was only impacted by Hurricane Zeta. Flooding was a significant issue, particularly in low-lying areas like Meadowbrook, where drainage and sewage problems persisted. Additionally, Camden saw flooding due to the storm water system being unable to handle the capacity during intense rain events and had 3 storm drains damaged that have yet to be repaired. A vital Community Center in Camden also sustained damage and the insurance funds received did not pay for the full repair for the building. Several bridges throughout the county were damaged and need replacement.

Areas in the county lack proper sewage treatment infrastructure. Homes may have septic systems that get backed up during storms, or they have what is called straight pipes outside of their homes, which sends raw sewage straight into yards. When flooding happens, there is a high risk for health concerns due to raw sewage contaminating the landscape and homes.

The table below includes the Estimated PA Cost, additional costs for resiliency measures (15%), increased cost of construction (23.6%), to estimate the Federal Share (90%) and the local share/unmet need (10%) more accurately for Categories C through G.

Table 202 Total Estimated Infrastructure Costs by PA Damage Category

Damage Category	PA Project Amount	15% Resilience Measures	23.6% Construction Costs	Total PA Project Amount
A - Debris Removal	$1,028,128	$0	$0	$1,028,128
B - Protective Measures	$55,658	$0	$0	$55,658
E - Public Buildings	$50,000	$6,750	$11,800	$68,550
Z - State Management	$33,714	$0	$0	$33,714
Total	**$1,167,500**	**$6,750**	**$11,800**	**$1,186,050**

b. Unmet Infrastructure Needs

The table below includes the Total Estimated PA Cost, consisting of resiliency measures and increased construction costs with the total Federal Obligated Amount and the Non-Federal Share Amount.

Table 203 Total Estimated Non-Federal Share Amount by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount
A - Debris Removal	$1,028,128	$925,315	$102,813
B - Protective Measures	$55,658	$49,678	$5,980
E - Public Buildings	$68,550	$45,000	$23,550
Z - State Management	$33,714	$33,714	$0
Total	**$1,186,050**	**$1,053,707**	**$132,343**

Based on the analysis performed, there is a potential unmet need of $23,550 for identified infrastructure damage eligible under FEMA-PA Categories C-G.

Table 204 Total Estimated Non-Federal Share Amount by PA Damage Category

Damage Category	Total PA Project Amount	Federal Share Obligated	Non-Federal Share Amount	Unmet Need
A - Debris Removal*	$1,028,128	$925,315	$102,813	$0
B - Protective Measures*	$55,658	$49,678	$5,980	$0
E - Public Buildings	$68,550	$45,000	$23,550	$23,550
Z - State Management*	$33,714	$33,714	$0	$0
Total	**$1,186,050**	**$1,053,707**	**$132,343**	**$23,550**

*CDBG-DR Funds are not used for PA costs in Categories A, B and Z.

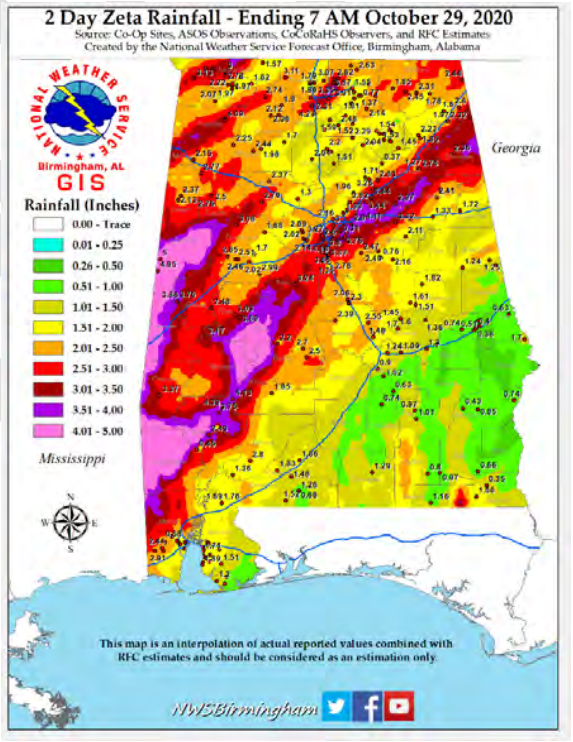
4. Economic Impact & Needs

A summary of damage and impacts of Hurricane Zeta is provided below, along with an analysis of Small Business Administration loans provided to the business community following Hurricane Zeta.

Agricultural Impacts

Following Hurricane Zeta, USDA designated Wilcox County as a primary natural disaster area, which allows producers who suffered losses by Hurricane Zeta to apply for emergency loans with the U.S. Department of Agriculture (USDA) Farm Service Agency (FSA). This natural disaster designation allows FSA to extend much-needed emergency credit to producers recovering from natural disasters. Emergency loans can be used to meet various recovery needs including the replacement of essential items such as equipment or livestock, reorganization of a farming operation or the refinance of certain debts.[75] As reported in the November 2, 2020, Alabama Crop Progress and Condition Report[76], Hurricane Zeta delivered heavy rains and damaging winds. The high soil moisture prevented fieldwork in many areas of the state following the Hurricane. As shown in Figure 54, parts of Wilcox County Received upwards of 5 inches of rain across a 48-hour period.

Figure 54 Hurricane Zeta 2 Day Rainfall Total



a. Unmet Economic Needs

According to an analysis of the Small Business Administration (SBA) Business loan data for applications with approved or denied loans that meet a HUD category of loss, the county realized a total verified loss for all businesses of $121,624. Additionally, fifteen percent (15%) in resilience costs was included, and the County's total estimated economic impact is $139,868. According to

[75] https://www.fsa.usda.gov/state-offices/Alabama/news-releases/2021/usda-designates-13-alabama-counties-as-primary-natural-disaster-areas
[76] https://www.nass.usda.gov/Statistics_by_State/Alabama/Publications/Crop_Progress_&_Condition/2020/AL-CropProgress-11-02-20.pdf

the SBA business report, the SBA provided $0 in total benefits for real estate losses. Therefore, the County's remaining economic unmet needs are valued at $139,868.

Table 205 Unmet Economic Needs Summary

Total Verified Loss	15% Resilience Costs	Total Estimated Impact	Total SBA Benefits	Remaining Unmet Needs
$121,624	**$18,244**	**$139,868**	**$0**	**$139,868**

D. Summary of Unmet Needs & MID Recovery Zones

1. Unmet Needs Summary

Based on the above analysis, the county has calculated a total unmet need of **$3.1 Million** attributable to Hurricane Zeta. In summary, this analysis projects unmet needs as follows:

Table 206 Summary of Total Unmet Needs

Category	Estimated Impact	Amount of Funds from other sources	Remaining Unmet Need
Housing	$4,455,169	$1,475,950	$2,979,219
Infrastructure	$1,186,050	$1,053,707	$23,550
Economy	$139,868	$0	$139,868
Total	**$5,781,087**	**$2,529,657**	**$3,142,636**

Refer to the table below for a more detailed analysis of how the unmet needs were calculated based on known losses and investments across each zip code.

Table 207 Unmet Need Summary by Zip Code

Zip Code	Unmet Housing Need	Unmet Infrastructure Needs	Unmet Economy Needs	Total Unmet Need
36726	$940,883	$23,550	$0	$964,433
36769	$795,699	$0	$4,600	$800,299
36720	$313,081	$0	$0	$313,081
36768	$113,931	$0	$118,185	$232,116
36751	$218,725	$0	$0	$218,725
36728	$200,792	$0	$0	$200,792
36435	$160,200	$0	$17,083	$177,282
36722	$129,084	$0	$0	$129,084
36784	$101,232	$0	$0	$101,232
36761	$1,864	$0	$0	$1,864
36773	$1,864	$0	$0	$1,864
36783	$1,864	$0	$0	$1,864
Total	**$2,979,218**	**$23,550**	**$139,868**	**$3,142,636**

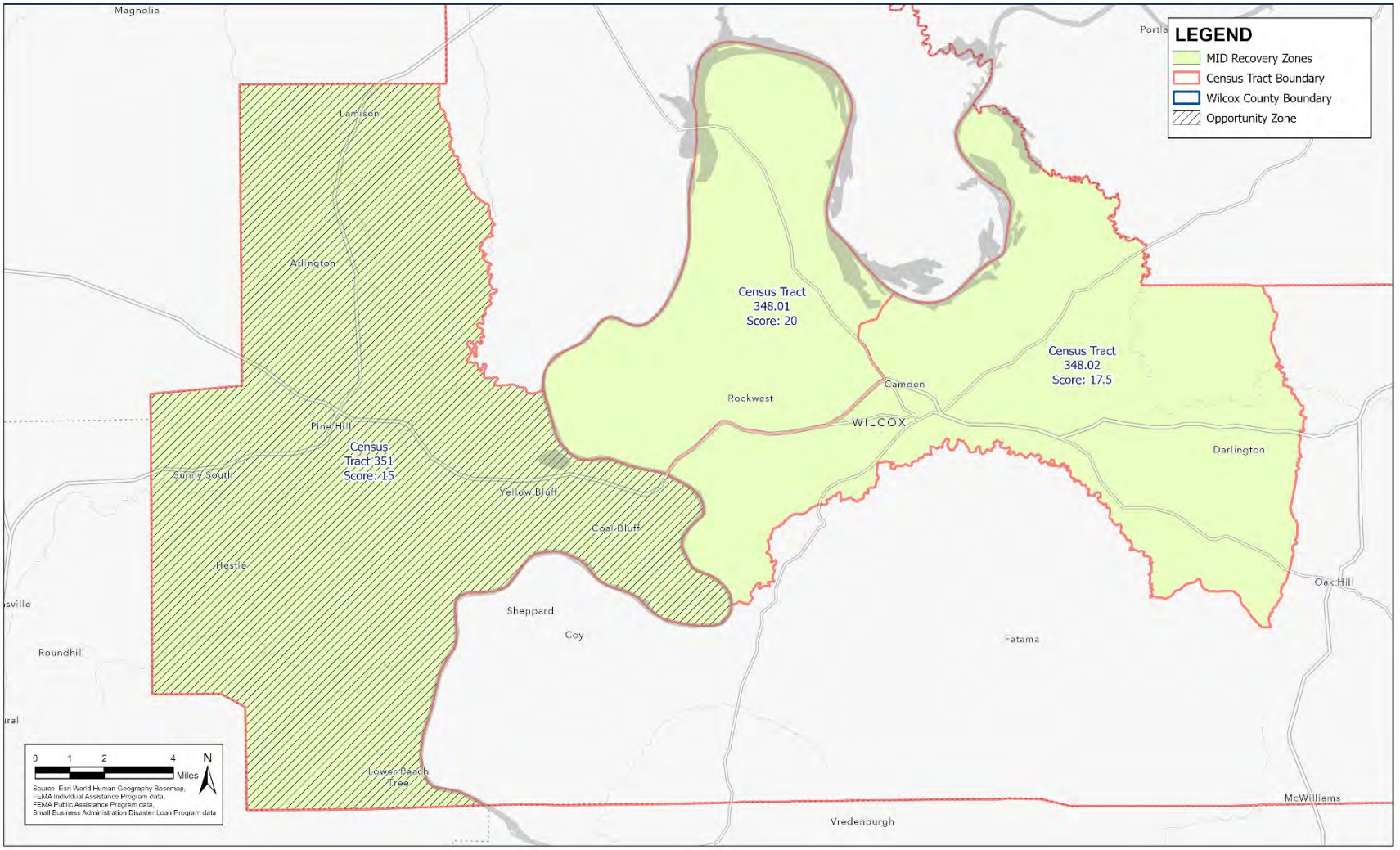
2. MID Recovery Zones

The MID Recovery Zones (MRZ) were identified at the census tract level based on areas with vulnerable populations and zip codes with the most unmet need and where these areas overlap

with census tracts. A ranked approach was taken to rate the census tracts in Wilcox County based on a score from 0 to 20, with a total possible score of 10 for each category. Census tracts with scores between 15 and 20 are considered a MID Recovery Zone

The MRZ identified for Wilcox County are shown in Figure 55.

Figure 55 MID Recovery Zone Map for Wilcox County



E. Mitigation Needs Assessment

In accordance with the LRRP guidance, the county completed the following Mitigation Needs Assessment. Alabama's 2023 State Hazard Mitigation Plan, 2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan, data from the National Oceanic Atmospheric Administration (NOAA) and FEMA, and stakeholder input was used to assess the mitigation needs. This assessment informs and provides a substantive basis for programs proposed in this Local Recovery Plan, with a focus on addressing and analyzing all significant current and future hazard risks.

1. Historic Overview of Hazards

Since 1973, there have been 12 disaster declarations for Wilcox County. The most common natural disasters that cause damage to an extent that results in a federal disaster declaration are hurricanes and severe storms/tornadoes. This historical pattern of extreme weather is expected to continue which means mitigation measures to reduce impacts caused by these types of hazards is critical.

Table 208 Declared Disasters since 1973 and the Associated Total Obligated PA Amount to Date for Wilcox County

Declaration	Year Declared	Incident Type	Declaration Title	Total Obligated PA Amount
DR-4573-AL	2021	Hurricane	Hurricane Zeta	$1,053,707
DR-4546-AL	2020	Severe Storm	Severe Storms and Flooding	$141,031
DR-4503-AL	2020	Biological	Covid-19 Pandemic	No Data
DR-1971-AL	2011	Severe Storm	Severe Storms, Tornadoes, Straight-Line Winds, And Flooding	No Data
DR-1835-AL	2009	Severe Storm	Severe Storms, Flooding, Tornadoes & Straight-Line	$23,014
DR-1687-AL	2007	Severe Storm	Severe Storms and Tornadoes	$199,918
DR-1605-AL	2005	Hurricane	Hurricane Katrina	$17,406
DR-1593-AL	2005	Hurricane	Hurricane Dennis	$67,536
DR-1549-AL	2004	Hurricane	Hurricane Ivan	$4,672,953
DR-861-AL	1990	Severe Storm	Severe Storms, Tornadoes & Flooding	No Data
DR-458-AL	1975	Flood	Severe Storms & Flooding	No Data
DR-369-AL	1973	Tornado	Tornadoes & Flooding	No Data

Source: Open FEMA Data Sets, Disaster Declaration Summary[77] and Public Assistance Funded Project Details[78]

Historic weather patterns can be determined for Wilcox County from NOAA's National Centers for Environmental Information (NCEI) Storm Events Database. Table 29210 provides an outline of the number of recorded storm events from January 1950 to June 2023 for Wilcox County. If the same event type occurred on the same date, only one event was recorded; however, the number

[77] https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2

[78] https://www.fema.gov/openfema-data-page/public-assistance-funded-projects-details-v1

of fatalities, injuries and damages were summed across the multiple events for a single day and event type.

Table 209 NCEI Storm Events Summary (1950 - 2023)

Event Type	Number of Events	Number of Fatalities	Number of Injuries	Property Damage ($)	Crop Damage ($)
Drought	2	0	0	$0	$0
Flash Flood	11	0	0	$127,000	$0
Hail	29	0	0	$3,000	$0
Heat	2	0	0	$0	$0
Heavy Snow	2	0	0	$0	$0
Hurricane (Typhoon)	2	0	0	$0	$0
Lightning	1	0	0	$25,000	$0
Sleet	1	0	0	$0	$0
Thunderstorm Wind	68	0	0	$493,500	$0
Tornado	10	1	4	$2,312,500	$0
Tropical Storm	5	0	0	$0	$0
Winter Storm	5	0	0	$0	$0
Grand Total	**138**	**1**	**4**	**$2,961,000**	**$0**

Source: NOAA's National Centers for Environmental Information (NCEI) Storm Events Database[79]

2. Greatest Risk Hazards

The *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* identified risks by studying historical events and susceptibility and gathering information and input from local stakeholders. Each hazard was categorized as High, Medium, Low, or Very Low based on the historical trends of the hazards and also the probability of future occurrence and estimated loss. These categories are defined below:

- High: Probable major damage in a 1-10 Year Period
- Medium: Probable major damage in a 10-50 Year Period
- Low: Probable major damage in a 100 Year Period
- Very Low: No probable major damage in a 100 Year Period

The *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* identified high winds from strong severe storms and tornadoes, and flooding as the most significant risks; however, extreme temperatures including drought, wildfires and Hurricanes were also identified as great risks.

[79] https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=1%2CALABAMA

Table 210 Greatest Risk Hazards for Wilcox County

Hazard	Risk Rating	Locations Impacted	Associated risk
Flooding	High	Areas along creeks and rivers, and low-lying areas with poor drainage are most at risk. If enough rain falls every area is at risk of flash flooding. Urban areas are especially prone to flash floods but may occur in other areas where there is inadequate, damaged or non-existent drainage infrastructure. Flooding in Meadowbrook and Camden are reoccurring events.	Can cause crop, property and infrastructure damage, injury, and loss of life
Tornadoes	High	County-wide, Tornadoes can occur throughout the year but most likely to occur in the spring (March - May) and fall (November to December). The northwestern half of the county is more vulnerable and susceptible to Tornadic activity and associated impacts.	Can cause crop, property and infrastructure damage, injury, and loss of life
Severe Storms	High	County-wide, Severe storms can occur throughout the year.	Can cause crop, property damage, injury, and loss of life
Extreme Heat and Droughts	Medium	County-wide, the area is especially susceptible to these events during the summer months.	Can cause crop loss, water quality and quantity issues, threaten health (heat stroke, etc.) of people living and working in the area
Wildfires	Medium to High	Urban, more densely populated areas have a higher	Can cause crop and property and infrastructure damage, threated health due to poor air quality and result in injury and loss of life

While extreme cold temperatures are uncommon due to Alabama's mild winter climate and therefore it is not classified as a Medium or High Risk in Wilcox County, residents are unaccustomed to and less prepared for the severe cold weather, putting residents at a greater risk for dealing with the extreme cold compared to more northern climates. Most crop species in Alabama do not have a tolerance for cold temperatures, making them more susceptible to the impacts of cold weather. Cold weather may also be accompanied by winter weather, and ice storms which can cause downed trees or result in vehicle accidents. Since 1950, 7 cold weather-related events have been recorded in Wilcox County. There is a lack of infrastructure in the county to offer dedicated warming stations for residents, especially populations that are the most vulnerable to extreme cold.

a. Extreme Heat and Drought

Extreme heat is often associated with droughts which can lead to greater impacts on communities. Extreme heat is very common to Wilcox County, as Alabama has a humid subtropical climate, and summers in Alabama are among the hottest in the United States, with high temperatures averaging over 90 °F throughout the state. The risk for negative impacts from heat waves across the majority of county is Relatively Moderate, as shown in *Figure 3 Heat Wave Risk in MID*

Counties by Census Tract. In general, there is a lack of infrastructure in the county to offer dedicated cooling stations for residents, especially populations that are the most vulnerable to extreme heat.

Prolonged extreme heat periods play a vital role when it comes to droughts, especially when coupled with lack of precipitation resulting in a lack of moisture in agricultural soil. This can lead to negative economic impacts in the county as crops losses occur. Agricultural losses from droughts are estimated to cost the state annually in damages. As a result, the past events and future probability of heat and droughts are classified county-wide as medium risk according to the *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan.*

b. Flooding

Flooding is a problem for many people across the United States. The county experiences flooding from riverine floods, which range from minor to major flooding levels, and flash floods. Tropical storms can cause flooding each spring through fall with tropical cyclones and flooding occurring outside of hurricane season with heavy rains. Enduring the consequences of repetitive flooding can put a strain on residents and on state and local resources. When the water rises, communities face the disruption of life, damaged belongings, and the high cost of rebuilding. FEMA administers the National Flood Insurance Program (NFIP), which pays flood claims. According to the NFIP data, as of April 2024, there is 1 Repetitive Loss Property and 0 Severe Repetitive Loss Properties in Wilcox County.

While repetitive loss flooding is uncommon in Wilcox County, Wilcox County does have flood events. According to the *2023 Alabama State Hazard Mitigation Plan*, the most common type of flooding event in Wilcox County is a flash flood as depicted in the table below.

Flash Flood	Flood	Coastal Flood or Storm Surge	All Flood Events
10	0	0	10

Data Source: 2023 Alabama State Hazard Mitigation Plan

Localized flooding is a significant issue in Wilcox County, particularly in low-lying areas like Meadowbrook, where drainage and sewage problems persist. Additionally, Camden's storm water system is unable to handle the capacity during intense rain events. Areas in the county lack proper sewage treatment infrastructure. Homes may have septic systems that get backed up during storms, or they have what is called straight pipes outside of their homes, which sends raw sewage straight into yards. When flooding happens, there is a high risk for health concerns due to raw sewage contaminating the landscape and homes.

According to Alabama Public Health[80], sewage contains germs like bacteria and viruses as well as parasites and worms that can cause stomach and intestine or liver illness such as:

- Germs and parasites may cause diarrhea, fever, cramps, nausea, vomiting, headache, weakness, or loss of appetite.
- Hepatitis A can cause liver disease; symptoms may include feeling tired, having pale poop, and having yellow eyes and skin.
- Roundworms cause coughing, trouble breathing, or pain in your belly and blocked intestines.

[80] https://www.alabamapublichealth.gov/onsite/assets/sewage-exposure-flyer.pdf

- Hookworms can cause a rash, stomach pain, diarrhea, loss of appetite, tiredness, and anemia.

c. Severe Storms

Severe storms may include lightning, hail, strong winds, intense rainfall, and flooding. Severe storms can happen county-wide which can lead to property and crop damage and at times injuries. Since 1950, NCEI has recorded 103 hail, heavy rain, lightning, thunderstorm windstorm, and tropical storm events resulting in over $500,000 in property and crop damages, as shown in Table 209. Since this event type has occurred regularly over the years which has resulted in damage, and severe storms are expected to continue regularly, Wilcox County has identified this event type as a high-risk hazard. The risk for negative impacts from hail across the majority of the county is relatively low, as shown in *Figure 7 Hail Risk in MID Counties by Census Tract.* For strong winds, the majority of the county has a relatively moderate risk, with a relatively high risk occurring in the central part of the county, as shown in *Figure 8 Strong Winds Risk in MID Counties by Census Tract.*

Hurricanes and Coastal Storms

As shown in Tables 209 and 210, hurricanes have historically made landfall in the region and have impacted Wilcox County. Due to the county's proximity to the Gulf of Mexico, hurricanes and coastal storms continue to be a high risk for the county. *Figure 4 Hurricane Risk in MID Counties by Census Tract,* in section VII.D, indicates that the majority of Wilcox County has a relatively moderate hurricane risk. Additionally, analysis performed by Florida State University's Meteorology Department, indicates that the probability of a hurricane of any intensity passing over Alabama is between 60% and 80%[81]. Any increased intensities in the future are likely to exacerbate the county's future vulnerability, given that intense hurricanes and coastal storms have enormous potential to devastate the physical, agricultural, economic, and sociocultural infrastructure of the county.

d. Tornadoes

Tornadoes are Wilcox County's most significant loss-producing natural hazards according to the NCEI Storm Events Database. Between 1950 and 2022, Tornadoes caused 4 injuries, 1 death and more than $2.9 million in property and crop losses.

According to *Figure 9 Tornado Risk in MID Counties by Census Tract,* the majority of Wilcox County has a relatively moderate to relatively high Tornado Risk rating. Generally speaking, the northwestern half of the county is more vulnerable and susceptible to tornadic activity and associated impacts.

e. Wildfires

According to the Alabama Forestry Commission Current Wildfire Totals summary[82], between 2000 and June 19, 2024, there were 612 total wildfires in Wilcox County. Those fires burned 5,303 acres. That translates to a yearly average of 26 fires and 225 acres burned per year. The largest

[81] https://moe.met.fsu.edu/tcprob/al.php
[82] https://forestry.alabama.gov/pages/fire/totals.aspx

fire recorded in the county between these years was 300 acres and occurred in 2016. Based on past occurrences, every area of the county has a degree of risk.

According to *Figure 10 Wildfire Risk in MID Counties by Census Tract*, Wilcox County has a relatively low risk for wildfire compared to the rest of the country. However, according to the 2023 Alabama State Hazard Mitigation Plan, as the climate changes, Alabama is projected to become more prone to wildfire occurrences between now and 2050. It is projected that by 2050 the average number of days with high wildfire will double from 25 to 50 days a year.

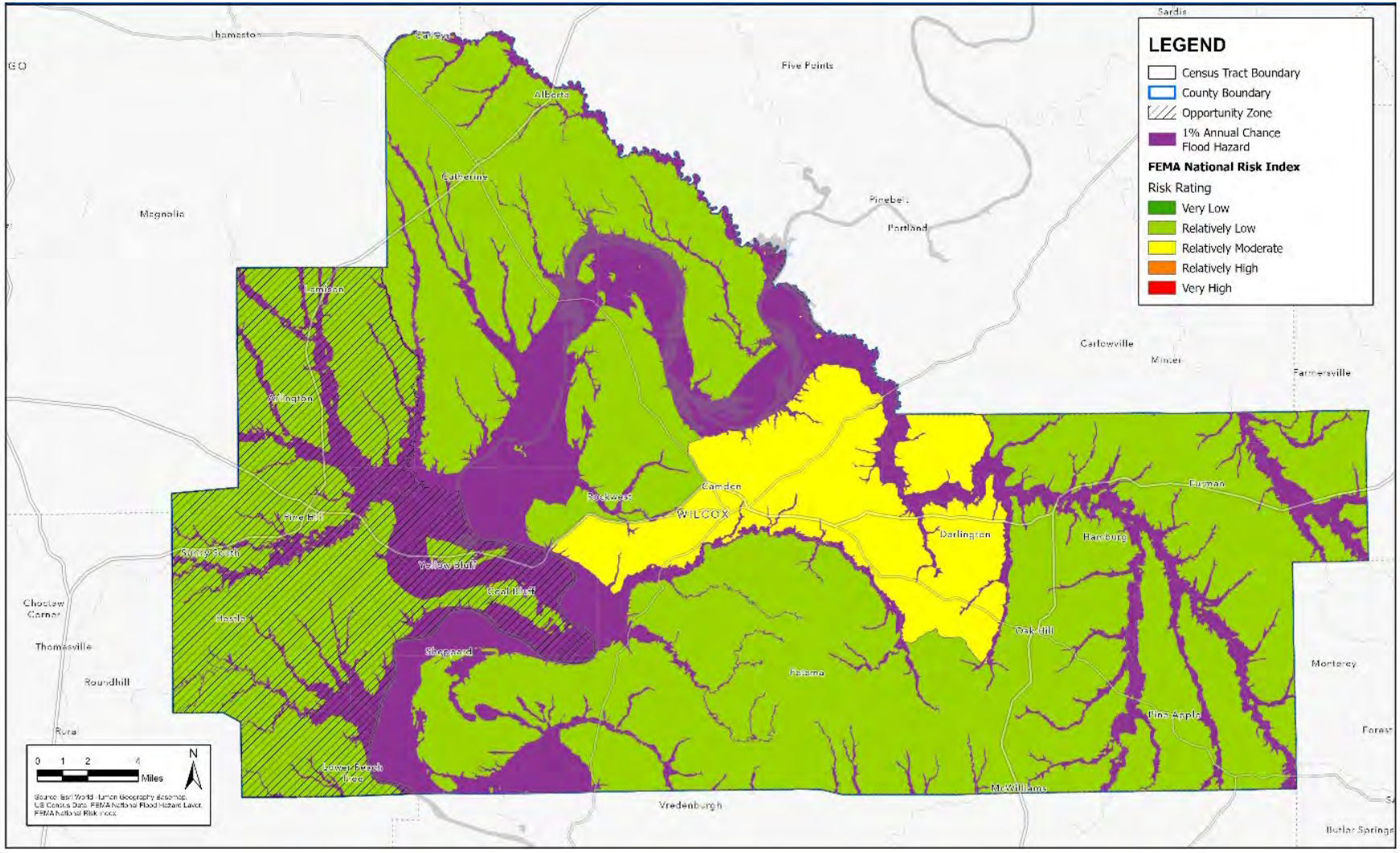
3. Hazard Risk Analysis

It has long been recognized that risk often corresponds with a high level of social vulnerability, compounding the impact of hazard and storm events. Using the FEMA National Risk index, we can evaluate the potential for negative impacts resulting from natural disasters by combining the expected annual loss due to natural hazards, social vulnerability and community resilience.

Risk Index = Expected Annual Loss x Social Vulnerability ÷ Community Resilience

Based on the composite Risk Index Score provided, we can see that there are parts of the county that have a Relatively Moderate risk score as shown in Figure 56. This area includes Camden and areas east of Camden. Hazard specific risk indices for the greatest regional and county risks can be found in the maps in Section VII.D of this plan.

Figure 56 FEMA National Risk Index Map for Wilcox County



Vulnerability Overview

An overview of the greatest hazards and their risk impact from the *2021-2026 Division C Regional Multi-Jurisdictional Hazard Mitigation Plan* is shown below. To quantify the risk classifications of the greatest risk hazard, risk factors (probability, impact, location extent, duration) were evaluated.

Hazard	Probability	Impact	Location Extent	Duration
Flooding	High	Critical	Moderate	Less than one week
Tornadoes	High	Critical	Small	Less than 6 hours
Severe Storms	Medium	Minor	Moderate	Less than 6 hours
Extreme Heat and Droughts	Medium	Minor	Small	More than one week
Wildfires	High	Minor	Small	Less than one week

Probability defined

- **Very Low**: Less than 1% annual probability
- **Low**: Between 1% and 10% annual probability
- **Medium**: Between 10% and 100% annual probability
- **High**: 100% annual probability

Impact defined:

- **Minor**: Very few injuries, if any occur. Only minor property damage and minimal disruption of quality of life. Temporary shutdown of critical facilities.
- **Limited**: Minor injuries only. More than 10% of property in affected areas was damaged or destroyed. Complete shutdown of critical facilities for more than one day.
- **Critical**: Multiple deaths/injuries possible. More than 25% of property in affected areas is damaged or destroyed. Complete shutdown of critical facilities for more than one week.
- **Catastrophic**: High number of deaths/injuries possible. More than 50% of property in the affected area was damaged or destroyed. Complete shutdown of critical facilities for one month or more.

Location Extent defined:

- **Negligible**: Less than 1% of area affected.
- **Small**: Between 1% and 10% of the area affected.
- **Moderate**: Between 10% and 50% of the area affected.
- **Large**: Between 50% and 100% of the area affected.

Community Lifelines

Community Lifelines are critical business and government functions that are critical in the event of a disaster and are essential to human health, safety, or economic security. The greatest risks identified by the county could disrupt any number of the community lifelines which could impact emergency response and vulnerable populations and communities. Mitigation efforts should address any vulnerabilities across the 7 community lifelines to decrease the impact from the hazards identified in this plan. Maps of the lifeline assets in the county as well as the greatest risks can be found in Section VII.

F. Activity Identification

The 2020 disasters exposed, and exacerbated housing, infrastructure, economic, and mitigation needs in many communities that remain at risk following these events. The post-disaster recovery process presents an opportunity to address these long-standing gaps while supporting the communities' efforts to recover and represent a lasting investment in local capacity and resilience. Programs proposed in this Local Recovery Plan are designed to promote long-term mitigation and resiliency standards with a focus on serving the most vulnerable populations.

To address these needs, the State of Alabama identified the following project activity types to be considered by each MID County as part of this planning process:

- Affordable Multifamily Rental Housing
- Homeowner Buyouts
- Homebuyer Assistance
- Mitigation
- Economic Resilience
- Infrastructure & Public Facility Improvements
- Public Services

Wilcox County did not identify a need for affordable multifamily housing, homeowner buyout, homeowner assistance or economic resilience projects. Below is an outline of the identified homebuyer assistance, mitigation, public services, and infrastructure & public facility improvement projects identified and their associated project descriptions and details.

Project Name	Eligibility Criteria		Project Description	Project Rank
Homeownership Assistance	**Strategy**	Housing Recovery	• Provide opportunities for vulnerable mobile home renters and owners to purchase more secure housing, with an emphasis on supporting first-time homebuyers located within a MID Recovery Zone. • Homeownership assistance programs typically subsidize down payments, interest rates, or mortgage principal amounts to LMI households to assist in purchasing a home.	
	Eligible Activity	Homebuyer Assistance, HCDA Section 105(a) 24		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	N/A		
Residential Drainage Projects	**Strategy**	Mitigation	• Many homes and mobile homes across the county do not have adequate sewer infrastructure. • Homes may have septic systems that get backed up during storms, or they have	
	Eligible Activity	Mitigation, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		

Project Name	Eligibility Criteria		Project Description	Project Rank
	Geographic Eligibility	MID County – Mitigation	what is called straight pipes outside of their homes, which send raw sewage straight into yards. • When flooding happens, there is a high risk of health concerns due to raw sewage overflowing and contaminating the landscape and homes. This project would fund providing necessary sewer infrastructure	
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Meadowbrook Flood Mitigation	**Strategy**	Mitigation	• The county has already received $400,000 in CDBG funding to complete a sewer improvement project in the Meadowbrook community; however, after bidding the project out for work the project cost came in almost double what was projected due to an increase in labor and material prices due to supply and demand of labor and materials as a result of the ARPA highway funding, the COVID-19 pandemic, and the rural nature of the county. The county would like to use funding under this funding LRP to complete the much-needed sewer improvement project.	
	Eligible Activity	Mitigation, HCDA Section 105(a) 2		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID County - Mitigation		
	Administering Entity Identified	Identified under previous CDBG Funding		
	Project Amount Identified	$400,000-600,000		
	Other Funding Sources Identified	Yes, $400,000 in CDBG Funding		
	Project Readiness	Shovel-Ready		
	Operations and Maintenance Feasibility Identified	Identified under previous CDBG Funding		
Community Resilience Center	**Strategy**	Recovery & Mitigation	• Develop a community resilience center that provides year-round programming to build overall community resilience, while also being augmented to provide critical services during extreme and disaster events. During a steady state the Center may provide health services, job and workforce training, microenterprise incubation, workshops, and meeting space, among other uses. During or following a disaster event, this center may serve as a cooling or warming center and would be designed with back up solar generators to enable the center to provide critical services to residents when needed, such as energy, water, shelter, food,	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zones		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual Phase		

Project Name	Eligibility Criteria		Project Description	Project Rank
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase	resources, communication infrastructure, health services, and other post-disaster services.	
Homeless Shelter	**Strategy**	Recovery	• Wilcox County does not have a homeless shelter to serve vulnerable populations pre- and post-disaster. The county would like to propose creating a new homeless shelter as a project of this LRP which may also be doubled to be used as a community resilience center if the right conditions are met.	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Stormwater Infrastructure Repair & Improvement	**Strategy**	Recovery	• The stormwater infrastructure in Camden is unable to handle the capacity of intense rainfalls and several stormwater drains were damaged during Hurricane Zeta and are in still need of repair. Wilcox County would like to use funds from this LRP to repair the damaged stormwater drains and make additional improvements throughout the city to ensure there is no roadway flooding.	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Bridge Replacement	**Strategy**	Recovery	• The county has identified bridge improvement projects as a need. Bridges across the county were damaged because of Hurricane Zeta and require repair to bring them back to pre-disaster condition. Additionally, improvements need to be made to raise the	
	Eligible Activity	Infrastructure & Public Facility Improvements, HCDA Section 105(a)(2)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		

Project Name	Eligibility Criteria		Project Description	Project Rank
	SVI Score	High	bridge height to prevent the likelihood of it being washed out or flooded in future storm events	
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	No, Conceptual Phase		
Expand PHA Staffing	**Strategy**	Recovery	• Wilcox County recently re-activated its PHA; however, there is not adequate staffing to be able to properly restart and run a PHA to access more funding and vouchers for vulnerable and LMI populations within their county. This project would be to expand the Public Housing Authority for the county by funding additional staff for the first several years of this new division.	
	Eligible Activity	Public Service, HCDA Section 105(a)(8)		
	National Objective	LMI, UN		
	Benefits vulnerable populations	Yes		
	SVI Score	High		
	Geographic Eligibility	MID Recovery Zone		
	Administering Entity Identified	No, Conceptual Phase		
	Project Amount Identified	No, Conceptual Phase		
	Other Funding Sources Identified	No, Conceptual Phase		
	Project Readiness	Conceptual		
	Operations and Maintenance Feasibility Identified	N/A		

On the following page, a matrix overview of identified project activity types is provided.

Project Description	Program Strategy	Project Activity Type	National Objective	Benefits vulnerable population	SVI Score	Geographic Eligibility	Administering Entity Identified	Leverages Other Funds Identified	Project Readiness	O&M Feasibility Identified	Project Rank
Homeownership program	Recovery	Homebuyer Assistance	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	
Residential Drainage Projects	Mitigation	Mitigation	LMI, UN	Yes	High	MID County - Mitigation	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	
Meadowbrook Flood Mitigation	Mitigation	Mitigation	LMI, UN	Yes	High	MID County - Mitigation	Yes	Yes	Shovel-Ready	Yes	
Homeless shelter	Recovery	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Community Resilience Center	Recovery	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Camden storms drain Repair	Recovery	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Bridge Replacement	Recovery	Infrastructure & Public Facility Improvements	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	No, Conceptual Phase	
Expand PHA Staffing	Recovery	Public Service	LMI, UN	Yes	High	MID Recovery Zone	No, Conceptual Phase	No, Conceptual Phase	Conceptual	N/A	