



**2015-2020 Santee-Lynches Hazard Mitigation Plan
City of Sumter Mitigation Strategy Progress Analysis**

Every five years, the City of Sumter, along with Sumter County, work together to produce a "Hazard Mitigation Plan." The current plan is the 2015-2020 Hazard Mitigation Plan. This plan is used to look at ways to improve the protection of our buildings and critical infrastructure in case of a natural disaster. As a part of this plan, the City establishes goals to improve our natural disaster preparedness over the next five years.

The Federal Emergency Management Agency (FEMA) recognizes floods as the most common, most costly natural disasters in America. As a member of the Community Rating System (CRS), the City of Sumter meets a higher standard of ensuring property is protected against flood damage. As part of participation in the CRS program, the City has adopted the Santee-Lynches Hazard Mitigation Plan to act as our Floodplain Management plan. Each year as part of participation in the CRS program, a yearly progress report must be submitted to the City Council based upon the established goals within the mitigation plan. Enclosed is the City's progress made upon these goals from August 2018, through August 2019.

As always, our purpose is to provide the citizens of Sumter with the highest level of customer service, accurate information, and ongoing review of our responses and processes to ensure the safety of our citizens.

The following is a report outlining the progress/status associated with identified goals and actions from the 2015-2020 Santee-Lynches Hazard Mitigation Plan for the City of Sumter.

City of Sumter Mitigation Strategy 2018-2019 Progress Analysis

Goal #1 Ensure the protection of critical facilities in the city.

Objectives

- Identify needed repairs and improvements to critical facility structures and equipment.
- Identify critical facilities that are at risk of being damaged or incapacitated due to a natural disaster.

Actions

- 1) **Facility Evaluation** – Prepare facility audits by evaluating all critical facilities exposure to damage from natural hazards and power losses from downed power lines. Include a review of insurance coverage and identify where more information can be found on the property protection measures recommended by the audit.

Status: *The Safety Committee Members, along with the Safety Officer, conduct an inspection on each facility on a bi-annual basis to ensure the safety of the workers who work in each facility. No formal audit for natural hazards has been conducted due to the constant upgrading to each facility. Additional items are being added to the bi-annual audit check-list to address facility exposure to damage from natural hazards and power losses from downed power line.*

City Staff works closely with the City's insurance agency to ensure proper policies are in place with periodic review of coverage.

- 2) **Repair Facilities** – Make repairs found listed in the audits in order for the facility to remain operational in case a natural disaster occurs. Items to consider include replacing roofs, installing storm windows and hurricane shutters, improved electrical systems, and ensuring the structures meet the required building codes.

Status: *The City has on-going improvements to each facility to ensure that facilities remain operational during storms. Items identified in safety audits are addressed by the City Construction Department or outside contractors when appropriate.*

All new construction is designed using best-practices to mitigate impacts from environmental hazards and natural disasters.

- 3) **Backup Power for Critical Facilities** – All critical facilities should have a proper backup power supply in order to make sure that if power lines are downed, they can remain functional. Therefore, it is essential that critical facilities should be equipped with backup generators.

Status: *All critical facilities that require a generator are outfitted with fully functioning power generators. Generators are checked on an on-going basis to ensure they are operational.*

Additional sites are being identified for backup power needs for placement of generators as funds become available.

Goal #2 Increase public education and awareness of natural hazards.

Objectives

- Provide public education to increase awareness of hazards and publicize the effectiveness of mitigation by incorporating/developing web sites, pamphlets, radio, television, and print media.
- All interested individuals will be encouraged to participate in hazard mitigation planning and training activities.
- Educate the public about emergency shelters and evacuation procedures.

Actions

- 1) Public Education and Awareness Information** – Prepare background information, articles and other explanations of hazard mitigation topics and provide them to County, municipal, and private offices for use in presentations, newsletter articles, websites, brochures, and other outreach projects.

Status: *Information from the American Red Cross, FEMA, and SC EMD is used for educational purposes. Compiling this information is the responsibility of the Emergency Management Agency and is part of an on-going process. This information is disseminated to the City and used for educational/outreach activities on an as-requested basis from the public to include the Sumter County Fair, school programs, local church groups, community meetings, etc.*

Additionally, the City of Sumter/Sumter Police Department use social Media (Facebook, Twitter, and Instagram) as a platform to push out the most up to date information during pre-disaster preparation, during active operations, and post-disaster to keep the public informed about necessary information related to the particular event.

- 2) Public Education and Awareness** – Prepare and disseminate outreach projects based on any prepared material concerning hazard mitigation. These projects should be publicized by the utilization of newsletters, news releases, directed mailings, handouts, websites, radio, and television.

Status: *The City's Safety Officer hosts an annual "Safety Day" along with the Sumter Fire Department. During this day the safety officer engages with the public at Swan Lake. This event is used to hand out the annual hurricane guide and to talk about the dangers of hurricane season. This year's Safety Day was on June 27, 2019.*

The City also hosts an annual Earth Day Celebration where individual City Departments (Stormwater, Parks and Gardens, Public Works, etc.) are available to speak to the public regarding specific concerns and to provide public awareness/education on each department's purpose and the activities they manage.

Each year the Planning Department Floodplain Coordinator mails notices to the owners of properties within the designated Special Flood Hazard Area (floodplain) and provides information related to the National Flood Insurance Program as well as information related flood hazard mitigation. The Floodplain Coordinator also contacts local insurance companies and realtors on an annual basis to provide up to date contact information for floodplain management questions. Any citizen or agency may request a floodplain determination letter from the Floodplain Coordinator free of charge for their personal records.

Goal #3 **Ensure that the availability and operation of the city’s infrastructure will not be significantly disrupted by a natural disaster.**

Objectives

- Water, sewer, roads, power, and natural gas infrastructure must be assessed for their vulnerability and be inspected for their ability to maintain functionality during the occurrence of a natural disaster.

Actions

- 1) **Inspection of Lines** – Utility lines and structures need to be inspected for their ability to withstand a natural hazard.

Status: *Individual utility providers are responsible for ongoing inspections/repairs of lines. The City manages a network of sanitary sewers, storm sewers, and potable water. The inspection of these lines is ongoing.*

- 2) **Replace or Retrofit Outdated Structures** – Any structures that are deemed vulnerable should be replaced or retrofitted.

Status: *As older sanitary sewer and water lines are damaged, they are replaced. The City is reviewing the stormwater management network to determine where changes or upgrades are appropriate to mitigate impacts to private property and the transportation network. As funds become available projects are undertaken.*

- 3) **Models and Database** – The county and municipalities should develop geographically accurate models and databases of their infrastructure systems.

Status: *The City Public Services has mapped sanitary sewer and potable water infrastructure in GIS with associated databases. These data are updated as new development is accepted by the City of Sumter, and when maintenance is undertaken on the infrastructure network.*

Goal #4 **Reduce the potential impact of natural disasters on new and existing development.**

Objectives

- Through comprehensive plans, building codes, or zoning ordinances and similar local government initiatives should address natural hazard mitigation and strengthen present policies to further protect the city and incorporated municipalities.

- Address identified data limitations regarding lack of detailed information about development build-out potential in high hazard areas.

Actions

- 1) Update Plans, Codes, and Ordinances** – When comprehensive plans, land use plans, zoning, and subdivision ordinances are up for revision, they should include natural disaster mitigation provisions.

Status: *The 2030 Comprehensive Land Use Plan, adopted in 2009, includes a Green Infrastructure Element that addresses wetlands development; streams, rivers, lakes, ponds, and drainage corridors, as well as surface and groundwater. The Plan encourages a conservation design approach to development that preserve environmentally sensitive areas and encourages the removal of development from sensitive areas such as mapped special flood hazard areas. These recommendations are being brought forward into the 2040 Plan Update as well and continue to be encouraged at the policy level.*

In September 2018, an updated Flood Damage Prevention Ordinance was adopted by Council that implements development requirements in the Special Flood Hazard Area based upon the South Carolina State Model Ordinance that goes a step above the National Flood Insurance Program (NFIP) minimum standards for development.

The current Zoning & Development Standards Ordinance was adopted in 1999, future revisions or rewrites to the Ordinance should include creation of development standards that are supported by Comprehensive Plan Policies related development in environmentally sensitive areas. To date, funding has not been identified for a complete rewrite or comprehensive update to the Zoning & Development Standards Ordinance.

- 2) Property Protection Measures** – Incorporate retrofitting incentives by establishing a program of technical assistance and financial incentives to encourage property protection measures on private commercial property.

Status: *Floodplain management/planning staff, in conjunction with building department personnel, work with developers/builders to identify and mitigate potential impacts from natural hazards such as flooding. To date no financial incentives or development incentives have been created to assist in retrofitting buildings or implementing property protection measures.*

- 3) Flood Control Projects** – Implement flood control projects for areas such as farm drainage, bridge improvements, and repairing dams that are prone to failure.

Status: *The community has been in an active recovery effort since the October 2015 Flood. Several dams in the community as a whole (city and county) were impacted resulting in either partial or total failure of the structures. The State of South Carolina DHEC Dam Safety Office has worked closely with identified public and private dam owners to evaluate current dam safety and to reclassify dams when necessary. No dam repairs have taken places without appropriate review and approval by the state and accompanying floodplain development permits when necessary. The publicly owned Second Mill Pond Dam has recently been repaired and reclassified as a high-*

hazard dam. This repair project installed a new emergency spillway and remotely controlled flood gates for management of flood waters. Swan Lake Dam was repaired shortly after the 2015 Flood. As of the writing of this report, the City of Sumter is working through the regulatory process of repairing the Booths Farm Dam. Other dams damaged in the 2015 Flood are privately owned. Boyle's Pond Dam, a privately-owned dam, is currently working with civil engineers to develop a repair plan for permitting.

SCDOT undertook an extensive analysis of impacted roadways and bridge/culvert structures post 2015 Flood. Identified DOT infrastructure in need of repair has been undertaken at the state level outside of local control.

Floodplain Management staff continues to coordinate at the state level on dam repair projects.

Goal #5 Reduce the impact of wildfires on homes, buildings, critical facilities, and infrastructure.

Objectives

- Address identified data limitations regarding lack of detailed information about vegetation types and individual structures located within the more forested or overgrown areas of the City.
- Develop a comprehensive approach to reducing the possibility of damage and loss of function due to the exposure of critical facilities and infrastructure to wildfire.

Actions

- 1) **Evaluate Areas Susceptible to Wildfires** – Utilize GIS to identify structures (homes and other buildings) that are in areas susceptible to wildfires.

Status: *The City is not as prone to threat of wildfires as the County is, however; the Sumter Fire Department has recently purchased several new “brush trucks” to aid in a wildfire fighting. All City and County Fire Stations are equipped with brush trucks. These trucks are 4-wheel drive with off-road capability. Any time a brush truck is deployed, a fire truck accompanies the brush truck to provide extra water support. Brush trucks are most active from spring into the fall and during periods of drought.*

To date a formal GIS analysis has not been undertaken, however; a comprehensive building footprint layer now exists in the Sumter County GIS which can be used in conjunction with other available data sources related to tree coverage, farmland, and other environmental conditions (i.e. drought, etc.), in addition to call response logs from the Fire Department in order to complete an evaluation. Completion of this project is currently limited by availability of personnel to undertake the analysis.

Goal #6 Reduce the impact of severe winds on houses, buildings, critical facilities, and infrastructure.

Objectives

- Pursue community-oriented grants for structures.

Actions

- 1) **Vegetation Management** – Inspect and manage vegetation that could damage critical facilities if felled by wind.

Status: *The City is constantly engaged in tree removal operations along road right of ways and adjacent to community facilities.*

Goal #7 Reduce the impact of floods on homes, buildings, critical facilities, and infrastructure.

Objectives

- Develop a comprehensive approach, through long-range planning, ICC Code revisions and zoning enforcement, to reducing the possibility of damage to structures.
- Protect existing structures and assets that are most vulnerable to the effects of flooding.
- Promote the continuing purchase of flood insurance by property owners in flood hazard areas.
- Address identified data limitations regarding lack of detailed information about individual structures located in the 100-year floodplain; flood probabilities other than the 100-year flood plain; and first floor elevations for priority areas.

Actions

- 1) **Drainage Ditch Maintenance** – Implement a formal and regular drainage ditch and canal system maintenance program for stormwater management.

Status: *Although there is no written program, the City contracts out annual ditch maintenance. The yearly work covers 9 to 10 miles of maintenance on drainage ditches. These ditches are mapped and incorporated into the City of Sumter GIS. This process should be formalized with a written program. This is currently limited by availability of staff to undertake programmatic documentation.*

- 2) **Flood Threat Recognition Program** – Determine the possibility of a flood threat recognition system that utilizes rain and stream gauges, along with a central gauge, to monitor and predict the occurrences of floods and flash floods.

Status: *No progress has been made on this action item at the local level.*

- 3) **Update Flood Maps** – Encourage FEMA to update flood maps.

Status: *FEMA has transitioned floodplain mapping from a county-wide basis to using major watersheds for map updates. The City and County adopted new FIRM Panels for the Wateree Watershed on September 28, 2018. The next major watershed within both jurisdictions to be updated will be the Black Watershed. The Black Watershed encompasses a bulk of the population and development within the City and County. The Discovery Process began in spring of 2017. Preliminary maps for the Black Watershed are anticipated within the next 12 months. Floodplain*

management staff will coordinate with local surveyors and engineers to thoroughly review the maps for anomalies and transmit comments/requests for corrections within the allotted timeframe.

- 4) Back-flow prevention** – Install back-flow prevention valves in sewer pipes.

Status: *To date, the City has not installed back-flow prevention valves into sewer pipes.*

- 5) Stormwater Management** – Implement the mandatory stormwater utility/tax.

Status: *The City obtained coverage under the State of South Carolina National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from regulated Small MS4s on September 24, 2007. This permit issued by SCDHEC requires the City, which has been designated a Small Municipal Separate Storm Sewer System (MS4) based on its population, to develop, implement, and enforce a stormwater management program designed to reduce the amount of pollutants discharging from the MS4. This is in order to protect and improve water quality in our rivers and streams. The permit requires this goal be achieved through the implementation of six Minimum Control Measures: 1) Public Education and Outreach; (2) Public Involvement and Participation; (3) Illicit Discharge Detection and Elimination; (4) Construction Site Storm Water Runoff Control; (5) Post-Construction Storm Water Management in New Development and Redevelopment; and (6) Pollution Prevention/Good Housekeeping for Municipal Operations.*

In July 2011, the city passed the Stormwater Utility Ordinance to assist in funding the city's MS4 program. The stormwater user fees are based on actual impervious cover on each parcel of land within the city limits. The amount of impervious cover on each parcel will be the basis for determining its contribution to the city's stormwater system and associated fees.

- 6) Stormwater Management** – Pilot mitigation projects for stormwater ponds and wetlands at public parks and a public golf course to determine better ways to manage and protect natural stormwater treatment and water quality management.

Status: *No pilot mitigation projects have been undertaken in the last calendar year. In 2013 an EPA 319 Grant was used to develop a plan for the Turkey Creek corridor in the city and county to address water quality issues using best management practices. This plan will be used to pursue future funding when it becomes available. In addition, within the last year the City has acquired flood damaged properties within the creek's riparian using HMGP funds within the Turkey Creek corridor to return to open space within the creek's riparian zone.*

- 7) Data Limitations, Amended Strategies to Address Issues** – Fold information gleaned through the Comprehensive Plan Update, the Hazard Mitigation Plan Update, and the County-wide Watershed Study into a comprehensive floodplain management plan.

Status: *To date a Floodplain Management Plan has not been developed. This action item, "Development of a Floodplain Management Plan" will be included in the 2020-2025 Santee-Lynches Multi-Hazard Mitigation Plan. Funding will be identified to pursue in order to assist in*

development of this plan as staffing limitations within the Floodplain Management program limit in-house creation of the document.

- 8) Data Limitations** – Identify through GIS overlays areas coupled with building permit files where development has impacted floodplains and critical areas, and address future impacts through the comprehensive floodplain management plan.

Status: *Data now exists from the October 2015 Flood that will assist in identifying areas outside of the mapped Special Flood Hazard Area for inclusion in a future Floodplain Management Plan.*

- 9) Data Limitations** – Track local flooding events through citizen participation and gathering information through coordination with Public Safety department and Public Works departments, coupled with data from federal sources (USGS, NOAA, etc.)

Status: *No formalized process has been established for tracking localized flooding events. Citizens may report localized flooding to City Public Services, the Stormwater Utility, and the non-emergency Police line. Additionally, the E-911 system has implemented a code in the tracking system that identifies whether or not the call was prompted by a weather-related event. However, no single clearinghouse has been established to formally track these events.*

This activity will carry forward to the 2020-2025 Hazard Mitigation Plan. Progress on this activity will be furthered as part of a formal Flood Hazard Mitigation Plan with development of a formalized process for tracking events.

Goal #8 Ensure the protection and function of Communications.

Objectives

- Communication lines should be frequently inspected in order to determine vulnerability to natural hazards.
- Inadequate communication systems supporting emergency service operations will be retrofitted or relocated to withstand the impact of natural disasters.

Actions

- 1) Inspection of Lines** – An inspection of communication lines in order to determine what needs to be replaced, and to ensure that they are clear from tree limbs and other obstructions.

Status: *This is part of an ongoing process conducted by the individual providers. All providers have aggressive programs in place to keep lines free from vegetation.*

- 2) Creation of a Mobile Dispatch Unit** – Create a mobile dispatch unit to ensure that communications are not lost as a result of a natural disaster.

Status: *The Sumter Police Department has a mobile command trailer, however; there is no mobile E-911 Dispatch Unit. The existing E-911 system is a modular lap-top based system that can be*

relocated with dispatchers to anywhere so long as there is a connection to communication services.

- 3) Retrofit and Relocate Communication System** – Utility and communication systems supporting emergency services operations will be retrofitted or relocated to withstand the impacts of a natural disaster.

Status: *The new Sumter Police Department was designed specifically to withstand hurricane force winds to allow E-911 operations to continue to work during a natural disaster. There is also an alternate location for E-911 operators to relocate to should the building be compromised.*

Goal #9 Facilitate the preparedness of Emergency Response

Objectives

- Enhance response capacity of the City fire, police, and emergency services personnel to at-risk populations.
- Obtain funding for new equipment and training in order to enhance response times and performance.

Actions

- 1) Emergency Response Preparation Evaluation** – Conduct a review of emergency response plans and programs to identify where additional activities are needed to respond to natural hazards.

Status: *The Emergency Operations Plan is updated yearly, and each respective department continues to review policies and standard operating procedures from lessons learned from past disasters. In addition to the Emergency Operations Plan, the City has implemented separate Inclement Weather Plans for the Public Services Complex and the newly constructed Utility Billing facility.*

- 2) Emergency Response Preparation Equipment** – Purchase any necessary equipment that is critical for the response to natural disasters and to ensure that personnel have adequate and up-to date training on the use of specific equipment.

Status: *As part of OSHA mandated training, the City conducts a multitude of safety trainings. This includes training for operations of equipment, proper Personal Protective Equipment wear and usage, and emergency action plans. The City also continually evaluates existing equipment necessary for daily operations/disaster preparedness. When equipment needs are identified they are addressed in a timely manner.*