

## Chapter 18: Mitigation Strategies

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### 18.1 Mitigation Status Report

In an effort to update the 2017 Somerset County Hazard Mitigation Plan, mitigation strategies from previous plan iterations were reviewed. Status updates were provided by members of the Hazard Mitigation Planning Committee (HMPC). Previous mitigation projects were separated into six broad categories including: Prevention, Property Protection, Public Education and Awareness, Natural Resource Protection, Emergency Services and Structural Projects. For the 2022 Plan Update, mitigation projects are separated into four types: (1) Local Planning and Regulations, (2) Structure and Infrastructure Projects, (3) Natural Systems Protection, and (4) Education and Awareness Programs.

### 18.2 Mitigation Action Items Update

*Appendix A* of this plan details the process implemented to gather feedback and updates to action items from the 2017 Hazard Mitigation Plan. The HMPC determined that ten (10) action items would be carried over into the 2022 Plan Update (including nine (9) projects designated as “delayed” in addition to one (1) project that was identified as being “on schedule”). These items were reviewed and refined to reflect current conditions within Somerset County. In addition to these action items, new action items were developed by stakeholders throughout the plan update process. During the mitigation workshop held on September 18, 2022, HMPC members were given the time and opportunity to review newly recommended action items and modify them as necessary to better suit Somerset County and its communities. Notes for this meeting, as well as other HMPC meetings, are available in *Appendix C: HMPC Meeting Notes* and on the project website: [www.somersetmdhazardplan.org](http://www.somersetmdhazardplan.org). In addition to the expertise and guidance of stakeholders, results from the public survey (see *Appendix H: Public Survey Results*) were considered in the development of mitigation action items. The public indicated a strong desire for the following types of mitigation projects:

1. Retrofit infrastructure, such as elevating roadways and improving drainage systems.
2. Inform property owners of ways they can mitigate damage to their property.
3. Retrofit and strengthen essential facilities such as police, fire, EMS, hospitals, schools, etc.
4. Work on improving the damage resistance of utilities (electricity, communications, water/sewer, etc.)

### 18.3 2022 Mitigation Strategies

During the Mitigation Action Items Workshop held on September 12, 2022, stakeholders were tasked with reviewing the current goals and objectives and determining if any modifications were to be made. Goals and objectives are multi-hazard and include property acquisition and elevation. Mitigation projects were developed based on those hazards posing the greatest risk to the community based on their local perspective. In addition, projects are identified by hazard(s) mitigated and the four categories previously discussed.

The nine goals and accompanying objectives are listed in this section. Goals as identified in this plan are broad-based and long-term in nature. The following goals identify what the community expects to accomplish through mitigation projects during the next five years. Objectives as identified in this plan are more specific and narrower in scope than goals. They expand upon the goals and provide more details on how to accomplish them.

*These goals, objectives, and mitigation action items apply to municipal participants as well as the unincorporated parts of the county. Goals and objectives that were added or modified during the 2022 Mitigation Action Items Workshop are denoted in **Red**.*

**GOAL 1      Maintain and enhance Somerset County’s Department of Communications and Emergency Service’s capacity to continuously make Somerset County less vulnerable to hazards.**

**Objective 1.1** Integrate to the greatest extent possible hazard mitigation into local plans, policies, codes, and programs.

Objective 1.2 Improve organizational efficiency.

Objective 1.3 Maximize utilization of best technology.

Objective 1.4 Maximize utilization of GIS software and applications.

Objective 1.5 Maximize use of hazard vulnerability data, such as Hazus Risk Map products.

**GOAL 2      Build and support municipal capacity and commitment to become continuously less vulnerable to hazards.**

Objective 2.1 Increase awareness and knowledge of hazard mitigation principles and practice among local and municipal public officials.

Objective 2.2 Aid municipal officials and help municipalities obtain funding for mitigation planning and project activities.

Objective 2.3 Assist in the preparation of technical reports for critical facilities hazard mitigation, as requested.

**GOAL 3      Improve coordination and communication with other relevant organizations.**

Objective 3.1 Establish and maintain lasting partnerships.

Objective 3.2 Streamline policies to eliminate conflicts and duplication of effort.

Objective 3.3 Incorporate hazard mitigation into activities of other organizations.

**GOAL 4      Increase public understanding, support, and demand for hazard mitigation and preparedness.**

Objective 4.1 Identify hazard specific issues and needs.

Objective 4.2 Heighten public awareness of natural hazards.

Objective 4.3 Publicize and encourage the adoption of appropriate hazard mitigation actions.

Objective 4.4 Increase the number of businesses that have developed a business risk reduction plan.

Objective 4.5 Increase the proportion of businesses and residences that have flood insurance.

Objective 4.6 Increase public awareness and preparedness specific to emerging infectious diseases.

Objective 4.7 Increase public awareness of repetitively flooded roadways and evacuation routes including roads with no outlet/dead-end via signage, including electronic signage where benefits outweigh the costs.

Objective 4.8 Increase public awareness of possible contamination of private drinking wells due to flooding.

**GOAL 5 Protect existing and future properties (residential, commercial, public, and critical facilities).**

Objective 5.1 Utilize the most effective approaches to protect buildings from flooding, including acquisition and elevation.

Objective 5.2 Enact and enforce regulatory measures to ensure that new development will not increase hazard threats from riverine flooding, storm surge or the threat of wildfire at the urban/forest interface.

Objective 5.3 Continue to review and update Building Codes to ensure that manufactured housing, including mobile homes, are constructed and installed in a manner to minimize wind and storm surge damage.

Objective 5.4 Reduce the number of houses in the floodplain that are subject to repetitive losses from flooding.

Objective 5.5 Increase the number of critical facilities that have carried out mitigation measures to ensure their functionality in a 100-year flood event. This goal includes facilities at the UMES campus which are identified by the University as being in the floodplain or storm surge area.

Objective 5.6 Ensure existing high risk residential structures are utilizing retrofitting techniques to mitigate repetitive flooding.

**GOAL 6 Ensure that public funds are used in the most efficient manner.**

Objective 6.1 Prioritize new mitigation projects, starting with sites facing the greatest threat to life, health, and property.

Objective 6.2 Use public funding to protect public services and critical facilities.

Objective 6.3 Use public funding on private property where benefits exceed costs.

Objective 6.4 Maximize the use of outside funding sources.

Objective 6.5 Encourage property-owner self-protection measures.

**GOAL 7 Promote sustainable development to improve the quality of life.**

Objective 7.1 Establish open space parks and recreational areas in flood hazard areas.

Objective 7.2 Provide for the conservation and preservation of natural resources.

Objective 7.3 Limit additional housing (especially elderly and high density) in areas of high hazard risk.

**GOAL 8 Prevent destruction of forests and structures in the Urban Wildland Interface.**

Objective 8.1 Improve communications capability between municipal and county emergency management and law enforcement personnel.

Objective 8.2 Identify specific high hazard areas in the Urban Wildland Interface and notify residents of means to protect their property from wildfire damage.

Objective 8.3 Develop evacuation procedures to enable residents near forested areas to evacuate safely.

**GOAL 9 Protect public infrastructure and facilities.**

Objective 9.1 Upgrade or replace public roads and stormwater management features to include mitigation into the project design and construction.

Objective 9.2 Improve routes utilized in flood hazard events to mitigate life-threatening road conditions and road closures.

Objective 9.3 Mitigate problem road sections within the County and municipalities.

Objective 9.4 Mitigate disruption of county and municipal services and security issues from cyber-attacks.

Objective 9.5 Install signage at roadways designated as repetitive flood issues.

Objective 9.6 Ensure continuous power supply to critical and public facilities.

#### **18.4 Mitigation Projects**

Upon completing the review of the goals and objectives established during the 2022 planning process, the HMPC reviewed the four broad categories of mitigation action items. These actions include (1) Local Planning and Regulations, (2) Structure and Infrastructure Projects, (3) Natural Systems Protection, and (4) Education and Awareness Programs. Mitigation ideas were discussed and identified throughout the plan update process and during the review of draft hazard chapters by stakeholders.

Mitigation action item projects address the goals and objectives developed by the HMPC. Project implementation is expected to occur over the five-year planning cycle. Projects have been identified as short-term (1-3 years), mid-term (3-5 years) or long-term (5+ years). These projects form the core of the *2022 Somerset County Hazard Mitigation Plan Update*. The mitigation projects are grouped into the following four categories:

1. **Local Planning and Regulation.** Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include

planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.

2. **Structural and Infrastructure Projects.** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, levees, floodwalls, seawalls, retaining walls, and safe rooms. Also, actions that involve the modification of existing Critical Facilities and other buildings or structures to protect them from hazards. Examples include acquisition, elevation, relocation, structural retrofits, and storm shutters.
3. **Natural Systems Protection.** Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration preservation.
4. **Education and Awareness Programs.** Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.

Mitigation projects have been identified by public stakeholders via the Public Survey and developed and refined by HMPC members during the plan update. Several projects have been carried over from the 2017, while many were developed during the 2022 Plan Update. Project sheets have been developed to fully expand upon mitigation ideas identified throughout the planning process.

A total of twenty-seven (27) mitigation projects were identified for this plan update. Seventeen (17) mitigation projects were developed during the 2022 plan update and ten (10) projects were carried over from the previous plan with relevant updates. During the Mitigation Workshop held on September 12, 2022, HMPC members worked in two groups to complete pre-filled mitigation project sheets for the seventeen (17) new action items developed during the plan update. The groups utilized their local knowledge and expertise to complete the project sheets and added two (2) new projects during the workshop. The projects added during the workshop include:

1. Project Z: Protect Wells From Contamination by Flooding, and;
2. Project ZZ: Upgrade Existing Signage at County Railway-Crossings

Upon completion of the Mitigation Workshop, the information gathered from HMPC members was incorporated into the project sheets and those updated project sheets were reviewed and prioritized by the HMPC. Prioritization of each mitigation project was completed using Survey Monkey, Figure 18-1. A link to the survey was provided to each HMPC member. The survey included project titles, a brief description of each project, and six (6) yes/no/null questions:

1. Do you think there would be community acceptance/general support for this mitigation action?

2. Do you think implementation of this mitigation action will enhance the health and safety of the community?
3. Do you think the jurisdiction will be able to sufficiently staff and/or provide technical support to implement this mitigation action?
4. Do you think the benefits of this mitigation action will exceed the likely costs?
5. Do you think the maintenance requirements for this mitigation action will be affordable and not provide an undue burden on the County or its municipalities?
6. Is this project consistent with environmental goals?

A reference document containing fully developed project sheets was provided to assist members with completing the prioritization survey. As a result, ten (10) projects were ranked “high,” ten (10) as “medium,” and the remaining seven (7) projects were ranked “low.” It is important to note that these hazards are only prioritized compared to each other, so a prioritization score of “low” does not indicate a nonimportant project. Table 18-1 provides the prioritization result for each project in addition to associated hazard(s) and mitigation category.

**Somerset County Mitigation Action Items Prioritization Survey**

The following mitigation action items were developed during the 2022 Multi-Hazard Mitigation Plan Update process and were refined and completed during the Mitigation Action Items Workshop held on September 12, 2022. Mitigation action items developed during the planning process must be prioritized as “high”, “medium”, or “low.”

The prioritization process helps Somerset County and its municipalities identify “high priority” projects. The mitigation projects in need of prioritization have been provided via email for reference while completing this prioritization survey. The survey below provides the Project Letter, Project Title, and Project Description. This information is the same on the provided reference material.

Completion of this survey will assist in the final prioritization of the mitigation projects. Please complete this survey to the best of your ability. If you are uncomfortable with answering questions related to one or more of the action items, please move on to the next action item.

**Null** = Not applicable or has no bearing.

**Project K: Somerset County Water and Sewer Plan Update**

**Project Description:** Update the Somerset County 2008 Comprehensive Water and Sewerage Plan. The Health Department could aid in estimating the number of existing shallow wells that are vulnerable to drought impacts. The Plan could be updated with information found within Chapter 7: Drought and Extreme Heat of the Multi-HMP.

	Yes	No	Null
Do you think there would be community acceptance/general support for this mitigation action?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you think implementation of this mitigation action will enhance the health and safety of the community?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you think the jurisdiction will be able to sufficiently staff and/or provide technical support to implement this mitigation action?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you think the benefits of this mitigation action will exceed the likely costs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you think the maintenance requirements for this mitigation action will be affordable and not	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 18-1: Mitigation Action Items Prioritization Survey

**Table 18-1: Mitigation Project Prioritization Results**

Projects	Mitigation Category	Hazard(s)	Ranking
Project A: Maintain Current FEMA CRS Rating	Local Planning and Regulation	Flood	High
Project B: Commodity Flow Study	Local Planning and Regulation	HazMat, Major Transportation Accident	High
Project C: Somerset County Agricultural and Civic Center Generator	Structural and Infrastructure Projects	Multi-Hazard	High
Project D: Natural Resource Planning	Natural Resources Project	Shoreline Erosion, Sea Level Rise	Low
Project E: Crisfield Tidal Flooding Prevention	Structural and Infrastructure Projects	Flood, Coastal Hazards, Shoreline Erosion, Sea Level Rise	High
Project F: Mitigation of Roadway Flooding	Structural and Infrastructure Projects	Flood, Coastal Hazards, Shoreline Erosion, Sea Level Rise	Medium
Project G: Essential Facility Accessibility and Signage at Repetitive Flood Locations	Local Planning and Regulation & Structural and Infrastructure Projects	Flood, Coastal Hazards, Shoreline Erosion, Sea Level Rise	Medium



**Table 18-1: Mitigation Project Prioritization Results**

<b>Projects</b>	<b>Mitigation Category</b>	<b>Hazard(s)</b>	<b>Ranking</b>
Project H: Mitigating TidalHealth McCready Pavilion Flood Issues	Structural and Infrastructure Projects	Flood, Coastal Hazards, Shoreline Erosion, Sea Level Rise	Medium
Project I: Essential Facility Flood Mitigation	Structural and Infrastructure Projects	Flood, Coastal Hazards, Shoreline Erosion, Sea Level Rise	High
Project J: Repetitive Loss Outreach	Education and Awareness Programs	Flood, Coastal Hazards, Shoreline Erosion, Sea Level Rise	Medium
Project K: Somerset County Water and Sewer Plan Update	Local Planning and Regulation	Drought, Extreme Heat	Medium
Project L: Utilize Electronic Message Boards for All-Hazards	Education and Awareness Programs	Drought and Extreme Heat, Winter Weather, Wildfire	High
Project M: Critical Facilities 9-1-1 Address Identification	Property Protection	Thunderstorm	Low
Project N: Critical Facilities Infrastructure Hardening – Lightning Strikes	Property Protection	Thunderstorm	High
Project O: Recruit Storm Spotters	Education and Awareness Programs	Tornado and High Wind, Thunderstorm, Flood	Low
Project P: Promote Water Hazard Information to Tourists	Education and Awareness Programs	Tornado and High Wind	Low
Project Q: Inclusive Public Messaging for All-Hazards	Education and Awareness Programs	All-hazards	High
Project R: Mitigate Winter Storm Impacts to At-Risk Essential Facilities	Structural and Infrastructure Projects	Winter Storm	Medium
Project S: Roadway Tree Debris Maintenance	Natural Systems Protection	Winter Storm, Tornado and High Wind, Thunderstorm	High
Project T: Install Dry Fire Hydrants at Essential Facilities within Wildland Urban Interface	Structural and Infrastructure Projects	Wildfire	Low
Project U: Prioritize Removal of Blighted Structures Within the Wildland Urban Interface	Structural and Infrastructure Projects & Natural Systems Protection	Wildfire	High
Project V: Fuel Oil and Propane Tank Maintenance Education	Structural and Infrastructure Projects & Education and Awareness Programs	HazMat, Flood, Coastal Hazards, Earthquake	Medium
Project W: Local Strategic Highway Safety Plan Development	Local Planning and Regulation & Education and Awareness Programs	Major Transportation Accident	Medium
Project X: Emerging Infectious Diseases Community Preparedness Outreach	Education and Awareness Programs	Epidemic/Emerging Infectious Diseases	Low
Project Y: Adopt Automated Phishing Defense Software	Local Planning and Regulation	Cyber Attack	Low
Project Z: Protect Wells From Contamination by Flooding	Public Education and Awareness	Epidemic/Emerging Infectious Diseases, Flood	Medium
Project ZZ: Upgrade Existing Signage at County Railway-Crossings	Structural and Infrastructure Projects & Education and Awareness Programs	HazMat, Major Transportation Accident	Medium

The following mitigation project sheets include these components:

1. Hazard(s) associated with the project
2. Locations impacted
3. Project Discussion
4. Responsible Agency
5. Partners
6. Ideas for Integration
7. Potential Funding
8. Cost Estimate (short, medium, or long-term)
9. Benefits (losses avoided)
10. Timeline for implementation
11. Goals associated with the project

There are a total of twenty-seven (27) mitigation project sheets. Projects ranked as **HIGH** are denoted in red.

Table 18-2. MITIGATION PROJECT A ( <b>HIGH</b> )	
<b>Project Title:</b>	<b>Maintain Current FEMA CRS Rating</b>
<b>Hazard:</b>	Flood
<b>Mitigation Category</b>	Local Planning and Regulation
<b>Location(s):</b>	County and Municipalities (Crisfield and Princess Anne)
<b>Project Discussion:</b>	<p>The FEMA Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program (NFIP). Over 1,500 communities participate nationwide.</p> <p>In CRS communities, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community's efforts that address the three goals of the program:</p> <ol style="list-style-type: none"> <li>1. Reduce and avoid flood damage to insurable property.</li> <li>2. Strengthen and support the insurance aspects of the National Flood Insurance Program.</li> <li>3. Foster comprehensive floodplain management.</li> </ol> <p>Somerset County's CRS rating is currently Class 10, however: the County is compliant with the NFIP, and a letter of intent was submitted to for the Community Rating System (CRS) in 2017. A Community Assistance Visit (CAV) was conducted in 2019 and the County is presently working through the last of the issues identified during the CAV. Once these issues are corrected, a letter of good standing can be issued, and CRS activity points may be assessed. The goal for completion is Fall or December of 2022.</p> <p>Once a letter of good standing is issued and points are assessed, if the County wants to improve its rating further, thus increasing resident's flood insurance savings, they need to dedicate staff and time to continue FEMA-approved community floodplain management practices.</p> <p><b>The Coordinator's Manual</b> is the guidebook for the Community Rating</p>



Table 18-2. MITIGATION PROJECT A (HIGH)

	System. The Coordinator’s Manual explains how the program operates, how credits are calculated, what documentation is required, and how class ratings are determined. It also acts as guidance for communities in enhancing their flood loss reduction and resource protection activities.
<b>Ideas for Integration:</b>	<ul style="list-style-type: none"> <li>• Create a streamlined timeline of when Permits and Inspections reaches out to County and Municipalities with annual information for their reporting.</li> <li>• Create a checklist for County and Municipalities on activities they can perform to assist in maintaining the current CRS rating.</li> <li>• Create a timeline that County and Municipalities receive annually to help in CRS reporting.</li> <li>• Annual meeting for all county and municipal stakeholders to discuss CRS program for the upcoming year.</li> </ul>
<b>Responsible Agency:</b>	Somerset County Emergency Services, MDE, Somerset County Planning and Zoning, City of Crisfield, Town of Princess Anne
<b>Potential Funding:</b>	FEMA Flood Mitigation Assistance Grant Program, Hazard Mitigation Grant Program, Building Resilient Infrastructure and Communities program (BRIC)
<b>Cost Estimate:</b>	Administration of CRS activities: staff-time at the County and Municipal level. The cost of developing and implementing projects to earn CRS credit is highly dependent upon the type of project.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>• Mitigation of damages caused by natural hazards such as flooding.</li> <li>• Reduction in the cost of flood insurance for property owners.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p><b>Goal 1:</b> Maintain and enhance Somerset County’s Department of Communications and Emergency Service’s capacity to continuously make Somerset County less vulnerable to hazards.</p> <p><b>Goal 2:</b> Build and support municipal capacity and commitment to become continuously less vulnerable to hazards.</p> <p><b>Goal 4:</b> Increase public understanding, support, and demand for hazard mitigation and preparedness.</p> <p><b>Goal 6:</b> Ensure that public funds are used in the most efficient manner.</p>

Table 18-3. MITIGATION PROJECT B (HIGH)

<b>Project Title:</b>	<b>Commodity Flow Study</b>
<b>Hazard:</b>	HazMat, Major Transportation Accident
<b>Mitigation Category</b>	Local Planning and Regulation
<b>Location(s):</b>	County and Municipalities (Crisfield and Princess Anne)
<b>Project Discussion:</b>	<p>In response to an ever-increasing number of hazardous materials incidents during the 1970's and early 1980's, Congress passed Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This Act required that all states and local jurisdictions create a Local Emergency Planning Committee (LEPC) to develop and implement a Hazardous Materials Response Plan. The purpose of these plans is to prevent or reduce loss of life and injury by developing methods to mitigate or minimize damage from Hazardous Materials (HazMat) releases.</p> <p>Initially, most planning efforts were centered around fixed sites storing or utilizing hazardous materials, but as plan documents were updated and refined, it became apparent that planning efforts needed to also focus more intently on the transportation of hazardous materials. As trucking became more prominent in the movement of hazardous materials, local jurisdictions began to note the movement of these materials and to be concerned about the type of hazardous materials and the volume being moved by this method of transportation.</p> <p>As a result of this increasing concern, a number of local jurisdictions have chosen to undertake Hazardous Materials Commodity Flow Studies to provide their local LEPC with a better understanding of the type of hazardous materials and associated volumes traveling by truck through their communities. A hazardous materials commodity flow study is an analysis of the hazardous goods that are moving through a particular area.</p> <p><b>PROJECT:</b> Conduct a Hazardous Material Commodity Flow Study (utilizing University of Maryland Eastern Shore interns) along strategic points on roadways with the highest Annual Average Daily Traffic (AADT) in Somerset County: Route 13 and Crisfield Highway. This study is important to the County, as discussed by the HMPC, there are many trucks carrying hazardous materials needing to travel through the County using Route 13 to carry products to facilities and manufacturers (not necessarily within Somerset County). Such a study would be helpful to Emergency Services in preparing for future incidents. Conducting a Hazardous Materials Commodity Flow Study would include detailed information pertaining to the amount and frequency of HazMats and truck traffic travelling through the County.</p> <p>Following the completion of the Commodity Flow Study, targeted planning efforts may be undertaken by the County's Emergency Services Department to train and exercise in preparation of events that may occur based on the types of HazMat materials identified in the Commodity Flow Study.</p>
<b>Ideas for Integration:</b>	Results of the Commodity Flow Study could be integrated into:

**Table 18-3. MITIGATION PROJECT B (HIGH)**

	<ul style="list-style-type: none"> <li>the Hazardous Materials Response Plan</li> <li>Future hazmat training exercises</li> <li>Future updates of the Hazard Mitigation Plan</li> </ul>
<b>Responsible Agency:</b>	Somerset County Emergency Services
<b>Potential Funding:</b>	Hazard Materials Emergency Preparedness (HMEP) may help offset cost.
<b>Cost Estimate:</b>	Internal: Staff Time (possibly Intern assistance from UMES) Consultant:
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Results relating to the types of hazardous materials and the frequency with which they are transported throughout the County can be utilized in planning for future hazmat scenarios.</li> </ul>
<b>Timeline:</b>	Short-term (0-2 years)
<b>Goals &amp; Objectives:</b>	<b>Goal 4:</b> Increase public understanding, support, and demand for hazard mitigation and preparedness.

Table 18-4. MITIGATION PROJECT C (HIGH)	
Project Title:	Somerlet County Agricultural and Civic Center Generator
Hazard:	Flood, Coastal Hazards, Tornado, High Wind, Winter Storm, Thunderstorm, Extreme Heat, Earthquake.
Mitigation Category	Structural and Infrastructure Projects
Location(s):	County and Municipalities (Crisfield and Princess Anne)
Project Discussion:	<p>The Somerlet County Agriculture and Civic Center has been designated as a shelter facility. The main shelter facility for Somerlet County is a school, Washington High School, which must be reopened as soon as possible following a storm event. Returning children to school in a timely manner provides continuity and sense of normalcy to the community. As such, a second location is needed, particularly in the case of long-term disaster incidents. In fact, the Civic Center was used in 2012 following the passage of Hurricane Sandy as a step-down shelter. There were 50 remaining evacuees at the time in which Washington High School needed to be reopened, as per the Board of Education, a second location was determined. The Civic Center was identified and used as a shelter until all evacuees were able to return to their homes or were relocated. In addition, the Civic Center is used as a backup facility for the Aurora Senior Living Center at Manokin.</p> <p><b>PROJECT:</b> Assess the Somerlet County Agriculture and Civic Center for vulnerability, capacity, facility resources, and back-up power (generator). The project deliverable would include a final technical report based on FEMA 361 guidelines. Based upon this report, apply for grant funding to purchase and install an emergency generator that meets the needs of the community.</p> <p><b>2022 Update:</b> During the 2022 Update, the Somerlet County Agriculture and Civic Center was added to the Critical and Public Facility Database.</p>
Responsible Agency:	Civic Center, Somerlet County
Potential Funding:	Hazard Mitigation Assistance Grant Program (HMGP); Pre-Disaster Mitigation Grant (PDM).
Cost Estimate:	TBD. The total cost will vary substantially based on the power and installation needs of the Civic Center (10,934 SF).
Benefits (Losses Avoided):	Back-up power (generator) at this site would ensure uninterrupted use of this site as a shelter in the event of a natural hazard event.
Timeline:	Short-term (0-2 years)
Goals & Objectives:	<p><b>Goal 6:</b> Ensure that public funds are used in the most efficient manner.</p> <p><b>Goal 9:</b> Protect public infrastructure and facilities.</p>

Table 18-5. MITIGATION PROJECT D

<b>Project Title:</b>	<b>Natural Resources Planning</b>
<b>Hazard:</b>	Shoreline Erosion, Sea Level Rise
<b>Mitigation Category</b>	Natural Resources Project
<b>Location(s):</b>	County and Municipalities (Crisfield and Princess Anne)
<b>Project Discussion:</b>	<p>Somerset County participates in the Chesapeake Bay Critical Area Program, with the purpose of establishing a resource protection for the bay and its tributaries and encouraging more environmentally sensitive development in areas near the shoreline. This law created a statewide Critical Area Commission to oversee the development and implementation of local land use programs directed towards the Critical Area. The Critical Area law provides for a 100-foot Buffer from the shoreline. This Buffer is measured 100 feet inland from mean high water, the landward extent of tidal wetlands, and the edge of tributary streams. The Buffer also refers to areas that have been expanded beyond 100 feet to include hydric soils. Although the County supports these buffer zones, projects/programs are not in place to require natural vegetation be located in these buffers. In addition, lot/parcels existing prior to 1985 are not subject to the critical area laws. Applying the same regulations of the critical area to areas in the County with significant stormwater issues would reduce hazard vulnerability and increase resilience.</p> <p><b>PROJECT:</b> Implement measures that protect people, property, and natural resources including:</p> <ul style="list-style-type: none"> <li>• Due to past development within the critical bay area, identify and complete mitigation activities on these properties such as planting native vegetation, vegetated swales, buffer strips, etc. <ul style="list-style-type: none"> <li>○ <b>Step 1:</b> Utilizing the 100-foot critical bay area buffer as a base layer, overlay existing parcel and building footprint layers in GIS to identify those properties within this area.</li> <li>○ <b>Step 2:</b> Prioritize parcels lacking vegetation and those parcels experiencing a high rate of shoreline erosion. (Utilize the DNR's Coastal Resiliency Assessment for erosion and habitat data.)</li> <li>○ <b>Step 3:</b> Once a priority listing has been established, review listing with Chesapeake Bay Critical Area Commission staff to determine those projects with the highest benefit/cost ratios.</li> </ul> </li> <li>• The Roads Department would identify stormwater management issues and the most vulnerable properties affected in the County. Adopt similar building regulations (such as those in the critical bay area) to these properties.</li> </ul> <p><b>2022 Update:</b> The County has been working with a mapping partner for new Critical Area maps to be finalized, which will determine the scope and reach of the 100 foot buffer. The GIS partner has created a building footprint layer for the County. The County is currently in the process of reviewing areas of concern or revision. Once the new CBCA maps are completed, this analysis can move forward.</p>

**Table 18-5. MITIGATION PROJECT D**

<b>Ideas for Integration:</b>	<ul style="list-style-type: none"> <li>Integrate projects developed in partnership with the Critical Area Commission into future Hazard Mitigation Plan Updates.</li> <li>Make building footprint data available as needed once complete for integration into future planning or GIS projects.</li> </ul>
<b>Responsible Agency:</b>	Somerset County Department of Technical and Community Services, Chesapeake Bay Critical Area Commission, GIS consultant firm, Somerset County Department of Public Works
<b>Potential Funding:</b>	Hazard Mitigation Assistance Grant Program (HMGP), Flood Mitigation Assistance Program (FMA), Building Resilient Infrastructure and Communities (BRIC), Watershed Protection and Flood Prevention Program, Chesapeake Bay Critical Area Commission
<b>Cost Estimate:</b>	Staff time, \$5,000-\$7,500 for GIS work.
<b>Benefits (Losses Avoided):</b>	Identifying high priority areas within the critical area for mitigation activities related to preventing shoreline erosion, inundation due to sea level rise, and flooding.
<b>Timeline:</b>	Long-term
<b>Goals &amp; Objectives:</b>	<p><b>Goal 5:</b> Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p><b>Goal 6:</b> Ensure that public funds are used in the most efficient manner.</p> <p><b>Goal 7:</b> Promote sustainable development to improve the quality of life.</p>



**Table 18-6. MITIGATION PROJECT E (HIGH)**

<b>Project Title:</b>	<b>Crisfield Tidal Flooding Prevention</b>
<b>Hazard:</b>	Flood, Coastal Hazards, Shoreline Erosion, & Sea Level Rise
<b>Mitigation Category</b>	Structural and Infrastructure Projects
<b>Location(s):</b>	City of Crisfield, Somerset County
<b>Project Discussion:</b>	<p>Somerset County has been historically impacted by flooding associated with high tides. The City of Crisfield experiences high tide issues daily with roads in the town flooding due to water entering into the storm drainage system and flowing into the City streets. This flood risk impacts the economy, affecting many local businesses with waterfront property.</p> <p><b>PROJECT:</b> The City of Crisfield identified 25 areas in need of new or replacement of existing tide gates. Of the original identified 25 tidal gates, 13 have been installed. The City of Crisfield will work with MDEM-Hazard Mitigation Grant Program, to replace 4 defective tidal gates within Somers Cove Marina area and install 8 new gates throughout the City limits</p> <p>Another mitigation project, similar to the City of Crisfield project, is to identify high-tide flooding issues throughout the rest of the County. The storm drainage systems should be evaluated, and backflow/flex valves installed following the evaluation process. These backflow/flex valves allow the storm water to pass through the system but prevent the inflow of water from forcing its way up gradient during high tides. Somerset County Public Works assists coastal communities, as well as residents of Smith Island to prioritize storm drainage areas in the county most affected by tidal flooding. Those areas with high cost/benefit ratios would then be considered for the installation of backflow/flex valves or other suitable mitigation actions.</p> <p><b>2022 Update:</b></p> <p>Re: Culvert Modifications (1/10/22), MDE performed on site final inspections. All items have been completed and the project is operating as intended, thus final completion. On 1/20/22 MDE released their final inspection and has marked project complete.</p> <p>Re: Tide Gates/Pumping Stations – MDE has grant money to contribute towards Phase 1 (engineering/design) RFP sent to MDE for review. RFP was sent to MDE for review. Sent back to the City for corrections. City will make corrections that have been recommended by MDE and resent for further review.</p> <p>The City hired Bayland Consultants &amp; Designers, Inc. to assess drainage for the entire municipality. A Drainage Assessment Report dated November 2021 was prepared and included recommended flood remediation for 32 high priority areas. The City intends to complete these projects as funding becomes available. This includes replacement of the tide gates.</p>
<b>Ideas for Integration:</b>	<ul style="list-style-type: none"> <li>• Hazard Mitigation Plan (future updates)</li> <li>• Examine the 32 identified “high priority” areas for co-location with</li> </ul>

**Table 18-6. MITIGATION PROJECT E (HIGH)**

	other known hazards areas.
<b>Responsible Agency:</b>	<b>City of Crisfield:</b> City of Crisfield, MDEM, Somerset County Department of Public Works <b>Somerset County:</b> Somerset County Emergency Services and Somerset County Department of Public Works
<b>Potential Funding:</b>	Hazard Mitigation Assistance Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC).
<b>Cost Estimate:</b>	<b>City of Crisfield:</b> TBD. <b>Somerset County:</b> Based on the size of storm drain, type of valve used, and quantity needed.
<b>Benefits (Losses Avoided):</b>	Culverts are more effective, thus preventing stormwater flooding. Tide gates prevent high tide water from infiltrating roadways and property. The prioritization of 32 locations for projects allows for targeted improvements to be made in the future throughout the City.
<b>Timeline:</b>	City of Crisfield: Ongoing. Long-term (0-5 years)
<b>Goals &amp; Objectives:</b>	<b>Goal 2:</b> Build and support municipal capacity and commitment to become continuously less vulnerable to hazards. <b>Goal 5:</b> Protect existing and future properties (residential, commercial, public, and critical facilities). <b>Goal 6:</b> Ensure that public funds are used in the most efficient manner. <b>Goal 9:</b> Protect public infrastructure and facilities.

Table 18-7. MITIGATION PROJECT F

<b>Project Title:</b>	<b>Mitigation of Roadway Flooding</b>
<b>Hazard:</b>	Flood, Coastal Hazards, Shoreline Erosion, & Sea Level Rise
<b>Mitigation Category</b>	Structural and Infrastructure Projects
<b>Location(s):</b>	Somerset County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	<p>Out of the 124 flood related roadway issues identified for Somerset County, 44 were ranked as “high priority” for mitigation by the HMPC. Those 44 roadways are listed on Table 18-8, following.</p> <p><b>PROJECT:</b> Conduct engineering studies to determine the most effective mitigation measures to ensure the prevention of future flooding to these roadways. Roadways of concern are depicted on the following maps, including Somerset County, Princess Anne, and Crisfield. After the study is complete, use available grant funding sources to implement the construction phase.</p> <p>Note: priority consideration should be given to those roadways that provide accessibility to critical facilities as discussed in Project F.</p> <p><b>2022 Update:</b> High water gauges were installed on roads that frequently flood. Gauges help identify the shoulder/edges of the roadbed and the approximate depth of water. Additionally, low areas have been raised on several County roads which frequently flood.</p>
<b>Ideas for Integration:</b>	Include identified projects within the County Capital Improvement Plan.
<b>Responsible Agency:</b>	Somerset County Department of Public Works, Private Engineering Firm, and Somerset County Emergency Services
<b>Potential Funding:</b>	Hazard Mitigation Assistance Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), Emergency Advance Measures for Flood Prevention.
<b>Cost Estimate:</b>	To be determined during the conceptual design phase process.
<b>Benefits (Losses Avoided):</b>	Mitigating repetitively flooded roadways helps ensure safe travel and keeps population centers, citizens, and emergency services connected during hazard events.
<b>Timeline:</b>	Long-term (0-5 years)
<b>Goals &amp; Objectives:</b>	<p><b>Goal 4:</b> Increase public understanding, support, and demand for hazard mitigation and preparedness.</p> <p><b>Goal 6:</b> Ensure that public funds are used in the most efficient manner.</p> <p><b>Goal 9:</b> Protect public infrastructure and facilities.</p>

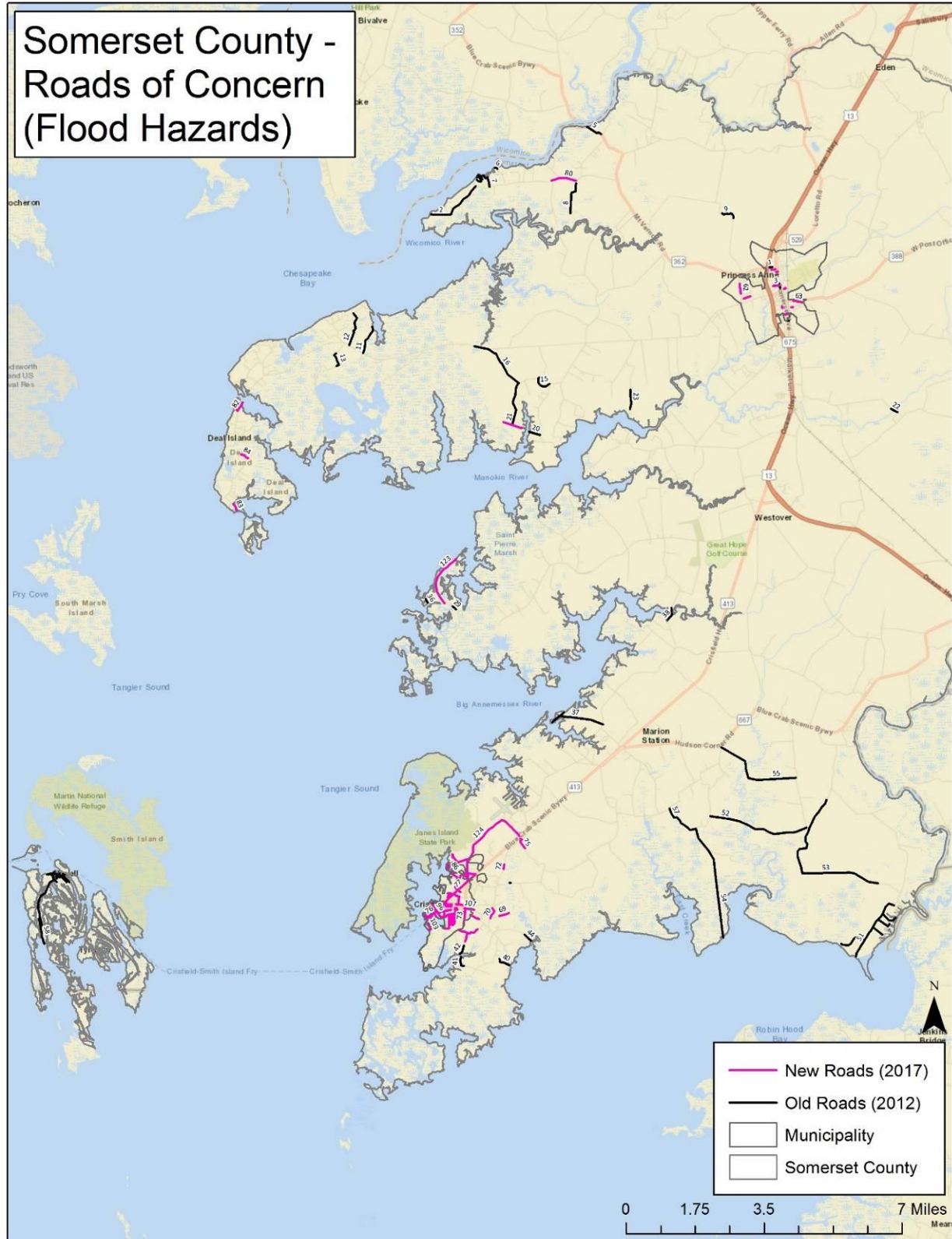
**Table 18-8: Excerpt from Repetitive Roadway Flooding Appendix High Priority Roadways**

Location #	Flood Related Issue - Roads	Evacuation Issue (Y/N)	SWM Elevation Problem	Flooding: Occasional or Repetitive	State, County, or Municipal	Hazard/Issue	Ranking (High, Medium, Low)
1	Mt Vernon Road @ Elm Street	No	SWM	Occasional	Princess Anne	Stormwater and Heavy Rain Events	High
2	Mt Vernon Road	No	Elevation	Repetitive	Princess Anne	Tidal & Stormwater	High
3	Somerset Avenue @ Fluers Lane	Yes	SWM	Repetitive	Princess Anne	Tidal, Storm Events, and Evacuation Issues	High
<b>Note: Road (Somerset Avenue @ Fluers Lane) cuts town in half when flooded.</b>							
5	Whitehaven Ferry Road	No	Elevation	Repetitive	Princess Anne	Flooding	High
10	Peggy Neck Road	No	SWM	Occasional	Princess Anne	Heavy Rain	High
22	Dublin Road	Yes	SWM	Occasional	Princess Anne	Swamp & Stormwater	High
41	Calvary Road	Yes	Elevation	Repetitive	Crisfield	Flooding	High
42	Sackertown Road	Yes	Elevation	Repetitive	Crisfield	Flooding	High
50	Green Road	No	Elevation	Repetitive	Crisfield	Flooding, Tidal, and Heavy Rain	High
55	Bryan Hall Road	Yes	Elevation	Repetitive	Crisfield	Flooding	High
12	Long Point Road	Yes	Elevation	Repetitive	County	Flooding	High
13	Riley Roberts Road	Yes	Elevation	Repetitive	County	Flooding	High
14	Shores Road	Yes	Elevation	Repetitive	County	Tidal Flooding	High
18	Hodson White Road	Yes	Elevation	Repetitive	County	Flooding, Tidal, and Heavy Rain	High
29	Rumbley Road	Yes	Elevation	Occasional	County	Tidal	High
30	Frenchtown Road	Yes	Elevation	Occasional	County	Tidal/Flooding	High
	Clifton Bozman Road	Yes	Elevation	Repetitive	County	Flooding, Tidal, and Heavy Rain	High
37	Coulbourne Creek Road	Yes	Elevation	Occasional	County	Flooding	High
39	Daughtery Town Road	Yes	Elevation	Repetitive	County	Flooding, Tidal, and Heavy Rain	High
58	Smith Island Roads - West	Yes	Elevation	Repetitive	County	Tidal	High
86	Smith Island Roads - East	Yes	Elevation	Repetitive	County	Tidal	High
15	Oriole Road	Yes	Elevation	Repetitive	State	Flooding	High
74	Cove Street @ South Somerset Avenue to South 3 <sup>rd</sup> Street	Yes	Elevation	Repetitive	Crisfield	Flooding	High

**Table 18-8: Excerpt from Repetitive Roadway Flooding Appendix High Priority Roadways**

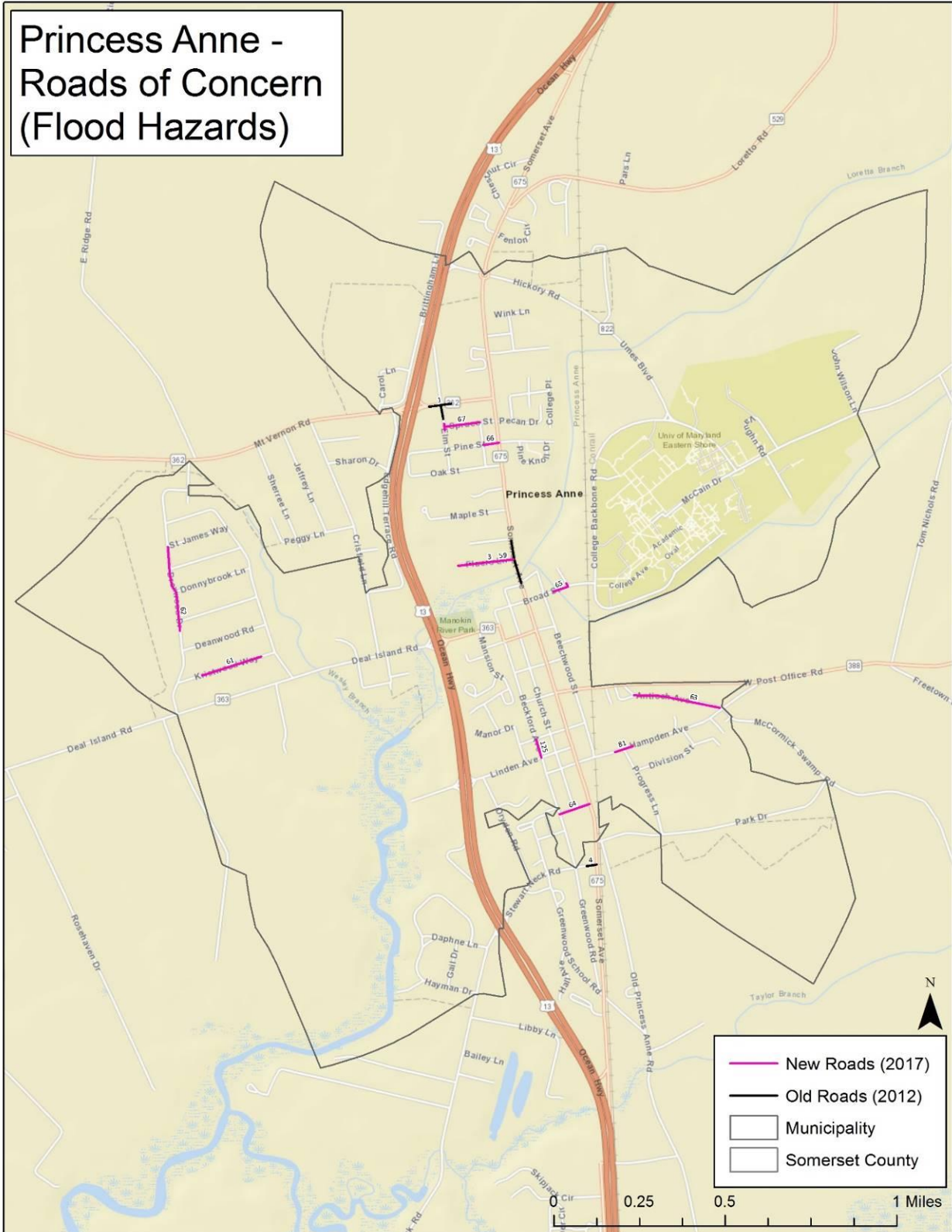
Location #	Flood Related Issue - Roads	Evacuation Issue (Y/N)	SWM Elevation Problem	Flooding: Occasional or Repetitive	State, County, or Municipal	Hazard/Issue	Ranking (High, Medium, Low)
76	West Main Street to end of Peninsula (Terminus of Road)	Yes	Elevation	Repetitive	Crisfield	Flooding	High
77	Maryland Avenue extending to beginning of Blue Crab Scenic Byway	Yes	Elevation	Repetitive	Crisfield	Flooding	High
97	Broadway	No	SWM	Repetitive	Crisfield	Flooding	High
123	Riverview Road	Yes	Elevation	Occasional	Crisfield	Flooding & Tidal	High
68	Calvery Road – North of Jenkins Creek	Yes		Repetitive	County	Flooding	High
82	Deal Island Road (Bridge to Hotel Road)	Yes	SWM/Elevation	Repetitive	County	Flooding	High
83	Deal Island Road (Southernmost End)	Yes	SWM/Elevation	Repetitive	County	Flooding	High
116	Stouty Sterling Road	No	Elevation	Repetitive	County	Flooding, Tidal, and Heavy Rain	High
177	Sackertown	Yes	Elevation	Repetitive	County	Tidal Flooding	High
101	Byrd Road	Yes	Elevation	Repetitive	County/State	Tidal Flooding	High
86	Hall Highway	Yes	SWM/Elevation	Repetitive	State	Flooding	High
87	Broad Street	No	SWM	Repetitive	State	Flooding	High
88	Williams Street	No	SWM	Repetitive	State	Flooding	High
89	10 <sup>th</sup> Street	No	SWM	Repetitive	State	Flooding	High
90	Dock Street	No	SWM	Repetitive	State	Flooding	High
91	N 11 <sup>th</sup> Street	No	SWM	Repetitive	State	Flooding	High
92	Goodsell Alley	No	SWM	Repetitive	State	Flooding	High
93	Spruce Street	No	SWM	Repetitive	State	Flooding	High
94	9 <sup>th</sup> Street	No	SWM	Repetitive	State	Flooding	High
95	8 <sup>th</sup> Street	No	SWM	Repetitive	State	Flooding	High
96	7 <sup>th</sup> Street	No	SWM	Repetitive	State	Flooding	High

Map 18-1: Somerset County Roads of Concern





### Map 18-2: Princess Anne Roads of Concern



Map 18-3: Crisfield Roads of Concern

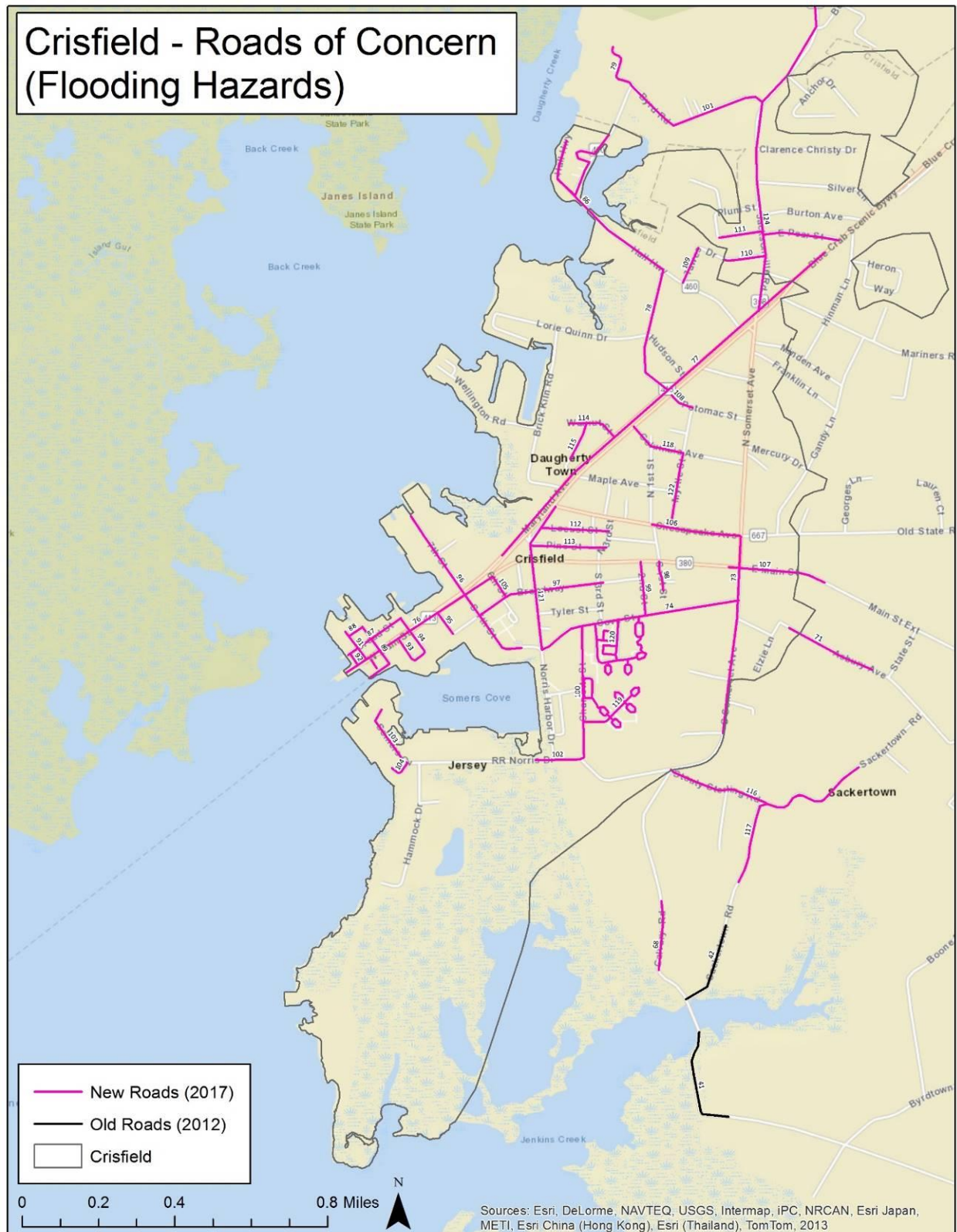



Table 18-9. MITIGATION PROJECT G

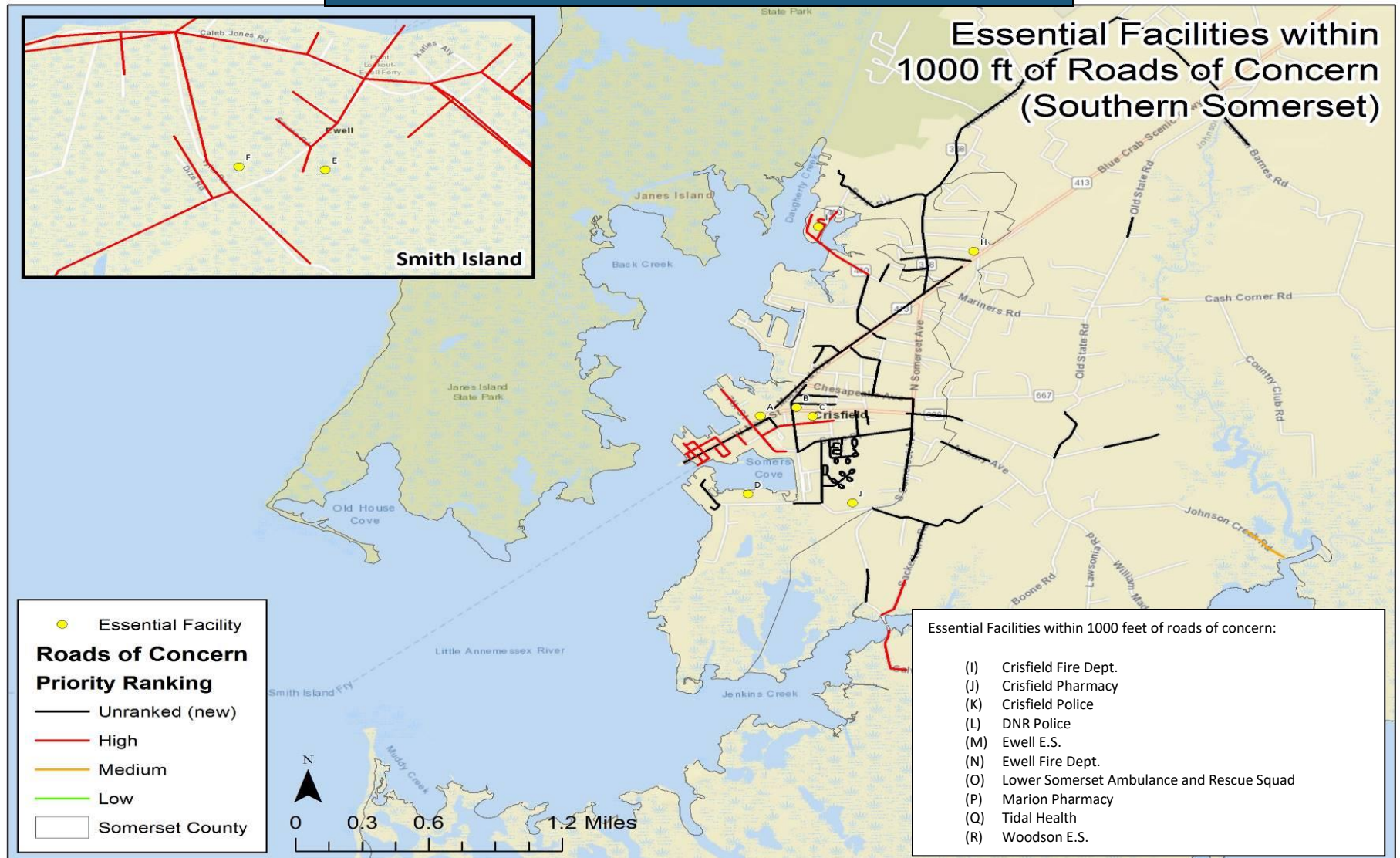
<b>Project Title:</b>	<b>Essential Facility Accessibility &amp; Signage at Repetitive Flood Locations</b>
<b>Hazard:</b>	Flood, Coastal Hazards, Shoreline Erosion, & Sea Level Rise
<b>Mitigation Category</b>	Local Planning and Regulation, Structural and Infrastructure Projects
<b>Location(s):</b>	Somerset County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	<p>The primary purpose of Essential Facility mapping is not just to convey to planners and decision-makers the location of a facility, but to show its capacity and service area in an accurate, clear, and convenient way. Roadways in Somerset County are considered "of concern" if they experience repetitive flooding. Roads of this nature were identified and ranked, and depending upon the severity and frequency of flooding, roads are ranked as high, medium, or low.</p> <p>Due to the repetitive nature of flooding on these roadways, it could be the case that during a flood hazard event certain essential facilities might become inaccessible. A proximity analysis was conducted to determine which essential facilities were within 1000 feet from a road of concern. The analysis identified eighteen (18) facilities that matched these criteria, thirteen (13) of which do not currently have signage, including:</p> <ul style="list-style-type: none"> <li>• Crisfield Fire Department</li> <li>• Crisfield Pharmacy</li> <li>• Crisfield Police</li> <li>• DNR Police</li> <li>• Ewell Fire Department</li> <li>• Ewell Elementary School</li> <li>• Fresenius Kidney Care</li> <li>• L. Somerset Rescue &amp; Fire Department</li> <li>• Marion Pharmacy</li> <li>• TidalHealth</li> <li>• Mt. Vernon Fire Department</li> <li>• TLC Medical Center</li> <li>• Woodson Elementary School</li> </ul> <p>Based upon the mapping, there are certain essential facilities that might be more prone to inaccessibility than others during a flood hazard event. For example, TidalHealth has two primary means for vehicular entrance: Hall Highway and Byrd Road. Nearly all of Hall Highway leading up to the hospital is ranked as high concern and Byrd Road has also been identified as a roadway with frequent flooding issues. Essential facilities with limited road access are important to identify prior to a flood hazard event and these types of facilities may require greater prioritization.</p> <p>Moving forward, it would be prudent to identify such aforementioned scenarios and identify backup routes to reach essential facilities if the need should arise. If alternative routes cannot be reasonably established, then precautions could be taken to limit flooding on roadways near essential facilities prior to significant flood events.</p>

Table 18-9. MITIGATION PROJECT G

	<p><b>PROJECT:</b> Somerset County has identified thirteen (13) Essential Facilities where signage markers are needed to identify its location as flood prone; depicted in Maps 1 and 2. Signage markers need to be placed 12 feet from the centerline on either side of the roadway leading to and from designated Critical Facility. Signage should include depth markers.</p> <div data-bbox="764 430 1089 795"> <p>Examples of Signage</p>  </div> <p><b>2022 Update:</b> The Town of Princess Anne indicates that the following locations have signage: Somerset County EOC, Karemore Pharmacy, Princess Anne Elementary School, Princess Anne Fire Department, Princess Anne Police Department, and TLC Pharmacy. While not identified by the buffer analysis, signage might also be a good idea at UMES, Princess Anne Town Hall, and the County Public Works.</p> <p>The County applied for HMPG funding for this project but was not awarded. An application can be resubmitted when the application period opens once more; dates are available at <a href="http://www.fema.gov/grants/mitigation/hazard-mitigation">www.fema.gov/grants/mitigation/hazard-mitigation</a>.</p>
<b>Ideas for Integration:</b>	In instances where electronic signage is presently utilized or desired, consider utilizing this type of signage for other hazard events besides flood, such as wildfire risk, high wind, or other severe weather alerts.
<b>Responsible Agency:</b>	Somerset County Department of Public Works, Somerset County Department of Emergency Services, City of Crisfield, and the Town of Princess Anne.
<b>Potential Funding:</b>	Somerset County Resources, Hazard Mitigation Assistance Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC).
<b>Cost Estimate:</b>	Somerset County Resources.
<b>Benefits (Losses Avoided):</b>	Signage indicating flooding hazards, as well as depth markers, increases public awareness to the hazard before and during an event. The public are more likely to avoid or take caution in these areas in the event of flooding if they have been identified beforehand.
<b>Timeline:</b>	Short-term (0-2 years)
<b>Goals &amp; Objectives:</b>	<p><b>Goal 4:</b> Increase public understanding, support, and demand for hazard mitigation and preparedness.</p> <p><b>Goal 9:</b> Protect public infrastructure and facilities.</p>



Map 18-4: Southern Somerset-Essential Facilities & Roads of Concern



Map 18-5: Northern Somerset – Essential Facilities & Roads of Concern

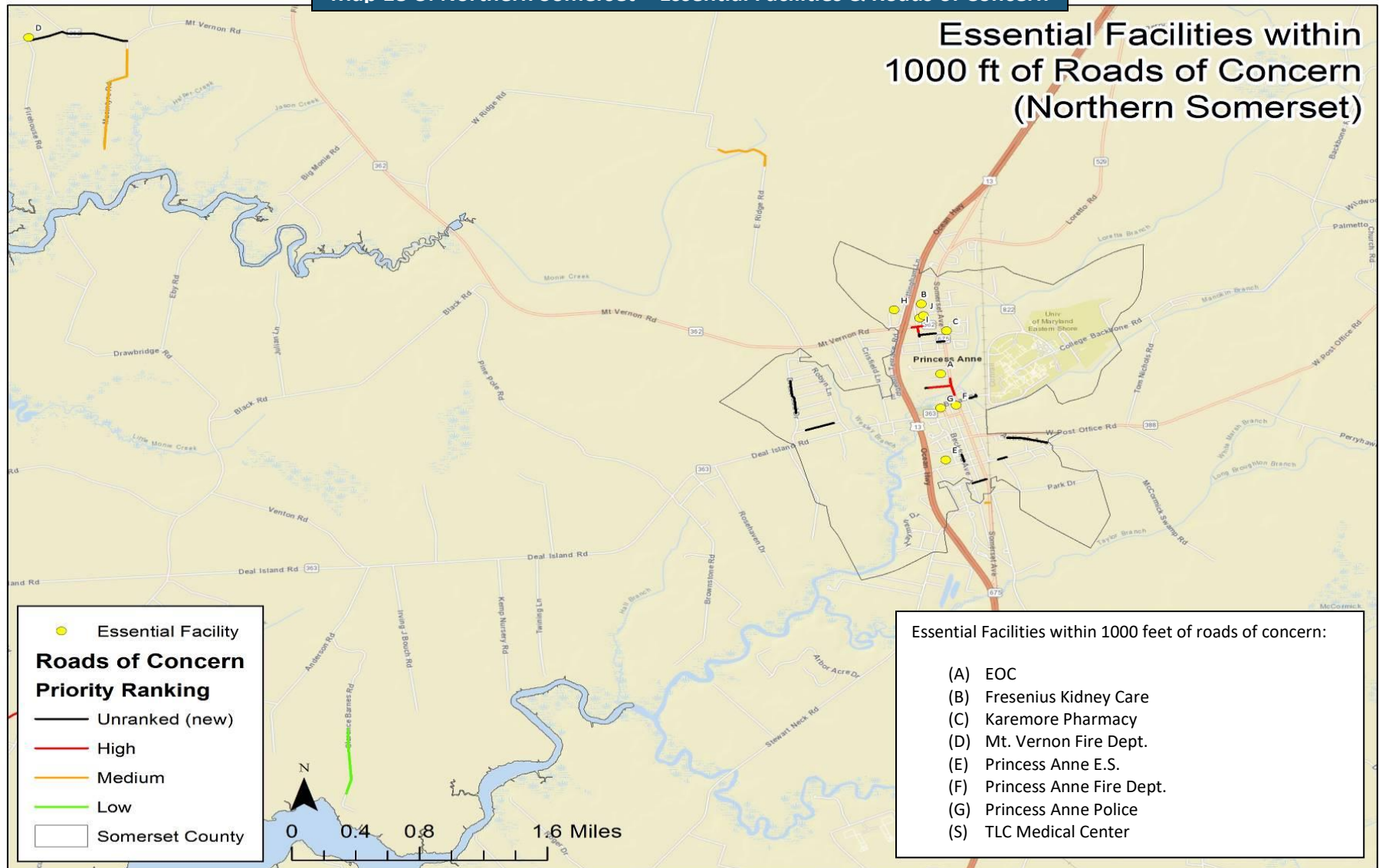




Table 18-10. MITIGATION PROJECT H


<b>Project Title:</b>	<b>Mitigating TidalHealth McCready Pavilion Flood Issues</b>
<b>Hazard:</b>	Flood, Coastal Hazards, Shoreline Erosion, & Sea Level Rise
<b>Mitigation Category</b>	Structural and Infrastructure Projects
<b>Location(s):</b>	Somerst County, City of Crisfield
<b>Project Discussion:</b>	<p>TidalHealth McCready Pavilion consists of a network of medical and care facilities serving the Lower Eastern Shore. The main campus in Crisfield, Maryland is located on waterfront property donated by the McCready family in 1919. It features TidalHealth Medical Imaging, Alice B. Tawes Nursing &amp; Rehabilitation, TidalHealth Gynecology, and Chesapeake Cove Assisted Living.</p> <p>TidalHealth facilities and the major bridge (S-0010) on Byrd Road, located in the City of Crisfield, are located within the FEMA floodplain, hurricane storm surge, and 2050 mean sea level rise inundation areas. It is important to note that the location data does not include information regarding elevations; some of these facilities were constructed after the County began to issue permits in accordance with the Floodplain Management Ordinance.</p> <p><b>Project:</b> Mitigate flood issues at TidalHealth McCready Pavilion by installing flood protection devices, including but not limited to, flood barriers. In addition, hurricane resistant windows (impact glass) should be considered. A technical assessment of this facility should be completed to determine the most cost-effective and beneficial hazard mitigation measures considering the extent and scope of flood hazards that have a potential to substantially impact this essential facility.</p>  <p>During Hurricane Sandy, Hall Highway and the bridge leading into the hospital were flooded, isolating the facility and making evacuation difficult. <i>Source: Somerst County Department of Emergency Services.</i></p> <p><b>2022 Update:</b> Door Dams have been purchased by TidalHealth. The doors still need to be installed, but work was delayed due to the COVID-19 Pandemic.</p>
<b>Ideas for Integration:</b>	<ul style="list-style-type: none"> <li>Determine if the TidalHealth campus was identified as one of 32</li> </ul>

Table 18-10. MITIGATION PROJECT H	
	priority sites by the Drainage Assessment Report described in Project E.
<b>Responsible Agency:</b>	TidalHealth, Somerset County Department of Emergency Services, City of Crisfield
<b>Potential Funding:</b>	Somerset County Resources, Hazard Mitigation Assistance Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), Emergency Advance Measures for Flood Prevention.
<b>Cost Estimate:</b>	Door dams have been purchased; future costs depend on contractor quote to install the doors.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>• Flood walls will prevent damage caused from flooding during storms.</li> <li>• Less flooding helps ensure continuity of operations.</li> <li>• Saves money in the long run.</li> </ul>
<b>Timeline:</b>	Long-term (0-5 years)
<b>Goals &amp; Objectives:</b>	<p><b>Goal 4:</b> Increase public understanding, support, and demand for hazard mitigation and preparedness.</p> <p><b>Goal 5:</b> Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p><b>Goal 6:</b> Ensure that public funds are used in the most efficient manner.</p>

Table 18-11. MITIGATION PROJECT I (HIGH)

<b>Project Title:</b>	<b>Essential Facility Flood Mitigation</b>
<b>Hazard:</b>	Flood, Coastal Hazards, Shoreline Erosion, & Sea Level Rise
<b>Mitigation Category</b>	Structural and Infrastructure Projects
<b>Location(s):</b>	Somerset County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	<p>According to the Reducing Flood Effects in Critical Facilities, FEMA, April 2013, (Hurricane Sandy Recovery Advisory) in numerous instances, critical facilities could not function because essential equipment was placed in basements, sub-basements, or ground floor levels that flooded. In some cases, components of essential systems were elevated well above the floodwaters, while other critical system elements (transformers, transfer switches, fuel tanks, pumps, etc.) were placed at lower levels and therefore were vulnerable to flooding. When those vulnerable critical elements failed, the systems were rendered inoperative, and the functionality of the critical facilities suffered as a result.</p> <p><b>Project:</b> Provide information and recommendations to improve the functionality of critical facilities by reducing the vulnerability of essential systems, equipment, and the overall facility to flooding.</p> <p>Following the review and analysis of information presented herein, flood hazard impacts to Somerset County and its communities is the loss of essential facilities, which would be felt community wide. As such, essential facilities that were found to be at-risk to coastal and/or riverine flooding, hurricane storm surge inundation, and sea level rise during the development of the plan are priorities for hazard mitigation.</p> <p>Three Essential Facilities are vulnerable to the following flood hazards: FEMA Flood Zone AE, Flood Depth, Hurricane Category 1, and Sea Level Rise. These facilities are depicted on the following maps, which include depth of flooding:</p> <ul style="list-style-type: none"> <li>• Tylerton Fire Department</li> <li>• Ewell Elementary School</li> <li>• Ewell Fire Department</li> </ul> <p>The following Essential Facilities are vulnerable to the following flood hazards: FEMA Flood Zone AE, Flood Depth, and Hurricane Category 1:</p> <ul style="list-style-type: none"> <li>• Crisfield Police Station – 3.0 ft.</li> <li>• Crisfield Fire Department – 2.5 ft.</li> <li>• Woodson Elementary School – 0.5 ft.</li> <li>• Fairmount Fire Department – 1.3 ft.</li> <li>• Mt. Vernon Fire Department – 0.5 ft.</li> <li>• TidalHealth McCready Pavilion – 3.2 ft.</li> </ul> <p><b>2022 Update:</b> The project is still relevant, and in some cases flooding issues have worsened. The pandemic halted progress on this project, however Emergency Services plans to contact the critical facilities and apply for funding when grants are available.</p>

Table 18-11. MITIGATION PROJECT I (HIGH)	
<b>Responsible Agency:</b>	Somerset County Department of Emergency Services and Affected Facilities
<b>Potential Funding:</b>	Somerset County Resources, Hazard Mitigation Assistance Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC).
<b>Cost Estimate:</b>	TBD.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Continuation of essential services during hazard events, particularly flood events.</li> </ul>
<b>Timeline:</b>	Long-term (0-5 years)
<b>Goals &amp; Objectives:</b>	<p><b>Goal 2:</b> Build and support municipal capacity and commitment to become continuously less vulnerable to hazards.</p> <p><b>Goal 5:</b> Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p><b>Goal 6:</b> Ensure that public funds are used in the most efficient manner.</p>

Map 18-6: Ewell Fire Department





Map 18-7: Ewell Elementary School





Map 18-8: Tylerton Fire Department



Map 18-9: Crisfield Police Station

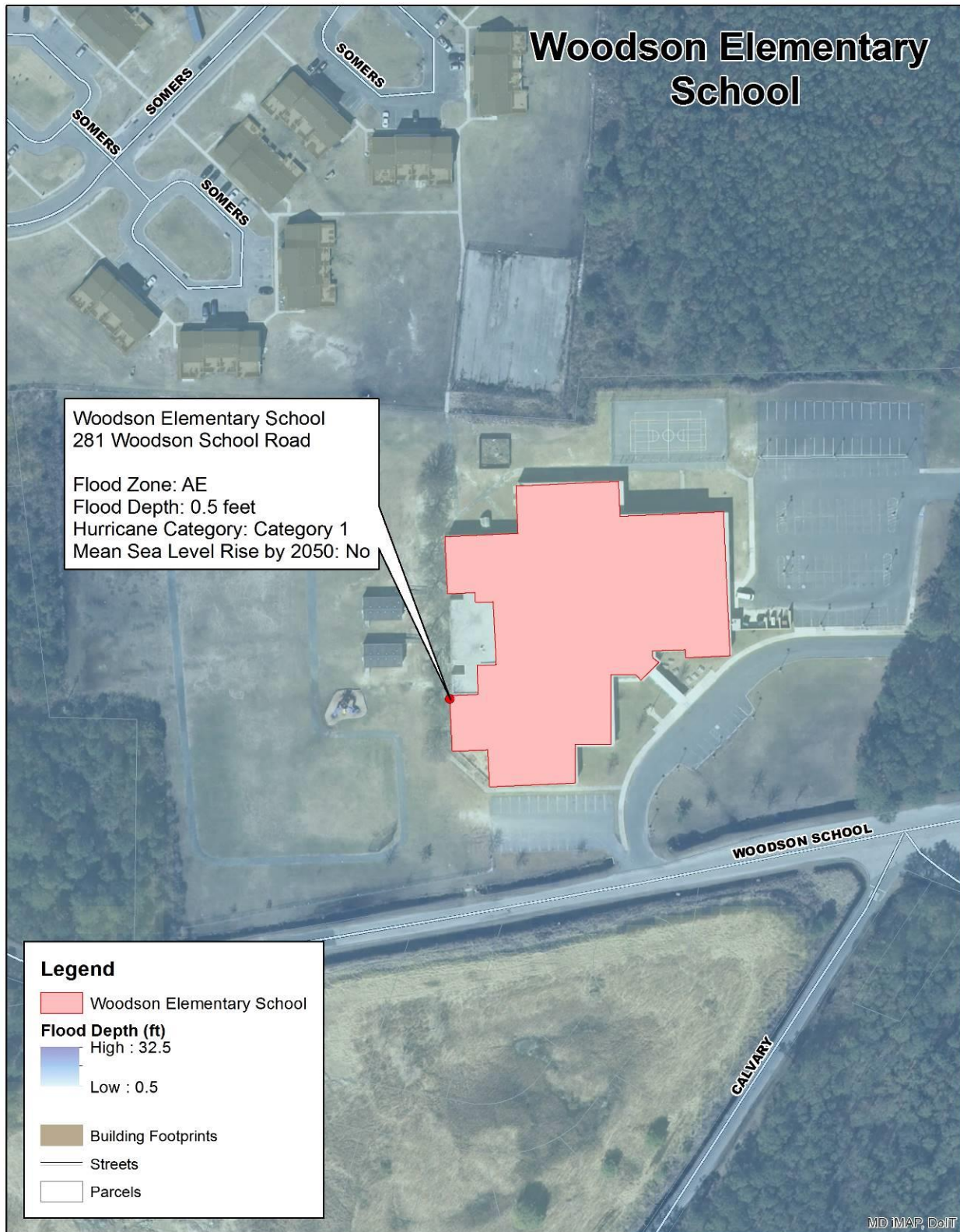




Map 18-10: Crisfield Fire Department



Map 18-11: Woodson Elementary School





Map 18-12: Fairmont Fire Department

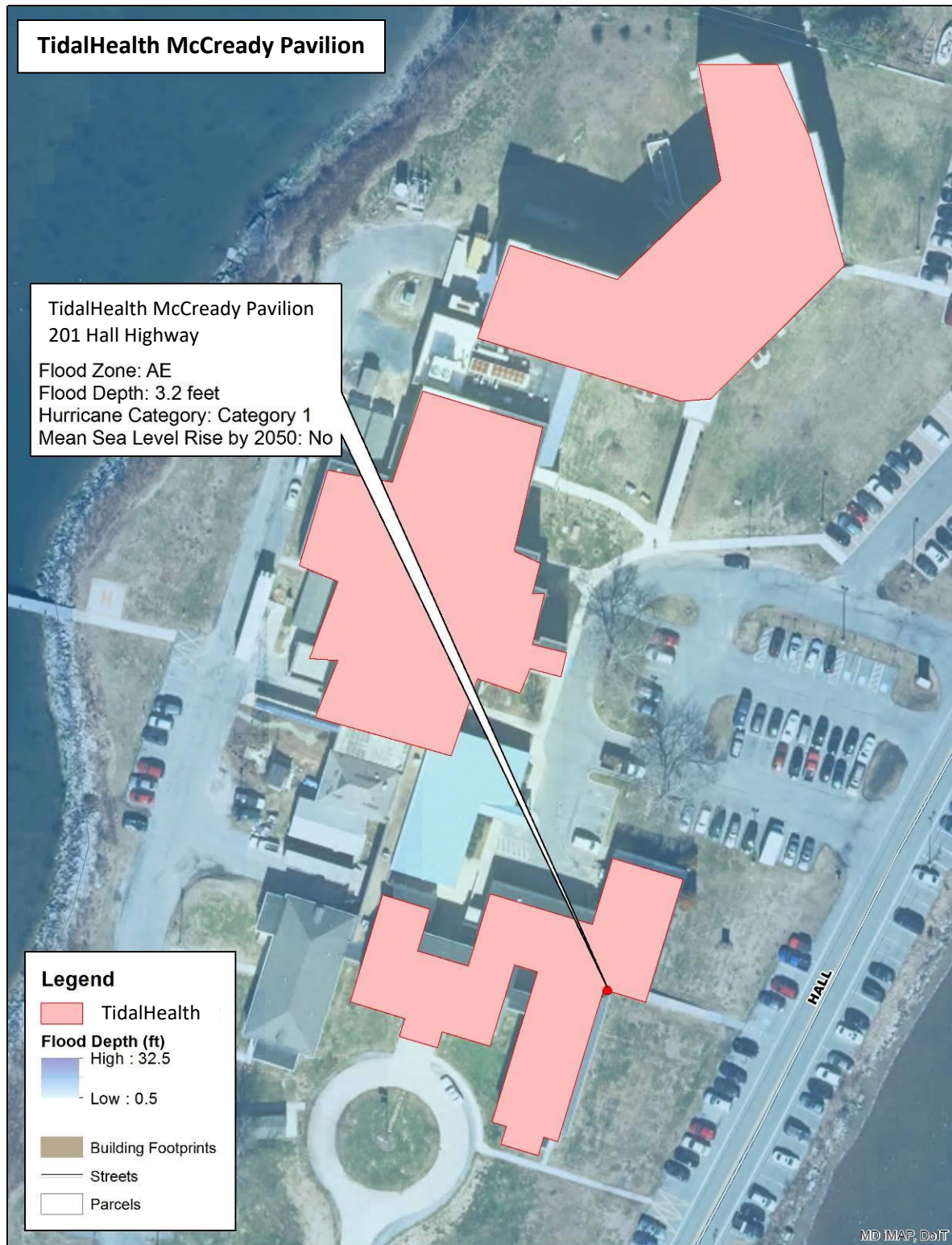




Map 18-13: Mt. Vernon Fire Department



Map 18-14: TidalHealth McCready Pavilion





**Table 18-12. MITIGATION PROJECT J**

<b>Project Title:</b>	<b>Repetitive Loss Outreach</b>
<b>Hazard:</b>	Flood, Coastal Hazards, Shoreline Erosion, & Sea Level Rise
<b>Mitigation Category</b>	Education and Awareness Programs
<b>Location(s):</b>	Somerset County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	<p>According to the 2017 CRS Coordinator’s Manual, part of the process to receive CRS credit for Activity 504, for a Category C community (which is defined as a community with 50 or more unmitigated repetitive loss properties) includes implementing an annual outreach project to the properties in the mapped repetitive loss areas that have insurable buildings and include a copy of the project with its application and annual recertification.</p> <p>As of September 30, 2022, there were sixty-one (61) repetitive loss properties within the unincorporated areas of Somerset County, two of which are severe repetitive loss properties. Of these properties, fifty-six (56) are considered “unmitigated.” As of this same date, there were twenty-six (26) repetitive loss properties located in the City of Crisfield, one (1) of which is a severe repetitive loss property. There are no repetitive loss properties within the Town of Princess Anne. Additional information can be found in Chapter 4: Flood.</p> <p><b>PROJECT:</b> The outreach project must advise the recipient of four things:</p> <ol style="list-style-type: none"> <li>1. That the property is in or near an area subject to flooding;</li> <li>2. What property protection measures are appropriate for the flood situation;</li> <li>3. What sources of financial assistance may be available for property protection measures; and,</li> <li>4. Basic facts about flood insurance.</li> </ol> <p>The outreach project must be delivered to all properties near repetitive loss areas, not just the properties on the FEMA repetitive loss property list. This may be done in one of two ways:</p> <ol style="list-style-type: none"> <li>1. An outreach project that is distributed each year to the properties in the repetitive loss areas that have insurable buildings. This project may also be submitted for credit as a targeted outreach project under Activity 330.</li> <li>2. An annual outreach project developed as part of a Program for Public Information (PPI) credited under Activity 330. The PPI Committee may conclude that there are more effective ways to inform repetitive loss area residents than mailing a notice once a year. The PPI may use a different approach, such as neighborhood meetings, provided the PPI document identifies the priority audience for the service and discusses the best way to reach that audience.</li> </ol>

**Table 18-12. MITIGATION PROJECT J**

	<p>For continued PPI credit, the committee must annually evaluate the effectiveness of the outreach projects and revise them as needed.</p> <p><b>2022 Update:</b> This project is still relevant, and repetitive loss outreach is part of the ongoing CRS project. The COVID-19 Pandemic delayed some components of this project.</p> <p><b>An example of the outreach project is on the following page.</b></p>
<b>Ideas for Integration:</b>	<ul style="list-style-type: none"> <li>• CRS Credit is awarded for RLP outreach</li> <li>• Hazard Mitigation Planning (future updates)</li> <li>• Integrate these targeted outreach efforts with other hazard outreach efforts in known hazard areas (i.e., SLR, flood zones, storm surge areas, SLR inundation zones, etc.)</li> </ul>
<b>Responsible Agency:</b>	Somerst County Planning & Zoning, Somerst County Emergency Services
<b>Potential Funding:</b>	Somerst County Resources, Hazard Mitigation Assistance Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC).
<b>Cost Estimate:</b>	Staff Time
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>• Outreach effort can be submitted for CRS credit under Activity 330.</li> <li>• Increased property owner's knowledge about prevention measures they can take as well as purchasing flood insurance.</li> </ul>
<b>Timeline:</b>	Ongoing
<b>Goals &amp; Objectives:</b>	<b>Goal 4:</b> Increase public understanding, support, and demand for hazard mitigation and preparedness.

Dear Resident:

You have received this letter because your property is in an area that has been flooded several times. Our community is concerned about repetitive flooding and has an active program to help you protect yourself and your property from future flooding, but here are some things you can do:

1. Check with the Building Department on the extent of past flooding in your area. Department staff can tell you about the causes of repetitive flooding, what the County is doing about it, and what would be an appropriate flood protection level. The staff can visit your property to discuss flood protection alternatives.
2. Prepare for flooding by doing the following:
  - Know how to shut off the electricity and gas to your house when a flood comes.
  - Make a list of emergency numbers and identify a safe place to go.
  - Make a household inventory, especially of basement contents.
  - Put insurance policies, valuable papers, medicine, etc., in a safe place.
  - Collect and put cleaning supplies, camera, waterproof boots, etc., in a handy place.
  - Develop a disaster response plan. See the Red Cross' website at [www.redcross.org](http://www.redcross.org) for information about preparing your home and family for a disaster.
  - Get a copy of Repairing Your Flooded Home. We have copies at the Public Works Department, or it can be found on the Red Cross' website, too.
3. Consider some permanent flood protection measures.
  - Mark your fuse or breaker box to show the circuits to the floodable areas. Turning off the power to the basement before a flood can reduce property damage and save lives.
  - Consider elevating your house above flood levels.
  - Check your building for water entry points, such as basement windows, the basement stairwell, doors, and dryer vents. These can be protected with low walls or temporary shields.
  - Install a floor drain plug, standpipe, overhead sewer, or sewer backup valve to prevent sewer backup flooding.
  - More information can be found at FEMA's website, [www.ready.gov/floods](http://www.ready.gov/floods).
  - Note that some flood protection measures may need a building permit and others may not be safe for your type of building, so be sure to talk to the Building Department.
4. Get a flood insurance policy.
  - Homeowner's insurance policies do not cover damage from floods. However, because the community participates in the National Flood Insurance Program, you can purchase a separate flood insurance policy. This insurance is backed by the Federal government and is available to everyone, even properties that have been flooded. Because the community participates in the Community Rating System, you will receive a reduction in the insurance premium.
  - Because your area is not mapped as a Special Flood Hazard Area, you may qualify for a lower-cost Preferred Risk Policy.
  - Some people have purchased flood insurance because it was required by the bank when they got a mortgage or home improvement loan. Usually, these policies just cover the building's structure and not the contents. During the kind of flooding that happens in your area, there is usually more damage to the furniture and contents than there is to the structure. Be sure you have contents coverage.
  - Don't wait for the next flood to buy insurance protection. In most cases, there is a 30-day waiting period before National Flood Insurance Program coverage takes effect.
  - Contact your insurance agent for more information on rates and coverage.



**Table 18-13. MITIGATION PROJECT K**

<b>Project Title:</b>	<b>Somerset County Water and Sewer Plan Update</b>
<b>Hazard:</b>	Drought and Extreme Heat
<b>Mitigation Category</b>	Local Planning and Regulation
<b>Location(s):</b>	Somerset County
<b>Project Discussion:</b>	<p>The State of Maryland requires counties to have and maintain its Water and Sewer Plan. Planning staff are responsible for reviewing both draft and adopted versions of County water and sewer plans and their amendments for consistency with County and municipal comprehensive plans, PFA eligibility, Growth Tier Map implications, and areas of other state interest. These plans must be reviewed by MDE.</p> <p>Update the Somerset County 2008 Comprehensive Water and Sewerage Plan. The Health Department could aid in estimating the number of existing shallow wells that are vulnerable to drought impacts. The Plan could be updated with information found within <i>Chapter 7: Drought and Extreme Heat</i> of the HMP.</p>
<b>Ideas for Integration:</b>	Consistent with land use planning efforts, Comprehensive Plan, Water Resources Element. The plan needs specific language for failing systems and extending public water treatment systems.
<b>Responsible Agency:</b>	DTCS, County Engineer, County Sanitary
<b>Partner(s):</b>	Health Department, Municipalities, Maryland Department of the Environment, Maryland Department of Planning, Municipalities.
<b>Potential Funding:</b>	American Rescue Plan (ARPA) Funds.
<b>Cost Estimate:</b>	\$100K, staff-time.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Protects the health, safety, and welfare of residents, businesses, and institutions</li> <li>Protects the quality of the environmental resources of the county, the state, and the Chesapeake Bay region</li> </ul>
<b>Timeline:</b>	Short-term (0-3 years)
<b>Goals &amp; Objectives:</b>	<p>Goal 1: Maintain and enhance Somerset County's Department of Communications and Emergency Service's capacity to continuously make Somerset County less vulnerable to hazards.</p> <p>Goal 2: Build and support Municipal capacity and commitment to become continuously less vulnerable to hazards.</p> <p>Goal 3: Improve coordination and communication with other relevant organizations.</p> <p>Goal 5: Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p>Goal 6: Ensure that public funds are used in the most efficient manner.</p> <p>Goal 7: Promote sustainable development to improve the quality of life.</p>


Table 18-14. MITIGATION PROJECT L (HIGH)	
<b>Project Title:</b>	<b>Utilize Electronic Message Boards for All-Hazards</b>
<b>Hazard:</b>	Drought and Extreme Heat, Winter, Wildfire
<b>Mitigation Category</b>	Education and Awareness Programs
<b>Location(s):</b>	Somerset County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	<p>Existing electronic message board signage should be utilized as possible for heat and drought information, winter weather advisories, and wildfire risk messaging to residents and visitors of the County. Presently, these message boards are placed at local fire departments and municipalities.</p> <p>Electronic messaging serves multiple purposes, primarily of which: it is eye-catching, it can serve multiple purpose (remotely programmable), and it is transportable (on wheels).</p> <p>While existing message boards can be utilized to their fullest capacity by enabling messaging for all-hazards, considerations could be made to acquire more electronic message boards if required.</p> 
<b>Ideas for Integration:</b>	Project has been initiated – collective voice of multiple departments to commissioners of need.
<b>Responsible Agency:</b>	State Highway Administration, County Roads and Waterways.
<b>Partner(s):</b>	Fire Departments, Police, EMS, Municipalities, UMES.
<b>Potential Funding:</b>	Hazard Mitigation Assistance Program (HMGP), Building Resilient Infrastructure and Communities (BRIC).
<b>Cost Estimate:</b>	Utilizing existing electronic message boards for all-hazards would cost time and effort. The cost of new matrix message boards (like pictured above) varies on size and functionality, but generally average around \$15,000 per unit.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Increased all-hazard awareness for residents and visitors reduces overall community vulnerability.</li> </ul>
<b>Timeline:</b>	Short-term (0-3 years)
<b>Goals &amp; Objectives:</b>	<p>Goal 1: Maintain and enhance Somerset County's Department of Communications and Emergency Service's capacity to continuously make Somerset County less vulnerable to hazards.</p> <p>Goal 3: Improve coordination and communication with other relevant organizations.</p> <p>Goal 4: Increase public understanding, support, and demand for hazard mitigation and preparedness.</p>

Table 18-15. MITIGATION PROJECT M	
<b>Project Title:</b>	<b>Critical Facilities 9-1-1 Address Identification</b>
<b>Hazard:</b>	Thunderstorm
<b>Mitigation Category</b>	Structural and Infrastructure Projects
<b>Location(s):</b>	Somerst County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	<p>Identify or assign 911 addresses for the four (4) critical utilities identified as potentially vulnerable to lightning strikes. Ensure that on-site address identification is visible and operational. Part of this project could include hiring a full-time GIS analyst for Emergency Services to help build a 9-1-1 database as part of the position's responsibilities.</p> <ul style="list-style-type: none"> <li>• Telecom Verizon Tower – Kingston Lane – County</li> <li>• Telephone – Charlotte Avenue, Crisfield</li> <li>• Telephone and Wireless Tower – N. of Potomac Street @ Myrtle Street – Crisfield</li> <li>• Telephone – Old Westover Marion Road – Princess Anne</li> </ul>
<b>Ideas for Integration:</b>	9-1-1 addressing is already required as part of issuing new building permits.
<b>Responsible Agency:</b>	Property Owners
<b>Partner(s):</b>	DTCS (initial addressing of new site when building permits are issued), Somerst County, Department of Emergency Services.
<b>Potential Funding:</b>	The responsibility is on property owners; however, funding would be required for GIS database for Emergency Services.
<b>Cost Estimate:</b>	Staff-time, plus a full-time GIS person for Emergency Services to build a 9-1-1 address database and maintain it as part of their duties.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>• Ensures that response time to the listed critical facilities in the event of a hazard event is timely and accurate.</li> </ul>
<b>Timeline:</b>	Short-term (0-3 years)
<b>Goals &amp; Objectives:</b>	<p>Goal 2: Build and support Municipal capacity and commitment to become continuously less vulnerable to hazards.</p> <p>Goal 5: Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p>Goal 6: Ensure that public funds are used in the most efficient manner.</p> <p>Objective 6.2: Use public funding to protect public services and critical facilities.</p>

Table 18-16. MITIGATION PROJECT N (HIGH)	
<b>Project Title:</b>	<b>Critical Facilities Infrastructure Hardening – Lightning Strikes</b>
<b>Hazard:</b>	Thunderstorm
<b>Mitigation Category</b>	Structural and Infrastructure Projects
<b>Location(s):</b>	Somerset County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	<p>Assess critical infrastructure, beginning with the 22 communication towers identified as vulnerable to lightning strikes, for proper grounding and surge protection. (see attached listing).</p> <p>This has been completed for the County DES 911 communication center. Properly grounded transmission system and surge protection should be installed to ensure service is not interrupted during a thunderstorm (i.e., lightning strike) event. Proper grounding and surge protection are small investments compared to the system replacement cost following a lightning strike.</p>
<b>Ideas for Integration:</b>	Not Applicable for Somerset County.
<b>Responsible Agency:</b>	Property Owners
<b>Partner(s):</b>	Department of Emergency Services, Municipalities.
<b>Potential Funding:</b>	Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC).
<b>Cost Estimate:</b>	Cost is dependent upon the type of surge protection system, in addition to tower height (150-600 feet), and total number of faces (usually 3 or 4). Individual quotes would be necessary per tower.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Ensures the continued functionality of a critical facility, particularly communications, after a lightning strike or some other hazard event which might cause a surge in power.</li> <li>Enables delivery of uninterrupted services.</li> <li>Avoids downtime and outages.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p>Goal 1: Maintain and enhance Somerset County’s Department of Communications and Emergency Service’s capacity to continuously make Somerset County less vulnerable to hazards.</p> <p>Goal 5: Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p>Goal 9: Protect public infrastructure and facilities.</p> <p>Objective 9.6: Ensure continuous power supply to critical and public facilities.</p>

**Excerpt from Chapter 8: Thunderstorm Table 8-4: Critical and Public Facilities At-Risk**

Location	Facility Type	Facility Name	Address
County	Utility	Verizon Telephone	10157 Deal Island Road
County	Utility	Telephone	20884 Caleb Jones Road
County	Utility	Marion 911 Tower	25873 Hudson Corner Road
County	Utility	Communication	28927 Irene Whittington Road
County	Utility	Telecom Tower	31330 Eden Allen Road
County	Utility	Telecom Verizon Tower	5719 Tullis Corner Road
County	Utility	Telephone	5722 Tulls Corner Road
County	Utility	Telecom Verizon Tower	Kingston Lane
Crisfield	Utility	Crisfield 911 Tower	600 W Main Street
Crisfield	Utility	Telephone	Charlotte Avenue
Crisfield	Utility	Telephone & Wireless Tower	N. Of Potomac St @ Myrtle Street
Princess Anne	Utility	Telephone	11732 Church St
Princess Anne	Utility	Telecom Verizon Tower	11916 Somerset Ave
Princess Anne	Utility	Telecom Tower	12611 Recycle Dr.
Princess Anne	Utility	Communication	27440 Mt Vernon Road
Princess Anne	Utility	Communication	28490 Deal Island Road
Princess Anne	Utility	State Police Telecom Tower	30581 Perry Road
Princess Anne	Utility	Telecom Verizon Tower	30880 W Post Office Road
Princess Anne	Utility	Telecom Tower	30939 McCormick Swamp Road
Princess Anne	Utility	Telecom Tower	31305 Peggy Neck Road
Princess Anne	Utility	Telecom Tower	9600 Arden Station Road
Princess Anne	Utility	Telephone	Old Westover Marion Road

Source: 2022 Somerset County Critical and Public Facility Database.



**Table 18-17. MITIGATION PROJECT O**

<b>Project Title:</b>	<b>Recruit Storm Spotters</b>
<b>Hazard:</b>	Tornado and High Wind, Thunderstorm, Flood
<b>Mitigation Category</b>	Education and Awareness Programs
<b>Location(s):</b>	Somerset County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	<p>SKYWARN was founded in the early 1970s in partnership with the National Weather Service. Storm spotters provide real time reports of hail size, wind damage, flash flooding, heavy rain, tornadoes, and waterspouts to effectively warn the public of inclement weather. Basic Requirements include:</p> <p>You must be at least 18 years old, be able to observe weather (though no instruments are required) and have access to a telephone or be an amateur radio operator so you can relay your reports. Note: You do not have to be an amateur radio operator to be a SKYWARN SPOTTER. You also must take a SKYWARN class which is a free, informative, fun filled 2 hour seminar that teaches you the basics of how SKYWARN operates, how to spot and report severe weather. After completing the class, you will receive a spotter ID number. All SKYWARN Spotter Training Courses are free and are held in the Spring and Fall.</p> <p>Establish a program with a goal to encourage more people to become storm spotters; "Storm Spotters Encouragement Program." This could borrow heavily from, or fold into entirely with, the NWS Skywarn Storm Spotter Program.</p>
<b>Ideas for Integration:</b>	The lead entity for a coordinated outreach effort could generate approved social media content that is then dispersed to other departments, organizations, and businesses in the County.
<b>Responsible Agency:</b>	Multiple groups could encourage the recruitment of local storm spotters, but a coordinated effort could be led by Emergency Services. Wicomico County Emergency Services does spotter training, but no known Somerset resident spotters.
<b>Partner(s):</b>	Retired residents, High schools (focus on senior class due to age requirements), UMES, Fire, Police, EMS, Health Departments.
<b>Potential Funding:</b>	NWS offers Skywarn Training for free.
<b>Cost Estimate:</b>	Training via NWS SKYWARN is free and typically lasts about 2 hours, and staff-time.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Additional trained storm spotters would likely lead to an increase in the quality and quantity of storm event data available at the County-level. This would, in turn, provide a better view of the frequency and intensity of various types of natural hazards, including floods, tornadoes, high wind events, and thunderstorms.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p>Goal 1: Maintain and enhance Somerset County's Department of Communications and Emergency Service's capacity to continuously make Somerset County less vulnerable to hazards.</p> <p>Goal 2: Build and support Municipal capacity and commitment to become continuously less vulnerable to hazards.</p>

**Table 18-17. MITIGATION PROJECT O**

	Goal 4: Increase public understanding, support, and demand for hazard mitigation and preparedness.
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Table 18-18. MITIGATION PROJECT P

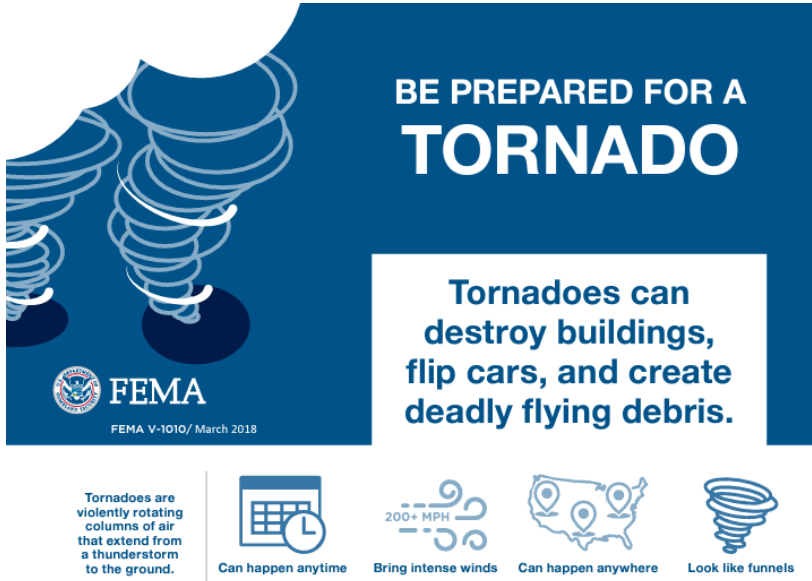
<b>Project Title:</b>	<b>Promote Water Hazard Information to Tourists</b>
<b>Hazard:</b>	Tornado and High Wind
<b>Mitigation Category</b>	Education and Awareness Programs
<b>Location(s):</b>	Somerset County
<b>Project Discussion:</b>	<p>Considering the County's proximity to large expanses of water, coordinated public outreach efforts should be initiated in partnership with the Coast Guard, local businesses, and local watermen to educate tourists on the potential dangers of waterspouts and squalls and other risks associated with being on or near the water. The Coast Guard in Crisfield is already prepared to respond to these types of emergencies and watermen are very aware of these risks.</p>  <p>Outreach efforts can be as simple as posting ready-made warnings on approved social media platforms, such as the following guides provided by FEMA:</p> <ul style="list-style-type: none"> <li>• <a href="#">A Guide for Alerts and Warnings</a> (this includes tornadoes, as well as 12 steps to take for “sudden” hazards, such as squalls)</li> <li>• <a href="#">Be Prepared for a Tornado</a></li> <li>• <a href="#">12 Ways to Prepare</a> (ready.gov)</li> </ul> <p>These same ready-made guides, signs, and posters could also be distributed to coastal businesses and tourist destinations, ferry stations (e.g., Smith Island), and local watermen.</p>
<b>Ideas for Integration:</b>	Coordination of outreach with other agencies, which promotes Goal 3, Objectives 3.1.
<b>Responsible Agency:</b>	Emergency Medical Services

Table 18-18. MITIGATION PROJECT P	
<b>Partner(s):</b>	Coast Guard, Local watermen, local businesses (particularly tourist destinations), Health Department, Fire Departments, Red Cross, DNR (boating safety), and EDC (business coordination).
<b>Potential Funding:</b>	Staff-time across multiple departments.
<b>Cost Estimate:</b>	FEMA has a wealth of free resources and kits available for most hazard scenarios. Staff time would be required to coordinate the initial outreach efforts, social media messaging, printing of informational resources, etc.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Increased awareness of sudden coastal storm hazards protects residents, visitors, and businesses.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p>Goal 1: Maintain and enhance Somerset County's Department of Communications and Emergency Service's capacity to continuously make Somerset County less vulnerable to hazards.</p> <p>Goal 3: Improve coordination and communication with other relevant organizations.</p> <p>Objective 3.1: Establish and maintain lasting partnerships.</p> <p>Objective 3.2: Streamline policies to eliminate conflicts and duplication of effort.</p> <p>Objective 3.3: Incorporate hazard mitigation into activities of other organizations.</p> <p>Goal 4: Increase public understanding, support, and demand for hazard mitigation and preparedness</p>

Table 18-18. MITIGATION PROJECT Q (HIGH)	
<b>Project Title:</b>	<b>Inclusive Public Messaging for All-Hazards</b>
<b>Hazard:</b>	All-Hazards
<b>Mitigation Category</b>	Education and Awareness Programs
<b>Location(s):</b>	Somerset County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	In line with recent public outreach efforts to the Hispanic community in the County (e.g., code red system can be set to Spanish, news releases sent to Hispanic radio stations), social media outreach (e.g., Facebook) and other media messages should be conducted in both English and Spanish for all hazard events as they occur. This includes flood, coastal hazards, shoreline erosion & sea level rise, drought & extreme heat, thunderstorm, tornado & high wind, winter storm, wildfire, hazmat, major transportation accident, epidemic, and earthquake.
<b>Ideas for Integration:</b>	By virtue of the partnered team effort this project requires, this project would be integrated in multiple departments throughout the County and its Municipalities.
<b>Responsible Agency:</b>	Department of Emergency Services in partnership with entities listed below.
<b>Partner(s):</b>	Municipalities, Health Department, Red Cross.
<b>Potential Funding:</b>	Free outreach resources exist online from FEMA and ready.gov, and the County already has translators.
<b>Cost Estimate:</b>	This project would be efficient and cost staff-time only to coordinate outreach efforts.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Utilizing the most inclusive alert, notification, and communications efforts ensures that the largest proportion of residents and visitors is notified of a hazard event.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p>Goal 1: Maintain and enhance Somerset County's Department of Communications and Emergency Service's capacity to continuously make Somerset County less vulnerable to hazards.</p> <p>Goal 3: Improve coordination and communication with other relevant organizations.</p> <p>Goal 4: Increase public understanding, support, and demand for hazard mitigation and preparedness.</p>



Table 18-20. MITIGATION PROJECT R

<b>Project Title:</b>	<b>Mitigate Winter Storm Impacts to At-Risk Essential Facilities</b>
<b>Hazard:</b>	Winter Storm
<b>Mitigation Category</b>	Structural and Infrastructure Projects
<b>Location(s):</b>	Somerlet County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	<p>Essential Facilities identified as especially vulnerable to high snow-loads (built prior to 1967 and have a flat roof) should be assessed to ensure proper maintenance is enforced to mitigate winter storm related issues. Facilities include:</p> <ul style="list-style-type: none"> <li>○ Marion Fire Department (County)</li> <li>○ Crisfield High School (Crisfield)</li> <li>○ Crisfield Fire Department (Crisfield)</li> <li>○ EOC (Princess Anne)</li> <li>○ Princess Anne Elementary School (Princess Anne)</li> <li>○ Greenwood Elementary School (Princess Anne)</li> <li>○ TidalHealth FamilyLab (Princess Anne)</li> <li>○ UMES (mixture of flat and sloped roofs)</li> </ul>
<b>Ideas for Integration:</b>	Declaration of Emergencies.
<b>Responsible Agency:</b>	Essential Facilities identified as at-risk (see above)
<b>Partner(s):</b>	Department of Emergency Services, DTCS, and Municipalities.
<b>Potential Funding:</b>	Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC).
<b>Cost Estimate:</b>	Cost is site and project dependent, based on what sorts of maintenance or repair need completed.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>• Ensuring proper maintenance of essential facilities prone to winter weather (i.e., snow loads) ensures that these facilities continue to operate effectively during and after a winter hazard event.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p>Goal 5: Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p>Goal 9: Protect public infrastructure and facilities.</p>

Table 18-21. MITIGATION PROJECT S (HIGH)	
<b>Project Title:</b>	<b>Roadway Tree Debris Maintenance</b>
<b>Hazard:</b>	Winter Storm, Tornado and High Wind, Thunderstorm
<b>Mitigation Category</b>	Natural Systems Protection
<b>Location(s):</b>	Somerset County, City of Crisfield, Town of Princess Anne
<b>Project Discussion:</b>	<p>Identify and prioritize locations along roadways throughout the County where the maintenance or removal of vegetation such as dead trees or branches would be useful in mitigating potential impacts to utility lines, properties, or residents prior to a winter storm, high wind, or thunderstorm event.</p> <p>Selective clearing and trimming of trees along major right of ways would reduce the risk of blocked roads or downed power lines during a hazard event. This action could be undertaken by or in partnership with the SHA, County, and Municipalities. The SHA has recently performed trimming and clearing of trees along the U.S. Route 13 right of way.</p>
<b>Ideas for Integration:</b>	Capital Improvement Plan, Debris Management Plan, MDOT Transportation Priority Letter (Annual).
<b>Responsible Agency:</b>	Roadways dependent, as follows: Roads and Waterways Department (County Roads), SHA (State Roads), Municipalities (City Streets)
<b>Partner(s):</b>	Local electric companies, Somerset County Maintenance Department, Private Property Owners/Homeowners, Landfill (for disposal).
<b>Potential Funding:</b>	Building Blocks for Sustainable Communities (EPA), RAISE Discretionary Grants (USDOT).
<b>Cost Estimate:</b>	Project dependent, based on location, type, and amount of tree debris.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>• Clearing and maintaining right of ways of tree and vegetative debris prior to a hazard event keeps transportation routes clear for residents and visitors.</li> <li>• One less barrier for emergency response personnel to travel to and from a hazard incident.</li> <li>• Dead branches are less likely to create blockages along the road, or damage public or private property during high winds, when they can become projectiles.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p>Goal 5: Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p>Goal 9: Protect public infrastructure and facilities.</p> <p>Objective 9.2: Improve routes utilized in flood hazard events to mitigate life-threatening road conditions and road closures.</p> <p>Objective 9.3: Mitigate problem road sections within the County and Municipalities.</p>

**Table 18-22. MITIGATION PROJECT T**


<b>Project Title:</b>	<b>Install Dry Fire Hydrants at Essential Facilities within Wildland Urban Interface</b>
<b>Hazard:</b>	Wildfire
<b>Mitigation Category</b>	Property Protection
<b>Location(s):</b>	Somerset County, Town of Princess Anne, City of Crisfield
<b>Project Discussion:</b>	<p>Facilities are more prone to wildfire if they are within the Wildland Urban Interface (WUI). The WUI is comprised of areas where development meets and is encompassed by large tracts of forests. Communities will also be at more risk if they lack access to municipal water systems.</p> <p>To reduce fire risk in rural areas, consider dry fire hydrants as appropriate. In rural areas where municipal water systems are not available, dry hydrants are used to supply water for fighting fires. A dry hydrant is analogous to a standpipe. A dry hydrant is usually an unpressurized, permanently installed pipe that has one end below the water level of a lake or pond. This end usually has a strainer to prevent debris from entering the pipe. The other end is above ground and has a hard sleeve connector. needed, a pumper fire engine will pump from the lake or pond by drafting water.</p>  <p>Dry fire hydrants are being installed at County waterway facilities as upgrades occur, therefore essential facilities in/nearby locations identified as especially prone to wildfire (i.e., Town of Princess Anne) and/or without access to the municipal water system should consider installing dry hydrants near waterways, where possible. The communities of Eden and West Pocomoke are also identified as being within the WUI, but no essential facilities are located in these immediate areas. Community Land Use/Land Cover for areas of the County is included on the attached reference map.</p> <p>Pictured dry-hydrants at County waterway facilities include Rumbley, Shelltown, and Webster's Cove:</p> <p>MFRI Center UMES (Bridge Installation)</p>

Table 18-22. MITIGATION PROJECT T




	 <p>Rumbley Dry Fire Hydrant.</p>  <p>Websters Cove Dry Fire Hydrant.</p>  <p>Shelltown Dry Fire Hydrant.</p>
<b>Ideas for Integration:</b>	Community Wildfire Protection Plan, GIS layer for mapping.
<b>Responsible Agency:</b>	Department of Emergency Services.
<b>Partner(s):</b>	Fire Departments, Roads and Waterways, Department of Natural Resources.
<b>Potential Funding:</b>	Community Wildfire Defense Grant in conjunction with a Community Wildfire Protection Plan, Volunteer Fire Assistance Program, Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC).
<b>Cost Estimate:</b>	Dry hydrants themselves will run anywhere from \$1,000 to \$2,000 depending upon size and parts.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Added fire protection in areas lacking access to municipal water systems.</li> </ul>
<b>Timeline:</b>	Short-term (0-3 years)
<b>Goals &amp; Objectives:</b>	<p>Goal 5: Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p>Goal 8: Prevent destruction of forests and structures in the Urban Wildland Interface.</p> <p>Goal 9: Protect public infrastructure and facilities.</p>

Table 18-23. MITIGATION PROJECT U (HIGH)	
<b>Project Title:</b>	<b>Prioritize Removal of Blighted Structures Within the Wildland Urban Interface</b>
<b>Hazard:</b>	Wildfire
<b>Mitigation Category</b>	Property Protection
<b>Location(s):</b>	Somerset County
<b>Project Discussion:</b>	<p>Facilities and structures are more prone to wildfire if they are within the Wildland Urban Interface (WUI). In Somerset County, the WUI is comprised of areas where development meets and is encompassed by large tracts of forests. Individual efforts to reduce wildfire risk to homes and other structures are rendered much less effective when nearby properties are left over-grown and fire prone, therefore blighted and abandoned structures contribute to increased risk if left unattended or unmitigated.</p> <p>The County Department of Planning has received a State grant for the removal of blighted properties. Continue the removal of blighted structures and consider prioritizing structures near large tracts of forested areas or along the wildland urban interface to aid in reducing wildfire risk. Land Use/Land Cover for the County is included on the attached reference map.</p>
<b>Ideas for Integration:</b>	This effort can be integrated with ongoing/existing removal of blighted or abandoned properties.
<b>Responsible Agency:</b>	DTCS.
<b>Partner(s):</b>	Emergency Services, Municipalities, local property owners as needed, Fire Department, Landfill (for disposal).
<b>Potential Funding:</b>	Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC).
<b>Cost Estimate:</b>	If coordinated with current available grant resources, the costs would primarily be time and staff-time.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>• Squatting will be lessened as abandoned structures are removed.</li> <li>• Fire risk is lessened.</li> <li>• New development opportunities may become available.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p>Goal 5: Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p>Goal 8: Prevent destruction of forests and structures in the Urban Wildland Interface.</p> <p>Goal 9: Protect public infrastructure and facilities.</p>



**Table 18-24. MITIGATION PROJECT V**

<b>Project Title:</b>	<b>Fuel Oil and Propane Tank Maintenance Education</b>
<b>Hazard:</b>	HazMat, Flood, Coastal Hazards, Earthquake
<b>Mitigation Category</b>	Structural and Infrastructure Projects & Education and Awareness Programs
<b>Location(s):</b>	Somerset County, Fixed HazMat Sites, Private Property
<b>Project Discussion:</b>	<p>Reach out to private property owners and educate owners regarding proper maintenance and tie-down of fuel oil and propane tanks. Anchor kits are available for fuel oil and propane tanks and are important in coastal and low-lying areas that are prone to storm surge or sea level rise. Unanchored tanks, or improperly anchored tanks, are prone to being moved by flood waters, high winds, and even earthquakes. The Maryland Department of the Environment has available many outreach materials regarding above ground storage tanks including: “Inspection of Heating Oil Aboveground Storage Tanks” and “Recommended Practices for Owners of Home Heating Oil Storage Tank Systems”.</p> <p>The MDE’s Oil Control Program (OCP) does not regulate residential heating oil tanks normally, therefore it recommends that homeowners be knowledgeable and diligent with regard to their heating oil storage systems. Underground storage tanks with a 1,100 gallon capacity or less that are used to store petroleum products at a private residence or farm are exempt from most Maryland oil control regulations, however they must comply with closure requirements when no longer used as a fuel source (COMAR 26.10.10). The OCP offers many ready-made “residential heating oil” fact sheets and on its website: <a href="http://mde.maryland.gov/programs/land/OilControl/Pages/ResidentialHeatingOil.aspx">mde.maryland.gov/programs/land/OilControl/Pages/ResidentialHeatingOil.aspx</a></p>
<b>Ideas for Integration:</b>	Flood outreach efforts could be coordinated with these efforts.
<b>Responsible Agency:</b>	DTCS (County), Maryland Department of the Environment (State).
<b>Partner(s):</b>	Property Owners, Emergency Services, Health Department, Maryland’s Oil Control Program (OCP) for larger (non-residential) storage capacities, fuel companies (delivering), EDC (business coordination).
<b>Potential Funding:</b>	Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), Residential Heating Oil Tank System Site Rehabilitation Reimbursement Program
<b>Cost Estimate:</b>	Staff-time – much of the outreach materials exist already.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Properly maintained and secured oil and propane tanks help ensure continuity of services during a hazard.</li> <li>Properly secured tanks reduce the risk of a HazMat incident.</li> </ul>
<b>Timeline:</b>	Short-term (0-3 years)
<b>Goals &amp; Objectives:</b>	<p>Goal 4: Increase public understanding, support, and demand for hazard mitigation and preparedness.</p> <p>Objective 4.2: Heighten public awareness of natural hazards.</p> <p>Objective 4.3: Publicize and encourage the adoption of appropriate hazard mitigation actions.</p> <p>Goal 5: Protect existing and future properties (residential, commercial, public, and critical facilities).</p>

**Table 18-25. MITIGATION PROJECT W**

<b>Project Title:</b>	<b>Local Strategic Highway Safety Plan Development</b>
<b>Hazard:</b>	Major Transportation Accident
<b>Mitigation Category</b>	Local Planning and Regulation & Education and Awareness Programs
<b>Location(s):</b>	Somerset County
<b>Project Discussion:</b>	<p>The Maryland Strategic Highway Safety Plan (SHSP) is a statewide, coordinated, comprehensive, traffic safety plan to reduce highway fatalities and serious injuries on all public streets and highways. The State is currently implementing its fifth plan, covering 2021-2025. It is suggested that Maryland's 24 jurisdictions develop local strategic plans to complement the State plan. A notable portion of serious crashes occur on roads that are maintained by local departments of public works or transportation and are under the authority of local police departments and sheriff's offices. The implementation of local SHSPs ensures that the entire roadway network and population are considered for safety countermeasures.</p> <p>Develop a Local Strategic Highway Safety Plan as encouraged by the State to work towards a goal of zero highway fatalities. Local Strategic Highway Safety Plans (LSHSP) can be developed in coordination with the Maryland Highway Safety Office. Local jurisdictions are encouraged to develop their own SHSP that takes on the principles and overall goals of the Maryland SHSP while addressing specific concerns in their jurisdictions. PRO Managers offer support and resources to local jurisdictions that are interested in creating their own plans. Contact information to start: <a href="https://zerodeathsmd.gov/resources/resource-form/">https://zerodeathsmd.gov/resources/resource-form/</a>.</p>
<b>Ideas for Integration:</b>	State Highway Administration Traffic Management Plan.
<b>Responsible Agency:</b>	Roads and Waterways, Planning and Zoning
<b>Partner(s):</b>	State PRO Manager, Emergency Services, Planning and Zoning, Roads and Waterways, Police Departments, Sheriff's Office, Municipalities, members of the public, businesses.
<b>Potential Funding:</b>	The Maryland Highway Safety Office has grants for both (1) Law Enforcement and (2) General Highway Safety Activities for eligible agencies, including local governments.
<b>Cost Estimate:</b>	Staff-time to write plan, depending on grant funding utilized from MDOT and other sources
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Improved roadway safety can reduce the number and severity of crashes locally, reduce injuries and fatalities, reduce local health care costs, improve local health.</li> <li>Reduction in property damage.</li> </ul>
<b>Timeline:</b>	Short-term (0-3 years)
<b>Goals &amp; Objectives:</b>	<p>Goal 1: Maintain and enhance Somerset County's Department of Communications and Emergency Service's capacity to continuously make Somerset County less vulnerable to hazards.</p> <p>Goal 2: Build and support Municipal capacity and commitment to become continuously less vulnerable to hazards.</p> <p>Goal 9: Protect public infrastructure and facilities.</p>

**Table 18-26. MITIGATION PROJECT X**

<b>Project Title:</b>	<b>Emerging Infectious Diseases Community Preparedness Outreach</b>
<b>Hazard:</b>	Emerging Infectious Diseases
<b>Mitigation Category</b>	Education and Awareness Programs
<b>Location(s):</b>	Somerset County
<b>Project Discussion:</b>	<p>A. Continuing to provide public health information from the CDC and Maryland Department of Health on somersethealth.org regarding current pandemics such as COVID-19 and new outbreaks such as Monkeypox is important to mitigate the impacts of these diseases. Coordinating this information for release via other County and Municipal operated channels (i.e., print, web, or social media) will help maximize the release of important health announcements and information.</p> <p>AND</p> <p>B. Ensure that all health-related announcements, information, and materials are accessible to all socially vulnerable groups, including but not limited to those: over the age of 65, under the age of 5, with limited English-speaking proficiency, with disability, and those at or below the poverty line.</p>
<b>Ideas for Integration:</b>	Municipal websites and social media can also be utilized to spread coordinated messages relating to emerging infectious diseases, COVID-19 After Action Reports.
<b>Responsible Agency:</b>	Somerset County Health Department.
<b>Partner(s):</b>	Dept of Emergency Services, Town of Princess Anne, City of Crisfield.
<b>Potential Funding:</b>	Staff-time.
<b>Cost Estimate:</b>	Staff-time.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Increased and/or sustained public outreach and health announcements will create a better-prepared community in terms of emerging infectious diseases hazards. Ensuring that health-related outreach and announcements are accessible to all groups (e.g., dispersed in multiple formats and languages) will also help raise community awareness and increase equity while decreasing vulnerability.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p>Goal 2: Build and support Municipal capacity and commitment to become continuously less vulnerable to hazards.</p> <p>Goal 3: Improve coordination and communication with other relevant organizations.</p> <p>Goal 4: Increase public understanding, support, and demand for hazard mitigation and preparedness.</p>

Table 18-27. MITIGATION PROJECT Y	
<b>Project Title:</b>	<b>Adopt Automated Phishing Defense Software</b>
<b>Hazard:</b>	Cyber Attack
<b>Mitigation Category</b>	Local Planning and Regulation
<b>Location(s):</b>	Somerset County, City of Crisfield, Princess Anne
<b>Project Discussion:</b>	<p>According to a 2021 report by the Anti-Phishing Working Group (APWG) Phishing Activity Trends Report for Q4 2021, phishing attacks hit an all-time high in 2021. More than 300,000 attacks were recorded in December of 2021, which means these types of attacks are more than three times as common as they were less than two years ago.</p> <p>These attacks can be difficult to stop as the emails typically show no signs of being malicious. Many originate from hijacked business email accounts, a tactic known as business email compromise or BEC. Plus, attackers often go a step further and host fake login pages (phishing sites) on Microsoft Azure custom domains. For example, these could end in “windows.net,” making the site seem legitimate and the scam even more difficult to spot.</p> <p>In Cofense’s Q3 2021 Phishing Review, the company reported that “93% of modern breaches involve a phishing attack”. This reveals just how prevalent the problem of phishing with keyloggers, and information stealers remains. Human intelligence remains the best defense against phishing attacks; in cases where users are empowered to report suspicious emails, attacks are often able to be swiftly averted.</p> <p>Somerset County, municipal governments and departments, as well as private businesses, are encouraged to utilize automated add-on software in unison with existing email software. For example, Know2Be, offers security tools and add-ons (with a focus on phishing prevention) that are compatible with Microsoft Outlook. PhishER, a software add-on from Know2Be, allow employees to report suspicious emails in the click of a button, and allows employers to simulate phishing attacks as a primary means to gauge their internal vulnerability. There are other companies that offer similar software capabilities, so each department or organization will have to determine what works best for them based on their unique needs.</p>
<b>Ideas for Integration:</b>	This could be integrated into existing or planned local Cyber Disruption Plans, Cyber Awareness Training, and other cyber-security planning documents.
<b>Responsible Agency:</b>	County Information Technology EDC (business coordination) for government, departments, and private businesses/organizations.
<b>Partner(s):</b>	Municipalities, Individual businesses or organizations
<b>Potential Funding:</b>	American Rescue Plan Act (ARPA), Department of Homeland Security Grant Program, County funds.
<b>Cost Estimate:</b>	Free trials and demos are available from most security software companies. Quotes are typically required to determine actual cost and are based on number of seats/users. Discounts are usually provided as the number of users increases. A base-level estimation for 101-500 seats/users is \$11.00 per seat per year, or about \$1,111-\$5,500 a year.

Table 18-27. MITIGATION PROJECT Y	
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>• Employees/Users can flag suspicious emails</li> <li>• IT departments are able to gauge how “at-risk” their organization might be</li> <li>• Increased security lessens the risk of a security breach, which protects private data of all types, including personal, medical, and financial information.</li> <li>• Avoid loss of productivity due to network loss or lockout.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p>Goal 9: Protect public infrastructure and facilities.</p> <p>Objective 9.4: Mitigate disruption of County and Municipal services and security issues from cyber-attacks.</p>



Table 18-28. MITIGATION PROJECT Z	
<b>Project Title:</b>	<b>Protect Wells From Contamination by Flooding</b>
<b>Hazard:</b>	Emerging Infectious Diseases, Flood
<b>Mitigation Category</b>	Education and Awareness Programs
<b>Location(s):</b>	Somerset County
<b>Project Discussion:</b>	<p>Wells are direct access routes to drinking water aquifers. If a well is flooded, floodwaters will get into the aquifer, creating a polluted water supply. If floodwaters reach a well or the top of a well casing, the assumption can be made that the well is contaminated. Water from the well should not be used for drinking, cooking, or brushing teeth.</p> <p>Well head elevations should be inventoried and where feasible raised above the Federal Emergency Management Agency (FEMA) base flood elevation. Well head covers may also be utilized as a preventative measure to mitigate flood contamination. Standard well caps usually have bolts around the side of the cap that hold the cap onto the top of the casing. Note: a watertight cap is needed.</p> <p>Outreach should be conducted for rural properties without access to the municipal water supply and for which flooding issues are known. The County Health Department offers well testing after a flood event.</p>
<b>Ideas for Integration:</b>	Include in public outreach materials for floodplain management and health related disaster information.
<b>Responsible Agency:</b>	Somerset County Health Department
<b>Partner(s):</b>	Maryland Department of the Environment, MD Geological Survey, Somerset County Planning and Zoning, Private Property Owners.
<b>Potential Funding:</b>	Somerset County Health Department, Hazard Mitigation Assistance Grants.
<b>Cost Estimate:</b>	\$50 per testing request, the Health Dept. has waived the fee in the past as necessary. Cost of staff and lab cost.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Helps provide safe drinking water to residents.</li> </ul>
<b>Timeline:</b>	Ongoing.
<b>Goals &amp; Objectives:</b>	<p>Goal 4: Increase public understanding, support, and demand for hazard mitigation and preparedness</p> <p>Goal 5: Protect existing and future properties (residential, commercial, public, and critical facilities).</p> <p>Goal 9: Protect public infrastructure and facilities.</p>

Table 18-29. MITIGATION PROJECT ZZ

<b>Project Title:</b>	<b>Upgrade Existing Signage at County Railway-Crossings</b>
<b>Hazard:</b>	Major Transportation Accident, HazMat
<b>Mitigation Category</b>	Structural and Infrastructure Projects & Education and Awareness Programs
<b>Location(s):</b>	Somerlet County, Princess Anne, City of Crisfield
<b>Project Discussion:</b>	In partnership with railroad owners and state agencies, maintain and upgrade Somerlet County's (dozen) highway-railway crossings to make them safer for commuter and pedestrian crossing. Upgrades include, but are not limited to, adding new signal features that will help drivers move away from the track before a train arrives, modernizing railway crossings with improved lighting and other safety features, improving accessibility and making warning system upgrades, installing electronic warning signs, and installing gates and upgrading pavement markings at railway crossings.
<b>Ideas for Integration:</b>	MDOT Transportation Priority Letter (Annual), Future Local Strategic Highway Plan.
<b>Responsible Agency:</b>	Roads and Waterways Department
<b>Partner(s):</b>	Delmarva Central, Maryland Department of Transportation, Municipalities, Mountaire Farms (Benson Road), and BOE (bus contractor coordination).
<b>Potential Funding:</b>	USDOT Commuter Authority Rail Safety Improvement (CARSI) Grants, RAISE Transportation Discretionary Grants.
<b>Cost Estimate:</b>	The average cost to upgrade by adding lights and crossing arms is between \$250,000 to \$300,000 for each project.
<b>Benefits (Losses Avoided):</b>	<ul style="list-style-type: none"> <li>Crossing at highway-railway crossings would be safer for commuters and pedestrians.</li> <li>Less likelihood for an accident at a railway crossing.</li> </ul>
<b>Timeline:</b>	Long-term (5 years +)
<b>Goals &amp; Objectives:</b>	<p>Goal 1: Maintain and enhance Somerlet County's Department of Communications and Emergency Service's capacity to continuously make Somerlet County less vulnerable to hazards.</p> <p>Goal 4: Increase public understanding, support, and demand for hazard mitigation and preparedness</p> <p>Goal 9: Protect public infrastructure and facilities.</p>