# SOMERSET COUNTY NUISANCE FLOODING PLAN

Flooding is one of the most common natural hazards experienced in Somerset County it may be widespread or isolated, developing slowly or quickly. Nuisance flooding is a more specific and commonplace phenomenon which dictates a less significant response and threatens the community in less intrusive ways. This plan address nuisance flooding and nuisance flood policies throughout Somerset County.

Nuisance Flood Plan 11.06.2024

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#### I. Background

Maryland Senate Bill (SB) 1006 states that "on or before July 1, 2019, a local jurisdiction that experiences nuisance flooding shall develop a plan to address nuisance flooding." The legislation further specifies that the plan must be submitted to the Maryland Department of Planning, published on the local jurisdiction's website, and updated at least every five years.

#### II. Introduction

Flooding is one of the most common natural hazards experienced in Somerset County. Depending on the circumstances, flooding may be widespread or isolated, developing slowly or quickly. It may take the form of coastal, overland, or flash flooding. Floods may originate from the Bay and its tributaries, riverine flooding or spring tides occurring during the full or new moon. Nuisance flooding is a more specific and commonplace phenomenon which dictates a less significant response and threatens the community in less intrusive ways.

The National Oceanic and Atmospheric Administration (NOAA), defines nuisance flooding, or high tide flooding, as "flooding that leads to public inconveniences such as road closures. It is increasingly common as coastal sea levels rise." The language of SB 1006 refers to nuisance flooding as: "high-tide flooding that causes public inconvenience." Nuisance flooding is typically unrelated to particular storm events, though it may be exacerbated by long-duration wind events of passing storm systems. As such, it is frequently referred to as "sunny day flooding."

Nuisance flooding is capable of disrupting daily activities through a variety of mechanisms, such as the closure of roads due to high water, the inundation of yards and parks, and the impairment of engineered and natural drainage systems. Currently, these disruptions typically occur for a period of several hours and then abate. However, as a changing climate drives sea levels higher and precipitation events to greater severity, these repeated "nuisance" impacts will become significant stressors on the infrastructure, emergency response, public health, and fabric of the community.

Somerset County has 1100 miles of water front property and nuisance flooding occurs most predominately in locations near or adjacent to major bodies of water. Nuisance flooding is common on residential and commercial properties near the Tangier Sound, Manokin River, Pocomoke River, Pocomoke Sound, Monie Bay, Wicomico River and both the Big and Little Annemessex Rivers. Elsewhere in the County, nuisance flooding is experiences as debris from farm fields washes into ditches and eventually settles on roadways as ditches overflow. Culverts in low-lying areas may have difficulty conveying water adequately, causing ponding on low-lying roadways throughout the County.

#### III. Preparing for Nuisance Flooding

Because nuisance flooding is a complex problem, strong partnerships between planning, public works, emergency management, and geographic information systems (GIS) are necessary for Somerset County to properly prepare for the impact of nuisance flooding. In particular, it is important that state and local departments, agencies and municipalities collaborate to inventory and map chronically inundated areas.

As part of the nuisance flood planning process for Somerset County, the Hazard Mitigation Committee created a thorough inventory of know flood hazard areas, which can be found as Appendix A to this document. Departments involved in the nuisance flood planning and inventory process can be found in Appendix B of this document.

In addition to mapping, accurate flood forecasting and warning is critical to the safety and preparedness of a community. Weather forecast data is received from the National Weather Service (NWS) forecasting office in Wakefield, Virginia. Critical tide information is received from the NOAA tide gauge stations at Crisfield County Dock, as well as additional gauges elsewhere throughout the Chesapeake Bay. These gauges allow Somerset County to be aware of and prepare for possible nuisance flooding impacts.

The Somerset County Department of Emergency Services maintains a close relationship with NWS Wakefield, receiving notification of special hazards and watches or warning of severe weather before the community is impacted. The timeliness of these severe weather alerts is critical when the potential for public safety impacts exist, such as in flood situations. Additionally, it is the responsibility of the Somerset County Department of Emergency Services to disseminate public safety information via Code RED, the County's mass notification system, as well as local tv, radio, and social media outlets. When nuisance flooding is anticipated, it may be necessary for Somerset County Emergency Services to initiate a message to flood hazard areas via CodeRED, local tv, radio, and social media outlets with details about flood severity, duration, or impacts such as road closures.

# IV. Responding to Nuisance FloodingA. Emergency Response

Thresholds are maintained by Somerset County which direct a set of actions based on a particular inundation level or frequency of flooding. These thresholds are meant to supplement actions directed by the Somerset County Emergency Operations Plan.

Threshold	Response Level	Required Action
Forecast data from the NWS or	Level I – Public Warning	Make the public and first
NOAA tide gauge indicates		responders aware of nuisance
likely nuisance flooding impacts		flooding threat via mass
		notification, emails, media and
		social media, etc.
Flood waters are present below	Level II – Monitor	Deploy DPW and SHA personnel to
nuisance levels and are rising	inundation	monitor flood levels as needed and
		place high water signs at impacted
		locations. Notify first responders.

Flood waters are high enough	Level III – Flood Response	Place additional DPR and SHA
to warrant temporary road		personnel on standby, close roads
closures		and reroute traffic as flooding
		reaches hazardous levels. Notify
		first responders & stage Swiftwater
		Rescue teams to support them.

When flooding reaches such a severity that life safety, critical infrastructure, and key resources are threatened, "nuisance" flooding levels have been exceeded. Below are response concepts consistent with the Somerset County Emergency Operations Plan which may become necessary as flood waters rise beyond nuisance levels.

#### Response

- Lifesaving activities
- Incident containment
- Public health concerns
- Maintenance of transportation routes
- Maintenance of critical facilities
- Public warning mechanisms
- Responder health and safety
- Media and VIP management
- Control and Coordination of operations
- Provision of transport, shelter and documentation of displaced persons
- Restoration of normalcy

#### Recovery

- Transition from life-saving to restoration
- Facilitate the restoration of systems to normalcy
- Assess damage and return vital life support systems to minimum operation standards
- Collate financial cost of the event
- Legal implications, claim investigating
- Debrief and compilation of final report
- Community and restoration of services

#### B. Documentation

Documenting the extent and impacts of nuisance flooding is critical to public safety and the long-term resilience of Somerset County. This information will be documented and updated on a regular basis for emergency planning purposes. A review of flood documentation should provide Somerset County a comprehensive view of trends in flooding over time. The following factors will be recorded by Somerset County DES and the County and Municipality Public Works Departments for tracking; and archived by the County GIS staff. Including instances of nuisance flooding addressed by SHA and communicated over the radio.

- Date, time, and location of nuisance flooding
- · Agency notified

See Appendix C Flooded Road / Closed Roads for a nuisance flooding documentation tool.

Local Flood Gauge pictures (a visual awareness for citizens)

Another means to collect data is through the website <a href="https://mycoast.org/md">https://mycoast.org/md</a>

MyCoast: Maryland allows you to communicate flooding and storm damage in your community. It is a portal to collect and analyze photos which are linked to precipitation, riverine, and tidal data to create reports that help government agencies, business owners, and residents understand impacts in the community.

#### V. Mitigating Nuisance Flooding Impacts

Both the Comprehensive Plan and the Hazard Mitigation Plan (HMP) for Somerset County address measures by which the impacts of flooding can be mitigated, or lessened, by structural and non-structural means. The purpose of the Nuisance Flooding Plan is to augment and support the information and recommend actions found in other planning documents. According to the **2022** Somerset County Hazard Mitigation Plan Update (p. 3-1):

The first step in preparing mitigation strategies for Somerset County involves the identification of various hazards and the risk associated with each hazard. The Maryland Department of Emergency Management (MDEM) published the 2021 Maryland State Hazard Mitigation Planŧ. Update, a document designed to show the probability and impact of various hazards across the state. As shown on the following table, Somerset County ranked "High" for coastal and flood hazard risk; "Medium-High" for the risk of high wind; and "Medium" for drought, thunderstorm, wildfire, and winter storm. The county ranked "Medium-Low" for the risk of a tornado.

The principles of floodplain management are fundamental to the proper mitigation of nuisance flooding in Somerset County. Higher standards – such as freeboard, development restrictions in the floodplain, can be effective in mitigating the effects of both nuisance flooding and other major flooding events.

# Somerset County's commitment to higher standards is reflected by acceptance as a CRS community class 7 in July 2024

Premium Reduction								
CRS Class	Credit Points (cT)	In SFHA	Outside SFHA					
1	4,500+	45%	10%					
2	4,000-4,499	40%	10%					
3	3,500-3,999	35%	10%					
4	3,000-3,499	30%	10%					
5	2,500-2,999	25%	10%					
6	2,000-2,499	20%	10%					
7	1,500-1,999	15%	5%					
8	1,000-1,499	10%	5%					
9	500-999	5%	5%					
10	0-499	0	0					

SFHA: Zones A, AE, A1-A30, V, V1-V30, AO, and AH

Outside the SFHA: Zones X, B, C, A99, AR, and D

Preferred Risk Policies are not eligible for CRS premium discounts because they already have premiums lower than other policies. Preferred Risk Policies are available only in B, C, and X Zones for properties that are shown to have a minimal risk of flood damage.

Some minus-rated policies may not be eligible for CRS premium discounts.

Premium discounts are subject to change

Somerset County's HMP identifies four areas in which focus is directed regarding mitigation activity. These four areas include:

- Ensure that existing structures are resistant to flood-related damage,
- Create awareness of floodplain hazards and protective measures,
- Protect critical facilities, and
- Prepare/update stormwater management plans for various areas in the County.

In addition to actions specified in the HMP, the NFP includes activities which Somerset County will implement or consider implementing to mitigate the impacts of nuisance flooding. These activities support the four areas of focus found in the Hazard Mitigation Plan. They also support actions from Somerset County's goals and strategies of the Somerset Comprehensive Plan.

#### Structural

- Enact floodplain ordinance or codes which mandate the use of freeboard beyond current requirements.
- Improve stormwater management infrastructure to more effectively convey water from flood-prone areas.
- o Conduct regular maintenance of drainage and stormwater control systems.
- Consider green infrastructure options rather than conventional stormwater solutions.

#### Nonstructural

Public Information

- Communicate the risk of nuisance flooding in non-emergency times to residents and businesses via mass mailings, social media, press releases, or automated phone calls.
- Disseminate flood preparedness information to enable a safer and more aware public in the face of flooding.
- Integrate nuisance flooding-related public messaging in Somerset County's existing public information plan and materials.

#### Planning

- Ensure Somerset County's Nuisance Flood Plan (NFP) is kept up to date and reference in the Hazard Mitigation Plan and other pertinent locations.
- Schedule meetings of the nuisance flooding planning committee on an asneeded basis to address flood-related issues and review plans.
- Improve stormwater management planning and strengthen policies to reduce runoff (i.e. from rain events).

#### Implementation

- Educate and train County staff on responsibilities under the NFP.
- The State has strict permitting requirement that must be completed before starting a project.
- Preserve floodplains as open spaces through the use of legal protection status.
- Protect and restore natural coastal features (forests, marshes, dunes, underwater grasses, and oysters) that can reduce the impacts of flooding.

#### VI. Projections for Future Impacts

The areas impacted by nuisance flooding will increase gradually in the coming years as changing climate elevates water levels and drives precipitation patterns to new extremes. This shift, however, is likely to accelerate gradually over time. New areas will also become impacted, leading to an increased number of businesses, residents, and critical infrastructure at risk. Public services will also be more frequently impaired as flooding increases.

Somerset County will maintain a level of awareness of data made available by NOAA, the State of Maryland, the University of Maryland Center for Environmental Science, and other scientific institutions as it pertains to the community and local flood risks. These risks of increased nuisance flooding will be communicated appropriately to residents and decision makers and direct them to take appropriate action in the areas of emergency response and hazard mitigation. Elected officials and County staff will utilize venues such as County Commissioners' meeting and Planning Commission meetings to communicate information on long-term flood risks. Future projections of sea level change and nuisance flooding should also be integrated into land use planning, floodplain management, comprehensive planning, and capital investment planning.

#### Appendix A – Inventory of <u>Nuisance Flooding Locations</u>

# **Excerpt from (Somerset County 2022 Multi-Hazard Mitigation Plan)**

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		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 & Storm Water	High
3	Somerset Ave. Flurers Lane	Yes	SWM	Repetitive	Princess Anne	Tidal, Storm Events, and Evacuation Issues	High
	Note: Road (Some	erset Avenue @	Flurers Lane	cuts town in h	alf when flood	led.	
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		SWM	Occasional	Princess Anne	Swamp & Stormwater	High
41	Calvary Road		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	Occasional	Crisfield	Flooding	High
12	Long Point Road		Elevation	Repetitive	County	Flooding	High
13	Riley Roberts Road, Shores 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 & 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	Daughertytown Road	Yes	Elevation	Repetitive	County	Flooding, Tidal, and Heavy Rain	High

58	Smith Island Roads - West		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	Cover St. & South Somerset Ave. to South 3rd St.	Yes	Elevation	Repetitive	Crisfield	Flooding	High
Location #	Flood Related Issue - Roads	Evacuation Issue (YIN)	SWM Elevation Problem	Flooding: Occasional or Repetitive	State, County, or Municipal	Hazard	Ranking High, Medium, Low
76	West Main Street to end of Peninsula (Terminus of Rd)	Yes	Elevation	Repetitive	Crisfield	Flooding	High
77	Maryland Ave. 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	Calvary 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)		SWM/ Elevation	Repetitive	County	Flooding	High
116	Stouty Sterling Road	No	Elevation	Repetitive	County	Flooding, Tidal, and Heavy Rain	High
177	Sackertown Road	Yes	Elevation	Repetitive	County	Tidal Flooding	High
101	Byrd Road	Yes	Elevation	Repetitive	County/ State	Tidal Flooding	High
86	Hall Highway		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		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 Aly	No	SVVM	Repetitive	State	Flooding	High

93	Spruce Street	No	SVVM	Repetitive	State	Flooding	High
94	9 <sup>th</sup> Street	No	SVVM	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

#### Repetitive Flooded Roadways

Somerset County's Nuisance Flooding Plan identifies 119 roadways that are impacted by flooding. Of those 119 roadways, 74 experience repetitive flooding; listed below.

A total of twenty-eight (28) repetitive flood roadways are owned and maintained by the County. Crisfield identified twenty-five (25) repetitive flood roadways within their municipal limits, while seven (7) repetitive flood roadways are within Princess Anne's town limits. Of the seventy-four (74) identified roadways, thirty-two (32) sites are impacted by tidal flooding. Eleven (11) repetitive flood roadways that are affected by tidal flooding are evacuation routes.

#### Repetitive Loss Properties as of September 30, 2022

Based on the FEMA NFIP and FMA definitions for repetitive loss properties, the City of Crisfield has 26 repetitive loss properties within its municipal boundaries, including one (1) severe repetitive loss property as of September 30, 2022. Of these properties, twenty-two (22) are single family structures, one (1) is business non-residential, one (1) is other residential, and two (2) are other non-residential. One (1) structure is identified as "mitigated" and (twelve) 12 are NFIP insured. The Town of Princess Anne has zero (0) repetitive loss properties within its municipal boundaries as of September 30, 2022.

As part of the update process, the repetitive loss listing for Somerset County was obtained from the Maryland NFIP Coordinating Office. This list is a valuable planning tool and has been used during the Multi-Hazard Mitigation Plan Update process.

#### In Conclusion

Repetitive Loss Properties (RLP's) in the County's unincorporated areas and 1,106 properties which are considered at-risk. Properties are considered at-risk if they are both within a 1,000 ft buffer of a repetitive loss property AND if they are within the Special Flood Hazard Area Zone AE. These eight identified areas should be prioritized for hazard mitigation and NFIP CRS outreach efforts, starting with the areas with the highest amounts of repetitive loss properties, which include:

- 1. Crisfield Surrounding Area North (7 RL properties)
- 2. Crisfield Surrounding Area South (17 RL properties)
- 3. Deal Island, Chance, Dames Quarter (11 RL properties)
- 4. Oriole, Champ (8 properties)

- 5. Frenchtown-Rumbly, Fairmount (4 RL properties)
- 6. Mount Vernon (2RL properties)
- 7. Pocomoke River (1 RL property)
- 8. Smith Island (6 RL properties)

#### **High Priority Areas and Alternatives for Flood Remediation (Excerpt)**

Priority	High Priority Area	Alternative
Immediate	Overall	Fortify/Elevate Shoreline and City Boundary
Immediate	Overall	Drainage System Maintenance
Immediate	Cove Street, Cove Street & 4th Street	Adequate Conveyance, Tide gate, and Pumping Station
Immediate	South Somerset Avenue/ Woodson School Road	Pumping Station, Fix Existing Tide Gate
Immediate	South Somerset Avenue/ Woodson School Road	Existing tidal dike remediation or Low-Level Berms Along Roadway and Yards
Immediate	Hall Highway	Tide gate
Immediate	4th Street	Tide gate for Pine/Locust System
	4th Street, 1st Street between Main Street &	
Immediate	Chesapeake Avenue	Tide gate for Chesapeake System
Immediate	Wynfall Avenue (& Hudson Street)	Increase Swale Capacity, Berm, Culvert w/ Tide gate
Immediate	Overall	Fortify/Elevate Shoreline and City Boundary
Immediate	Overall	Drainage System Maintenance
Immediate	Cove Street, Cove Street & 4th Street	Adequate Conveyance, Tide gate, and Pumping Station
Immediate	South Somerset Avenue/ Woodson School Road	Pumping Station, Fix Existing Tide Gate
Immediate	South Somerset Avenue/ Woodson School Road	Existing tidal dike remediation or Low-Level Berms Along Roadway and Yards
Immediate	Hall Highway	Tide gate
Immediate	4th Street	Tide gate for Pine/Locust System
Immediate	4th Street, 1st Street between Main Street & Chesapeake Avenue	Tide gate for Chesapeake System
Immediate	Wynfall Avenue (& Hudson Street)	Increase Swale Capacity, Berm, Culvert w/ Tide gate

Immediate         Somers Cove Marina/ City Housing         Install Tide gates at RR Norris Drive Culverts           Immediate         Broad Street (Lumber)         Tide gate           Immediate         Broad Street & 9th Street         Tide gate           Immediate         Wynfall Avenue (between Hudson Street & Hall Highway)         Tide gate           Immediate         Broad Street (West)         Tide gate           Short Term         South Somerset Avenue to Woodson School Road         SWM Facility near School           Short Term         Cove Street         SWM Facility b/w 3rd & 2nd Streets           Short Term         OS CGW ES & CH         Elevate Sidewalk           Provide Secondary Outfall & Increase Capacity         Increase Capacity           Short Term         Myrtle Street         Install Improved Drainage Systems           Long Term         Broad Street & 9th Street         Tide gate and Increase Capacity           Long Term         Broad Street (Lumber)         Tide gate and Increase Capacity           Long Term         1st Street between Main Street & Chesapeake Avenue         SWM Facility/ Increase Swale Capacity           Long Term         7th Street         SWM Facility/ Increase Capacity           Long Term         4th Street         Tide gate and Increase Capacity           Long Term         Somers Cove Marina/ City Hous			
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Short Term	Short Term	OS CGW ES & CH	Elevate Sidewalk
Long TermBroad Street & 9th StreetTide gate and Increase CapacityLong TermBroad Street (Lumber)Tide gate and Increase CapacityLong Term1st Street between Main Street & Chesapeake AvenueSWM Facility/ Increase Swale CapacityLong Term7th StreetSWM FacilityLong Term4th StreetTide gate and Increase CapacityLong TermHall HighwayTide gate and Increase CapacityLong TermSomers Cove Marina/ City HousingWilliam D Gerald Drive and RR Norris DriveLong TermBroad Street (West)Tide gate and Increase CapacityMonitorMain Street & 1st StreetSee Alternative AnalysisMonitorBroadway & 4th StreetIncrease CapacityMonitorBroadway & 7th StreetIncrease Capacity	Short Term	7th Street	·
Long TermBroad Street (Lumber)Tide gate and Increase CapacityLong Term1st Street between Main Street & Chesapeake AvenueSWM Facility/ Increase Swale CapacityLong Term7th StreetSWM FacilityLong Term4th StreetTide gate and Increase CapacityLong TermHall HighwayTide gate and Increase CapacityLong TermSomers Cove Marina/ City HousingWilliam D Gerald Drive and RR Norris DriveLong TermBroad Street (West)Tide gate and Increase CapacityMonitorMain Street & 1st StreetSee Alternative AnalysisMonitorBroadway & 4th StreetIncrease CapacityMonitorBroadway & 7th StreetIncrease Capacity	Short Term	Myrtle Street	Install Improved Drainage Systems
Long Term  1st Street between Main Street & Chesapeake Avenue  Capacity  Long Term  7th Street  SWM Facility  Long Term  4th Street  Tide gate and Increase Capacity  Long Term  Hall Highway  Tide gate and Increase Capacity  Install SWM Facility between  William D Gerald Drive and RR  Norris Drive  Long Term  Broad Street (West)  Tide gate and Increase Capacity  Tide gate and Increase Capacity  See Alternative Analysis  Monitor  Broadway & 4th Street  Increase Capacity	Long Term	Broad Street & 9th Street	Tide gate and Increase Capacity
Long Term 7th Street SWM Facility  Long Term 4th Street Tide gate and Increase Capacity  Long Term Hall Highway Tide gate and Increase Capacity  Long Term Somers Cove Marina/ City Housing William D Gerald Drive and RR Norris Drive  Long Term Broad Street (West) Tide gate and Increase Capacity  Monitor Main Street & 1st Street See Alternative Analysis  Monitor Broadway & 4th Street Increase Capacity  Monitor Broadway & 7th Street Increase Capacity	Long Term	Broad Street (Lumber)	Tide gate and Increase Capacity
Long Term 4th Street Tide gate and Increase Capacity  Long Term Hall Highway Tide gate and Increase Capacity  Install SWM Facility between  William D Gerald Drive and RR  Norris Drive  Long Term Broad Street (West) Tide gate and Increase Capacity  Monitor Main Street & 1st Street See Alternative Analysis  Monitor Broadway & 4th Street Increase Capacity  Monitor Broadway & 7th Street Increase Capacity	Long Term	·	
Long Term Hall Highway Tide gate and Increase Capacity Install SWM Facility between William D Gerald Drive and RR Norris Drive  Long Term Broad Street (West) Tide gate and Increase Capacity  Monitor Main Street & 1st Street See Alternative Analysis  Monitor Broadway & 4th Street Increase Capacity  Monitor Broadway & 7th Street Increase Capacity	Long Term	7th Street	SWM Facility
Long Term Somers Cove Marina/ City Housing William D Gerald Drive and RR Norris Drive  Long Term Broad Street (West) Tide gate and Increase Capacity  Monitor Main Street & 1st Street See Alternative Analysis  Monitor Broadway & 4th Street Increase Capacity  Monitor Broadway & 7th Street Increase Capacity	Long Term	4th Street	Tide gate and Increase Capacity
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MonitorMain Street & 1st StreetSee Alternative AnalysisMonitorBroadway & 4th StreetIncrease CapacityMonitorBroadway & 7th StreetIncrease Capacity	Long Term	Somers Cove Marina/ City Housing	William D Gerald Drive and RR
Monitor Broadway & 4th Street Increase Capacity  Monitor Broadway & 7th Street Increase Capacity	Long Term	Broad Street (West)	Tide gate and Increase Capacity
Monitor Broadway & 7th Street Increase Capacity	Monitor	Main Street & 1st Street	See Alternative Analysis
	Monitor	Broadway & 4th Street	Increase Capacity
Monitor Main Street & Somerset Avenue See Alternative Analysis	Monitor	Broadway & 7th Street	Increase Capacity
	Monitor	Main Street & Somerset Avenue	See Alternative Analysis

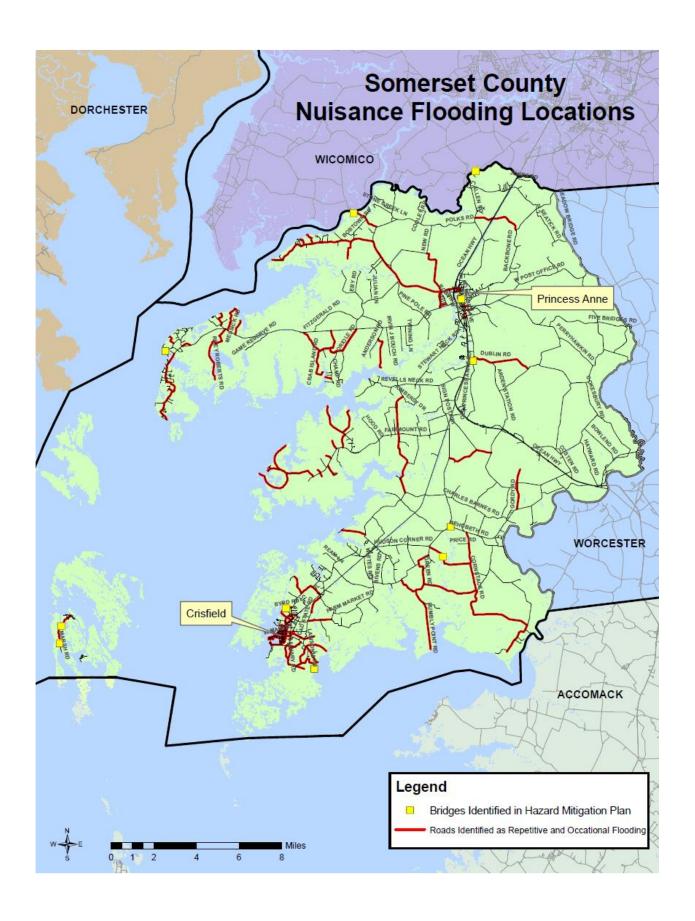
#### **Bridge Locations Identified in 2022 Hazard Mitigation Plan Update**

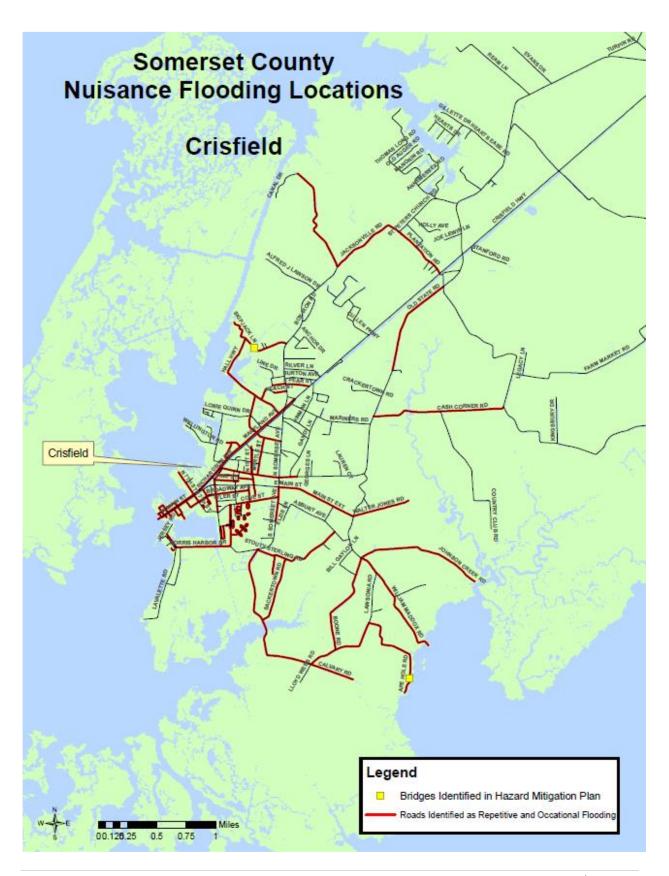
**Repetitive-** Roads/ Bridges that flood on a daily basis at MHW (Mean High Water) or on a monthly basis during weather events or moon phases. (Water is on the road bed more days than not throughout the month/year).

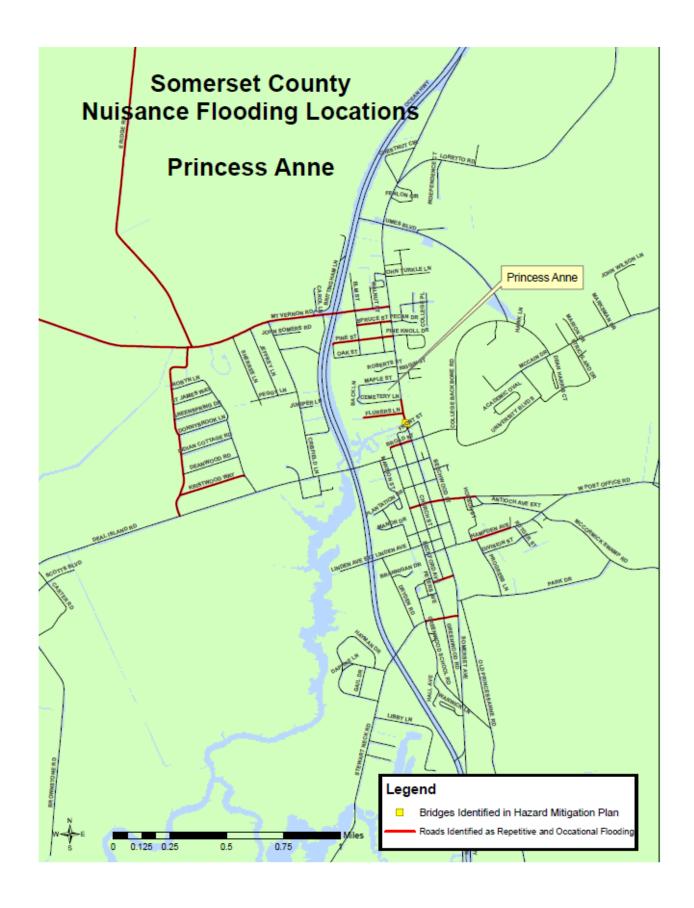
**Occasional-** Road beds/Bridges typically only floods during extreme weather patterns or storm events such as heavy rains and winds, tropical storms or hurricanes.

**SWM-Storm Water Management-** Water does not effectively drain from the roads into rivers or streams.

Flood Related Issue Bridges		cuation e (Y/N	n E	WM levation Problem	Flooding Occasional or Repetitive	State County or Municipal	Hazard - Issue
S-0001 Stewarts Neck Rd		Yes		SWM	Occasional	County	Tidal Flooding
S-0011 Sign Post Rd		No		SWM	Occasional	County	Tidal Flooding
S-0016 Haines Pt Rd		No		SWM	Occasional	County	Tidal Flooding
S-0018 Rehobeth Rd/Coventry Parish	Rd.	No		SWM	Occasional	County	Tidal Flooding
S-0019 Bryan Hall Rd		Yes	Е	levation	Occasional	County	Tidal Flooding
S-0020 Whitehaven Ferry Rd		No		SWM	Occasional	County	Tidal Flooding
S-0021 Marsh Rd/Smith Island		Yes	Е	levation	Repetitive	County	Tidal Flooding
S-0022 Smith Island Rd		Yes	Е	levation	Repetitive	County	Tidal Flooding
S-0023 Old Princess Anne Rd		No		SWM	Occasional	County	Tidal Flooding
S-0024 Cathell Rd		No		SWM	Occasional	County	Tidal Flooding
Somerset Ave (Town of PA)		Yes	Е	levation	Occasional	State	Tidal Flooding
Byrd Rd		Yes	Е	levation	Repetitive	State	Tidal Flooding







### Appendix B – Nuisance Flooding Committee Members

#### I. Steering Committee

Yvette Cross	Somerset County Emergency Services
Laraine Buck	Somerset County Emergency Services
Woody Barnes	Somerset County Roads
Woody Barnes	Somerset County Maintenance Departments
Jesse Drewer	Somerset County Planning and Zoning

#### II. Stakeholders Committee

Daniel Barbour	State Highway Administration
Tavonne Satchell	State Highway Administration
Dennis "Denny" Cullison	City of Crisfield PW
Dionte Cottman	Town of Princess Anne PW
John Redden	Somerset County PW
Sheriff Ronnie Howard	Somerset County Sheriff
Will Cornish	Somerset County Planning and Zoning
Matt Duvall	Somerset County GIS Planning and Zoning
"Asst Director"	Somerset County Emergency Services

## **Appendix C - Nuisance Flooding Documentation**

# Somerset County Department of Emergency Services Storm Sheets

	FLOODED ROADS				CLOSED ROADS			
TIME	DATE	ADDRESS	AGENCY NOTIFIED	TIME	DATE	ADDRESS	AGENCY NOTIFIED	
				-				

# Locally Made Flood Gauge Signs / Awareness for Citizens

