



**TOWN COUNCIL INFORMATIONAL  
WORK SESSION AGENDA  
December 12, 2023  
Starting at 6:00 PM**

**I. Call to Order and Roll Call**

**II. Pledge of Allegiance**

**III. Informational discussion on the following:**

1. Town of Chesapeake Beach Coastal Resiliency Plan
2. Town of Chesapeake Beach Zoning Administrator
3. CBWRTP Capital Improvements purchase of seals on two press feed pumps
4. Public Parks

**IV. Council Lightning Round**

**V. Adjournment**



To: The Honorable Mayor and Town Council

From: Holly Wahl, Town Administrator

Subject: Coastal Resiliency Plan

**Date: December 8, 2023**

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## **I. BACKGROUND:**

The Town of Chesapeake Beach Coastal Resiliency Task Force and Coastal Resiliency Steering Committee coordinated to provide a [draft coastal resiliency](#) plan for the Town in June of 2023, which was reviewed by the Town Council in July of 2023 at a work session. The coastal resiliency plan provides strategies and recommendations that are intended to guide the Town as it adapts to sea level rise and an increased incidence and severity of flooding. The plan was prepared by the Town of Chesapeake Beach using federal funds from the Office for Coastal Management at the National Oceanographic and Atmospheric Administration (NOAA). To view the grant MOU with the State, please click [here](#).

The organizational and technical approach to the project was developed jointly with the Town of North Beach in coordination with the Maryland Department of Natural Resources, Chesapeake, and Coastal Services. The jurisdictions also coordinated in the simultaneous production of mapping used in this report which documents the projected impacts of future sea level rise. While this Plan's strategies and recommendations were developed through a planning process specific to Chesapeake Beach, they reflect an understanding of the effects of sea level rise on North Beach and compliment North Beach's own efforts to adapt to sea level rise.

The draft plan received [public comment](#) from citizens, businesses and the Town's Planning and Zoning Commission over the course of the last several months. Comments have been reviewed by the Coastal Resiliency Steering Committee and changes were incorporated based on the comments received.

## **II. STATUS OF PLAN COMPLETION:**

**Step 1:** March 2022 to June 2023 hold public meetings and draft the coastal resiliency plan.

**Step 2:** June 2023 submit the draft plan to the State.

**Step 3:** July 2023 Town Council reviews the draft plan.

**Step 4:** July to December Public Comment received and incorporated into the plan.

**Step 5:** December 2023 submit the final plan to the state to remain in compliance with the grant funding requirements and to be eligible for further funding on future projects.

The plan has been submitted to the State to comply with the guidelines of the grant; however, it still requires Town Council approval. This item is on the Town Council work session to finalize edits to the plan for Town Council adoption.

*Please note this draft is a live document; therefore, the formatting is not completed. All changes from the Steering Committee will be input into a clean final document for Town Council adoption.*



### **III. RECOMMENDATION:**

It is recommended that the Town Council review the changes made to the draft based on comments received on the Coastal Resiliency plan. It is recommended that Town Council make amendments as necessary so that the plan can be adopted and submitted to the State to remain in compliance with grant funding.

It is recommended that the Town Council consider the activities of the Coastal Resiliency Steering committee moving forward. The committee is currently a voluntary advisory committee of residents and businesses where members are not appointed by the Mayor and Town Council.

Steering Committee ~~Draft, Not yet approved, August 21, 2023~~ Approved December 11, 2023

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# Coastal Resiliency Plan

## Town of Chesapeake Beach

A Flood and Sea Level Rise Action Plan



Financial assistance in the preparation of this document was provided by the federal Coastal Zone Management Act of 1972 as amended as administered by the Office for Coastal Management, National Oceanic and Atmospheric Administration, with local grant administration by the Maryland Department of Natural Resources, Chesapeake and Coastal Service.

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## Acknowledgments

### Chesapeake Beach Mayor and Town Council

Pat “Irish” Mahoney, Mayor  
Valerie Beaudin  
Larry Jaworski  
Greg Morris  
Keith Pardieck  
L Charles Fink  
Margaret Peggy Hartman

### Steering Committee on Coastal Resiliency

Jeff Foltz, P.E. Chairman  
Larry Jaworski, P.E., CC-P, Town Councilman  
~~Keith Pardieck, Town Councilman~~  
Wesley Donovan  
Robert Munro  
Phil Pfanschmidt  
Grant Soderstrom  
Dave Kimelblatt

Commented [GU1]: Keith asked that his name be removed.

### Technical Advisory Committee on Coastal Resiliency

Larry Jaworski, P.E., CC-P, Town Councilman  
Jay ~~BarryBerry, Chief, Director of Public Works~~ Public Works Administrator  
Christopher N. Jakubiak, AICP, ~~Town Planning and Zoning Administrator~~  
Wayne Newton, P.E., Town Engineer  
Josh Stinnett, Superintendent, Chesapeake Beach Water Reclamation Plant (CBWRTP)  
Holly Kamm Wahl, MBA, Town Administrator

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Special thanks to Sasha Land, Coastal Resilience Program Director, Maryland Department of Natural Resources, Chesapeake and Coastal Services, and Laurent McDermott, GISP and Mary Buffington, GISP with the Eastern Shore Regional GIS Cooperative, Salisbury University.

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## Chapter 1 Introduction

### Introduction

This plan is about coastal resiliency in Chesapeake Beach. Its strategies and recommendations are intended to guide the Town as it adapts to sea level rise and an increased incidence and severity of flooding.

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It was prepared by the Town of Chesapeake Beach using federal funds from the Office for Coastal Management at the National Oceanographic and Atmospheric Administration (NOAA). The organizational and technical approach to the project was developed jointly by the neighboring towns of Chesapeake Beach and North Beach in coordination with the Maryland Department of Natural Resources, Chesapeake and Coastal Services. The jurisdictions also coordinated in the simultaneous production of mapping used in this report which documents the projected impacts of future sea level rise. While this Plan's strategies and recommendations were developed through a planning process specific to Chesapeake Beach, they reflect an understanding of the effects of sea level rise on North Beach and compliment North Beach's own efforts to adapt to sea level rise.

## General Context and Purpose



Figure 1: 2003 Photo Following Hurricane Isabel. MD Route 261 (Bayside Road) at the entrance to the Volunteer Fire Company, looking north).

Chesapeake Beach is vulnerable to very severe flooding associated with hurricanes, tropical storms, and nor'easters; the latest such major event was Isabel in 2003<sup>1</sup>. It made landfall in North Carolina's Outer Banks and followed a path northwestward through western Maryland. While far removed from the Chesapeake Bay, its winds drove a 4 to 5 foot storm surge against the western shore that swamped coastal communities including the Twin Beaches (Chesapeake Beach and North Beach). Buildings were destroyed, beaches were washed away, bulkheads, piers, and revetments were damaged, and MD Route 261, including along its frontage with the North Beach Volunteer Fire Company, was inundated and impassible<sup>2</sup>.

The Town is also vulnerable to nuisance flooding. Such flooding is not necessarily associated with named storms and sometimes results simply from the mechanisms of the tides and excessive rainfall in a short amount of time. As recently as October 2009<sup>2</sup> a high tide breached shoreline revetments and flooded residential lots close to the Bay. It entered the Fishing Creek Marina area via the Town's public boat landing. It overloaded local storm drainage systems and flooded public streets including MD Route 261. These severe events disrupt daily activities, impede travel, and add to the standing pools of water at lower elevations along roads, in parking lots, and at Kellam's Field.

Global sea level rise is related to the release of carbon dioxide emissions into the atmosphere, the resulting warming of the oceans, and melting of glaciers and polar ice sheets<sup>3</sup>. It is an ongoing phenomenon and is projected to continue well beyond 2100. The combination of global sea level rise and land subsidence in coastal Maryland has raised mean high tide in the Chesapeake Bay. Historic tracking at the tide gauge at Solomon's Island records an

<sup>1</sup> Hurricane Isabel was just one of 39 recognized flooding events between 1996 and 2016 reported by the National Climate Data Center and one of 56 tropical storm events impacting Maryland between 1980 and 2015. (Calvert County All-Hazard Mitigation Plan, 2017).

<sup>2</sup> Photos like the one on this page showing the aftermath of Hurricane Isabel in Chesapeake Beach are available at: <https://forums.somd.com/media/albums/2003-hurricane-isabel-chesapeake-beach-north-beach.246/page-2>

<sup>3</sup> In the Chesapeake Bay region sea level rise is also a function of ongoing Ice Age related land subsidence as the earth's plate, like a seesaw, falls in the east and rises in the northwest still feeling the effects of the glacier retreat.

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increase of about 0.15 inches per year, or 1 foot of rise, between 1937 and 2019. Sea level rise is accelerating, and current projections indicate the Town should plan for the Bay to rise another 2.4 feet by 2050<sup>4</sup>--that is, the Bay at Chesapeake Beach would be 2.4 feet, or 28.8 inches, higher than it was in 2000.

Over the very long term, the rise of the Bay is projected to largely reclaim much of Town's low lying areas built on and around tidal wetlands. In so doing the remaining marshes that so define the Town's natural setting are projected to increasingly become open water at their lower elevations, and at higher elevations, to continue to migrate into developed places. With the passage of time more and more of the Town will become vulnerable to flooding. With higher water levels in the Bay, future storm surges will arrive at the Town's shoreline feet above their predecessors and logically bring more water and hazard potential. A rising Bay will place a larger area of Chesapeake Beach at risk, including existing neighborhoods, housing complexes, cultural and recreational assets, and essential infrastructure.

**The purpose of this Plan is to provide a coordinated and long term approach to becoming more resilient to the effects of rising water levels and the flooding associated with it.**

To be clear, this is not a master plan or an engineering design plan, intended to direct specific resources toward specific or known design challenges in the short term. Sea level rise is not that kind of problem, and the environmental and cultural setting of Chesapeake Beach is not well suited to one design solution. There will be a time for project based plans and designs.

Rising sea level presents an ongoing community development and conservation challenge; one whose challenges and opportunities will evolve and thus cannot be fully understood here and now in 2023. The resources of current and multiple future generations will be called upon to address sea level rise and learning memory will be achieved. Therefore, this Plan is also meant to provide a forum of sorts -- an organizational and policy framework -- where solutions to what will be an evolving challenge can be refined, implemented, extended, or even corrected as needed, as residents, businesses, and property owners interact with the Town and its partners like the Town of North Beach, the Maryland Department of Natural Resources, and NOAA.

## Coastal Resiliency

This Plan is about building coastal resiliency. By coastal resiliency, we mean the ability of the Chesapeake Beach community to adapt to the risks posed by sea level rise. At its heart, this is a plan for the physical adaptation of the Town to the threat of sea level rise.

Resiliency, as a term used in hazard planning generally, is more comprehensive than this plan aims for. For context, the United Nations Office of Disaster Risk Reduction refers to resiliency as the ability of a community exposed to hazards to resist, absorb, accommodate to, and recover in a timely and efficient manner including by preserving and restoring essential structures and function. This and other definitions of "resiliency" embrace notions of hazard preparedness, emergency management, rescue, and rebuilding. While this Plan touches on these elements, its focus is on physical adaptation to the risk of living along the Chesapeake Bay in areas projected to become

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<sup>4</sup> [Sea Level Raise, 2018 Projections](#), Maryland Commission on Climate Change.



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inundated. This is less about emergency response and recovery and more about long range community planning, civil engineering, and landscape and building design.

In the future as projects are implemented there will be ongoing opportunities to further incorporate the multifaceted themes of resiliency. For example: An engineering design for a sea-wall might incorporate flexibility to readily allow strengthening at such time that live loads increase; or a storm drain upgrade might be re-routed to convey water away from its previous discharge point or be designed with much larger inlets for holding water, as a means for avoiding the mechanical pumps necessary to discharge into the Bay against projected higher tides. Resiliency must permeate all plans and designs that flow from this Plan.

## Related Plans and Studies

There are three local plans particularly relevant to coastal resiliency in Chesapeake Beach that have influenced this Plan. These are described below<sup>5</sup>.

### Calvert County, Maryland All-Hazard Mitigation Plan

In 2017 Calvert County adopted the All-Hazard Mitigation Plan, which includes useful information on past flood events and flood risk assessments including in Chesapeake Beach and North Beach. While the County Plan does not evaluate in a detailed way sea level rise and future local vulnerabilities, its research and findings have informed this Plan.

The Plan sets goals for mitigating flood hazards with special mention of concerns that towns share with the County, namely protecting critical infrastructure and facilities that residents rely on and protecting and sustaining natural resources such as tidal wetlands that function naturally to mitigate flooding damage. With respect to flood hazard mitigation planning, the County Plan incorporates input provided by the Town of Chesapeake Beach and recommends the following specific mitigation actions for the Towns of Chesapeake Beach and North Beach:

- Identify natural resources that provide mitigation such as wetlands, (riparian) buffers, etc. and make them a priority for preservation.
- Continue to ensure compliance with stormwater management regulations.
- Give high priority to undeveloped floodplain areas for preservation.
- Maintain zoning ordinance provisions for protection of all hazard areas.
- Continue a community-based stormwater management program consisting in routine inspections and debris removal.

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<sup>5</sup> Also relevant is the Calvert County, Maryland All-Hazard Mitigation Plan, adopted by the County in 2017, which also covers the Towns of Chesapeake Beach and North Beach.

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### Chesapeake Beach Nuisance Flood Plan: 2000-2025

In 2020, the Town adopted a Nuisance Flood Plan per Maryland statutes which require jurisdictions that experience nuisance flooding to adopt, publish, and update a plan once every five years<sup>6</sup>. As defined in State law, “nuisance flooding” is high tide flooding that causes public inconvenience. Such flooding is not a product of major storm events and typically lasts only for several hours before abating.

The plan is a short-term plan intended primarily to build awareness at the local level of certain recurring flood areas, to improve the capacity of local governments to notify and warn the public about flood hazards, and to consider steps to mitigate potential hazards. The Town’s Nuisance Flood Plan also provides guidance on how to document nuisance flood occurrences and sets four priorities:

- Ensure existing structures are resistant to flood-related damage, where possible.
- Create awareness of floodplain hazards and protective measures.
- Protect critical facilities.
- Prepare and update stormwater management plans.

The Town’s Plan identifies three primary locations for nuisance flooding: (1) the lowest lying parts of the Kellam’s recreational area and Fishing Creek Marina, (2) the northern edge of the wetland complex west of MD Route 261 and south of First Street (North Beach) ([South Creek](#)), and (3) Town-owned property along the tidal wetlands south of Harbor Road, running parallel to and west of Deforest Drive. These same areas are among the first projected to be inundated in the decades due to sea level rise.

### Chesapeake Beach Comprehensive Plan

In April 2022, the Town adopted a new Comprehensive Plan that extensively addressed sea level rise through land use and natural resource recommendations. The Plan used mapping to establish the extent of existing and projected flooding, and designated parts of the Town that are especially vulnerable. It also made specific land use and zoning recommendations to eliminate or minimize development potential in areas projected to be inundated with a 2.1 foot sea level rise as well as remaining forests and forested steep slopes. The Town Council codified these latter recommendations into law through amendments to the Zoning Ordinance and official Zoning Map in 2022. Lastly the Comprehensive Plan recommended that this Coastal Resiliency Plan be prepared, and it adopted overall principles to guide local planning for sea level rise over the long term, as follows:

- The low-lying land, where Fishing Creek meets the Chesapeake Bay, is the very heart of Chesapeake Beach, encompassing the recreational assets and natural resources that have shaped the Town’s heritage. Continued use of this area and even redevelopment is not necessarily incompatible with projections of increased flooding.
- The Town’s natural environment itself can be a guide to how to manage rising water levels in Chesapeake Beach. The Town’s marshes absorb storm surges and hold back floodwaters. The Town’s remaining woodlands soak up rainwater reducing the severity of flooding. The Town’s topography shows that the heart of Chesapeake Beach was built on and around the natural estuary of Fishing Creek.
- A long-term response to a rising Chesapeake Bay can be positive and aligned with a vision of harmonizing land with water. In a coastal town, built as a tourist destination, rising water levels can be an asset and an opportunity to build upon the Town’s heritage.

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<sup>6</sup> See Maryland Senate Bill 1006 from the 2018 Session of the Maryland General Assembly which amended parts of the Transportation and Natural Resources Articles of the Annotated Code of Maryland and included revision to the Coast Smart laws related to the siting and design of infrastructure in areas vulnerable to sea level rise inundation.

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- Lands that were “made” through the filling in wetlands, are the most quickly threatened by sea level rise. Allowing space for water to reclaim parts of these areas and for wetlands to migrate within them can help recreate nature’s role in holding back flood waters and buffering storm surges.
- Unplanned and uncoordinated efforts to raise the elevation of the land or build structural flood defenses including seawalls, raised bulkheads, shoreline revetments, etc. are counterproductive to ongoing efforts to coordinate an effective strategy to address sea level rise. Such measures must only be undertaken in a coordinated way consistent with an adopted plan.
- Rising water levels expand the area that is vulnerable to flooding. As the Bay rises, some areas that do not flood today are predicted to flood in the future and some areas that do in fact flood today are predicted to experience more frequent and severe flooding events.

There are other important parts of the Chesapeake Beach Comprehensive Plan that have shaped this Plan and speak to coastal resiliency including the conversion of Kellam’s recreational complex into a blue-green recreational and flood management area, the introduction of small parks, the preservation of resource lands, promoting walkability and public accessibility especially to the waterfront, and eliminating new residential development potential from vulnerable areas.

## Community Engagement

As part of this project the Town created the Steering Committee on Coastal Resiliency. The Steering Commission conducted four public work sessions, and three public informational events. All the events were live-streamed and recorded. Once the analysis and findings were assembled but before recommendations were developed, the Committee held a round of neighborhood based work sessions: one at the Volunteer Fire Company and the other at the Town Hall. Notices and invitations to each event were mailed to all residents located within the localized flood hazard areas. The Town also created a webpage for the project where documents, maps, and notice were published.

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## Chapter 2 Existing Conditions

### South Creek and Fishing Creek, Chesapeake Bay Inlets

South Creek and Fishing Creek are tributaries to the Chesapeake Bay. The watersheds they drain extend far beyond the Town's borders. Their natural estuaries are among the features of Town most vulnerable to sea level rise. South Creek drains the coastal plain north of MD Route 260 including North Beach and forested lands west of the Twin Beaches. It discharges to the Bay through a tidal estuary shown in the photo below. The Chesapeake Beach Water Reclamation Plant, North Beach Volunteer Fire Company, and the Seagate residential communities are located in this estuary. MD Route 261 crosses through it. Fishing Creek drains a mostly forested and rural landscape and meets the Bay in the traditional maritime center of

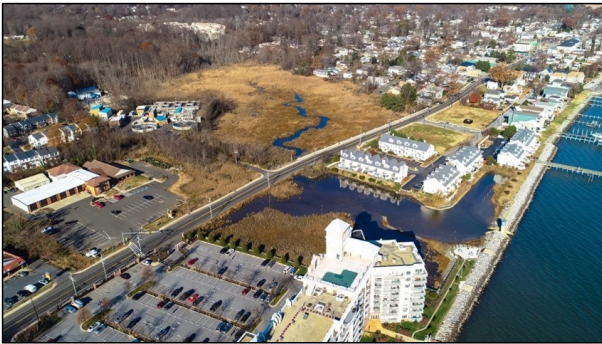


Figure 2. Birdseye view of the South Creek estuary.

Chesapeake Beach. At one time, the Creek's natural estuary covered what is today the Courtyards at Fishing Creek Apartments and Townhouses, Chesapeake Beach Waterpark, Northeast Community Center, Fishing Creek Marina, and all of Kellam's Recreation Complex.



Figure 3: Birdseye view of the Fishing Creek estuary.

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To better understand the complexity of the Fishing Creek estuary, note the marshland grass symbols in Figure 4 . They are indicating the historic extent of tidal wetlands on the west side of MD 261 north and south side of Gordon Stinnett Avenue. Most of this has been replaced by parkland, parking lots, building sites, and streets.



Figure 4: Historic FEMA floodplain mapping showing the extent of the marsh associated with Fishing Creek.

## Floodplains

The Federal Emergency Management Agency (FEMA) regularly maps floodplains having a 1% chance of flooding in any given year (i.e., the 100-year floodplain). These are shown in Figure 5 below for most of coastal Chesapeake Beach and the North Beach area. In these floodplains, within Town boundaries, Chesapeake Beach regulates building and land development activities through its Floodplain Management Ordinance (Chapter 149 of Town Code).

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Figure 5: Mapped FEMA Floodplain, 1% Annual Chance Flood Area.

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Figure 6 below maps the existing 1% Annual Chance floodplain from MD Route 260 north to North Beach. It provides a more detailed view of the northern part of Town and the floodplain associated with South Creek.



Figure 6: FEMA 1% Annual Chance Floodplain.

The figures below highlight separate flood zones within this above geographic area and show the base flood elevation (BFE). BFE is FEMA's estimate of the elevation of surface water resulting from the "base flood". The base flood is the flood with a 1% chance of being equaled or exceed in any given year. BFE can be thought as the minimum elevation above which a homebuilder must set the first floor to prevent water entering the home during a flood with a 1% annual chance of occurring. Figure 7 shows that the flood zone associated with South Creek has a BFE of 4 feet. Figure 8 shows floodplain that is mapped without a BFE. Figure 9 shows the flood zones along the shoreline from First Street in North Beach to 27<sup>th</sup> Street is subject to high velocity wave action and has a BFE of 8 feet.

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Figure 9: FEMA Flood Zone AO. Base flood elevation is 4 feet.



Figure 8: FEMA Flood Zone AO. The base flood elevation is not mapped by FEMA.

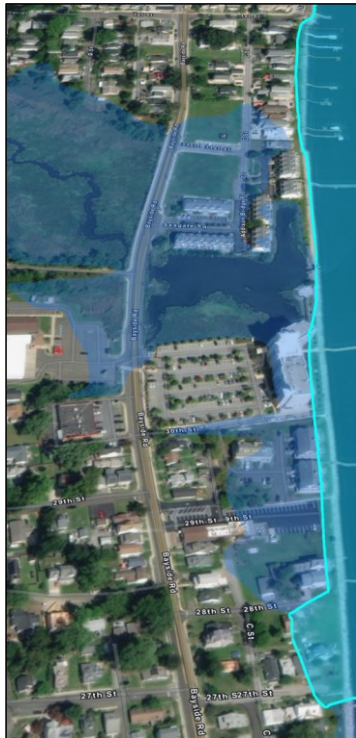


Figure 7: FEMA Flood Zone VE, Special Flood Hazard Area. This area is subject to high velocity wave action. Base flood elevation is 8 feet.



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## Wetlands

Most of the Town's floodplain is tidal estuarine wetlands (marsh). These wetlands attenuate flooding, prevent shoreline erosion, improve the water quality of the Bay, and provide habitat for native plants, fish, and wildlife. They protect the existing settlement pattern in the historic center of Chesapeake Beach. Figure shows the wetlands in Chesapeake Beach.

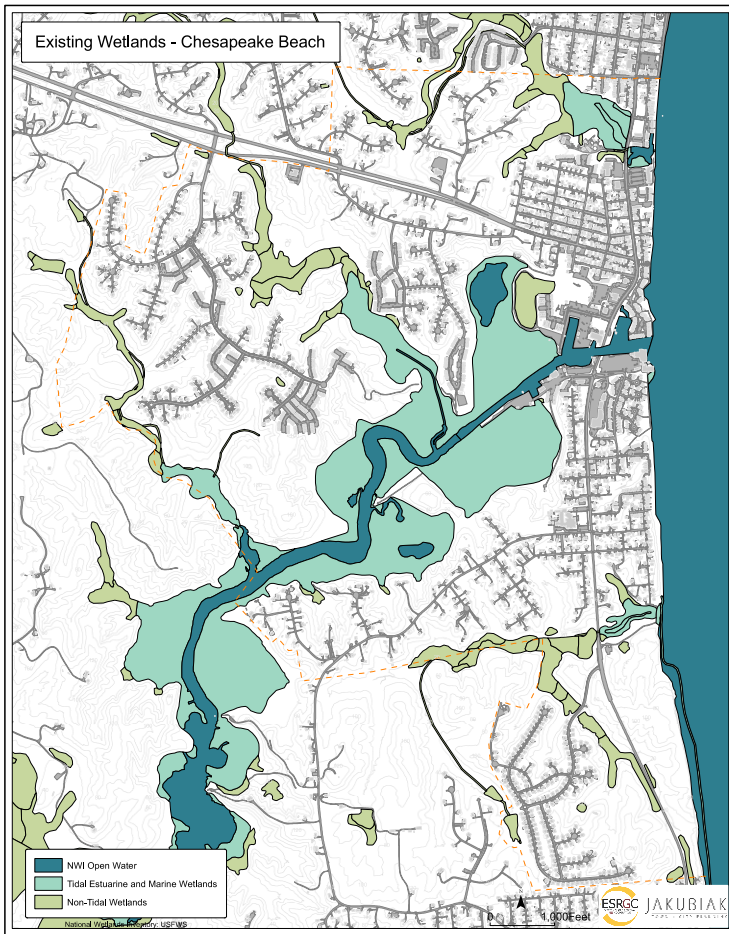


Figure 10: Mapped Wetlands in Chesapeake Beach.

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The dominant wetland in and around Chesapeake Beach is the 92-acre Estuarine and Marine Wetland associated with Fishing Creek. Shown on Figure 10, it's the central green area on either side of Fishing Creek. This defining landscape feature consists of deep-water tidal habitats and marshes in which the bottom is both flooded and exposed by tidal action. It is also among the most scenic type of all natural resources in coastal Maryland. [These marshes adjoin forested parcels, including a 200+ acre covenant protected by Forest Interior Dwelling Species \(FIDS\) habitat north of the Fishing Creek marshlands. Strict enforcement of this covenant and preservation of the forested areas surrounding the Fishing Creek marshlands is an essential element of local flood management](#)

The similar but smaller (12.5-acre) wetland complex of the same type on the north end of Town extends into North Beach and is associated with South Creek (See Figure 2.) Though it is mainly on the western side of MD Route 261, it is associated with the tidal action which is restricted to some extent by the seawall and a flood gate located between the Seagate and Horizons on the Bay housing communities.

Figure 10 also shows that non-tidal wetlands are located near both major tidal marshes. These are generally forested and extend into slightly higher elevations at greater distance from tidal action. The Town's non-tidal wetlands, whether populated by trees or just herbaceous plants, provide vital basins for retaining and filtering rainwater that flows from upland locations. The largest non-tidal wetland in Town is seven acres in size and is actually the Town's dredge disposal site. It separates Kellam's Field and the Courtyards at Fishing Creek from the Town's central tidal marsh. Even more extensive however, are the non-tidal wetland associated with South Creek (which extends northwesterly into North Beach) and along various tributary streams within the Town. These wetlands are mostly forested, and their preservation is an essential element of local flood management.

As sea levels rise, the Town's marshlands are expected to gradually transform into open water and simultaneously grow in response to both higher surface and ground water levels. Which is to say, the wetlands and marshes are dynamic; as they fill with water, they will also migrate and establish themselves where conditions are right for their growth.

**Commented [GU2]:** Recommendation: "These marshes adjoin forested parcels, including a 200+ acre covenantprotected Forest Interior Dwelling Species (FIDS) habitat north of the Fishing Creek marshlands. Strict enforcement of this covenant and preservation of the forested areas surrounding the Fishing Creek marshlands is an essential element of local flood management."

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## Chesapeake Bay Shoreline

Two-thirds of the Town's 2.4-mile Bay shoreline, from North Beach south to 17th Street, is safeguarded by revetments. A revetment is a permeable wall of stones set at an angle away from the water to absorb the energy of waves and protect against erosion. Only a small section of the Bay's shoreline, at the Rod 'N' Reel Resort, is protected by bulkheading. Except for this small run of bulkhead and developed shoreline, the shoreline is gently sloping and mostly planted in lawn. There are ~~two~~ three small private beach areas, one at Windward Key, one at Chesapeake Station and another ~~the~~ other at the Rod 'N' Reel Resort. There are no naturalized or vegetated (living) shorelines or buffer zones in Town except at Brownies Beach and the Randle Cliff Natural Heritage Area.

From 17th Street southward, the shoreline becomes very steep with slopes exceeding 50%. Cliffs are a special type of steep slope, where the face of the slope rises at least 10 feet at a grade of 50% or more<sup>7</sup>. The cliffs extend to Brownies Beach, where the shoreline flattens out again allowing Brownies Creek to flow into the Bay. After leveling out at the Brownies Creek inlet, the shoreline rises steeply again, this time in a naturalized condition and unprotected by revetment. Here the shoreline becomes the Randle Cliffs, which is a dynamic natural landform, continually eroding by force of waves, ground and surface water, and wind.

The Maryland Department of Natural Resources has designated the Randle Cliffs and its associated upland forest a Natural Heritage Area. Its combined geological, hydrological, and biological features are considered among the best in Maryland. Habitats for three threatened / endangered species are found there<sup>8</sup>. The Town has protected the area with its Resource Conservation zoning.



Figure 11: Bay Shoreline in southern Chesapeake Beach.

## Drainage

Drainage in low lying areas has increasingly become a challenge and the Chesapeake Beach Nuisance Flood Plan: 2000-2025 documented locations throughout the Town where residual standing water follows coastal flooding and/or precipitation events. Figures 12 and 13 show two of those locations.

<sup>7</sup> The tops of these shoreline slopes were subdivided and sold as building lots long before the advent of zoning. Houses and other structures now stand above the Bay, most notably along B Street. Heavy rains in recent years have caused noticeable sloughing and evoked concerns about the natural processes at work shaping the shoreline. Considering this, the Town adopted a Steep Slope Ordinance in 2018 requiring independently reviewed geo-technical studies and special stormwater management planning as conditions for future building activities.

<sup>8</sup> Puritan Tiger Beetle found in the intertidal zone, beach, cliff face and upland forest along Bay shoreline. Red Turtlehead (plant) found in the floodplain and non-tidal wetland areas to the west of MD Route 261. Glade Fern found in the northeast facing ravines and contiguous uplands between and above the ravines in the southwestern part of the area.

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Figure 12: Standing Water at the Tot Lot at Kellam's.



Figure 13: Standing water on Gordon Stinnett Ave.

There are two areas of Town, however, where major drainage systems are not operating effectively as described below and the effects are more extensive. Both would require updated engineering and significant investment. The solutions to both are integrally tied to this Plan's approach to coastal resiliency.

### Floodgate

The South Creek estuary is partially controlled by a flood gate located between Seagate (on the north) and Horizon's on the Bay (on the south). Between these communities is the eastern section of the estuary's tidal wetland which is separated from the Chesapeake Bay by a floodgate with a revetment and causeway. These features are visible in the photo below, which was taken from the northbound lane of MD Route 261. The open floodgate is in the distant center of the photo. Over time, this wetland has been converting to open water.



The floodgate, with its revetment and causeway, were intended to prevent storm surge from entering the wetland and flooding the northern part of Town, including Seagate and MD Route 261<sup>9</sup>. However, the floodgate is in a

Figure 14: Photo showing the floodgate.

permanently open position, so it does not operate to prevent tidal flooding. Figure 15 shows that MD Route 261 was inundated by the October 2022 unnamed tidal event that occurred without precipitation.

During times of precipitation and upland flooding, the open floodgate is intended to allow water to flow out to the Bay thus preventing the back up of water. When there is a major coastal flooding event (like October 2022) or

<sup>9</sup> That is, in the rare occurrence where there is coastal high flooding event without significant precipitation.

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coastal event in combination with a rain storm—a common occurrence—the floodgate system also cannot work which among other things overwhelms the drainage system near the Seagate townhouse community.



*Figure 15: View from Sea Gate community along MD 261 frontage looking west toward the sidewalk railing on MD Route 261 which is underwater following the un-named high tide event on October 12, 2022.*

Seagate, which lies on the north bank of the wetland, contains a pumped stormwater system near the intersection of C and 31<sup>st</sup> Streets. This pump drains a sump area and discharges its water through a storm drain which outfalls about 460 feet to the south into the wetland. Presumably, the water is meant to be held in the wetland where its sediments are allowed to drop out. But, in times of coastal flooding, the water in the wetland is pushed westward over MD Route 261 (or through a culvert) whereupon it eventually moves eastward returning to the sump area to be pumped again into the wetland. This creates a continuous circular pumping scenario.

To avoid this, the drainage infrastructure would need to be re-constructed to pump directly to the Bay. The ultimate design solution for MD Route 261, however depends in large part of how this drainage system is reconfigured.

#### 29th Street & Veterans Park

The Bayfront properties between 29th Street and Veterans Memorial Park have traditionally drained into the Bay through a series of storm drain pipes or wall openings in a bulkhead. The storm drain design for this area, which was implemented, is shown below. It is no longer effective. Note that it extends well west of MD Route 261 into the Middle Subdivision. Some years ago, the Army Corps of Engineers (USACOE) built the current stone revetment structure to protect those properties from eroding effects of wave action. In doing so, the USACOE raised the level of the structure relative to the homes and yards behind the revetment and did not modify drainage infrastructure.

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Over time due to sea level rise and the raised revetment wall, both of which have prevented the discharge of

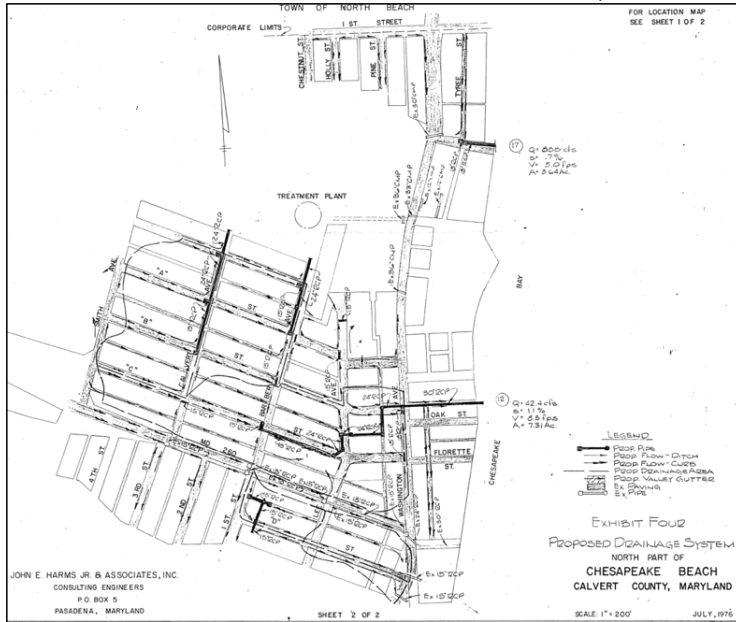


Figure 16: Storm Drain Plan, 1976.

water to the Bay, private property owners and the Town have found it necessary to implement incremental drainage solutions. Storm drains have been re-routed to find low areas to convey water and pipes have been elevated where possible. Also, the storm drain outlet at 28th Street and the Bay was completely plugged to prevent ponding on private property during high tide events. A comprehensive and areawide drainage assessment needs to be undertaken including videotaping the existing drainage system. Detailed mapping is required to determine an optimal method of modernizing the drainage system in light of the sea level rise projected in this Plan.

## Chapter 3 Vulnerable Areas and Assets

### Background

Local sea level is measured at tide gauges in the Chesapeake Bay. The baseline for the sea level projections used in this report is the level recorded in 2000 at the Solomon's Island, Maryland tide gauge. When this report refers to sea level rise, it is referring to the change above the levels recorded at the Solomon's Island tide gauge in 2000. The projections of sea level rise are from the Maryland Commission on Climate Change, Sea-Level Rise Expert Group via the University of Maryland Center for Environmental Science (UMCES). The Commission's publication

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titled Sea-Level Rise: Projections for Maryland 2018, is the source for the projections<sup>10</sup>. Pursuant to State law, these projections are to be updated every five years.

Tolerance for Flood Risk

The UMCES projects sea levels at various “tolerances for risk” and advises how these projections should be used when planning or and designing improvements. Figure 17 shows the projections for three levels of risk tolerance by decade through the year 2150.

This Plan uses maps for projected sea levels in the years 2030, 2050, and 2100 at a “low tolerance for flood risk”. Figure 17 shows, for example, that in 2050 sea level is projected to be plus 2.4 feet at the low risk tolerance projection. For comparison, at the medium risk tolerance, the projection is plus 2.0 feet. At the high risk tolerance, the projection is plus 1.7 feet. The risk tolerances correspond to the following percent probabilities that sea level will meet or exceed the stated value in a given year:

- High tolerance for flood risk: 17% probability
- Medium tolerance for risk: 1 in 20 chance, or 5% probability
- Low tolerance for flood risk: 1 in 100, chance, or 1% probability

For coastal planning purposes, University of Maryland Center for Environmental Science and Maryland Department of Natural Resources advise using projections associated with the low risk tolerance for flooding<sup>11</sup>. Using a low risk tolerance effectively means planning for avoidance, resistance, and the relocation of assets when adapting to flooding over time. In using a low risk tolerance, this Plan assumes that sea level rise values given for each year are unlikely to be exceeded in that year. In this way, conservative planning can be done so potentially severe consequences of flooding can be avoided, such as loss of life, public safety hazard, property destruction, and costly repair of infrastructure and buildings.

The low risk tolerance projection is used in this Plan can be explained in this way: there is 1% chance that sea level will be 2.4 feet or higher than the level recorded in 2000. It can also be explained by saying: there is a 99% chance sea level rise will be lower than 2.4 feet. Likewise, for the year 2100, the low risk tolerance projection used in this Plan means that there is 1% chance that sea level will be 5.8 feet or higher than the 2000 level and thus a 99% chance it will be lower than 5.6 feet.

If the Town were in the position now to design a new residential community, a town hall, a new water reclamation plan, or a fire company, it would adopt a low tolerance for risk for these assets. Each is vitally important and one

Tide Gauge: Solomons Island, MD			
Emissions Pathway beyond 2050: Stabilized (RCP 4.5)			
Year	High tolerance for flood risk	Medium tolerance for flood risk	Low tolerance for flood risk
2030	0.9 ft	1.1 ft	1.3 ft
2040	1.2 ft	1.5 ft	1.8 ft
2050	1.7 ft	2.0 ft	2.4 ft
2060	2.0 ft	2.4 ft	2.9 ft
2070	2.4 ft	2.9 ft	3.5 ft
2080	2.7 ft	3.3 ft	4.3 ft
2090	3.1 ft	3.8 ft	5.0 ft
2100	3.5 ft	4.4 ft	5.8 ft
2110	3.9 ft	5.0 ft	6.8 ft
2120	4.3 ft	5.5 ft	7.8 ft
2130	4.8 ft	6.1 ft	8.8 ft

Figure 17: Projections of Sea Level Rise, University of Maryland Center for Environmental Science, 2018.

<sup>10</sup> Boesch, D.F., W.C. Boicourt, R.I. Cullather, T. Ezer, G.E. Galloway, Jr., Z.P. Johnson, K.H. Kilbourne, M.L. Kirwan, R.E. Kopp, S. Land, M. Li, W. Nardin, C.K. Sommerfield, W.V. Sweet. 2018. Sea-level Rise: Projections for Maryland 2018, 27 pp. University of Maryland Center for Environmental Science, Cambridge, MD. [https://www.umces.edu/sites/default/files/Sea-Level%20Rise%20Projections%20for%20Maryland%202018\\_0.pdf](https://www.umces.edu/sites/default/files/Sea-Level%20Rise%20Projections%20for%20Maryland%202018_0.pdf)

<sup>11</sup> Guidance for Using Maryland’s 2018 Sea Level Rise Projections, Kate McClure University of Maryland Sea Grant Extension and Allison Breitenother and Sasha Land, Maryland Department of Natural Resources, March 2022.

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of the design goals would be to ensure the long term viability and safety of the asset or of public safety generally. For that reason, the Town would insist on locating and designing such assets to strictly minimize the threat of hazard. The fact that each asset type is already present in Chesapeake Beach, and located within a flood hazard area, only reinforces the need for conservative planning. In applying a low tolerance for risk, this Plan is aiming to guide adaptation of the town and such assets with the greatest concern for public safety and asset preservation.

By contrast, if the Town were now to design a new park, it would likely use a higher tolerance for risk because a park, in contrast to a fire company, can generally flood without causing major damage. In the future, as the Town and State of Maryland implement the ideas recommended in this Plan, engineers will make specific determinations about relative tolerances for risk. An evacuation route (such as MD Route 261) could be conservatively designed with a low risk tolerance and would ideally be elevated well above base flooding conditions, while a parking lot at the Kellam's Recreational Complex could be designed with a much higher tolerance for risk allowing for routine flooding without impact to public safety.

### A Word About Storm Surge

The mapping used in this Plan shows the projected extent of future "still" water—that is, open water on a typical dry-weather day in the future (2030, 2050 and 2100). The mapping does not incorporate the storm surge associated with hurricanes or nor'easters. Storm surge is the level of windblown water that arrives at the shoreline above the normal tide levels. In Hurricane Isabel (2003), the local storm surge was estimated to be 4 to 5 feet -- that is, the water was 4 to 5 feet above the normal tide level on that day in 2003. When one considers the mapping of open "still" water in this report, it's helpful to layer storm surge on top of that higher sea level to appreciate the extent of future risk. If, for instance, the sea level in 2050 is about 2.4 feet higher than it was during Hurricane Isabel (as projected), a comparable storm surge will arrive at roughly 6.4 to 7.4 feet above the 2003 tide level, rather than at 4 to 5 feet. This gives greater credence to this Plan's decision to use the low risk tolerance for coastal resiliency planning.

## Mapping

The Eastern Shore Regional GIS Cooperative (ESRGC) assisted the Towns of Chesapeake and North Beach with flood analyses and prepared the maps in this Plan. An ESRGC prepared document summarizing its methodology is provided in the Appendix. The ESRGC used the most current (2017) LiDAR topographic mapping data to establish land elevations, meaning that any topographic changes following 2017 were not captured on the maps presented in this report. To address this, the Town surveyed lands in 2022 known to have been raised since 2017 and updated the mapping as needed. The updated maps are not incorporated into this report but were considered in this study, presented at public work sessions, and remain available on the webpage the Town created for public review.

Maps are used in this report to explain existing or projected conditions. They are also provided at a higher resolution for more detailed examination in the Appendices. Maps are provided for the years 2030, 2050, and 2100. For the year 2100, two series of maps were produced. The first series is based on the 2100 projection for sea level rise (RCP 4.5) which assumes global society is able to stabilize carbon emissions following 2050. The second series (RCP 8.5) assumes global carbon emissions continue to grow beyond 2050<sup>12</sup>. This second scenario shows a greater extent of inundation and flooding than the stabilized emission scenario. Both series of maps were considered in formulating the recommendations of this Plan, but only the stabilized emissions scenario is presented in the body of this document.

The maps contain content that is particularly useful to understanding vulnerability to sea level rise. Figure 18 provides guidance for reading the maps. As noted previously, the maps show the extent of inundation in future

<sup>12</sup> See the aforementioned report, [Sea Level Rise, Projection for Maryland, 2018](#).



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years under dry-weather conditions. In other words, the water coverage one could expect to see on a typical dry-weather day. So, as shown in Figure 18, areas marked with the darkest blue color are projected to be open water on a typical dry-weather day.

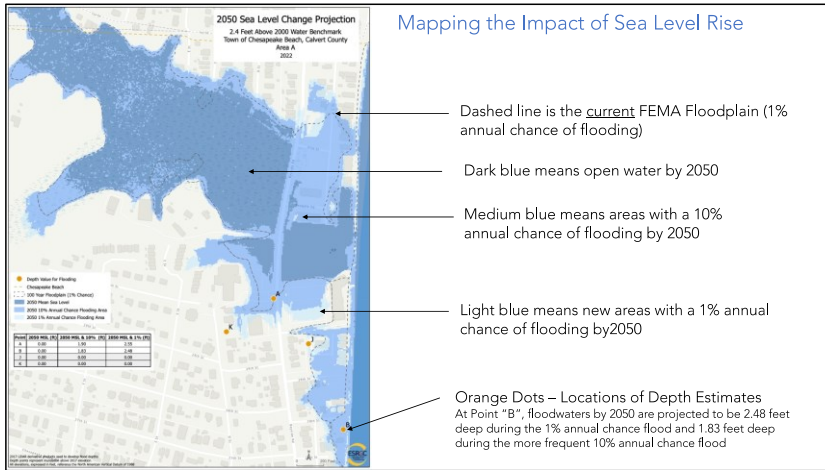


Figure 18: A Guide to the Content on the Sea Level Rise Maps.

It is important to note that the maps do not show the impacts of storm surges or of heavy rains which would lead to more land being covered in water at least temporarily. To better understand the increased vulnerability to flooding that the Town's coastal areas will face in the years ahead, the maps also show the existing FEMA 1% annual chance flood area, a projected 1% annual chance flood area, and a projected 10% annual chance flood area. Land contained within 1% annual chance flood, would have a one in 100 chance of being flooding in the given year. Land contained within 10% annual chance flood, would have a one in 10 chance of being flooding in the given year.

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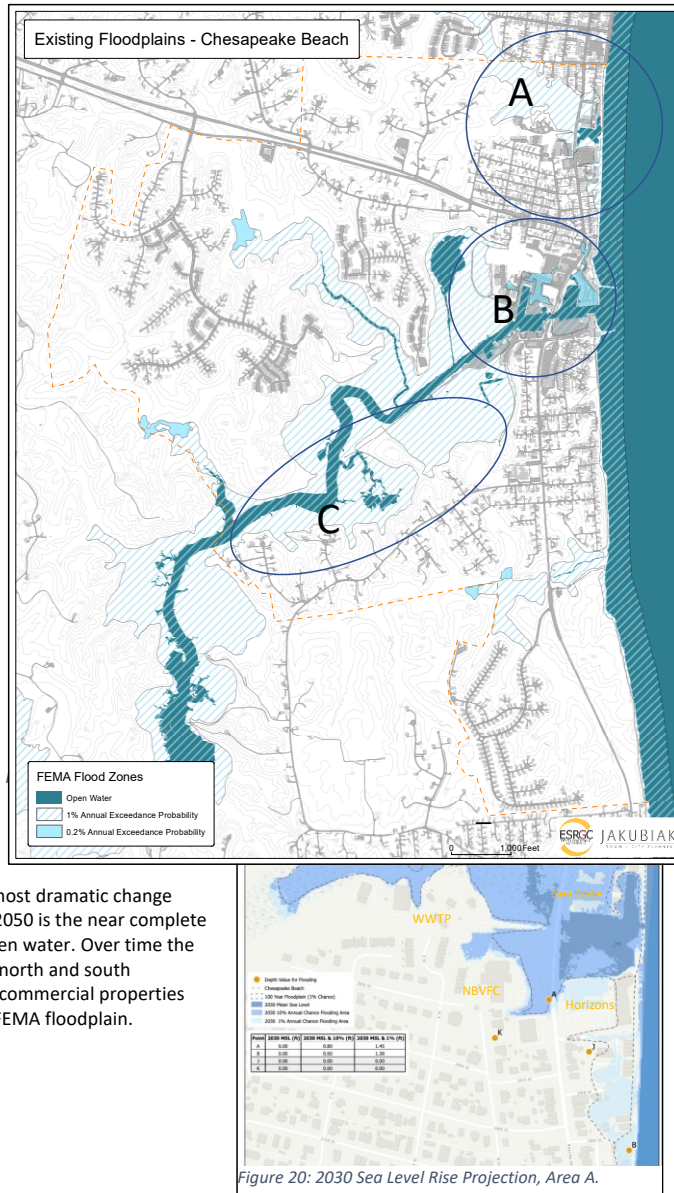
## Vulnerability Areas

To allow for detailed examination of the effects of projected sea level rise on neighborhoods, infrastructure, and community assets, this Plan focuses on three subareas within the Town (See Figure 19).

The maps that follow document the extent of future inundation, flooding, and vulnerable community assets within each of these areas. Later in Chapter 4, this Plan's recommendations are also organized by area.

### Area A

Area A extends from about 27<sup>th</sup> Street north to First Street. It encompasses the South Creek estuary or inlet to the Bay. Shown here is the area in 2030 (with a sea level rise of 1.3 feet), in 2050 (with a sea level rise of 2.4 feet), and 2100 (with a sea level rise of 5.8 feet). The most dramatic change projected between 2030 and 2050 is the near complete conversion of the marsh to open water. Over time the floodplain would extend both north and south encompassing residential and commercial properties that today are not within the FEMA floodplain.



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The community assets shown in the maps are the Chesapeake Beach Water Reclamation Plant (WRP) and the North Beach Volunteer Fire Company (NBVFC). The Sea Gate residential community, consisting of 30 townhouses, is projected to be increasingly vulnerable to flooding in the decades ahead. By 2100 the are South Creek estuary is projected to be fully engulf in water covering the grounds of Sea Gate and nearby properties.

Area B

Area B encompasses the historic center of Chesapeake Beach and the Fishing Creek inlet to the Bay. Shown here is the area in 2030 (with a sea level rise of 1.3 feet), in

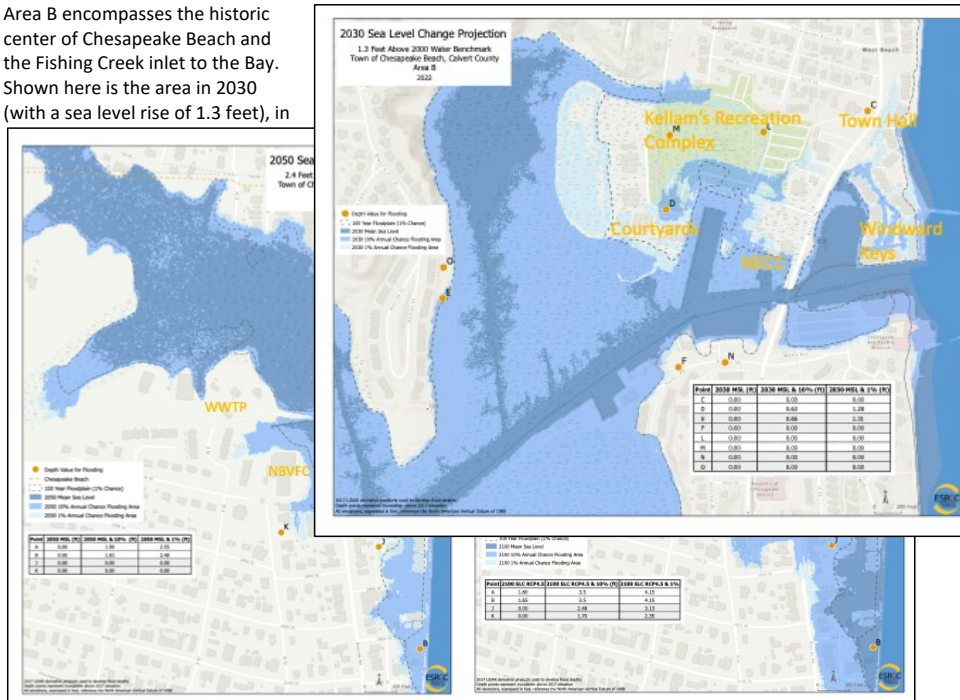


Figure 21: 2050 & 2100 Sea Level Rise Projections, Area A.

2050 (with a sea level rise of 2.4 feet), and 2100 (with a sea level rise of 5.8 feet).

The community assets shown in the maps of Area A are the Chesapeake Beach Town Hall, the Kellam's Recreation Complex, the North East Community Center (NRECC). The Chesapeake Beach Waterpark and Public Boat Landing are also located here. The Courtyards at Fishing Creek Townhouses and Apartments (Courtyards) and Windward Key are also located in this area of Town. Both are projected to be increasingly vulnerable to flooding in the decades ahead, the Courtyards especially.

Figure 22: 2030 Sea Level Rise Projection, Area B.

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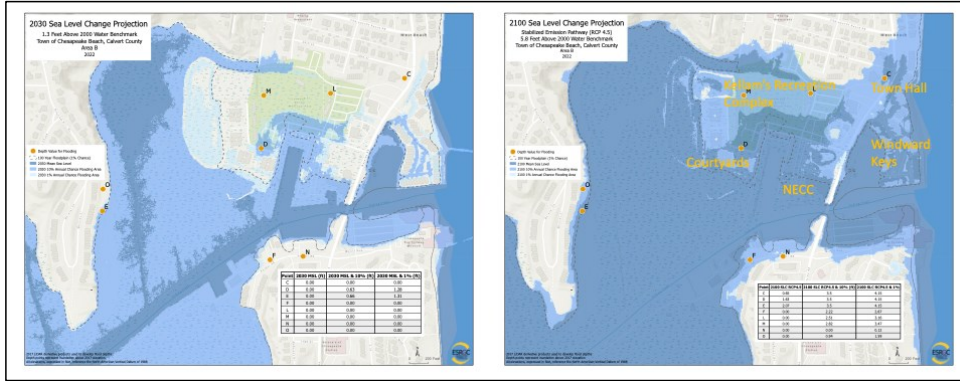


Figure 23: 2050 & 2100 Sea Level Rise Projections, Area B.

Area C

Area C encompasses the southern section of the Fishing Creek marsh. Shown here is the area in 2030 (with a sea level rise of 1.3 feet), in 2050 (with a sea level rise of 2.4 feet), and 2100 (with a sea level rise of 5.8 feet).

Sea level rise in Area C is almost entirely contained within the current FEMA floodplain, through some expansion of the flood plain in lower lying areas is projected over time. This area of Chesapeake Beach is largely wooded and sparsely developed. It is zoned for low density residential development and falls within the Limited Development Area (LDA) of the Critical Area. There are no community assets here and no public streets or utilities are anticipated to be impacted by sea level rise.

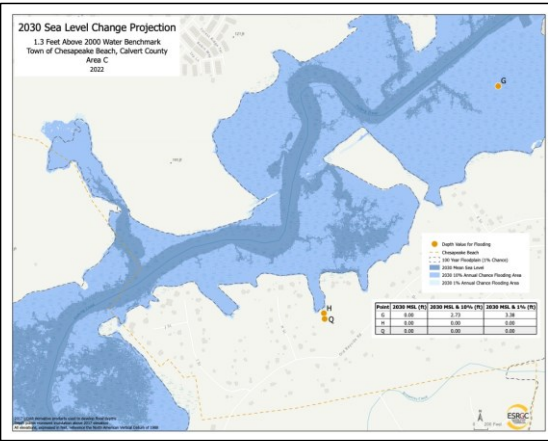


Figure 24: 2030 Sea Level Rise Projection, Area C.

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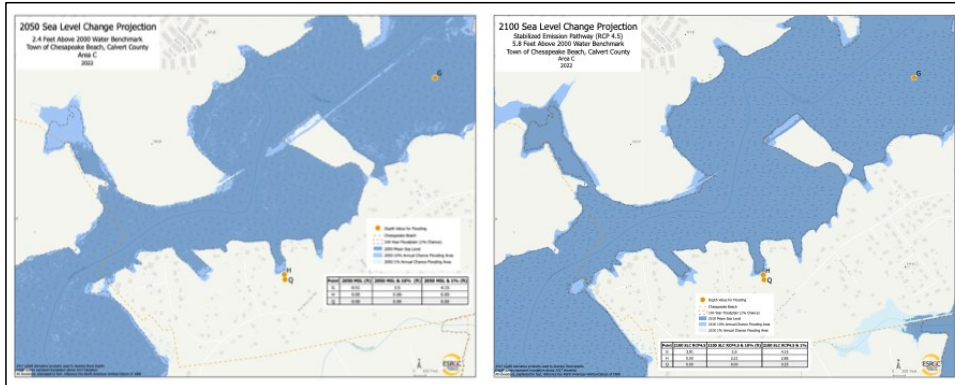


Figure 25: 2050 and 2100 Sea Level Rise Projection, Area C.

### Summary of Impacts

Housing developments have been built within areas and at elevations which present significant future flood hazard. Circulation within Chesapeake Beach is also vulnerable to multiple day disruptions during both tidal events and major storms. Over the long term, beyond 2050, some streets are also at risk of being permanently inundated as sea level fills low lying areas. This includes MD Route 261 between 27<sup>th</sup> Street and First Street, several Town owned streets including parts of 31 Street, C Street, D Street, E Street, David Street, and Gordon Stinnett Avenue. A major section of this road is elevated only 2.5 to 3.0 feet above the current sea level and is routinely flooded during 1% annual storm events.

Gordon Stinnett Avenue is the only access route between the Courtyard at Fishing Creek housing community and the Town street system. The Courtyards was established in 1989 under the federal Low Income Housing Tax Credit program (LIHTC) and was constructed on filled wetlands. It provides 76 units for Town households earning below the median housing income. Multiple private community streets are also at risk including those at the Courtyard at Fishing Creek, Windward Key, and Sea Gate.

Essential community facilities are at risk, including the North Beach Volunteer Fire Department, the entrance road to the Chesapeake Beach Water Reclamation Plant, the grounds of the Town Hall, and the Northeast Community Center (which is actually a designated hazard resource center). The entire Kellam's Recreation Complex was constructed on filled wetlands and a large portion sits at, or under, five feet above sea level. The Chesapeake Water Park is a site of significant subsidence as mentioned elsewhere in this report and its ability to function over the longer term, in the absence of resiliency solutions, is at risk due to flooding. The extent of these and other risks is explored further in Chapter 4, Action Plan Strategies and Recommendations.

Commented [GU3]: add: in the absence of resiliency solutions

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## Chapter 4 Plan Strategies, Recommendations

### Overall Approach

The purpose of this Plan is to provide a coordinated and long term approach to making Chesapeake Beach more resilient to the effects of rising water levels and the flooding associated with it.

This Plan aims to be holistic in its approach. It considers the natural resource systems and the Town's settlement pattern. As documents in this report, the Town developed in a way that placed current and future populations increasingly at risk, mostly within and adjoining the tidal estuaries associated with South and Fishing Creeks. So, this Plan for resiliency is largely about retrofitting those patterns.

Solutions must be comprehensive, flexible, sensible and consensus driven. This plan for coastal resiliency is a plan about embracing the reality of the landscape and its limitations and making Chesapeake Beach safer and more environmentally sustainable, walkable, beautiful, and enjoyable. The solutions that address flood risk most optimally therefore will be solutions that provide other community benefits too.

The overall approach can be broken into two main strategic frameworks. The first is about strategic flood management and sustainable drainage. These recommendations are universally applicable within the Town's coastal areas most notably within lower lying areas at risk of flooding or permanent inundation. The recommendations include changes to the regulations that govern development activities and land use in the floodplain. The second strategic framework is about tactical retrofitting. These recommendations are location-specific and include both policy and project-based proposals. Recommendations are provided for each of the three subareas described elsewhere in this report: Areas A, B, and C.

### Strategic Flood Management and Sustainable Drainage

In order to operationalize the recommendations in this section, the Town must periodically track projected changes in sea level and map the effects of these changes on the landscape. In other words, it must update the maps presented in Chapter 3. The Maryland Commission on Climate Change Commission updates the projections every five years so the Town could periodically select and adopt a sea level rise projections, based on the Commission's published projection. With the new projections in hand, the Town could then revise its geo-spatial mapping and take account of any local topographic changes. The updated mapping would then provide the base for drawing flood hazard zones wherein certain types of regulations would apply.

Tying regulations to consensus projections of sea level rise means the regulations can be reasonably applied in the short term and adjusted over the longer term as changing conditions or improved information warrants. For now, the recommendations that follow reflect this Plan's adoption of the 2.4 foot increase (projected to occur by 2050), and the mapping which derives from that projection, and the 5.6-foot increase (projected to occur by 2100) and the mapping which derives from that.

For guidance to the recommendations that follow, note that when the recommendations refer ~~to the~~ to the "2050 Maps" or "2100 Maps" they are referring to the maps in Chapter 3 of this report. The 2050 Maps show areas of open water, areas with a 10% annual chance of flooding and areas with a 1% annual chance flooding under the assumption that relative sea level is 2.4 feet over the year 2000 baseline. The 2100 Maps show the same geographic areas and the same categories but assume relative sea level is 5.6 feet over the baseline established in the year 2000. Please refer to the maps in the Appendix.

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1. Amend the Floodplain Management Ordinance (Chapter 149 of Town Code) to apply flood management regulations to all properties mapped on the 2100 Maps as a Flood Area. The regulations would include among other things applying a required minimum flood protection elevation (FPE or “freeboard”), and requiring flood resistance materials, the elevation of electrical building components, and anchoring of accessory structures. This effectively means broadening the geographic area and expanding the number of properties subject floodplain regulations.
2. Amend the Floodplain Management Ordinance to incorporate a higher flood protection elevation (FPE, or freeboard). For all areas mapped in the higher risk 10% Annual Chance Flood Area on the 2100 Maps, the Town should require that development or redevelopment projects incorporate a FPE of at least 4.5 feet. This is 2.5 feet higher than the current 2-foot flood protection elevation required in the Town’s Floodplain Management Ordinance. The extra clearance is intended to account for the projected 2.4 feet of sea level rise through 2050. This Plan assumes over time FEMA will continually update its base flood elevation and while the 2 -foot FPE should continue to be adequate generally, all properties mapped as 10% Annual Chance Flood Area, will need to adhere to this new higher standard for freeboard: 2-foot FPE plus at least 2.5 feet.
3. Amend the Zoning Ordinance (Chapter 290 of Town Code) to require that all site plans for any development or redevelopment on properties mapped on the 2100 Maps as Flood Area include certification by a Professional Engineer that all principal buildings have a demonstrated capability to withstand the storm surge associated with the Town’s projected sea level rise. Specifically, for the next decade, the certification will need to demonstrate that flood tolerant construction methods would be used appropriate to the projected storm surge assumed with the 2.4 foot rise. This is the “Isabel plus 2.4-foot test”. It takes the Town’s experience with the last recorded Hurricane and assumes it arrives on a tide level 2.4 feet higher.
4. Amend the Zoning Ordinance (including Critical Area regulations) to require that all required stormwater management practices and techniques for development or redevelopment projects in areas on the 2100 Maps as Flood Area be proven effective with the 2.4 foot rise in sea level assumed as a base condition. This includes stormwater management evaluations required for development activities within the Critical Area. The Town will need to coordinate with Calvert County Department of Public Works to incorporate this standard, or a comparable standard, into the Department’s administration of Maryland stormwater management regulations.
5. Amend the Zoning Ordinance to prohibit from areas mapped as 2100 Flood Area, all group homes, convalescent centers, nursing homes, ~~medical clinics,~~ and hospitals. These uses would be especially vulnerable to coastal hazards and would present difficulties for emergency evacuation. [These Zoning Ordinance amendments can be re-evaluated as mitigation measures are implemented and the projected 2100 Flood areas are adjusted.](#)
- 6-5. Thoughtfully evaluate the Zoning Ordinance to determine what regulatory obstacles may impede property owners from raising buildings and improving their properties in ways that would protect public health and safety and advance the resiliency goal of this Plan. [Examples of obstacles might include structure height, where the structure height is measured from, permitted hardscape elements, alternate entrances to a lot, etc.](#)

## Tactical Retrofitting

This section is organized into three parts. The first describes the spatial tactics and the techniques which may be applicable within the Town generally. The second and third part describe the tactics and techniques specially

**Commented [GU4]:** Received a comment that we shouldn't limit the type of development in this area but rather how to solve the flooding in the 2100 flooding map

**Commented [HW5R4]:** maybe say forecasted or unmediated areas...

**Commented [GU6R4]:** See sentence added at the end

**Commented [GU7]:** Question was asked - can we look at specific obstacles rather than making a blanket statement?

**Commented [HW8R7]:** some obstacle examples: structure height - where to measure from - hardscape - alternate entrance to a piece of land

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recommended as applicable to Area A, B, and C respectively. Recall areas A, B, and C are described and mapped in Chapter 3.

The tactics and techniques are summarized in the framework set forth in Figure 26 below. Some of the tactics can work in coordination with each other and in fact may be codependent. All of them can be used to ensure the most effective and comprehensive approach.

Spatial Tactic	Techniques	Description
<b>Attenuate</b>	General open space protection. Forest preservation and tree planting. Steep slope -- preservation in wooded condition. Shoreline, rip rap or naturalizing shoreline.	<b>Reduce</b> the velocity of flood waters and increase the time water takes to move along a pathway
<b>Alleviate</b>	Allowing marsh migration. Re-establishing wetlands. Spill-overs and retention zones. Building new landforms to contain water. Sustainable drainage. Best Management Practices.	Increase the capacity to <b>withstand</b> floods, provide safe areas that can be flooded to limit vulnerability elsewhere, manage stormwater in all forms of development, retro-fit existing neighborhoods. <b>Absorb</b> .
<b>Restrict</b>	Building, rebuilding revetments and bulkheads. Building, rebuilding floodgates and seawalls. Building new landforms to block water.	<b>Restrict</b> the entry of water. Hold the line against flooding.
<b>Realign</b>	Elevating streets, sidewalks, parking lots. Redeveloping neighborhoods. Elevating individual buildings. Managed retreat, relocating buildings and community assets. Bringing about land use changes.	<b>Reposition</b> and thus reduce exposure by moving infrastructure and buildings, either vertically or horizontally.

Figure 26 Spatial Tactics and Techniques

**Attenuate.** Attenuation is the foundation for the Town’s coastal resilient approach. While sea level rise is a coastal phenomenon, good land use and stormwater management further inland, (in the drainage basins of South and Fishing Creeks) can reduce the Town’s vulnerability to flooding. Healthy forests, especially on steeply sloped terrain and along streams, and healthy wetlands work to reduce the velocity of floodwater and increase the time it takes to flow into the lower lying areas of coastal Chesapeake Beach.

**Alleviate.** Alleviation is also foundational to coastal resiliency in Chesapeake Beach. The local context described in Chapter 2 of this report indicates the potential latent in the Town’s natural resources to help cushion sea level rise and withstand floods. This tactic is in part about allowing natural or nature-like processes, like the migration of wetlands and sustainable drainage, to absorb floodwater so that overall vulnerabilities are lowered.

**Restrict.** Restricting the entry of water into critical zones through floodgates, sea walls, bulkheads, and other structures is a must in certain locations but it’s viability within the unique environmental context of Chesapeake Beach is limited. Because the Town has been built on and among two estuaries, flood waters comes from the Bay while stormwater flows to the shoreline. The structures that would be required to hold back the water along the shorelines of the Bay and Fishing Creek would displace much of the Town and the drainage pipes and pumps necessary to convey floodwaters over and through those structures back to the Bay would be monumental.



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**Realign.** Realignment is about moving things like roads, houses, business, and community assets so they can withstand flooding or avoid it altogether. Some buildings, and infrastructure can be raised so water passes under or around and some can be relocated to safer locations. The Realign and Alleviate tactics can be especially complementary. For example, allowing tidal marshes to expand (alleviate) may depend on relocating buildings and infrastructure (realign).

Many of the recommendations assume multi-disciplinary engineering studies and design work. Teams of experts in coastal engineering, structural engineering, hydrology, infrastructure, land planning, landscape architecture, and town planning would be called upon. These studies would be conducted under the guidance of this Plan, and they would in turn help refine and detail this Plan as they are completed and accepted. Detailed engineering, particularly at the scale of small areas or even individual properties, may reveal actual elevations of some locations that differ from the geo-spatial assessments shown in this Plan. These findings will, of necessity, inform how the recommendations of this Plan are refined and detailed.

## Area A

### Overview

As described elsewhere in this report, Area A is dominated by the confluence of South Creek and the Bay and home to essential community assets and residential communities. The prominent scenic and environmental feature in Area A is the South Creek tidal marsh which now extends along the west side of MD Route 261 roughly from the entrance to the Volunteer Fire Company north to 31<sup>st</sup> Street. On the east side of the roadway, the marsh is hemmed in by Seagate to the north and Horizon's on the Bay to the south. The blue lines on Figure 27 show the approximate limits of land projected to become mostly open water through this century. This is an area of heightened concern.

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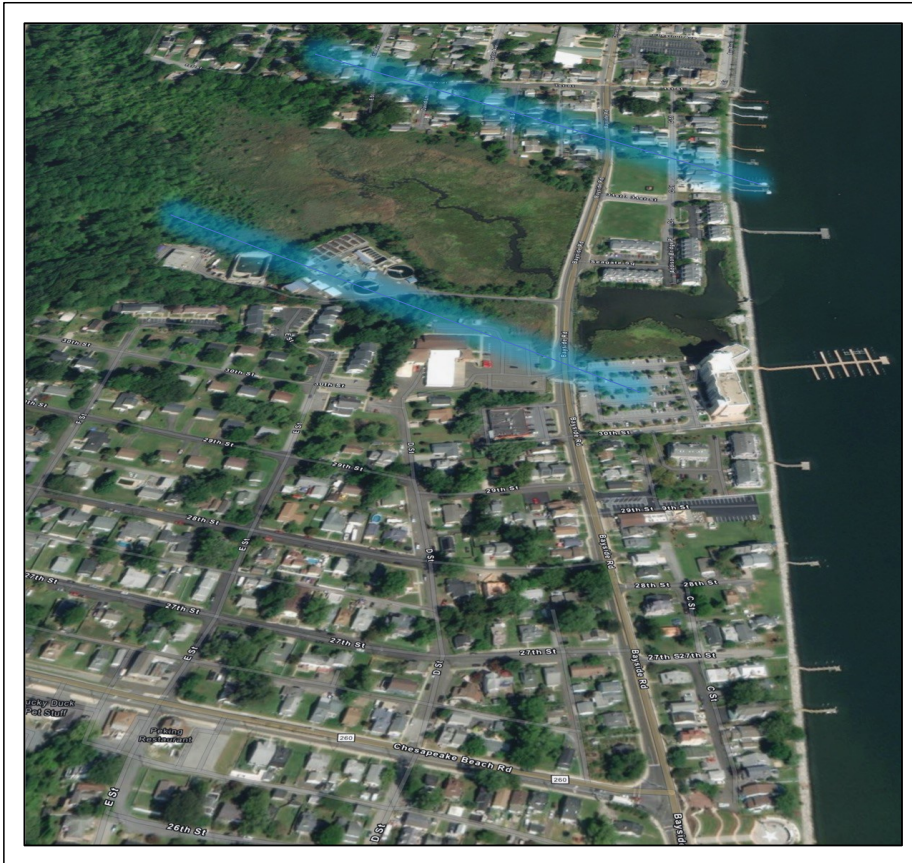


Figure 27: Defining the limits of the South Creek Estuary for planning.

The sea level rise mapping in Chapter 3 shows that relative sea level rise is projected to render much of the area between the blue lines in the figure above permanently inundated in still water conditions. Even by 2050, the marsh that exists today is projected to be open water and the edges of that marsh are likely to have migrated further north and south in response to expanding high water tables. Future storm surges (on par with the hurricanes of the past) would be far more devastating to any structures not substantially elevated or capable of floating. For context, Hurricane Isabel is reported to have soaked the insulated undersides of the elevated first floors in the Seagate community when its storm surge passed under the townhouses in 2003.

The optimal long term approach to coastal resiliency in this area is to allow, to the greatest extent possible, the natural functions of the estuary to be re-established and to prevent the introduction of any residential population. How that might optimally be achieved over the decades ahead will depend on considerable consultation with all parties including residents, property owners, and the Maryland Department of Transportation, State Highway

Commented [GU9]: Recommend changing to "limit" instead of "prevent"

Commented [HW10R9]: use this one

Commented [GU11R9]: Review

Commented [GU12]: recommendation to delete

Commented [HW13R12]: No

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Administration. Holding back the water in this area with structures along the Bay or along the marsh is not practical for every situation and maintaining essential community services and infrastructure to the limited population over the long term could prove exceedingly challenging.

As this area continues to flood and transform, the potential for property damage and risk will rise. This subarea within Area A is subject to flooding from both the Chesapeake Bay to the east and South Creek to the west. Consequently, whether the existing development (especially residential uses) within this subarea of Area A can be sustained, and in what form, will require much study and consultation with property owners in the decades ahead. Some of the potential responses that flow from the realization that this estuary may become open water are:

- Access to ~~The North Beach Volunteer Fire Company would need to be modified in conjunction with realignments to MD Route 261 to ensure the entire service area could be supported. relocated, and the service areas reimagined such that emergency service to both towns would not depend on this section of highway. The fire company property would then be converted to open space.~~
- MD Route 261 would need to be reconstructed as a bridge over the marsh/open water, allowing for safe travel over the marsh and the freer movement of waters to and from the Bay while protecting the vital transportation needs between North Beach and Chesapeake Beach. The question of costs and feasibility would need to be studied.
- The access route to the Water Reclamation Plant would need to be elevated significantly in combination with MD Route 261, or if that is not practical, a new access route would need to be developed likely to the south side of the facility from a point north of 30<sup>th</sup> Street. The ground of the treatment plant itself, while at increased risk of flooding, is elevated above projected inundated levels even in 2100.
- Many of the residences on C Street would be surrounded by water on both their Bay and street sides and subjected to hazardous conditions. At minimum, C and 31<sup>st</sup> Street and the infrastructure and utilities within their rights-of-way would need to be reconstructed and raised to considerably higher elevations, which would affect driveway access to adjoinadjoining properties. Alternatively, such houses would need to be removed, raised or reconstructed.
- The residences along the north side of the marsh would be flooded and a wide band of homes extending from the marsh would be subjected to hazardous conditions. The southern ends of E Street, David Street, and D Street are projected to be inundated making vehicular access to the houses closest to the marsh impractical. The ends of these streets collect the drainage flowing southward from First Street and they encounter the northern overflow from the marsh. The houses near the marsh would need to be removed or they, along with the street and utilities, would need to be elevated significantly. Mitigation techniques such as berms and/or a functional flood gate might be possible to direct increased flooding away from these areas.
- Engineering studies that are conducted to evaluate solutions related to MD Route 261 should also consider the effects on the ~~The townhouses in the Sea Gate community and the surrounding area. This area~~ are projected to be surrounded by water with the private streets and grounds fully inundated. The community's current private street intersection at MD Route 261 is projected to be open water. The October 2022 tidal events foreshadows this condition (see Figure 15 in Chapter 2 under the heading Drainage). The townhouse blocks would need to be removed or completely and comprehensively

Commented [GU14]: Recommendation - for every situation

Commented [HW15R14]: OK

Commented [GU16]: recommendation to delete

Commented [HW17R16]: no

Commented [GU18R16]: left text in...

Commented [GU19]: Recommendation to delete and "What makes this area different from the Windward Key/Rod&Reel/Fishing Creek area"

Commented [HW20R19]: Maybe there's a way to distinguish

Commented [GU21R19]: see revision

Commented [GU22]: Lots of thoughts on this bullet point...Need to discuss revising or removing. Must be done considering what SHA has sent to the Town

Commented [HW23R22]: make statements of the issue not necessarily the solutions

Commented [GU24R22]: See revision

Commented [GU25]: Recommend add: "An engineering study would need to be conducted to determine how Rt. 261 can be elevated and configured to protect transportation between North Beach and Chesapeake Beach as well as continued emergency services provided by the North Beach Volunteer Fire Company.

Commented [GU26R25]: See revisions

Commented [GU27]: Recommendation to delete

Commented [GU28]: Discussion about this bullet point and the bullet point two below it

Commented [GU29R28]: see revision

Commented [GU30]: Suggestion to add the statement: "Add a berm to deflect the storm water away from the residential areas. Add a flood gate to the west side of Rt 261 to ensure the flooding doesn't occur along Rt 261."

Commented [GU31R30]: see revision

Commented [GU32]: Recommendation to add: "Engineering studies that are conducted to evaluate solutions for MD Rte 261 should also incorporate recommendations for ....

Commented [HW33R32]: re-evaluate all bullets here

Commented [GU34R32]: Review

Commented [GU35]: recommendation to add "which" in conjunction with the other add

Commented [GU36R35]: see revision

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~~elevated and/or redeveloped at a significantly higher elevation along with all streets, utilities, and infrastructure. It is quite possible the land itself would need to be raised and contained within bulkheads or seawalls, thus presenting a significant challenge for access, circulation, and public water and sewer.~~

- ~~The parking lot and access road into Horizons on the Bay is projected to be inundated and would need to be elevated.~~
- ~~Development of any open lands and intensification of any existing development would need to be strictly avoided.~~

### Recommendations for Area A

The following recommendations are intended for the next 10 years.

#### *Attenuate Recommendations*

Land preservation in the South Creek watershed is essential. The adopted 2040 Comprehensive Plan designated most of the remaining stands of forest within Town boundaries for resource conservation. Following the adoption of the Comprehensive Plan in 2022, the Town Council adopted zoning ordinance amendments and a new map which largely removed development potential from these areas and rezoned them "Resource Conservation".

Moving forward, the Town should seek to minimize any further forest removal through adjustment to its zoning regulations, implement recommendation for an urban forest program to increase forest cover within the watershed, and coordinate with Calvert County and North Beach to ensure continued preservation and appropriate land use strategies in the parts of the watershed that extend beyond town limits.

#### *Alleviate Recommendations*

- Through 2050, facilitate outward migration of the South Creek tidal marsh. To the north, allow the growth toward E, David, and D Streets. This can be optimally accomplished by coordinating with the most impacted property owners to buy out impacted owners and convert the land to open space. On the south side of the marsh, wetlands are migrating into the Volunteer Fire Company and its parking areas. Identifying near-term and long-term solutions for preserving emergency services to the Twin Beaches via the North Beach Volunteer Fire Company should be prioritized and evaluated for financial feasibility. ~~This is addressed below under "Realign" where this Plan recommends relocating the company. In the meantime, the strict application of State and federal regulations preventing the disturbance of tidal wetlands and wetland buffers must continue to be enforced along the edges of the marsh. Development activities in these area are further restricted by the Town's Critical Area regulations.~~
- Assert rightful public ownership and maintenance of the 20-foot wide historic trolley right-of-way that runs along the east side of MD Route 261. The section from First Street in North Beach to 31<sup>st</sup> Street is shown in the Figure 15 . This area may be used for flood management as conditions and opportunities warrant and/or to provide space needed by the State Highway Administration to elevate MD Route 261. Prevent the encroachment of any further private development activities within this area and coordinate with adjoining property owners to eliminate the several private structures (sheds, fences, and similar structures) that have been constructed on this public land.

**Commented [GU37]:** Recommendation to remove the bullet - could be viewed as a taking and development, if done correctly, could improve the area with flood and storm water management

**Commented [HW38R37]:** same as above

**Commented [GU39R37]:** See Revision

**Commented [GU40]:** 2 Questions:  
- Why are the recommendations for Seagate different from those for Winward Key  
- Why are the recommendations for open lands in this area different from those for Area B?

**Commented [GU41R40]:** Different flooding scenarios

**Commented [GU42]:** Recommendation to delete and add so it would now read as "Identifying near-term and long-term solutions for preserving emergency services to the Twin Beaches via the North Beach Volunteer Fire Company should be prioritized and evaluated for financial feasibility. To the extent possible, requirements..."

**Commented [HW43R42]:** ok

**Commented [GU44R42]:** see revision

**Commented [GU45]:** Concern was raised about whether this right-of-way exists

**Commented [GU46R45]:** Holly stated it does exist

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3. Incentivize or require the retrofitting of parking lots in Area A and to the extent possible convert un-needed parking area to open space for flood management. Figure 28 shows an example.



Figure 28: Image of parking lot providing stormwater management.

4. Address the drainage issue at Seagate and the storm drainage pump at 31st and C Streets, which is described in Chapter 2 of this report. The design should align with the long term objective of allowing natural processes to work in this area and be designed in combination with other sustainable methods to absorb stormwater while protecting public safety. Any option that makes public health and safety dependent on a mechanical solution must also have built-in redundant systems which are preferably nature based and include substantial physical space for the alleviation of flood risk.

*Restrict Recommendations*

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1. Elevating the revetment along the bayfront in Area A over the next decade is recommended between 30<sup>th</sup> Street and 27<sup>th</sup> Street (see Figure 29). This area is presently subject to coastal flooding, is projected to have a 10% annual chance of flooding by 2050 and have a much higher likelihood of begin open water by 2100 absent a solution.

The area of Town is not directly connected hydrologically to the South Creek tidal marsh which is just north so a higher revetement along the Bay stands as a viable option. In other words, a physical barrier at this location will not impede the discharge of water from South Creek to the Bay.

However, any elevation of the revetment in this area should be evaluated against any planned changes to the land, structures and infrastructure immediately behind the revetment. must only proceed after a plan is accomplished and adopted for elevating the land, structures, and infrastructure. Any master planning efforts for this area should specify ~~The master plan must specify a recommended~~ the necessary elevation of the land, the minimum elevation of structures, the location and vertical alignment of drainage facilities, standards for sustainable development and building construction, the assignment of private and public costs, the allotment of land for public and private open spaces, and broad public access to and along the Bay front. Elevating the revetment is best performed in conjunction with a ~~without a~~ plan for raising the land and/or structures, creating open spaces, and enhancing public access to the water. is not an option this Plan supports. However, ~~+~~ This Plan does recognize that anticipate that the revetment could be raised, especially in the short term to dissipate projected wave energy, prior to the implementation of the aforementioned plan.

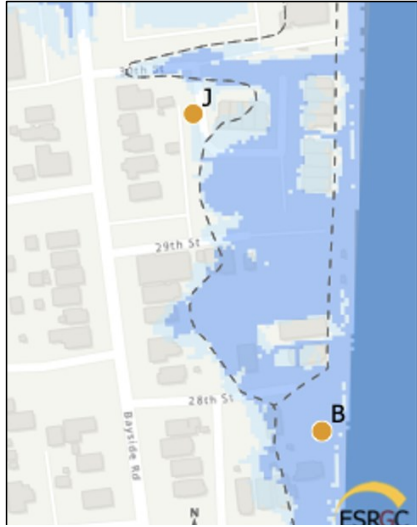


Figure 29: Flood Zone from 30<sup>th</sup> Street to 27<sup>th</sup> Street.

2. Conduct an engineering study in coordination with the State of Maryland to determine how much longer the floodgate in its current configuration can remain viable and investigate the optimal solutions for the flood control in the area. This Plan foresees the gradual transformation of the South Creek estuary into open water and marsh and that a combination of natural and manmade solutions will be necessary.

*Realign Recommendations*

1. ~~With urgency and in coordination with the North Beach Volunteer Fire Company, the Town of North Beach, and the State Highway Administration, evaluate whether it is feasible and advisable for the North Beach Volunteer Fire Company to remain at its current location or to relocate, and develop of plan of action for the preferred option.~~ Evaluate a spectrum of solutions for preserving facilities and

Commented [GU47]: Comment: This recommendation contradicts itself

Commented [HW48R47]: Grant to provide some guidance

Commented [GU49R47]: See revision

Commented [GU50]: For discussion about how to word this bullet or remove completely

Commented [HW51R50]: Soften the relocate part

Commented [GU52R50]: see revision

Commented [GU53]: Replace with "Evaluate a spectrum of solutions for preserving facilities and transportation at the current North Beach Volunteer Fire Department location and prioritize preserving emergency services to the Twin Beaches for funding."

Commented [HW54R53]: OK

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transportation to the current North Beach Volunteer Fire Department location and prioritize preserving emergency services to the Twin Beaches for funding.

2. Reconstruct MD 261 through Area A. The optimal design for reconstruction would emerge after significant engineering studies, but this Plan recommends that the elevated roadway or bridge be constructed as the top priority of this plan, acknowledging that this vital transportation link has a low tolerance for flood risk. The optimal design will incorporate pedestrian and bicycle facilities. ~~The optimal design for reconstruction would emerge after significant engineering studies but this Plan recommends that the roadway be reconstructed as a bridge with elevated pedestrian and bikeways, acknowledging that this vital transportation link has a low tolerance for flood risk. The optimal design will incorporate elevated pedestrian and bicycle facilities.~~
3. Use voluntary purchase and removal plan to remove houses located along the north side of the marsh and return the land to open space use allowing the marsh to expand.

While the ultimate location of retreat lines may differ based on more precise elevation surveys, Figure 30 shows planned “managed retreat lines” signifying roughly the properties that could be eligible for a purchase and relocation option over time. The Town should consider making the first purchase offers to those properties between the marsh and the 2050 Managed Retreat line shown.



Figure 30: Managed Retreat Lines

**Commented [GU55]:** Recommendation to reword as: "The optimal design for reconstruction would emerge after significant engineering studies, but this Plan recommends that the elevated roadway or bridge be constructed as the top priority of this plan, acknowledging that this vital transportation link has a low tolerance for flood risk. The optimal design will incorporate pedestrian and bicycle facilities."

**Commented [GU56R55]:** We know elevating this road is not the recommended course of action based on the SHA letter to the Town

**Commented [HW57R55]:** ok

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4. ~~Adopt amendments to the Town's Zoning Map and Zoning Ordinance as necessary to prevent or significantly limit the introduction of new residential. Ensurre any future development on the development on the~~ open parcels in Area A, especially within the subarea between the two blue lines in Figure 27, ~~occurs in concert with any planned mitigation efforts in the surrounding area, This could potentially require revisions or caveats to the Town's Zoning Map and Zoning Ordinance.~~

~~Options to consider include changing the zoning district to Resource Conservation, which would eliminate development potential or requiring the transfer of "development rights" out of the flood-prone areas for use on other properties in the Town. Under a scenario in which the "development rights" would be transferred, the land would become deed restricted open space and then could potentially be available for flood management.~~

Alternatively, or in combination with the above ~~zoning options~~, the Town and/or State could acquire the land for parkland and flood management. In the meantime, the Town should adopt the recommendations in the prior section of this Chapter under the heading Strategic Flood Management and Sustainable Drainage and strictly minimize the risk to future residents and the impact to local flooding conditions in light of the sea level rise projected in this Plan.

5. ~~Conduct a study to determine the practical and financial feasibility of either elevating the Sea Gate community and the neighboring residences, or working towards their removing and the relocation of the housing units in Town in practical.~~ As recommended in the Chesapeake Comprehensive Plan, the Town should also be open to modern construction techniques that allow housing to be flexibly designed to adapt to floodwaters. For example, modern flood adapted houses can be anchored to the land but made capable of rising and falling with the tides and flood waters. Flood resilient houses, as diagrammed below, are already constructed throughout the world and may be viable in this location.

Commented [GU58]: Recommended to delete

Commented [GU59]: For discussion

Commented [HW60R59]: take a stab at Bullet 4

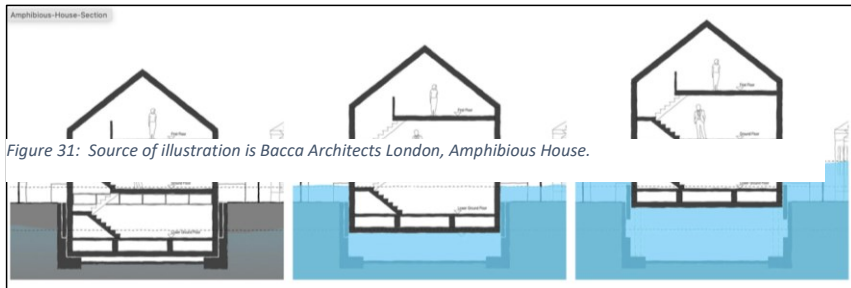
Commented [GU61R59]: See Revision

Commented [GU62]: Do we really wish to recommend that all of Seagate and C St Residents relocate?

Commented [HW63R62]: leave out the removal and relocation

## Area B

### Overview



As described elsewhere in this report, Area B is where Fishing Creek meets the Bay, the mixed-use town center. It is home to assets including the Town Hall and the North East Community Center, emergency command and control and evacuation centers, respectively. The following recreational assets are located here too: Chesapeake Beach Waterpark, Kellam's Recreational Complex, the Public Boat Landing, and the Chesapeake Beach Railway Trail. The



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area is also home to maritime, other commercial activities including a hotel and restaurants, two large residential communities, and a standalone apartment building at the end of Harbor Road.

Fishing Creek has been channelized and much of the once extensive marsh was filled and is now the Kellam's' Recreational Complex, Fishing Creek Marina, and Courtyards at Fishing Creek Apartments and Townhouses. The Fishing Creek channel is routinely dredged, and the spoils are deposited at the dredge disposal site located in the marsh along the western edge of the Courtyards at Fishing Creek complex. The Town has documented surface subsidence of up to 16 inches over 15 years at Kellam's, the North East Community Center, and along the right-of-way of Gordon Stinnett Avenue.

The optimal long term approach to coastal resiliency in Area B is to allow the natural functions of the estuary become re-established, where appropriate, while sustaining the maritime mixed use center. Through zoning changes adopted by the Town Council in 2022, the development of new residential uses is no longer permitted in Area B. The existing residential communities are at risk and considerable consultation with all parties will be needed in the decades ahead to address the effects of flooding.

In Area B Fishing Creek has been channelized and the land along its edge has been developed intensively. In these locations, property owners have found it necessary in recent years to raise bulkheads and elevate land. For this reason, even with a 2.4 foot sea level rise, open water is projected to mostly be contained within the channelized Fishing Creek, the boat inlets, and the boundaries of the marsh. As shown on Figure 32 below, the marsh itself is projected to be almost entirely open water by 2050.

While the extent of open water coverage would be limited through 2050, the areal extent of recurring flooding is projected to be substantial by 2050. All the aforementioned community assets, Gordon Stinnett Avenue, and the private streets and grounds of the Courtyards at Fishing Creek and Windward Key, are projected to have a 10% annual chance of flooding. Through 2050, The Kellam's Recreational Complex is projected to flood from both the north and the south leaving a 250-foot wide strip of slightly higher elevated ground just above the floodplain. The 2100 Maps in Chapter 3 show that open water would extend quite far into the Recreational Complex with the projected 5.6 foot rise. The depth of the 10% annual chance flood on the remaining land area at Kellam's would exceed 2.5 feet in 2100.

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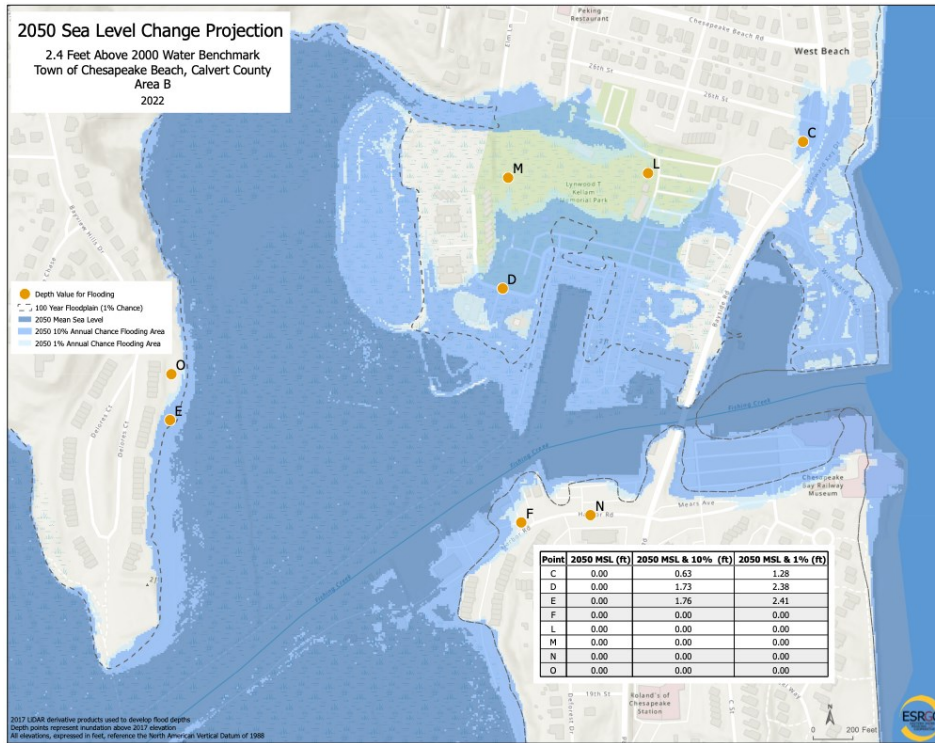


Figure 32

The entire shoreline of Fishing Creek and its boat inlets is structurally supported until the shoreline merges with the natural marsh west of Fishing Creek Marina. All of it is owned privately except for the Public Boat Landing which is owned by the Town of Chesapeake Beach. The boat landing is a break in what is otherwise a solid structure currently containing the water. The October 2022 tidal events demonstrated how far water can enter through the boat landing and it foreshadows permeant conditions if no changes are made.

The private structures along the north side of Fishing Creek and the Fishing Creek Marina, help protect the Kellam’s Complex. There are no structures along the western edge of the marsh and flood protection afforded to the Courtyards housing project is partly a function of the elevated dredge spoils site. Elevating the existing structures and building new structures and/or land forms would be needed to secure Courtyards at Fishing Creek and the Kellam’s Complex against projected sea level rise.

As this area continues to flood and to transform, the potential for property damage and risk will rise. Whether the existing residential development within this Area B can be sustained, and in what form, will require much study and consultation with property owners in the decades ahead.

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Recommendations for Area B

The following recommendations are intended for the next 10 years.



Figure 33: View of Area B.

*Attenuate Recommendations*

Land preservation in the Fishing Creek watershed is essential. The adopted 2040 Comprehensive Plan designated most of the remaining stands of forest within Town boundaries for resource conservation. Following the adoption of the Comprehensive Plan in 2022, the Town Council adopted zoning ordinance amendments and a new map which largely removed development potential from these areas and rezoned them "Resource Conservation". [Additionally, the Comprehensive Plan recognizes the importance of protecting the forested lands identified as the FIDS Protective Area.](#)

Moving forward, the Town should ~~seek to~~ minimize any further forest removal through adjustment to its zoning regulations, implement recommendation for an urban forest program to increase forest cover within the watershed, and coordinate with Calvert County to ensure continued preservation and appropriate land use strategies in the part of the watershed that extends beyond town limits.

*Alleviate Recommendations*

**Commented [GU64]:** Recommendation to add: "Additionally, the Comprehensive Plan recognizes the need to assert the covenant protections on 202.78 acres of forested land, identified as the FIDS Protective Area."

**Commented [HW65R64]:** ok

**Commented [GU66]:** Recommendation: delete "seek to" and have the first sentence read as: "Moving forward, the Town should enforce the FIDS covenant, including by securing the FIDS parcel by forcing its conveyance to a public or community entity. Additionally, the Town should minimize...."

**Commented [HW67R66]:** do not add

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Beginning now and carrying through 2050, use landscape design and civil engineering to gradually adapt to rising water and flooding conditions in and around the Kellam's Recreational Complex. Wetlands would be allowed to migrate and gradually evolve from newly planned spillover areas (flood retention zones) to open water, contained by berms and other land forms.



Figure 34: An imagined blue-green park excerpted from the Comprehensive Plan.

The goal would be to merge both flood management and recreation into what would be a large blue – green park as generally imagined in the image in Figure 34. This Plan recommends beginning a master plan process within the next couple of years to establish the feasibility and engineering parameters and then to begin phasing the work by the end of this decade.

The basic idea is conceptually rendered for Kellam's in Figure 35. Areas shaded blue are projected to be open water in the decades ahead which would be contained by berms and other landforms (the green lines)<sup>13</sup>. The dredge spoil site has potential to be incorporated into this design approach. The new landforms (along with drainage solutions) could then sustain an open area for ballfields and other activities, which itself could safely accommodate periodic flooding.



Figure 35: Blue - Green Approach at Kellam's Recreational Complex.

The created landforms could become part of the park experience. Figure 36 below shows a recreational cycle track which could become an integral element of a blue - green park and the adjoining Chesapeake Beach Railway Trail.

<sup>13</sup> As drawn, this approach might possibly help sustain the Courtyards at Fishing Creek Apartments and Townhouses, which would also require the elevation of Gordon Stinnett Avenue and supporting infrastructure. However, the low lying conditions and the fact that the property was developed on wetlands raises questions about the viability of this property as a residential community over the long term. A recommendation for considering relocating the housing to a safer location in Town is discussed later.

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Figure 36: Source, American Ramp Company. A potential recreational use for the landforms that would be established to help protect Kellam's Recreational Complex.

#### Restrict Recommendations

1. This Plan assumes private property owners will continue to maintain and as needed elevate the bulkheads which line Fishing Creek and secure their marinas and commercial properties. The Plan supports these efforts, but as noted in Chapter 5, this Plan endorses the Town's Comprehensive Plan recommendation that the Town Council re-establish the Chesapeake Beach Board of Port Wardens to provide oversight to these projects in conjunction with the Planning Commission approval processes. (See Chapter 290 of the Town Code, Article IX).
2. This Plan also assumes that the Windward Key Home Owners Association will secure its property against coastal flooding which may be expected in future decades to come over and through its current revetment and bulkheads. Since the property is not directly threatened by upland flooding, overflow of the marsh (at least for the foreseeable future), or wetland soils, these efforts should secure the neighborhood against major flood hazard. These efforts could also have the ancillary benefit of protecting the Town Hall (at MD Route 261 and 26<sup>th</sup> Street), which receives coastal inundation in large tidal events that passes through the Windward Key property. The HOA should initiate and plan for these upgrades.

#### Realign Recommendations

1. In coordination with Calvert County, evaluate the long term viability of the current location of the North East Community Center and consider relocating the center within Town to a location out of the flood hazard area. In the near term, consider whether the emergency shelter functions assigned to the Center are viable and if so, for how long. This site, including its access drive and parking, flooded during the October 2022 tidal event. Evaluate the Waterpark similarly. Evaluate a spectrum of solutions for

Commented [GU68]: recommendation to add "additional"

Commented [GU69R68]: Left additional in ...

Commented [GU70]: Recommendation to add: "in conjunction with Planning Commission approval processes"

Commented [HW71R70]: add

Commented [GU72]: Recommendation to remove the use of using a Board of Port Wardens. Doesn't currently exist and need to confirm purpose and duties

Commented [GU73R72]: Town Council is moving to create the Board of Port Wardens

Commented [GU74]: Much concern about recommendation to relocate this structure

Commented [HW75R74]: rewrite

Commented [GU76]: Recommendation to change to: "Evaluate a spectrum of solutions for preserving the North East Community Center and the Chesapeake Beach Water Park and continued transportation access to each."

Commented [HW77R76]: there's our answer

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preserving the Northeast Community Center, the Chesapeake Beach Water Park and continued transportation access to each.

2. Study the ~~range of options to mitigate potential flooding of feasibility of elevating~~ Gordon Stinnett Avenue as part of a Master Planning effort in Area B. and/or the development of a replacement access route. The full length of the current road is the only means of vehicular access to the western side of the Fishing Creek Marina and Courtyards at Fishing Creek Apartments and Townhouses. Maintaining public street access to these two properties will require substantial costs for reconstruction and maintenance. The Town needs to decide the feasibility of elevating the road and its infrastructure, or of building an alternative road, and how such a project might be incorporated into a long term approach to flood management.
  
3. ~~Consider relocating +~~The Courtyards at Fishing Creek Apartments and Townhouses. ~~This housing development~~ was established in 1989 under the federal Low Income Housing Tax Credit program (LIHTC). The 76 units in the development are set aside for households making less than 60% of the area median household income and rents are generally capped at 30% of a household's income. The development thus meets an important housing need in Town, but it was constructed on filled marsh and at an elevation that puts the residents at risk over the long term. Evaluate a spectrum of solutions for preserving this critical housing and the associated infrastructure supporting it. Significant consultation with the property owner and the residents is needed to investigate solutions and retain the housing units within the Town, whether at this site or somewhere else.
  
4. Redesign the Public Boat Landing. The net effect of subsidence and sea level rise is already compromising the functionality of the landing. During high tides and storms, the Landing allows water to enter the southeast side of the Fishing Creek Marina and flood the parking lot and access drive.
  
- 4.5. Study and evaluate the infrastructure needs that support vital assets in this area, inclusive of water distribution, sewer services, roads and electric transmission.

Commented [GU78]: Recommendation to add: "as part of a Master Planning effort in Area B."

Commented [HW79R78]: add

Commented [GU80]: Much concern about recommendation to relocate this structure

Commented [HW81R80]: rework wording

Commented [GU82R80]: See revision

Commented [GU83]: Consider adding another bullet: "Close Gordon Stinnett Ave and reroute traffic through Town Hall or 26th Street"

Commented [GU84R83]: See revision

Area C

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As shown in Chapter 3, Area C includes the southwestern extent of the Fishing Creek marsh within the Town. The area of concern encompasses the residential properties north of Old Bayside Road at the ends of E, H, I, and J Street.

Figure 37 shows that the open water is projected to be contained largely within the exiting FEMA 1% Annual Chance Floodplain with the projected 2.4 foot rise. However, the encroachment of ground water and periodic flooding may potentially degrade the on-site septic systems in the rear yards of these properties. The Town’s long term plan is to connect these residences to the public wastewater collection system. Sea level rise may hasten this. This Plan recommends that the Town and the Calvert County Department of Health coordinate with property owner through the next decade to track conditions.

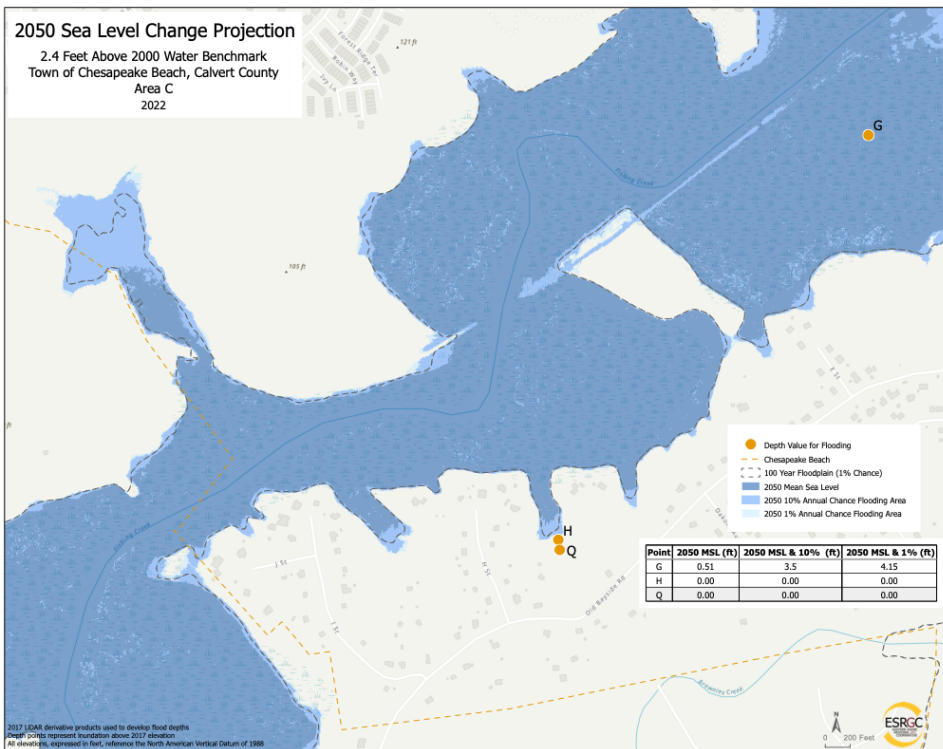


Figure 37

**NOTE FORMATTING WILL BE ADDRESSED IN THE FINAL VERSION ONCE ALL COMMENTS ARE RECEIVED**

## Chapter 5 Implementation and Conclusion

The previous chapter of this Plan described the most important recommendations over the next 10 years. Here are the critical steps necessary to facilitate the implementation of those recommendations.

1. Formally adopt this Plan by resolution of the Mayor and Town Council and transmit copies to the Town of North Beach and Calvert County. Transmit a copy to the Maryland Department of Natural Resources, Chesapeake and Coastal Service.
2. Formalize the Coastal Resiliency Steering Committee into a standing committee or commission within Town government with the main task being to guide the implementation of this Plan and to regularly advise the Mayor and Council. A standing committee or commission, with funding to support its work professional analysis and studies, would allow development of the specialized local knowledge, institutional capacity, and community trust necessary to deal with the challenges this Plan has highlighted. The commission or committee should be staffed by town employees and/or consulting engineers and planners. ~~As an alternative, the Town may wish to organize the Steering Committee into the Town of Chesapeake Beach Board of Port Wardens or, preferably, to place the Board's portfolio of responsibilities with this new body.~~ This Plan and the Town's adopted Comprehensive Plan both recommended reconstituting the Board of Port Wardens.
3. Identify priorities for capital improvements related to this Plan and update this Plan every five years. Report on progress and refine and detail the recommendations as conditions warrant. Establish a process for tracking progress and providing updates to interested parties including the key Departments in State government. Further develop the Town's webpage devoted to the topic into a community outreach tool to residents and property owners.
4. Continue the work begun under this Plan to document in detail the condition and ownership of the drainage systems in Town and as part of that effect undertake a town-wide coastal survey to refine and detail the elevations of the land, streets, open drainage ways, buildings, revetments, and bulkheads. Much of this today is available but needs to be assembled and updated into a quickly deployable data set that can be used both in planning, preliminary engineering, and disaster recovery and/or rebuilding.
5. Coordinate with Calvert County and North Beach ~~is in~~ the periodic update of the Calvert County All-Hazard Mitigation Plan and incorporate the findings and recommendations of this Plan.
6. Identificaton of Funding.
  - ~~6-a. First, a~~ Assemble a package of federal and state grant and loan programs that the Town can be used to undertake the detailed engineering studies recommended in this report. Some sources will require a local match and over the next several years the Town will need to strategize about how to fund this work and the infrastructure upgrades and modernization that will flow from these studies. Examples include the federal Building Resilient Infrastructure and Communities (BRIC) program and the federal Flood Mitigation Assistance program.

Commented [GU85]: Recommendation to delete

Commented [HW86R85]: no

Commented [GU87]: Recommendation to delete

Commented [HW88R87]: professional analysis and studies

Commented [GU89]: Recommendation to reword this sentence to read: "As an alternative, the Town may wish to organize the Steering Committee into the Town of Chesapeake Beach Board of Port Wardens with the responsibility to approve or disapprove c projects referred by the Planning Commission."

Commented [HW90R89]: strike sentence

Commented [GU91]: same concern as previously noted re: Board of Port Wardens

Commented [HW92R91]: ok

Commented [GU93]: Recommendation to add: "Identify priorities for capital improvements related to this plan and..."

Commented [HW94R93]: ok

Commented [GU95]: Comment: "This plan supports organizing the Coastal Resiliency Steering Committee into a Commission with funding and the authority to direct and prioritize a large portfolio of capital improvement projects, separating these expenditures from the traditional budget process and from the accountability of elected leaders."

Commented [HW96R95]: identification of funding

- b. Assemble a package of federal and state and loan programs that the Town can use to assist property owners in making property more resilient to the effects of flooding and to facilitate the relocation of those buildings which lie within the hazard areas designated in this Plan and future studies for "managed retreat". The aforementioned BRIC program is also available for this purpose.



Steering Committee ~~Draft, Not yet approved August 21, 2023~~ Approved December 11, 2023

NOTE FORMATTING WILL BE ADDRESSED IN THE FINAL VERSION ONCE ALL COMMENTS ARE RECEIVED

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**Commented [GU97]:** Recommendation - Hire a hydrologist to review any potential circumstances within the 2100 flooding map

**NOTE FORMATTING WILL BE ADDRESSED IN THE FINAL VERSION ONCE ALL COMMENTS ARE RECEIVED**

## Appendices

### Intended Use and Limitations

The datasets represent projected still water depths (ft) in a forecast sea level change scenario. The layers are an aid for researchers seeking to identify potential vulnerabilities along Chesapeake Beach's shoreline. The data supports Chesapeake Beach's leadership and planners as they endeavor to mitigate or prevent the impacts of sea level change resulting from land surface subsidence and rising sea levels. The product uses sea-level projections to forecasts areas of inundation for a given scenario. The data may be used and redistributed for free but is not intended for legal use, since it likely contains inaccuracies. The User assumes the entire risk associated with its use of these data and bears all responsibility in determining whether these data are fit for the User's intended use. The information contained in these data is dynamic and will change over time. The data are not better than the original sources from which they were derived, and both scale and accuracy may vary across the data set. These data may not have the accuracy, resolution, completeness, timeliness, or other characteristics appropriate for applications that potential users of the data may contemplate. The User is encouraged to carefully consider the content of the metadata file associated with these data. These data are neither legal documents nor land surveys, and must not be used as such. Eastern Shore Regional GIS Cooperative should be cited as the data source in any products derived from these data. Any Users wishing to modify the data should describe the types of modifications they have performed. The User should not misrepresent the data, nor imply that changes made were approved or endorsed by the Eastern Shore Regional GIS Cooperative. The Eastern Shore Regional GIS Cooperative, nor any of its employees or contractors, makes any warranty, express or implied, including warranties of merchantability and fitness for a particular purpose, or assumes any legal liability for the accuracy, completeness, or usefulness, of this information.

**Commented [GU98]:** Question: Is this Use and Limitations Clause included in all Coastal Resiliency Plans? The highlighted disclaimers do not instill a lot of confidence in the report.

**Commented [GU99R98]:** Standard language they issue with their data

**NOTE FORMATTING WILL BE ADDRESSED IN THE FINAL VERSION ONCE ALL COMMENTS ARE RECEIVED**

## General Comments:

### FIDS:

First, the most disappointing aspect of this document is that it neglects to specifically recognize and recommend strict enforcement of the Forest Interior Bird Dwelling (FIDS) Covenant and Agreement associated with 202.78 acres adjacent to Fishing Creek. These 200 acres represent the largest natural buffer in our Town, providing critical attenuation and alleviation benefits to mitigate current and future water-related challenges in the Town Center. The FIDS parcel also serves as a cherished scenic vista for a large number of residents and visitors of the Chesapeake Beach Railway Trail and is the site for five of the six most popular walkability projects as proposed in the 2021 Town of Chesapeake Beach Connectivity Study, adopted as part of the 2040 Comprehensive Plan. The FIDS Protection area provides for protection from development in perpetuity. As the Grantee of the covenant, the Town has the explicit right to enforce the protections outlined in the covenant and to secure the property away from the developer.

If the current administration were in support of enforcing the covenant and securing the FIDS parcel, it would be easy and appropriate to specifically site the value of this property to coastal resiliency efforts and to recommend protecting it in perpetuity by securing it from the developer. For reference, relevant pages of the FIDS Covenant and Agreement are attached.

### Generally:

The approach of prematurely recommending that public assets be relocated rather than recommending that engineering studies be funded to determine solutions for protecting and retaining public assets seems backward. Our town consists of only 2.79 square miles of land and there are few, if any, viable parcels of land available to receive relocated assets. In many cases, relocation would result in the effective elimination of the asset for convenient use by Chesapeake Beach residents. Recommendations to relocate public assets should only be made after a focused engineering study is performed and only if the study indicates that the assets cannot be retained in current locations. If there are situations where relocation is ultimately recommended, the recommendation should include a proposed new site. This plan recommends that our Town's most substantial assets and amenities be relocated, while at the same time affirming support for continued private development on parcels that are co-located. It is important to recognize that even in the case of private development, public funds for associated infrastructure would necessarily be expended. It would be more appropriate to direct efforts and public funds towards infrastructure that supports public assets as well as towards the public assets themselves. Most people would prefer that the town use tax revenues to retain assets and amenities, rather than to support private development.

Additionally, it appears that the Town will be pushing forward on the substantial investment of a wastewater treatment plant capacity expansion. This seems unwise at this time, in light of all that is suggested in this Coastal Resiliency Plan. There are quite a few high-dollar budget items that are needed in the near future. Committing revenue towards adding utility capacity to facilitate additional development before budgeting and planning for other items will only compound the problems outlined in this report.

### Specifically:

#### Area A

Determining a solution for Rt. 261 in Area A is key to decision-making throughout Chesapeake Beach. Undoubtedly, a solution for this important transportation route that regularly floods will need to be identified in the near term, and any solution implemented is likely to be very expensive. Rather than assume one of the most costly solutions for this road in the absence of an engineering study, the adopted plan should call for an engineering study that provides options for a spectrum of solutions that range in cost. For each solution considered, this study should also evaluate the resulting physical

**Commented [GU100]:** suggestions to address FIDS are discussed earlier in the Plan

**Commented [GU101R100]:** addressed earlier in the document -

**Commented [GU102]:** I think this is addressed earlier in the plan review

**Commented [GU103R102]:** reworded in the document

**Commented [GU104]:** I am not aware of any capacity expansion plans for the WWTP. I think the expansion was completed a number of years ago.

**NOTE FORMATTING WILL BE ADDRESSED IN THE FINAL VERSION ONCE ALL COMMENTS ARE RECEIVED**

and financial impact to co-located public assets, such as the North Beach Fire Department and the Chesapeake Beach Wastewater Treatment Plant.

The study suggested as recommendation #5 for the Sea Gate community on page 39 should also be included in studies related to Rt. 261 in Area A.

As the need for a solution on Rt. 261 in Area A is eminent, estimating the cost and nature of the solution and estimating the cost for implementing related initiatives to protect public assets, infrastructure, and housing served by the route will be critical for planning and budgeting. Determining the solution for Rt. 261 in Area A should be clearly identified as the top priority of the plan.

Regarding the vacant parcels in Area A, the zoning amendment recommendations in the Plan for these parcels seem nonsensical in the absence of an engineering study as described above, and following so soon after Comprehensive Planning and Comprehensive Rezoning during which the parcels were designated "RV-2," (allowing for high densities). Likewise, implementing a TDR program for these parcels would be grossly unfair to those property owners whose properties were recently downzoned. After focused studies are completed and a decision is made for the solution to flooding on Rt. 261, the Town may find that the two vacant parcels in Area A remain viable for some level of development. If not, the program described on page 38, #3 may be appropriate.

**Area B**

Area B is a complicated area that is important to land/business owners and residents alike. The goal here should be to retain the existing public amenities and to engage in negotiations with land/business owners that result in mutually beneficial development agreements. Master Planning this area under the guidance of a multidisciplinary coastal planning/engineering firm would get the best results for this area. Adjusting the zoning ordinance to incorporate a framework for a Developer's Rights and Responsibilities Agreement could be a useful tool to consider.

My specific suggestion for this section is to replace all recommendations suggesting the relocation of public assets and amenities with verbiage that recommends an engineering study to determine how each asset might be retained in the Town Center as part of a master-planning effort.

I agree with the assessment that it is unwise to place physically or financially vulnerable populations in care facilities or residences that may need to be evacuated from time to time, as securing temporary quarters for these populations can be expensive and challenging. We should not introduce additional vulnerable populations to this area, and it could be beneficial to all if an agreeable relocation solution for the residents and property owners of the Courtyard Apartments can be found.

Finally, it is extremely confusing that on August 10, 2023, this plan was presented, recommending relocation for the Chesapeake Beach Waterpark and Northeast Community Center, but on August 11, 2023, the Town mailed out a postcard featuring a QR code link for residents to take a survey about which waterpark and community center features are most important to them.

**Area C**

Area C contains only one recommendation, which is that the Town coordinates with the Calvert County Department of Health to track conditions of septic systems in the rear residential yards adjacent to Fishing Creek at its Southwestern border, with the long-term goal of connecting these properties to public wastewater collection. I agree with this recommendation.

**Commented [GU105]:** RV-2 is not "high density" - refer to zoning description in Town Code

**Commented [GU106]:** Discussed earlier in the plan review - Recommendations to relocate have been removed

**Commented [GU107R106]:** addressed in the plan

**Commented [GU108]:** This committee wasn't aware of the postcard or survey regarding the waterpark or community center



To: The Honorable Mayor and Town Council

From: Holly Wahl, Town Administrator

Subject: Town Planning and Zoning Administrator

Date: December 8, 2023

---

## **I. BACKGROUND:**

Per section § 290-26 of the Town Code. "Administration of permitting process".

The *Zoning Administrator (the "Administrator")* shall administer and enforce the provisions of the administration of the permitted process and implement violations as necessary. Per the Town code, the Zoning Administrator is appointed by the mayor and confirmed by the Town Council.

B. The Administrator shall have the following duties and powers:

- (1) Receive and examine all applications for zoning permits and other applications required by this chapter.
- (2) Refer all zoning permits and applications to construct or change the use of a building or structure in RPC Districts to the Planning Commission for review and approval. The Planning and Zoning Commission ("the Commission") shall make its recommendations within 45 days after submission to it.
- (3) Refer zoning permit applications for the following purposes to the Commission for approval: (a) To alter, extend, or change any nonconforming use. (b) To construct or expand off-street parking areas of three or more vehicles.
- (4) Issue permits only where there is compliance with the provisions of this chapter and with other Town ordinances. Permits for construction or uses requiring a special exception or variance shall be issued only upon order of the Board of Appeals.
- (5) Receive applications for special exceptions and forward these applications to the Board of Appeals for action thereon.
- (6) Following refusal of a permit, receive applications for interpretation, appeal, and variance and forward these applications to the Board of Appeals for action thereon.
- (7) Conduct inspections and surveys to determine compliance or noncompliance with the terms of this chapter.
- (8) Issue stops, cease, and desist orders, and orders in writing for correction of all conditions found to be in violation of the provisions of this chapter. Such written orders shall be served personally or by certified mail upon persons, firms, or corporations deemed by the Administrator to be violating the terms of this chapter. It shall be unlawful for any person to violate any such order lawfully issued by the Administrator, and any person violating any such order shall be guilty of a violation of this chapter.
- (9) Institute in the name of the Town any appropriate action or proceedings to prevent the unlawful erection, construction, reconstruction, alteration, repair, conversion, maintenance or use; restrain, correct, or abate such violation so as to prevent the occupancy or use of any building, structure or land; or to prevent any illegal act, conduct, business, or use in or about such premises.
- (10) Revoke, by order, a permit issued under a misstatement of fact or contrary to the law or the provisions of this chapter.



- (11) Record and file all applications for zoning permits or other permits with accompanying plans and documents. All applications, plans, and documents shall be a public record.
- (12) Maintain a map or maps showing the current zoning classification of all land in the Town, including the Zoning Map and the Critical Area District Map, and maintain records of growth allocation acres awarded and the amount remaining.
- (13) Upon the request of the Mayor or Town Council, the Commission, or the Board of Appeals, present to such bodies facts, records, or reports which they may request to assist them in making decisions, or in any other matter.
- (14) Refer any zoning permit to the Commission for review and comment as the Administrator deems necessary and appropriate.
- (15) Review for completeness all applications for Category 1 site plans and submit completed applications to the Planning Commission for review and approval as provided for in Article VI of this chapter.
- (16) Review and take action on all Category 2 site plans as provided for in Article VI of this chapter.

Further, per § 290-31 **Violations and penalties.**

All citations for violations subject to this section shall be issued by the Zoning Administrator, in accordance with the provisions of Article 23A, § 3, of the Annotated Code of Maryland.

## **II. APPOINTMENT:**

Under the current roles and responsibilities defined by the Town Code, the Town Administrator is serving in the capacity of the Zoning Administrator as appointed by the mayor. The Town Administrator serves as the Zoning Administrator with input and guidance from the Town Planner, Town Public Works Administrator and Town Engineer facilitating the processes necessary to conduct Zoning Administration for the Town.

## **III. RECOMMENDATION:**

It is recommended that the Town Council consider confirming the Town Administrator to serve as the Zoning Administrator to formalize this role per the requirements of the Town code.



To: The Honorable Mayor and Town Council

From: Holly Wahl, Town Administrator

Subject: CBWRTP Capital Improvements purchase of seals on two press feed pumps

**Date: December 8, 2023**

---

**I. BACKGROUND:**

The Town Council approved a FY24 budget for the CBWRTP that includes the cost of seals on two press feed pumps at the plant.

**II. ESTIMATES:**

Estimates for two press feed pump seals are attached as Exhibit A.

**III. RECOMMENDATION:**

It is recommended that the Town Council consider approving the purchase of the CBWRTP seals for two press feed pumps as estimated. The cost for the two press feed pumps total \$22,105.48. To account for the estimated labor costs for the work, staff will be requesting authorization of not to exceed \$25,000 for equipment and labor to complete the work.



**410-228-4447**

3901 Vincent Road - Linkwood, MD 21835

Phone: (410)-228-4447 / Fax: (410)-228-2517

Email: sales@hillsindustrial.com

## Job Estimate

<b>Job No:</b>	066391
<b>Date:</b>	12/4/2023
<b>Page:</b>	1 of 1

<b>Sold To:</b>	Customer Number: 000641	<b>Ship To:</b>	Ship To Number: 000001
	<b>CHESAPEAKE BEACH WWTP</b> 8200 BAYSIDE ROAD P.O. BOX 400 CHESAPEAKE BEACH, MD 20732  Phone: 410-257-2230 Fax: 410-257-1463		<b>CHESAPEAKE BEACH WWTP</b> 8550 BAYSIDE ROAD CHESAPEAKE BEACH, MD 20732  Phone: 410-257-9334

Job Number	Estimate Date	Sales Code	Job Type	Ship Via	Terms
066391	12/04/23	014	Pump Three Phase		NET 30 DAYS
<b>Purchase Order:</b>	PENDING	<b>PO Release:</b>		<b>Misc Number:</b>	

QTY	Item Number	Description/Notes	Unit Price	Extended
		Nameplate Data: Pump brand:SEEPEX, Pump mod:BN 70-6L, Pump Ser:835760.1		
		Special Instructions: CONVERT TO PACKING		
	STGA126203500AXXXX	GLAND HOUSING		
	PKRK126203500OH0K8	PACKING SET		
	STBA626203500NXXXX	GLAND		
	SHAL0M120060000186	GLAND BOLT		
	STWC126203500DLEBX	PLUG IN SHAFT		
	DSGM006003500AQ5M6	CASING GASKET		
	MSKM4M120000000934	NUT		
	SGTF006003500XN612	SINGLE SET JOINT PARTS		
	MPSP1	SHOP SUPPLIES SHOP LABOR		
		ADDITIONAL WORK AND/OR LABOR WILL BE QUOTED AS NEEDED.		
		THE LABOR QUOTED ON THIS JOB IS STRICTLY AND ESTIMATE AND YOU WILL BE BILLED FOR THE ACTUAL TIME REQUIRED.		

Repair estimate valid for 30 calendar days from the above date.

Total is plus sales tax if applicable. Based Upon Our Standard Terms And Conditions.

<b>Est. Total:</b>	11052.74
--------------------	----------

Estimated By: \_\_\_\_\_ Date: \_\_\_\_\_  
*Based on our Terms and Conditions.*





**410-228-4447**

3901 Vincent Road - Linkwood, MD 21835

Phone: (410)-228-4447 / Fax: (410)-228-2517

Email: sales@hillsindustrial.com

## Job Estimate

<b>Job No:</b>	066392
<b>Date:</b>	12/4/2023
<b>Page:</b>	1 of 1

<b>Sold To:</b>	Customer Number: 000641	<b>Ship To:</b>	Ship To Number: 000001
	<b>CHESAPEAKE BEACH WWTP</b> 8200 BAYSIDE ROAD P.O. BOX 400 CHESAPEAKE BEACH, MD 20732  Phone: 410-257-2230 Fax: 410-257-1463		<b>CHESAPEAKE BEACH WWTP</b> 8550 BAYSIDE ROAD CHESAPEAKE BEACH, MD 20732  Phone: 410-257-9334

Job Number	Estimate Date	Sales Code	Job Type	Ship Via	Terms
066392	12/04/23	014	Pump Three Phase		NET 30 DAYS
<b>Purchase Order:</b>	PENDING	<b>PO Release:</b>		<b>Misc Number:</b>	

QTY	Item Number	Description/Notes	Unit Price	Extended
		Nameplate Data: Pump brand:SEEPEX, Pump mod:BN 70-6L, Pump Ser:835760.1		
		Special Instructions: CONVERT TO PACKING		
	STGA126203500AXXXX	GLAND HOUSING		
	PKRK126203500OH0K8	PACKING SET		
	STBA626203500NXXXX	GLAND		
	SHAL0M120060000186	GLAND BOLT		
	STWC126203500DLEBX	PLUG IN SHAFT		
	DSGM006003500AQ5M6	CASING GASKET		
	MSKM4M120000000934	NUT		
	SGTF006003500XN612	SINGLE SET JOINT PARTS		
	MPSP1	SHOP SUPPLIES SHOP LABOR		
		ADDITIONAL WORK AND/OR LABOR WILL BE QUOTED AS NEEDED.		
		THE LABOR QUOTED ON THIS JOB IS STRICTLY AND ESTIMATE AND YOU WILL BE BILLED FOR THE ACTUAL TIME REQUIRED.		

Repair estimate valid for 30 calendar days from the above date.

Total is plus sales tax if applicable. Based Upon Our Standard Terms And Conditions.

<b>Est. Total:</b>	11052.74
--------------------	----------

**Estimated By:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
*Based on our Terms and Conditions.*



To: The Honorable Mayor and Town Council

From: Holly Wahl, Town Administrator

Subject: Pocket Park Naming

Date: December 12, 2023

---

## I. BACKGROUND:

Per Chapter 196 “PARKS AND PUBLIC AREAS” of the Town Code

## II. PUBLIC PARK:

A PUBLIC PARK is defined by the Town code as— An area or structure owned or operated by the Town of Chesapeake Beach or another public entity and which is designed for the recreational use of the public and which is designated as a public park in this chapter. Public parks are subject to additional regulations specific to each park, as provided in subsequent articles of this chapter.

Article I of Chapter 196 defines restrictions on camping, fires, motorized vehicles, restricted areas, glass containers, hunting, removal of plant life, smoking, and vaping. Subsequent articles in the chapter designate public spaces as Parks, name the Park and provide regulations for how the space will be operated per an ordinance of the Town Council.

## III. POCKET PARKS:

The Town recently completed three pocket parks for public enjoyment in the Town. The mayor, with input from the Town’s Walkable Community Advisory Committee, has the following names for Town Council consideration and discussion.

**Kellams Pocket Park (3825 Gordon Stinnett Ave):** A walkway to the Kellams complex recreational facility on the northern corner of the Kellams complex. The proposed name is "**Buc’s Corner**" in honor of the Beach Buccaneers.

**29<sup>th</sup> Street Pocket Park (the eastern end of 29<sup>th</sup> Street):** A waterfront platform for rest and enjoyment equipped with a viewing scope. The proposed name is "**Shisler Park**" in honor of Dr. Shisler along with a street sign entering the park along 29<sup>th</sup> street that says "**Favret Way**" in honor of Councilman Derek Favret.

**B Street Overlook (7429 B Street):** A waterfront overlook park for rest and enjoyment on the southern side of Town equipped with a viewing scope and native plantings. The proposed name is "**Old Campgrounds Park.**"