PLANNING COMMISSION
AGENDA
OCTOBER 25, 2023
6 PM

I. Call to Order & Roll Call

II. Approval of the October 25, 2023 Planning Commission Agenda.

III. Approval of the minutes of the September 27, 2023 Planning Commission Meeting.

IV. Public Comment on any item on the agenda: NOTE: There will be a 2-minute limit on comments received.

V. New Business
1. Coastal Resiliency Plan

VI. Old Business
1. Critical Area Regulations

VII. New Business (Continued)
2. Rules of Procedure
3. Fees in Lieu
4. Signage

VIII. Comments by Commissioners - Note: 1-minute limit on comments

IX. Adjournment

PLANNING AND ZONING COMMISSION

MINUTES OF THE PLANNING COMMISSION MEETING SEPTEMBER 27, 2023

I. Commission Chair Berault called the meeting to order at 7:00 pm. In attendance were Vice-Chair Cindy Greengold, Laura Blackwelder, Larry Brown, Kelly Hauhn, and Rachel Larsen Weaver, Commission members, Sarah Franklin, Town Planner, and Sharon L. Humm, Commission Clerk. Absent was Jan Ruttkay, Commission member.

Chair Berault began the meeting by sharing a quote from Winston Churchill; "We make a living by what we get, we make a life by what we give."

II. **Approval of the September 27, 2023 Planning Commission Agenda.**

> **MOTION:** Commission Vice-Chair Greengold moved to approve the September 27, 2023 Planning Commission agenda. Seconded by Commissioner Brown, all in favor.

Commissioner Brown brought to the floor items that were discussed at the last Commission meeting in which Mr. Jakubiak was to advise the Commission on. Commissioner Brown was inquiring if that would be part of tonight's agenda. RE: 1) Compare land use policies of COMAR 27.01.02.03 pertaining to land use activities within the IDA and COMAR 27.01.02.04 pertaining to land use activities within the LDA and 2) tree definition and standards for removal.

Ms. Franklin will research and provide an answer at the next meeting.

III. **Introduce & welcome new Town Planner Sarah Franklin**– Chair Berault was pleased to introduce and welcome the new Town Planner, Sarah Franklin. Ms. Berault provided a little background on Ms. Franklin and welcomed her to the Commission.

IV. **Approval of the July 26, 2023 Planning Commission meeting minutes.**

> **MOTION:** Commissioner Brown moved to approve the July 26, 2023 Planning Commission meeting minutes. Seconded by Vice-Chair Greengold, all in favor.

V. **Public Comment on any item on the agenda** – No comments were received.

VI. **Old Business**

Critical Area Regulations – The Commission was provided with a draft of the revised Critical area ordinance**.** Chair Berault stated the Commission will start its review from the beginning of the document reviewing the indicated text to be added and the indicated text to be removed for accuracy.

B. Critical Area Program –
Commissioner Brown provided the Town's adoption date of its Critical Area Program to be inserted- "December 1, 1985.

D. Critical Area Overlay District Map –

E. Applications referred to the Critical Area Commission. - Commissioner Brown recommended the legal name "Chesapeake Bay Critical Area Commission (CBCAC)" be used here and the acronym (CBCAC) could be used throughout the remainder of the document. **Commission Agreed**.

> **MOTION:** Commissioner Blackwelder moved under E. (1) to delete the strikethrough "~~as specified in COMAR 27.03.01.04~~ but retain the language. Seconded by Commissioner Weaver. Ayes, Commissioners, Berault, Blackwelder, Greengold, Hauhn, and Weaver. Opposed, Commissioner Brown. **Motion Passes.**
>
> **MOTION:** Commissioner Blackwelder moved that going forward throughout the document, that when a COMAR reference is specified, that it be retained. Seconded by Vice-Chair Greengold. Ayes, Commissioners Berault, Blackwelder, Greengold, Hauhn, and Weaver. Opposed, Commissioner Brown. **Motion Passes**.
>
> **MOTION**: Vice-Chair Greengold moved under E. (3) to insert the words "The Town of" before Chesapeake Beach to read "The Town of Chesapeake Beach" and to continue the same written out format throughout the document when indicated. Seconded by Commissioner Weaver, all in favor.

Part 2. Development Standards in the Critical Area

A. General Requirements in all Critical Area Overlay Zones

(10) (a) Reduce increases in flood frequency and severity that are attributable to development.

> **MOTION:** Vice-Chair Greengold moved to eliminate the words "increases in" so as to read "Reduce flood frequency and severity that are attributable to development;" Seconded by Commissioner Brown, all in favor.

B. Limited Development Areas

(9) A permit ~~issued~~ shall be obtained from the Town before forest or developed woodland is cleared.

Commissioner Blackwelder recommended revising the language in the above sentence to read: "The Applicant shall obtain a permit from the Town before forest or developed woodland is cleared" and continue to use active voice throughout the document where applicable. Also noted, when the word "Town" is used more than once in a sentence, that "Town of Chesapeake Beach" shall be used first, and "Town" used thereafter. **Commission Agreed.**

Part 3. The Buffer

B. Development Activities in the Buffer (5) (a) (vii)

> **MOTION:** Commissioner Blackwelder moved to strike (vii) "Any other approved beneficial use." Seconded by Vice-Chair Greengold. Ayes, Commissioners Blackwelder and Greengold. Opposed, Commissioners Berault, Brown, Hauhn, and Weaver. **Motion Fails.**

MOTION: Vice-Chair Greengold moved to strike (5)(a) (iv) "Restoration of an island." Seconded by Commissioner Blackwelder. Ayes, Commissioners Blackwelder and Greengold. Opposed, Commissioners Berault, Brown, Hauhn, and Weaver. **Motion Fails.**

Part 4. Modified Buffer Area (MBA) A. Applicability

NOTE: Section 290-17 G (1) of the zoning ordinance will be inserted in the document under A. Applicability and the term "buffer exemption area" will be replaced with "modified buffer area." Ms. Franklin will provide the Commission with the Modified Buffer Area map which is a supplement to the Town's Critical Area Map.

Vice-Chair Greengold brought to the floor her concerns with the Fees in lieu program. She would recommend that the program be eliminated. After discussion and uncertainties related to the program, the Commission agreed to re-visit this issue at its next meeting.

Part 5. Other Habitat Protection Areas

A. Identification

(2) Maps identifying these specific Habitat Protection Areas are maintained by the Maryland Department of Natural Resources Wildlife and Heritage Division.

Commissioner Blackwelder stated the Town has a Forest Interior Dwelling Species (FIDS) habitat area and this would be the appropriate section to reference the Town's protective area(s). Ms. Franklin stated that a sentence could be added such as "these maps include but are not limited to" giving reference to the name of the wildlife protection area and a "as of this date." With that wording, it would make certain any future areas would not be excluded.

MOTION: Commissioner Blackwelder moved to have Ms. Franklin add a sentence to this section that would reference the Town's habitat protection area(s). Seconded by Commissioner Hauhn, all in favor.

The Commission ended discussion for the evening at Part 7. Growth Allocation.

NOTE: Ms. Franklin will modify the draft ordinance and incorporate changes made tonight. Page numbers will be added and any adjustment to renumbering within the document will be revised.

VII. New Business

1. **Consider a time change of Planning & Zoning Meetings to 6 PM. –** Chair Berault presented the idea of changing the start time of the Planning & Zoning meetings to 6 pm and asked for Commission thoughts. After discussion, Commissioners Berault, Blackwelder, Brown, Hauhn, and Weaver were in favor. Vice-Chair Greengold opposed the change. The majority of the Commission was in favor and the new time change of 6 pm will take effect beginning next month.

2. **Rules of Procedure –** This item will be on next month's agenda. Commissioner Brown stated he will have amendments to present.

VIII. Adjournment:

There being no further comments, Commissioner Brown moved to adjourn the meeting at 9:13 PM. Seconded by Vice-Chair Greengold, all in favor.

Submitted by,

Sharon L. Humm
Commission Clerk

This meeting can be viewed in its entirety on the Town website on the Planning Commission page www.chesapeakebeachmd.gov.

To: The Honorable Planning & Zoning Commission Chair and Commission Members
From: Holly Wahl, Town Administrator

Subject: Coastal Resiliency Plan: A Flood and Sea Level Rise Action Plan
Date: October 19, 2023

I. BACKGROUND:

The Town of Chesapeake Beach Coastal Resiliency Task Force and Coastal Resiliency Steering Committee drafted a plan to address short and long-range plans to prepare for the coastal resiliency of the Town of Chesapeake Beach. Its strategies and recommendations are intended to guide the Town as it adapts to flooding, 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 Town of Chesapeake Beach *draft* Coastal Resiliency Plan - please click here.

II. COMMENTS ON THE PLAN:

The *draft* Town of Chesapeake Beach Coastal Resiliency Plan is before the Town's Planning and Zoning Commission to receive comments; however, there is no request for any kind of vote from the Town's Planning and Zoning Commission on the plan itself. While several Planning Commission members have attended the Coastal Resiliency Steering Committee meetings and provided comments at those meetings having the draft plan on the agenda provides the opportunity for Planning Commission members to further convey their comments on the plan publicly. To ensure that all comments are tracked clearly for the Coastal Resiliency Steering Committee to consider, Planning Commission members are asked to also provide any input that they have on the plan in writing through the form linked here.

III. ADOPTING THE COASTAL RESILIENCY PLAN:

The Coastal Resiliency Steering Committee will hold a meeting on October 26th starting at 6 PM. This meeting is scheduled to review comments received on the *draft* plan and to take steps to finalize the plan for submission to the Town Council of the Town of Chesapeake Beach. Comments submitted to the steering committee by October 26th at 5 PM will be considered at this meeting, time permitting. This meeting will be held at the Chesapeake Beach Town Hall and live streamed here on the Town's channel.

The Town's Coastal Resiliency Steering Committee will continue to meet publicly to review and finalize the plan.

Once finalized, the Coastal Resiliency Plan for the Town of Chesapeake Beach will be adopted. Once adopted, the Town will prioritize projects and seek funding opportunities with further opportunities for public comment.

Thank you for your comments!

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.

Acknowledgments

Chesapeake Beach Mayor and Town Council

Pat "Irish" Mahoney, Mayor
Larry Jaworski, Council Vice President
Valerie Beaudin
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
Wesley Donovan
Robert Munro
Phil Pfanschmidt
Grant Soderstrom
Dave Kimelblatt

Technical Advisory Committee on Coastal Resiliency

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

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, GI with the Eastern Shore Regional GIS Cooperative, Salisbury University.

Table of Contents

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.

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 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 seal 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

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[1]. 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, bullheads, piers, and revetments were damaged, and MD Route 261, including along its frontage with the North Beach Volunteer Fire Company, was inundated and impassible[2].

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

[1] 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).

[2] 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

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. As recently as October 2002 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[3]. 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 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[4]--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

[3] 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.
[4] Sea Level Raise, 2018 Projections, Maryland Commission on Climate Change.

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 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[5].

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.

Chesapeake Beach Nuisance Flood Plan: 2000-2025

In 2020, the Town adopted a Nuisance Flood Plan per Maryland statues which require jurisdictions that experience nuisance flooding to adopt, publish, and update a plan once every five years[6]. 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:

[5] 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.

[6] 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.

- 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), 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.

- 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.

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.

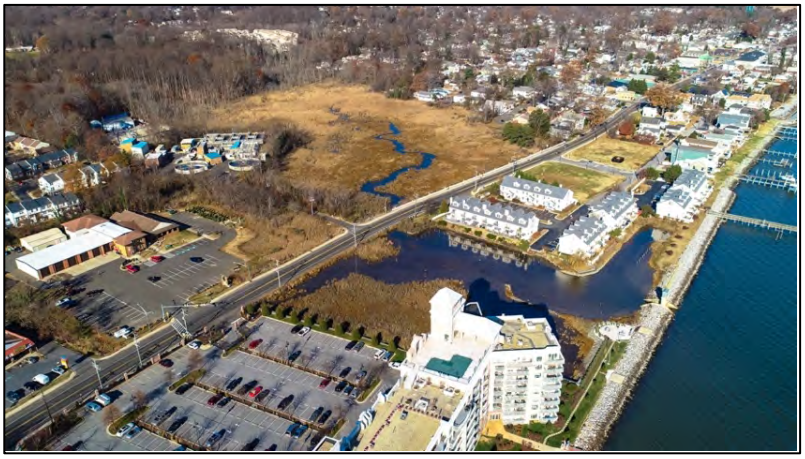

Figure 2. Birdseye view of the South Creek estuary.

Fishing Creek drains a mostly forested and rural landscape and meets the Bay in the traditional maritime center of 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.

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.

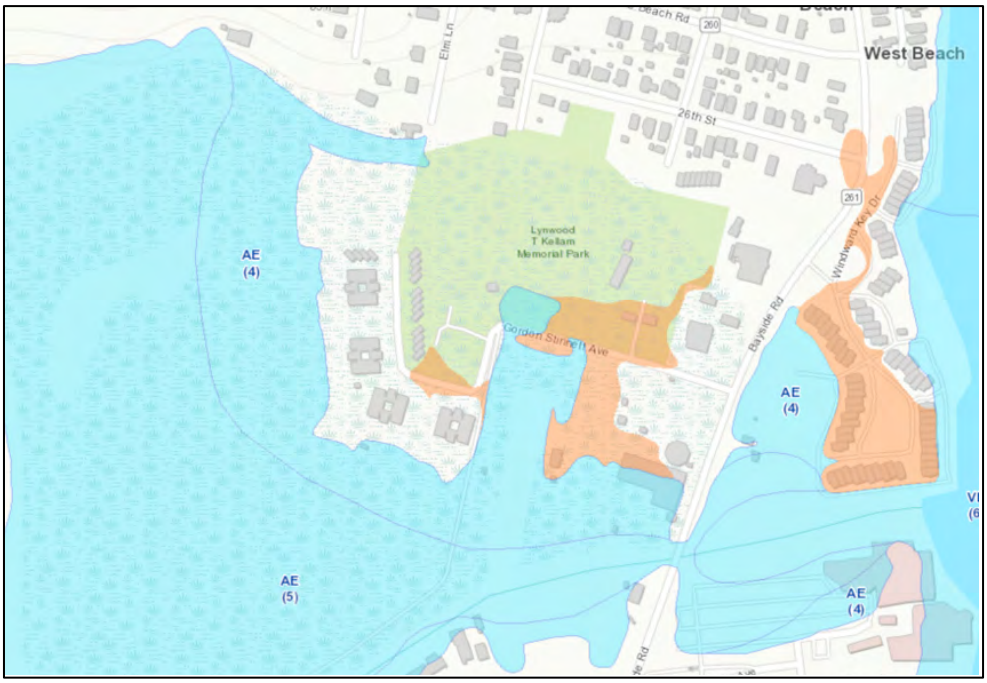

Figure 4: Historic FEMA floodplain mapping showing the extent of the marsh associated with Fishing Creek.

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).

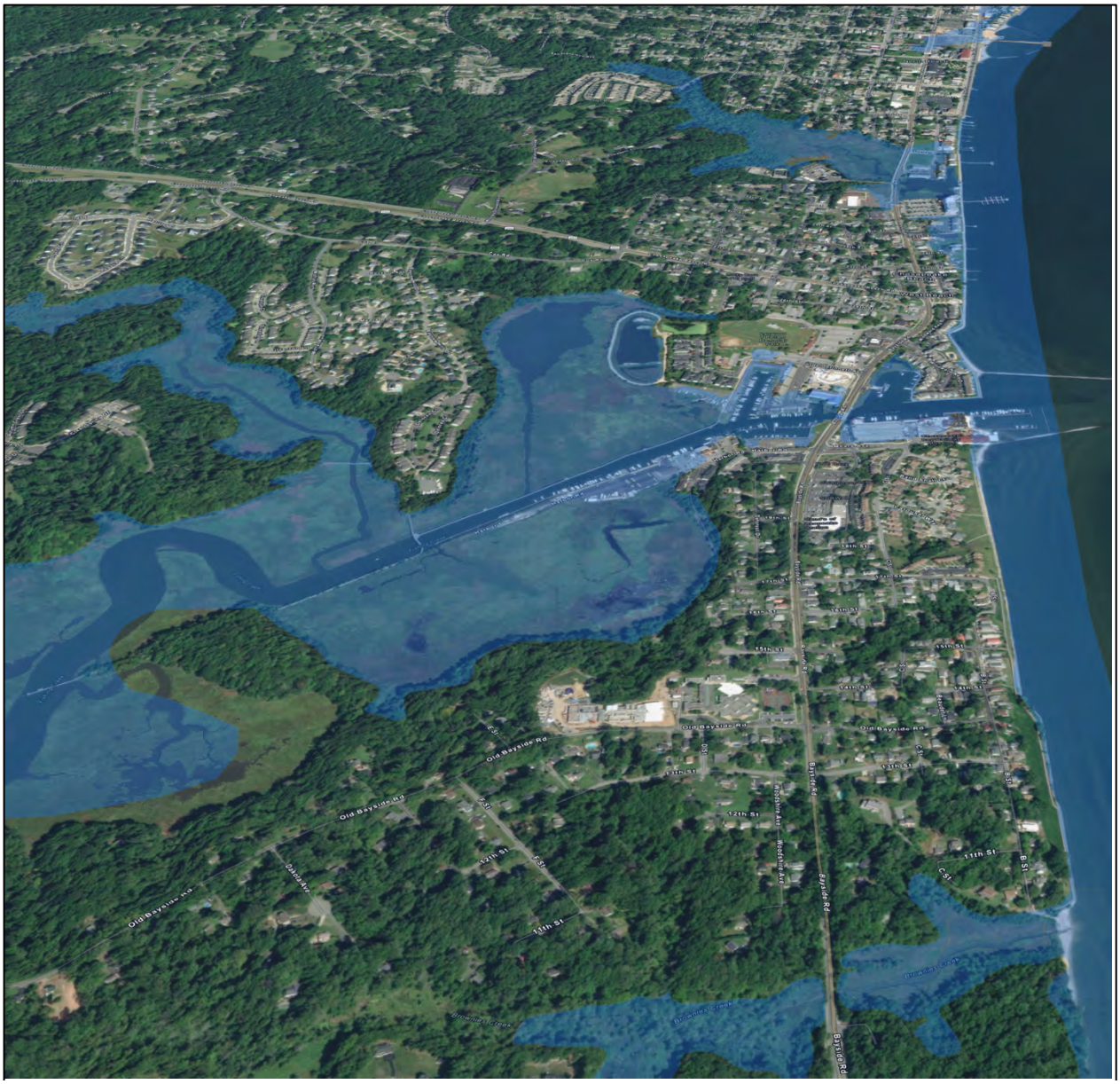

Figure 5: Mapped FEMA Floodplain, 1% Annual Chance Flood Area.

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 27th Street is subject to high velocity wave action and has a BFE of 8 feet.

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

Figure 8: FEMA Flood Zone AO. The base flood elevation may be less than 4 feet but 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.

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.

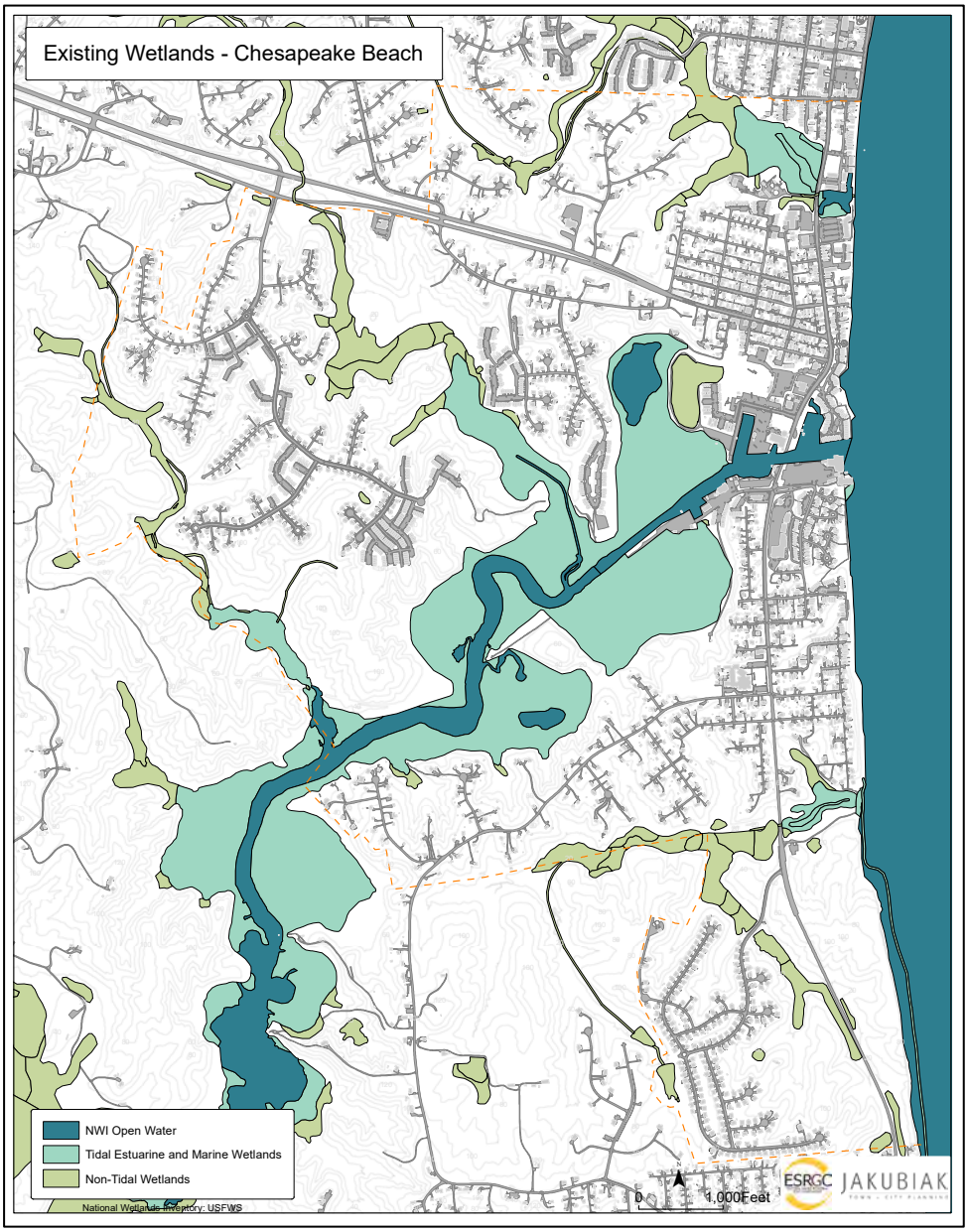

Figure 10: Mapped Wetlands in Chesapeake Beach.

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.

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.

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 small private beach areas, one at Chesapeake Station and 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[7]. 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[8]. The Town has protected the area with its Resource Conservation zoning.

Figure 11: Bay Shoreline in southern Chesapeake Beach.

[7] 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.

[8] 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.

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.

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

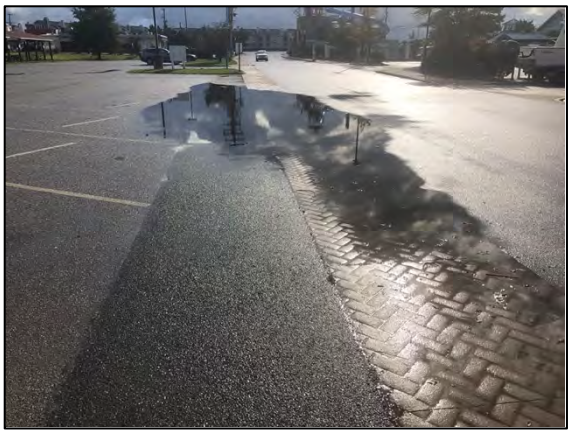

Figure 13: Standing water on Gordon Stinnett Ave.

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.

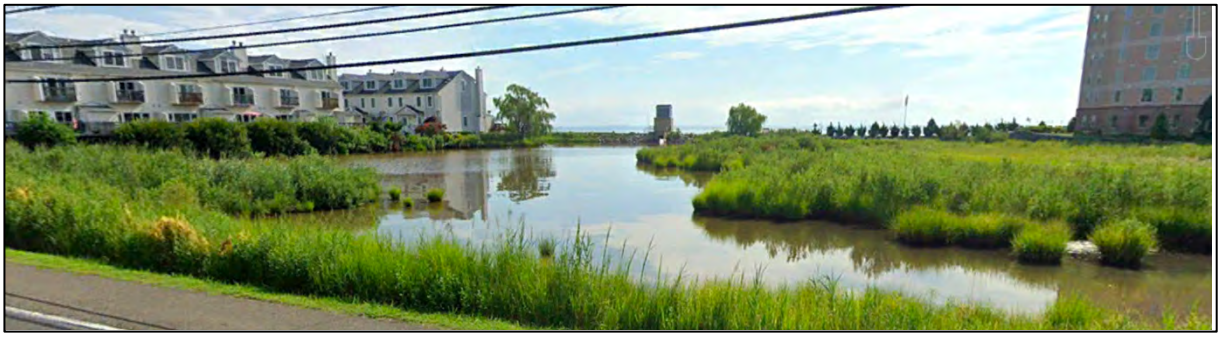

Figure 14: Photo showing the floodgate.

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[9]. However, the floodgate is in a 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 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 31st 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.

[9] That is, in the rare occurrence where there is coastal high flooding event without significant precipitation.

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.

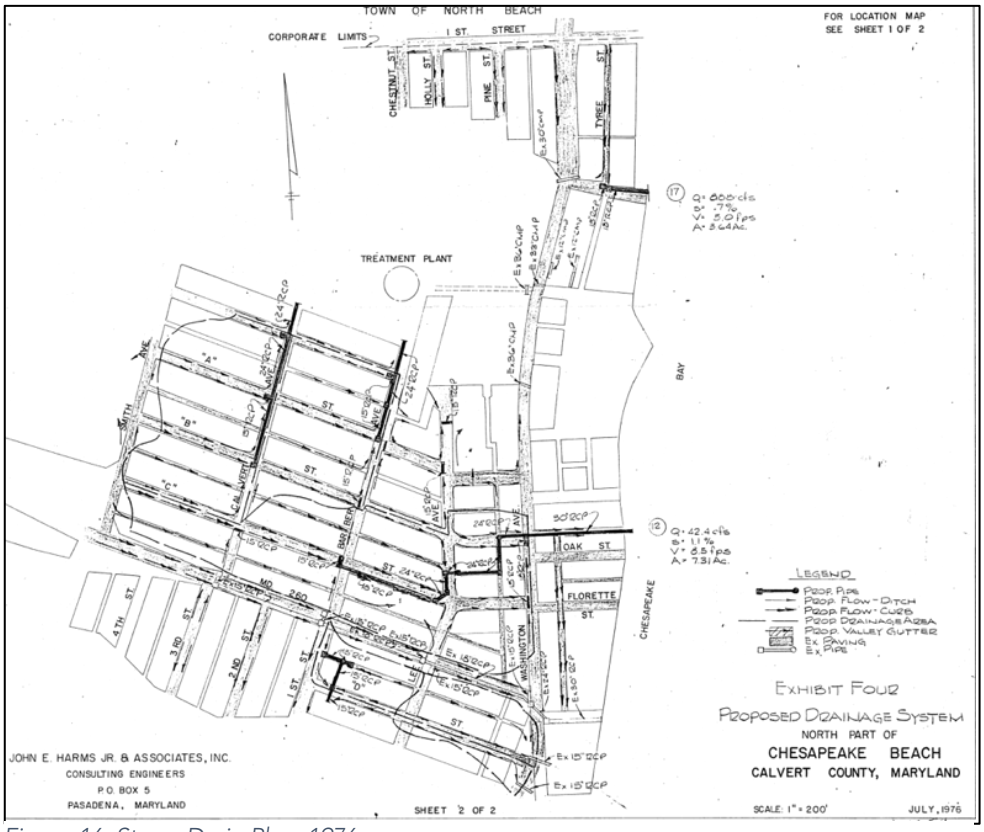

Figure 16: Storm Drain Plan, 1976.

Over time due to sea level rise and the raised revetment wall, both of which have prevented the discharge of 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 Solomon's Island 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 titled Sea-Level Rise: Projections for Maryland 2018, is the source for the projections[10]. 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.

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
2140	5.2 ft	6.7 ft	9.7 ft
2150	5.6 ft	7.3 ft	10.9 ft

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

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 flowing 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

[10] 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

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[11]. 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 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 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.

[11] 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.

Mapping

The Eastern Shore Regional GIS Cooperative (ESRGC) assisted the Towns of Chesapeake and North Beach with flood analyses and prepared the maps shown 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 of Chesapeake Beach 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.

The sea level maps are used throughout this report to explain existing or projected conditions, but they are also provided at a higher resolution for more detailed examination in the Appendix to this report. 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[12]. 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 the Town's vulnerability to flooding due to sea level rise. Figure 18 provides guidance for reading the maps.

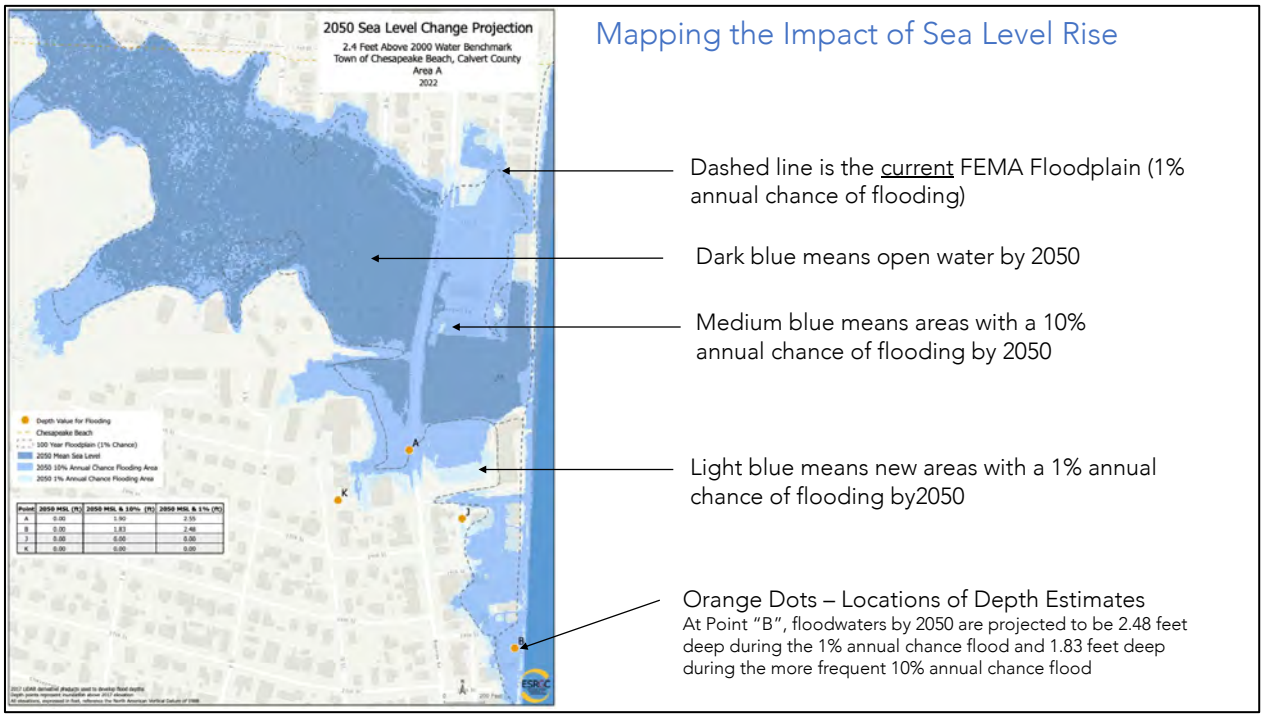

Figure 18: A Guide to the Content on the Sea Level Rise Maps.

[12] See the aforementioned report, Sea Level Rise, Projection for Maryland, 2018.

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.

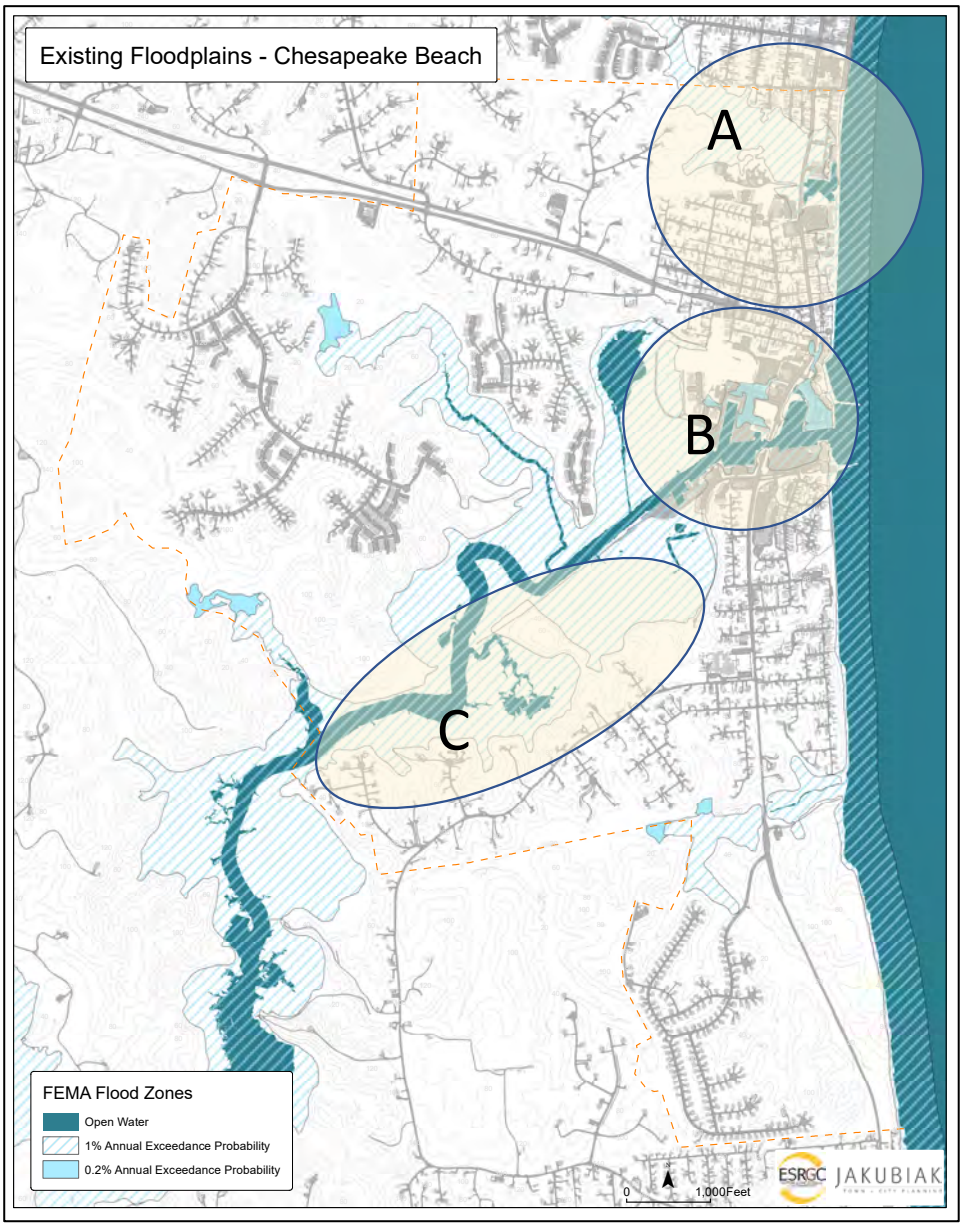

Figure 19: Three Vulnerability Areas.

Area A

Area A extends from about 27th 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.

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.

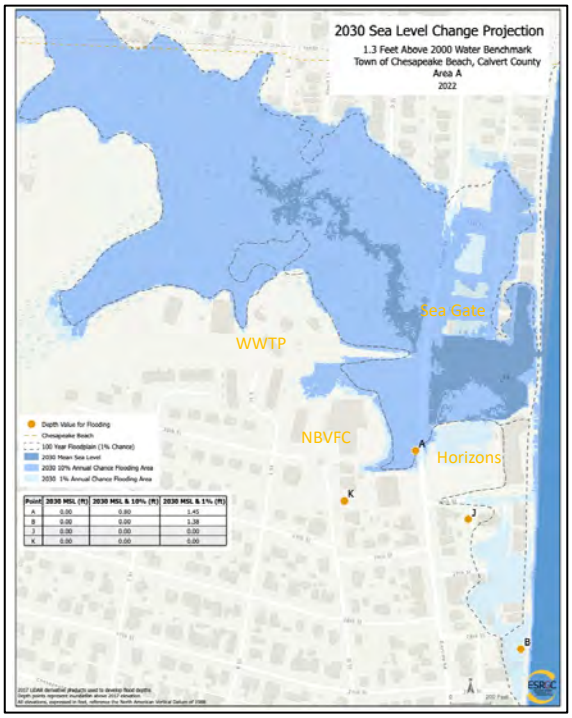

Figure 20: 2030 Sea Level Rise Projection, Area A.

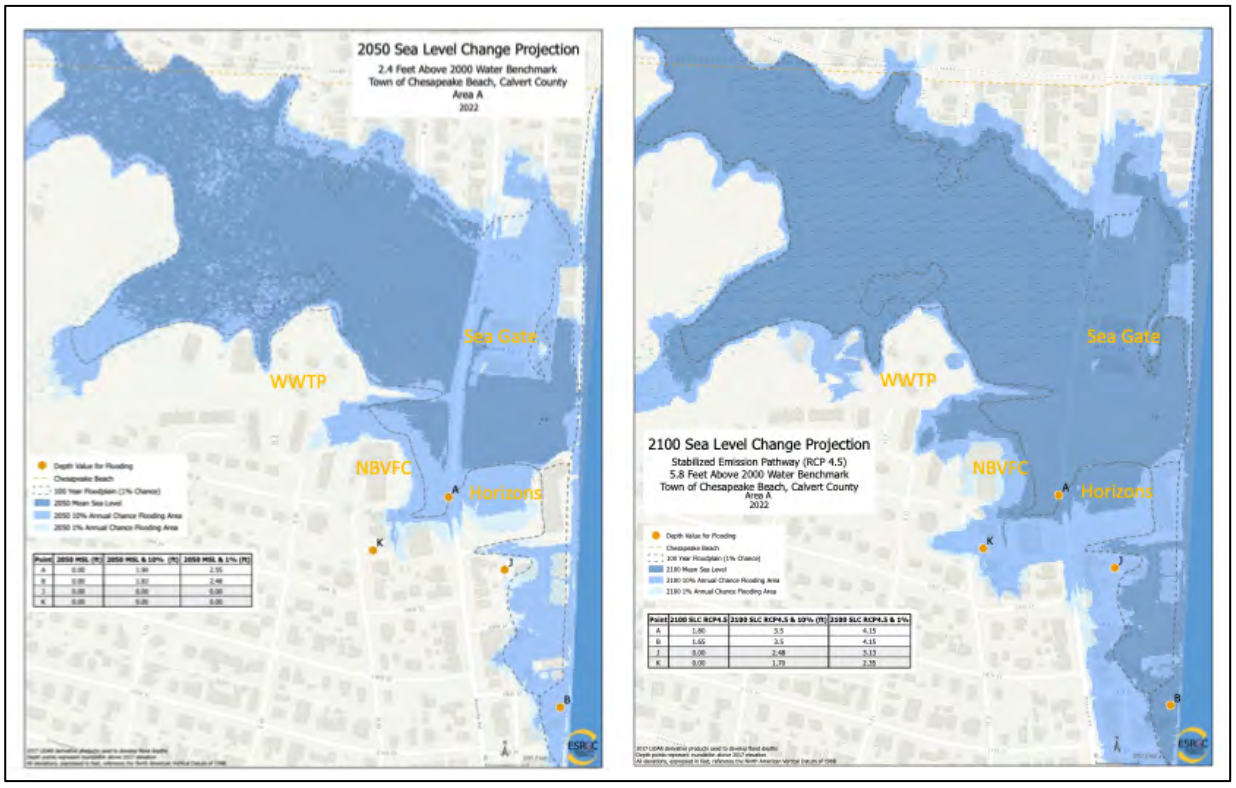

Figure 21: 2050 & 2100 Sea Level Rise Projections, Area A.

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

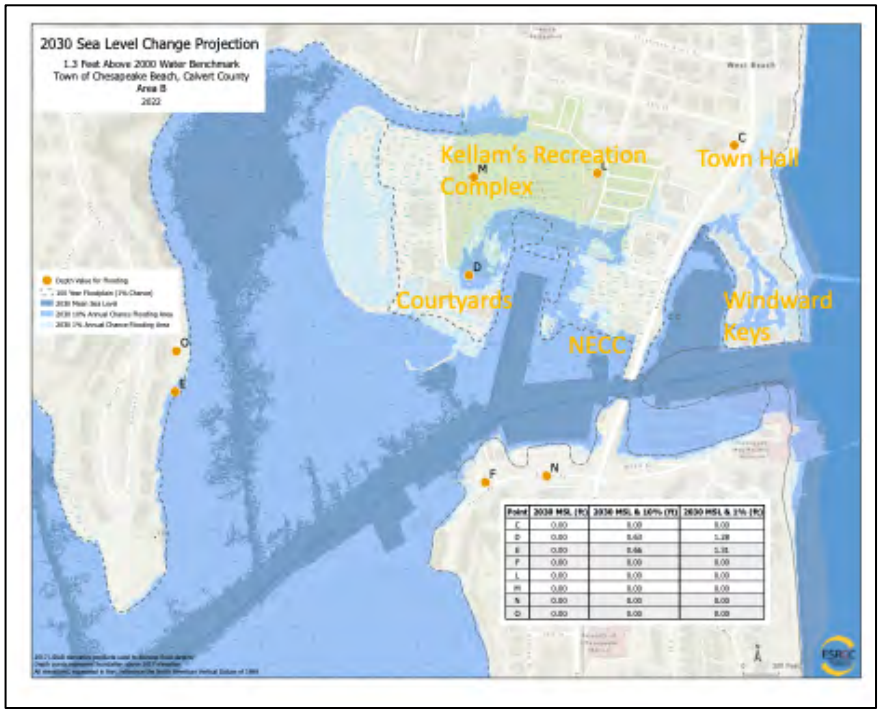

Figure 22: 2030 Sea Level Rise Projection, Area B.

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 (NRCC). 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.

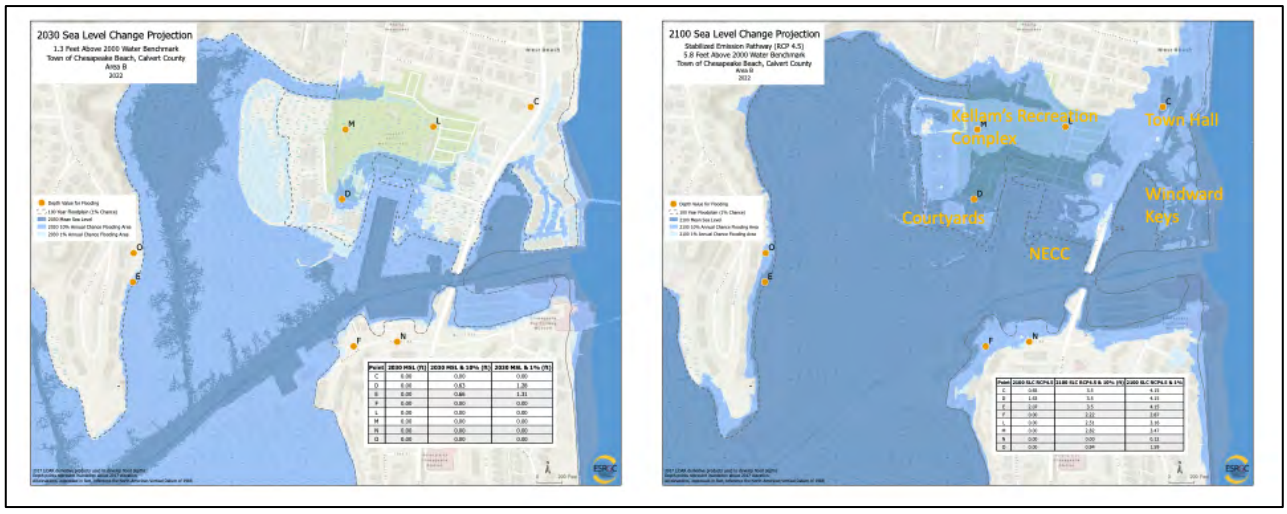

Figure 23: 2050 & 2100 Sea Level Rise Projections, Area B.

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.

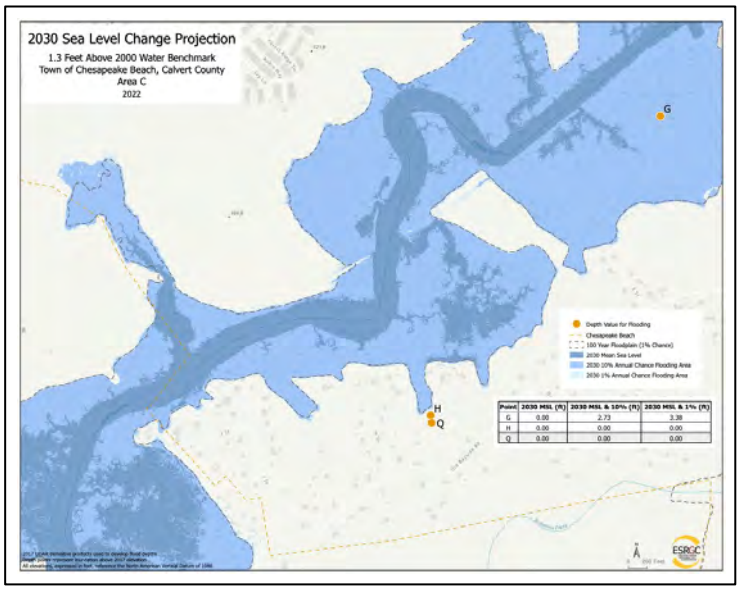

Figure 24: 2030 Sea Level Rise Projection, Area C.

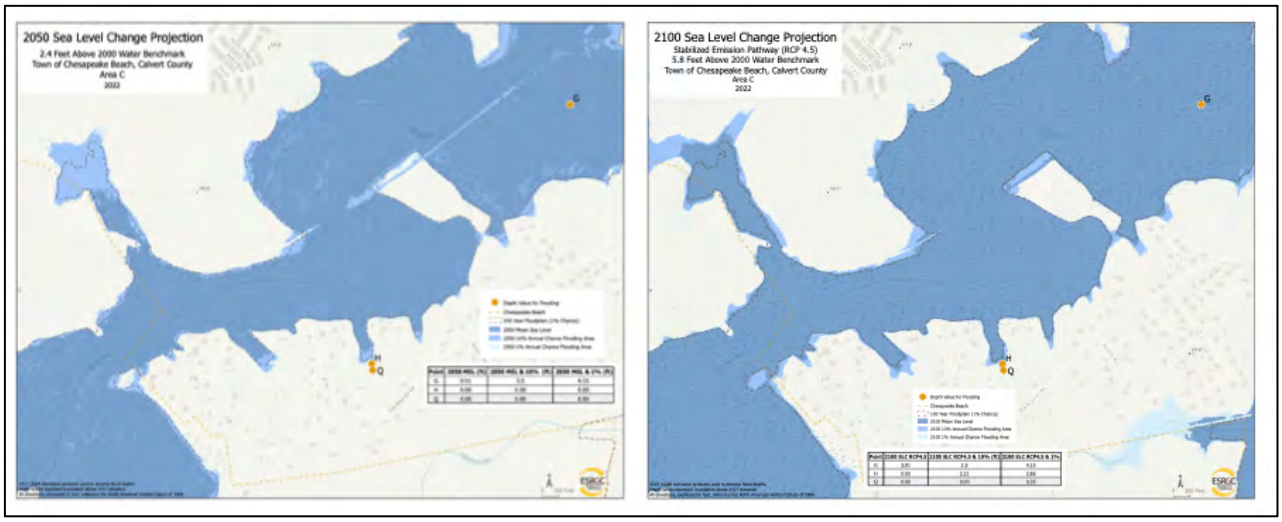

Figure 25: 2050 and 2100 Sea Level Rise Projection, Area C.

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 27th 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 at risk including those at the Courtyard at Fishing Creek, Windward Key, and Sea Gate.

Further, 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 is at risk due to flooding. The extent of these and other risks by area is explored further in Chapter 4, Action Plan Strategies and Recommendations.

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 "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 chace 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.

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.

6. 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.

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 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
Attenuate	General open space protection. Forest preservation and tree planting. Steep slope -- preservation in wooded condition. Shoreline, rip rap or naturalizing shoreline.	Reduce the velocity of flood waters and increase the time water takes to move along a pathway
Alleviate	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 withstand floods, provide safe areas that can be flooded to limit vulnerability elsewhere, manage stormwater in all forms of development, retro-fit existing neighborhoods. Absorb.
Restrict	Building, rebuilding revetments and bulkheads. Building, rebuilding floodgates and seawalls. Building new landforms to block water.	Restrict the entry of water. Hold the line against flooding.
Realign	Elevating streets, sidewalks, parking lots. Redeveloping neighborhoods. Elevating individual buildings. Managed retreat, relocating buildings and community assets. Bringing about land use changes.	Reposition 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.

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).

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 31st 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.

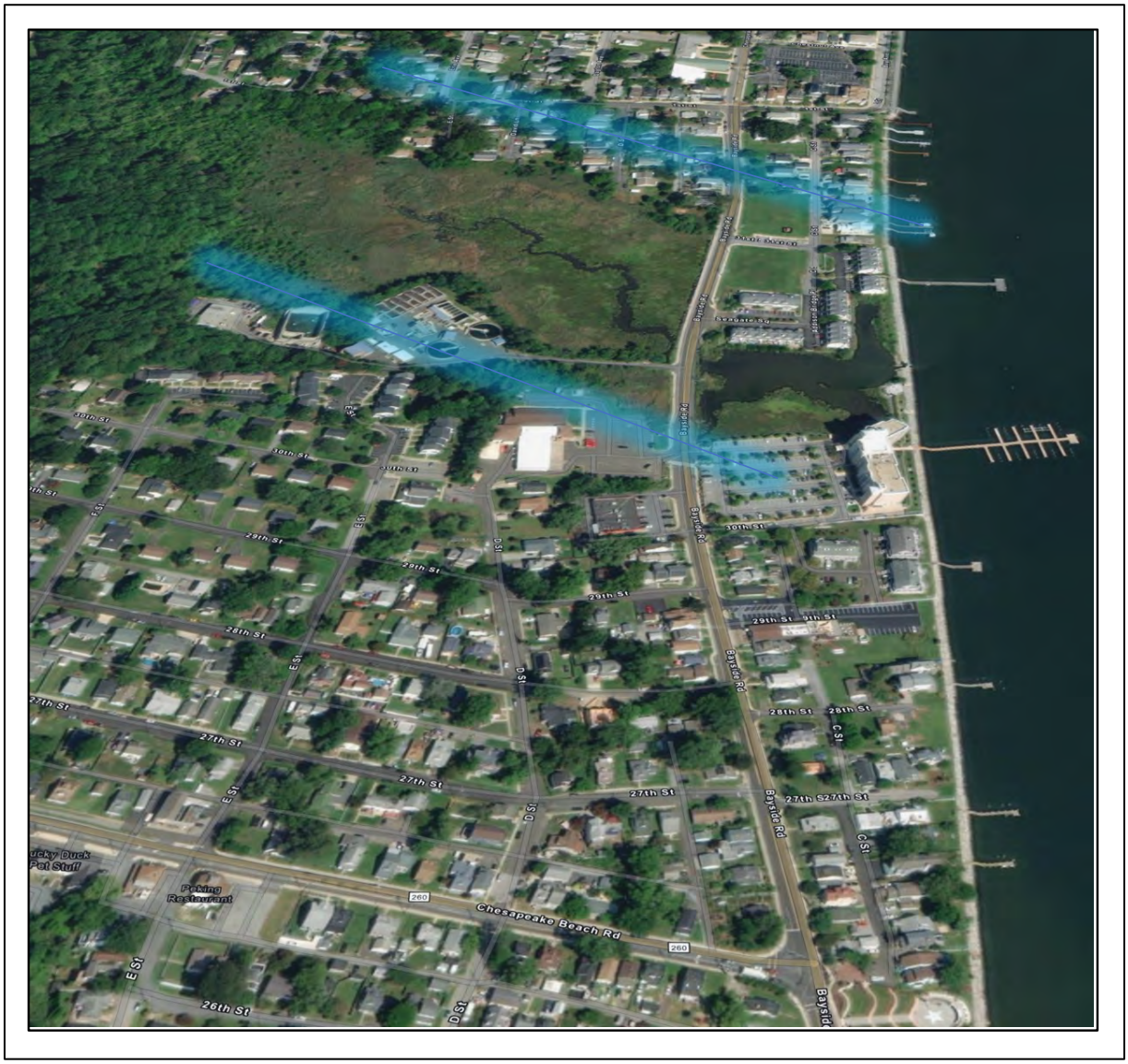

Figure 27: Defining the limits of the South Creek Estuary for planning.

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 devasting 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 Administration. Holding back the water in this area with structures along the Bay or along the marsh is not practical 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. 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:

- The North Beach Volunteer Fire Company would need to be 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. 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 30th 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 31st 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 adjoin properties. Alternatively, such houses would need to be removed, raised or reconstrued.

- 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.

- The townhouses in the Sea Gate community 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 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

1. 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. 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 be enforced along the edges of the marsh. Development activities in these area are further restricted by the Town's Critical Area regulations.

2. 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 31st 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.

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

1. Elevating the revetment along the bayfront in Area A over the next decade is recommended between 30th Street and 27th 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 to be largely 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.

   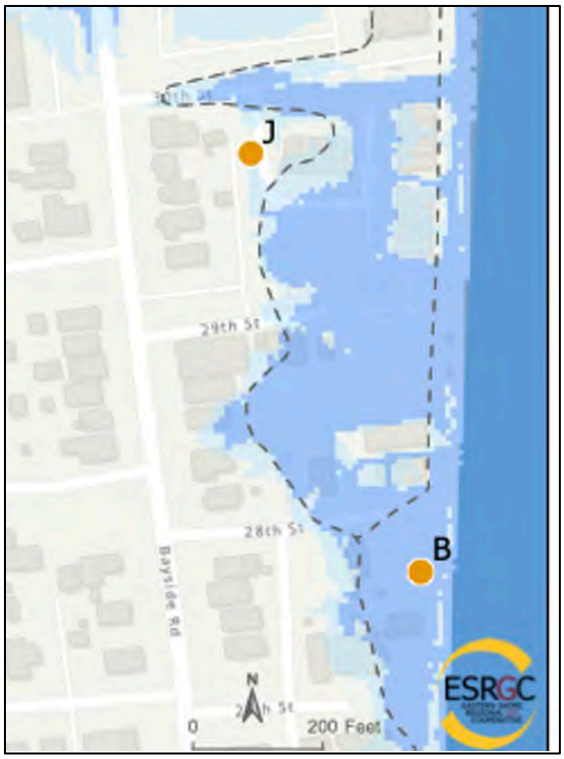

   Figure 29: Flood Zone from 30th Street to 27th Street.

   However, any elevation of the revetment in this area must only proceed after a plan is accomplished and adopted for elevating the land, structures, and infrastructure. The master plan must specify 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 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 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.

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 conditions in the area. This Plan foresees the gradual transformation of this area into open water and marsh and that a combination of natural and manmade solutions will be necessary.

Realign Recommendations

1. Relocate the Volunteer Fire Company to a safer location.

2. Reconstruct MD 261 through Area A. 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.

   Figure 30 shows the "managed retreat lines" signifying roughly the properties that would 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

4. Adopt amendments to the Town's Zoning Map and Zoning Ordinance as necessary to prevent or significantly limit the introduction of new residential development on the open parcels in Area A, especially within the subarea between the two blue lines in Figure 27.

   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.

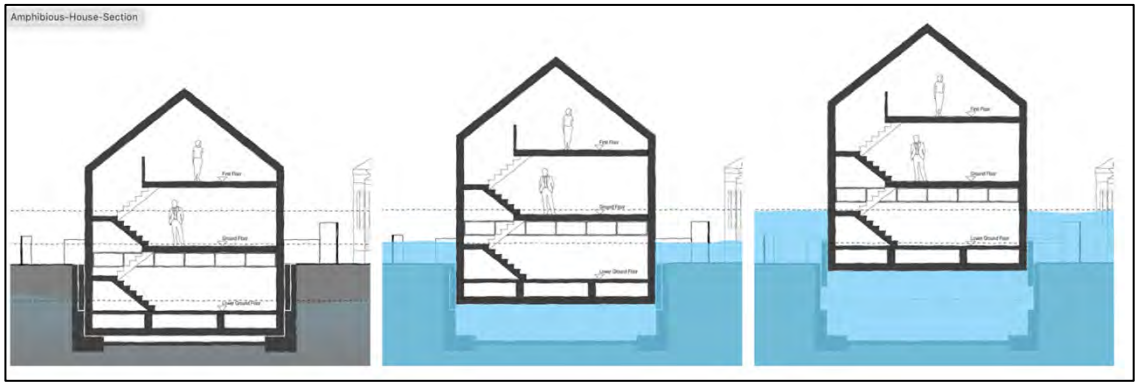

Figure 31: Source of illustration is Bacca Architects London, Amphibious House.

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 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.

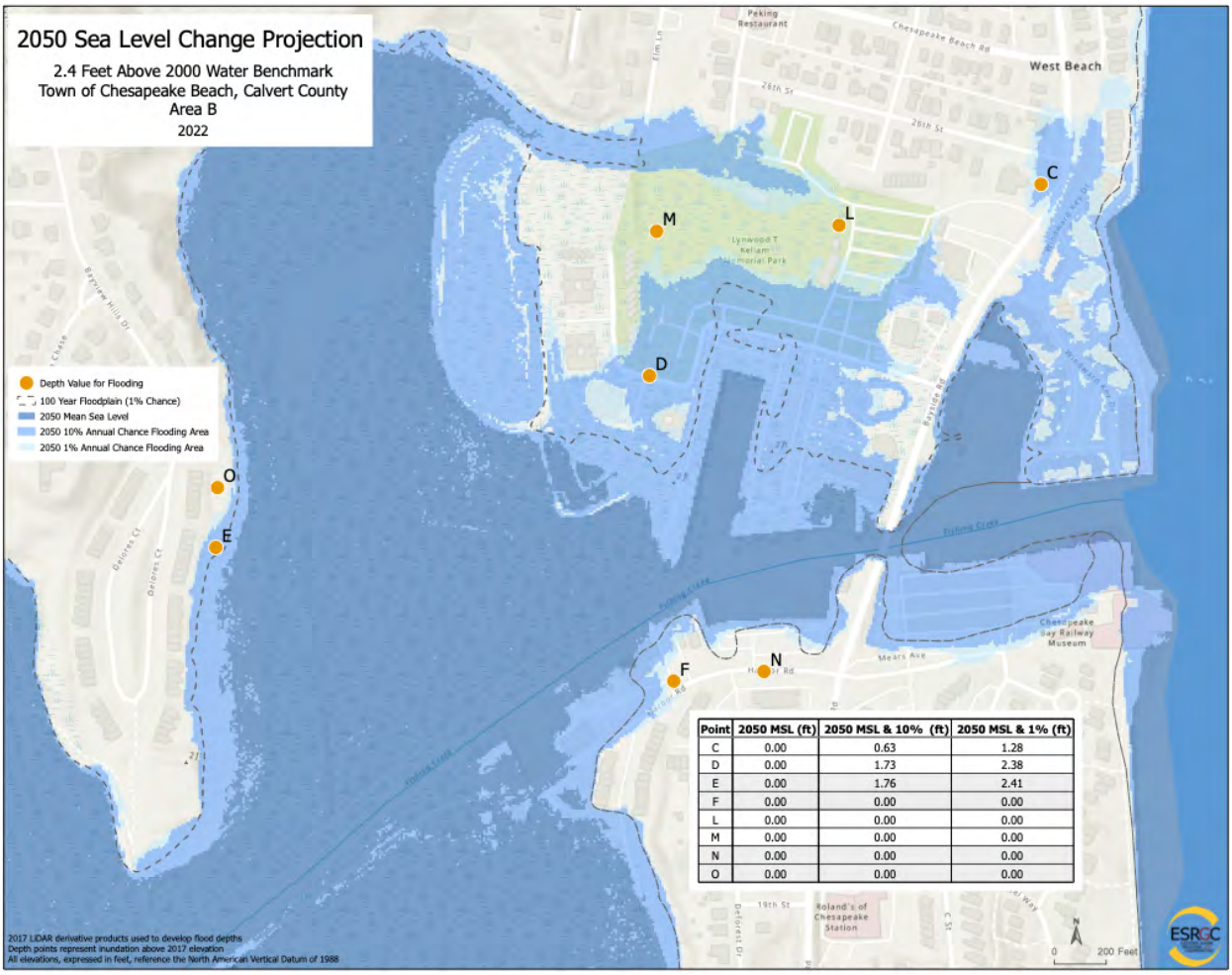

Figure 32

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.

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".

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

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)[13]. 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.

[13] 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.

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.

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 (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 26th 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. Relocate the North East Community Center 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 area and the access drive and parking flooded during the October 2022 tidal event. Evaluate the Waterpark similarly.

2. Study the feasibility of elevating Gordon Stinnett Avenue. The full length of this 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 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. 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.

Area C

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.

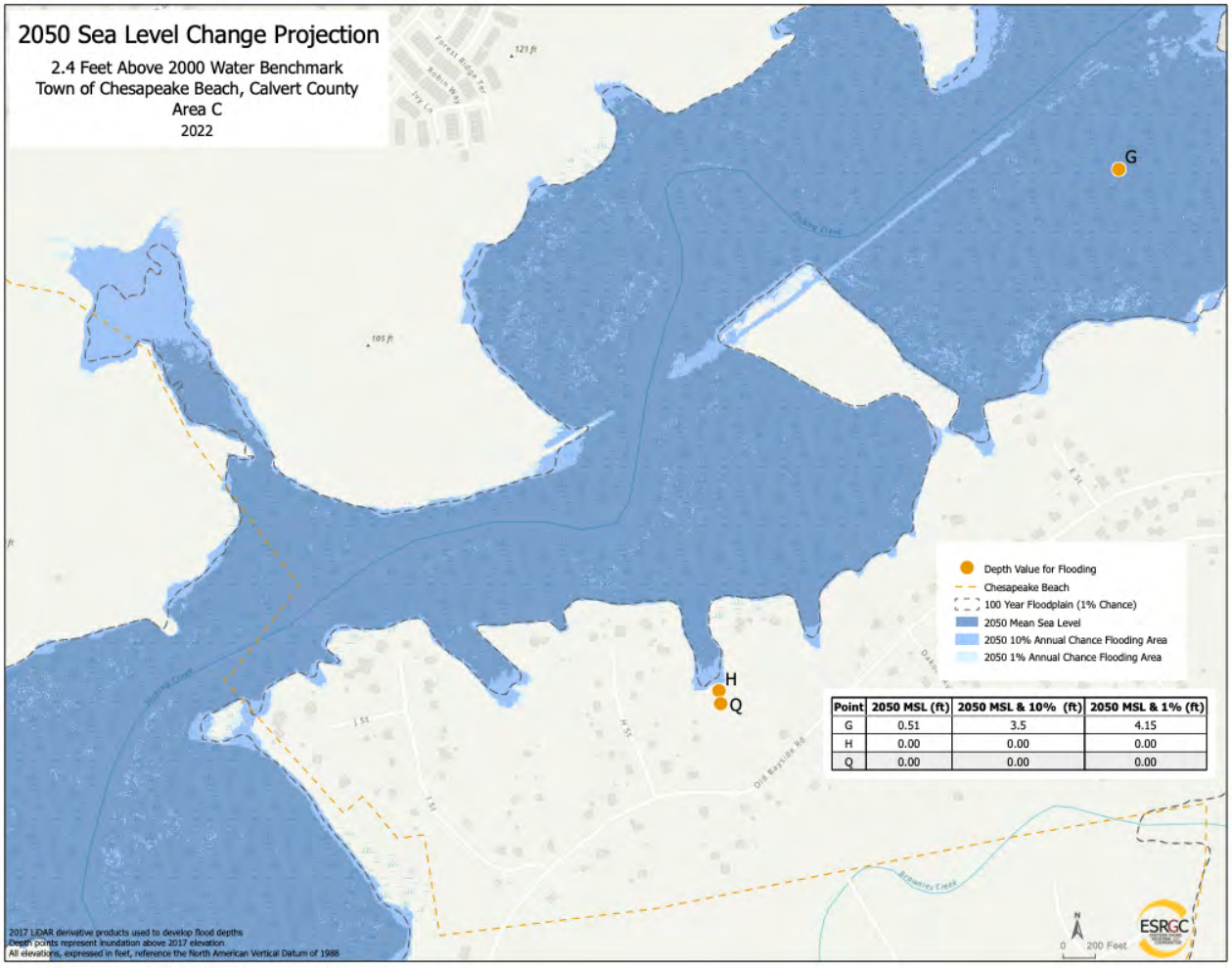

Figure 37

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, 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. 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 the periodic update of the Calvert County All-Hazard Mitigation Plan and incorporate the findings and recommendations of this Plan.

6. Funding. First, 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.

7. Funding. Second 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.

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Appendix

Flood Analysis and Mapping:
Technical Support Methodology
Town of Chesapeake Beach, Calvert County

June 27, 2022

Introduction

The Eastern Shore Regional GIS Cooperative (ESRGC) assisted the Town of Chesapeake Beach with flood analysis, processing, and mapping of data to predict sea level change for Chesapeake Beach, Calvert County. While much of Calvert County's natural and built environment is expected to be impacted by sea level change, the coastal community of Chesapeake Beach will be among the first to experience the effects. The data developed by the ESRGC will be used by the Town of Chesapeake Beach to assess the vulnerability of specific geographic areas in their community; recommend mitigation and adaptation options to address flooding impacts including sea level change; and prepare implementation strategies

The most recently available aerial topographic LiDAR derivatives, current sea level projections for Maryland 2030, 2050, and 2100 (R. Kopp, Rutgers University), and 1% annual-chance flood elevations (FEMA Flood Insurance Study: #24009CV000B; Effective: November 19, 2014) were used in this study to represent sea level rise and periodic flooding for Chesapeake Beach. For this study the ESRGC developed flood grids representing mean sea level for 2030 and 2050, 1% annual chance flood events for 2030 and 2050, and mean sea level for 2100 with a growing emissions pathway and mean sea level for 2100 with a growing emissions pathway and 1% annual chance flood event.

This methodology document is a high-level review of the ESRGC's technical support for the flood analysis and mapping for the Town of Chesapeake Beach. Please see the metadata for analysis details.

Definition of Study Area

The Town of Chesapeake Beach is located in northern Calvert County and experiences flooding from the Chesapeake Bay. Wetland areas to the north and south also flood from the Chesapeake Bay. The study area for this project extends beyond the town boundary to include the Chesapeake Bay and both wetland areas.

Sea Level Change: Depth Grid Development

The ESRGC worked with the Town of Chesapeake Beach to select the most appropriate methodology and flood scenarios. Professor Robert Kopp, Rutgers University, a leading climate scientist whose emphasis on sea level change was determined to be the most appropriate source for regional sea level change projections.

Chesapeake Beach selected the years 2030, 2050, and 2100 (RCP8.5 'growing' emissions pathway) for forecasted depth grid development. The Town also selected a low tolerance for the study area. A low tolerance for flood risk suggests buildings and infrastructure are unable to tolerate flooding.

The following table identifies the sea level change estimates over the 2000 benchmark at the Solomon's Island Tidal Gauge:

Year	Low Tolerance for Flood Risk: 1% meet/exceed
2030	1.3 feet
2050	2.4 feet
2100	7.0 feet

Table 1: Solomon's Island Tidal Gauge SLC Estimates over 2000 Benchmark

The Town also chose to include a 1% annual chance storm event for 2030, 2050, and 2100. Table 2 identifies the flood sources and corresponding still water elevations used in modeling the 1% annual chance storm:

Flooding Source	1% Annual Chance Storm Event
Chesapeake Bay at Northern County Boundary	4.30 feet
Chesapeake Bay at Town of North Beach	4.30 feet
Chesapeake Bay at Town of Chesapeake Beach	4.15 feet
Chesapeake Bay at Randle Cliff Beach	4.10 feet

Table 2: Elevations for 1% Annual Chance Storm Events

Tidal Calibration

The ESRGC prepared the digital elevation model (DEM) for analysis. Sea level change for Chesapeake Beach was localized to the nearest National Oceanic and Atmospheric Administration (NOAA) tidal reference station at Solomon's Island (Station ID: 8577330). Observations were transformed from tidal datum to North American Vertical Datum of 1988 (NAVD 1988). A final correction was applied to account for observed sea level change between the sea level benchmark (2000) and land elevation capture (2017), using the observed relative sea level change at the NOAA Solomon's Island station (3.93 mm/year).

The following table identifies the sea level change estimates adjusted for NAVD 1988 and for use with the land elevation (LiDAR) collected in 2017:

Year	Low Tolerance for Flood Risk: 1% meet/exceed
2030	0.9908071 feet
2050	2.090807 feet
2100	6.6908071 feet

Table 3: Sea Level Change Adjustments

Digital Elevation Model Analysis

The Calvert County DEM, along with the adjacent county DEMs, and an 'open water' GRID of 0.0 values were upsampled to 2-meters and mosaicked to meet the flood study's required extent. The 2-meter upsample maintains horizontal integrity while improving raster processing. Adjacent county LiDAR collections include Anne Arundel, Charles, Prince George's, and St Mary's Counties.

For annual chance depth grid output, the DEM is processed using HAZUS-MH software (v4.2 SP3).

For sea level change depth grid output, the sea level change estimate is subtracted from elevations.

Review of Preliminary Depth Grids

A review of the preliminary sea level change depth grid data is a critical step in the data analysis process.

Traditionally, the ESRGC uses the National Hydrography Dataset (NHD) flowlines to represent water drainage in a study area. However, the scale of the NHD does not lend itself to the scale and geomorphology of the study area and these data were rejected. Lacking a hydro-enforced DEM and data for the location of culverts, the ESRGC used raster analysis to develop a drainage flow line analysis. This analysis allowed the ESRGC to determine where false pooling would likely occur, limiting the true extent of potential flooding.

Local knowledge and investigation from Chesapeake Beach regarding the location of suspected culverts on public roads further supported the flowline analysis and ultimately, the resulting areas of inundation.

Depth Grid "Clean Up"

The preliminary depth grids must be reviewed for local minima, or "noise" in the data. The ESRGC implemented the following rules for the inclusion of cells in the depth grid:

1. Cells must intersect a flow line(s). Cells not intersecting flow line(s) are considered free from sea level change's direct influence and are excluded.
2. Intersected cells must represent a flood source (Chesapeake Bay) or be directly influenced by the flood source where direct influence is defined as:
    a. Contiguous cell representing a flood source,
    b. Adjacent to (2a) (may share corner vertex only),
    c. Adjacent to (2b) (may share corner vertex only),
    d. Not (2a), (2b), or (2c) because of the DEMs hydrologic limitations (i.e., visual inspection on ground or via aerial imagery confirms the presence of culvert(s) that would otherwise allow for continuous feature).

    This validates the data as a sea level change study and not a bathtub model.

Data Development

The ESRGC updated the existing building footprints for six locations using 2019 aerial imagery. The building footprint data assists in the development of first floor flooding. The ESRGC also used the DEM to develop drainage flow lines for the study area.

Depth Points

The Town of Chesapeake Beach provided 17 locations for the ESRGC to create water depth points. The points report the depth of water predicted for each projected year and annual chance periodic flood event. The points and depths are shown on the provided maps in a table and in the delivery geodatabase.

Final Products

The following products were developed for the Town of Chesapeake Beach:

Mean Sea Level, 2030 Depth Grid

- sweldepth0 - represents projected still water depths in 2030 (feet) during a period free from periodic flooding
- sweldepth10 - represents projected still water depths in 2030 (feet) during a 10% annual chance periodic flood
- sweldepth100 - represents projected still water depths in 2030 (feet) during a 1% annual chance periodic flood

Mean Sea Level, 2050 Depth Grid

- sweldepth0 - represents projected still water depths in 2050 (feet) during a period free from periodic flooding
- sweldepth10 - represents projected still water depths in 2050 (feet) during a 10% annual chance periodic flood
- sweldepth100 - represents projected still water depths in 2050 (feet) during a 1% annual chance periodic flood

Mean Sea Level with Stabilizing Emissions Pathway (RCP 4.5), 2100 Depth Grid

- sweldepth0 - represents projected still water depths in 2100 (feet) with a Stabilizing Emissions Pathway during a period free from periodic flooding
- sweldepth10 - represents projected still water depths in 2100 (feet) with a Stabilizing Emissions Pathway during a 10% annual chance periodic flood
- sweldepth100 - represents projected still water depths in 2100 (feet) with a Stabilizing Emissions Pathway during a 1% annual chance periodic flood

Mean Sea Level with Growing Emissions Pathway (RCP 8.5), 2100 Depth Grid

- sweldepth0 - represents projected still water depths in 2100 (feet) with a Growing Emissions Pathway during a period free from periodic flooding
- sweldepth10 - represents projected still water depths in 2100 (feet) with a Growing Emissions Pathway during 10% annual chance periodic flood

- sweldepth100 - represents projected still water depths in 2100 (feet) with a Growing Emissions Pathway during a 1% annual chance periodic flood

Maps

The Town of Chesapeake Beach chose to map the full overview and three additional areas of interest (Area A, Area B, and Area C) selected by the Town. The ESRGC provided the following maps as deliverables:

1. CB2030.pdf
2. CB2030_AreaA.pdf
3. CB2030_AreaB.pdf
4. CB2030_AreaC.pdf
5. CB2030_1_10.pdf
6. CB2030_1_10_AreaA.pdf
7. CB2030_1_10_AreaB.pdf
8. CB2030_1_10_AreaC.pdf
9. CB2050.pdf
10. CB2050_AreaA.pdf
11. CB2050_AreaB.pdf
12. CB2050_AreaC.pdf
13. CB2050_1_10.pdf
14. CB2050_1_10_AreaA.pdf
15. CB2050_1_10_AreaB.pdf
16. CB2050_1_10_AreaC.pdf
17. CB2100_Growing.pdf
18. CB2100_Growing_AreaA.pdf
19. CB2100_Growing_AreaB.pdf
20. CB2100_Growing_AreaC.pdf
21. CB2100_Growing_1_10.pdf
22. CB2100_Growing_1_10_AreaA.pdf
23. CB2100_Growing_1_10_AreaB.pdf
24. CB2100_Growing_1_10_AreaC.pdf
25. CB2100_Stabilized.pdf
26. CB2100_ Stabilized _AreaA.pdf
27. CB2100_ Stabilized _AreaB.pdf
28. CB2100_ Stabilized _AreaC.pdf
29. CB2100_ Stabilized _1_10.pdf
30. CB2100_ Stabilized _1_10_AreaA.pdf
31. CB2100_ Stabilized _1_10_AreaB.pdf
32. CB2100_ Stabilized _1_10_AreaC.pdf

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.

2030 Sea Level Change Projection

1.3 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area A
2022

Depth Value for Flooding
Chesapeake Beach
100 Year Floodplain (1% Chance)
2030 Mean Sea Level

Point	2030 MSL (ft)
A	0.00
B	0.00
J	0.00
K	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

N
0 200 Feet

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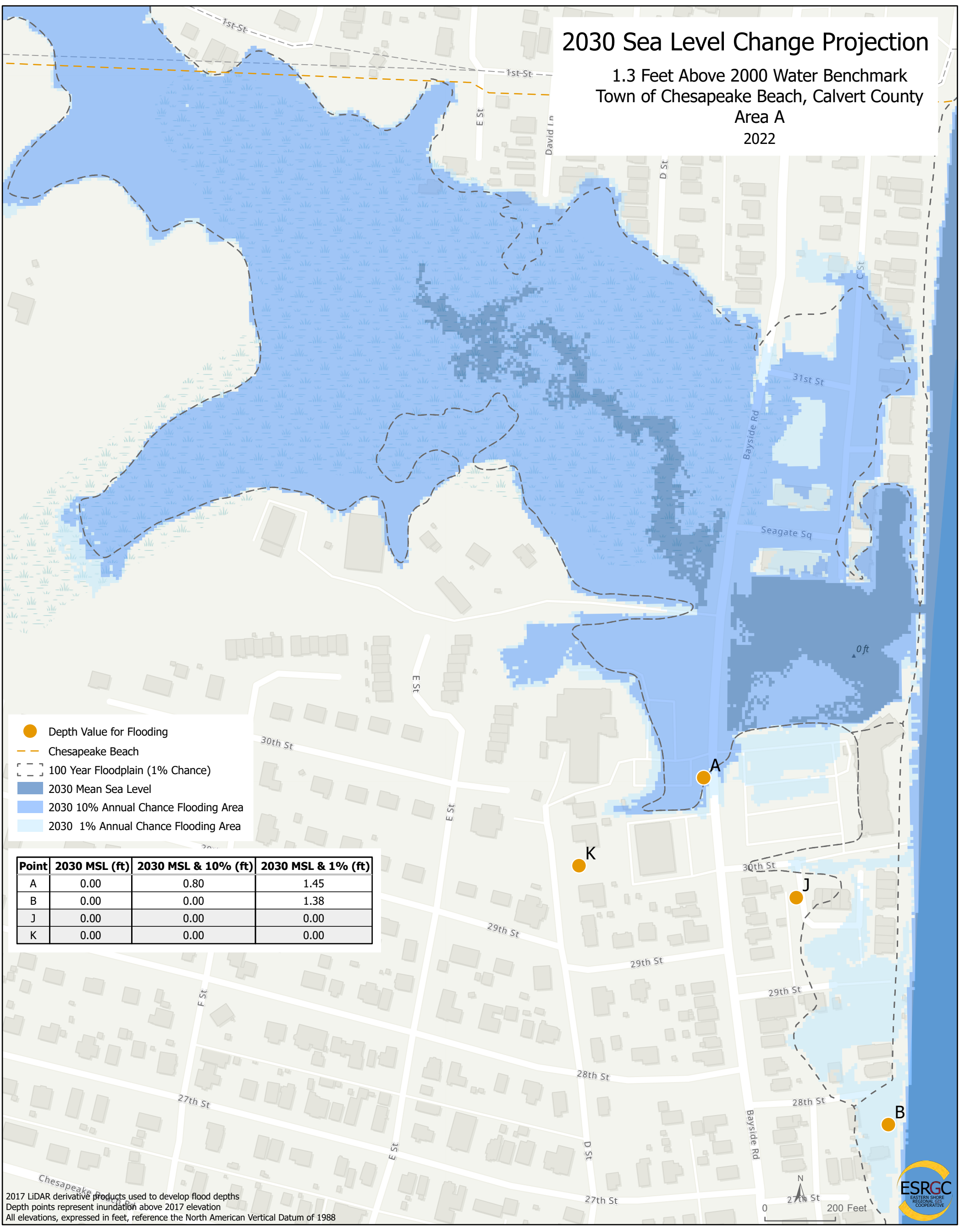
2030 Sea Level Change Projection

1.3 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area A
2022



Point	2030 MSL (ft)	2030 MSL & 10% (ft)	2030 MSL & 1% (ft)
A	0.00	0.80	1.45
B	0.00	0.00	1.38
J	0.00	0.00	0.00
K	0.00	0.00	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

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2050 Sea Level Change Projection

2.4 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area A
2022

Depth Value for Flooding
Chesapeake Beach
100 Year Floodplain (1% Chance)
2050 Mean Sea Level

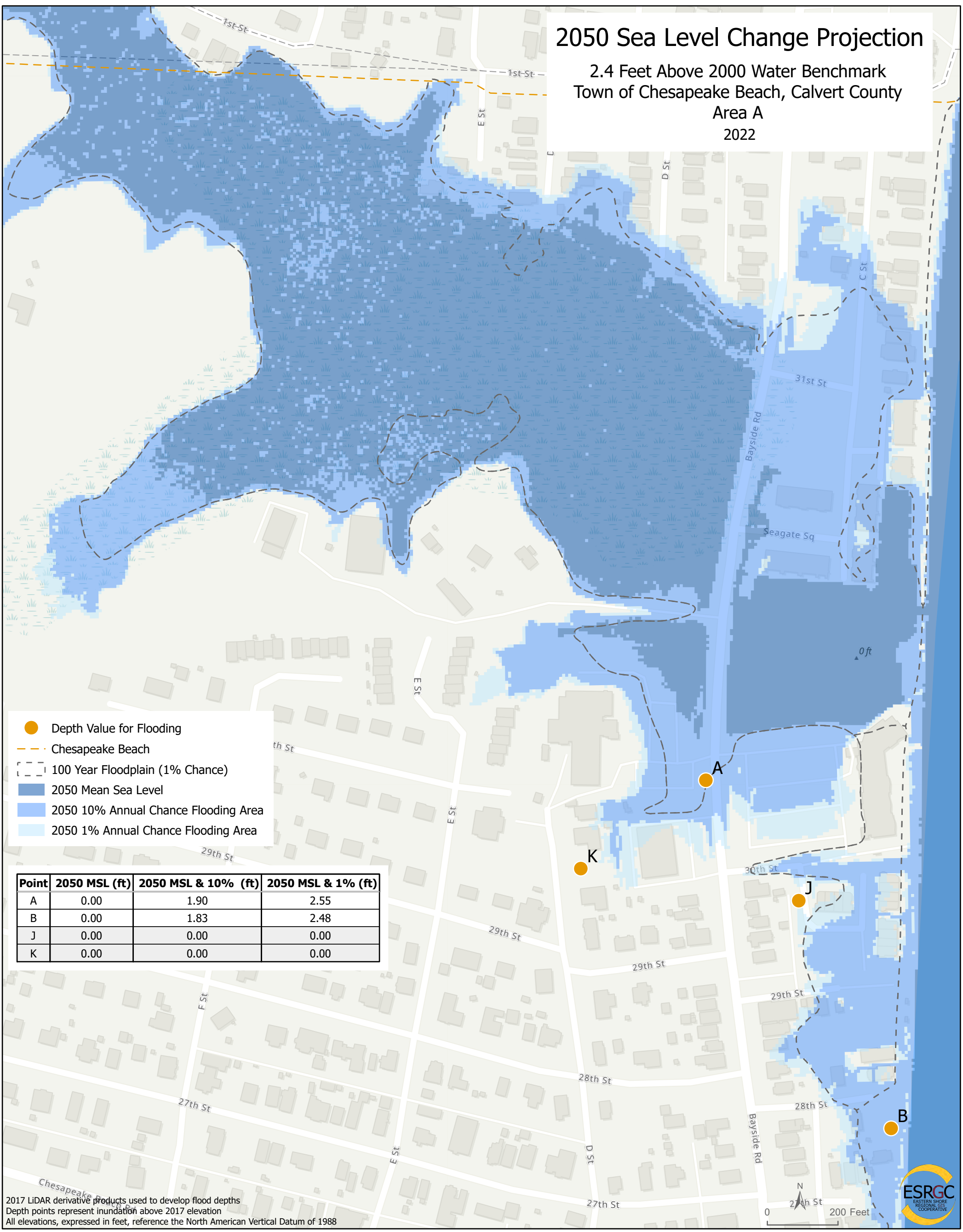
Point	2050 MSL (ft)
A	0.00
B	0.00
J	0.00
K	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

0 200 Feet

2050 Sea Level Change Projection

2.4 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area A
2022



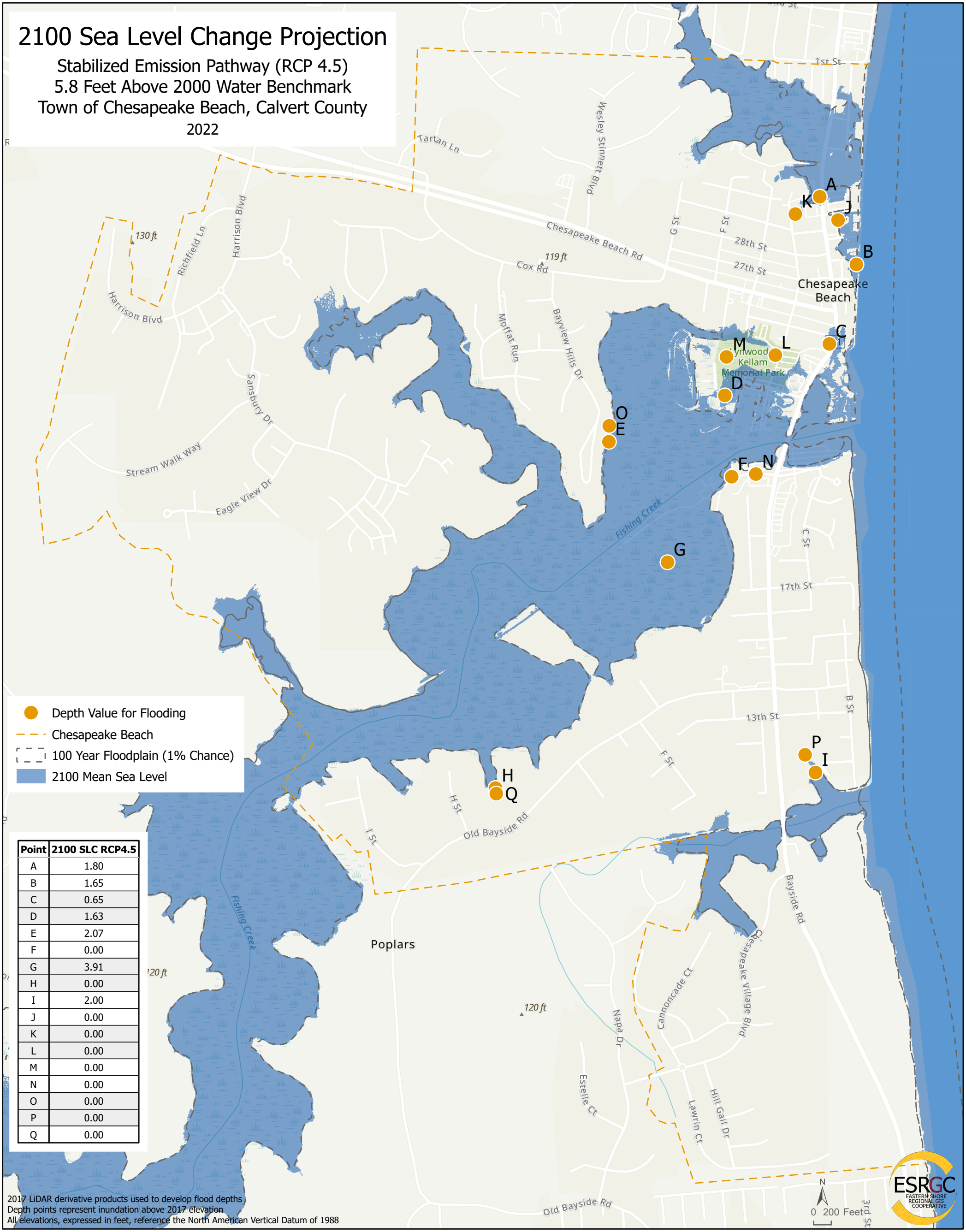
- Depth Value for Flooding
- Chesapeake Beach
- 100 Year Floodplain (1% Chance)
- 2050 Mean Sea Level
- 2050 10% Annual Chance Flooding Area
- 2050 1% Annual Chance Flooding Area

Point	2050 MSL (ft)	2050 MSL & 10% (ft)	2050 MSL & 1% (ft)
A	0.00	1.90	2.55
B	0.00	1.83	2.48
J	0.00	0.00	0.00
K	0.00	0.00	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

2100 Sea Level Change Projection

Stabilized Emission Pathway (RCP 4.5)
5.8 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
2022



- Depth Value for Flooding
- Chesapeake Beach
- 100 Year Floodplain (1% Chance)
- 2100 Mean Sea Level

Point	2100 SLC RCP4.5
A	1.80
B	1.65
C	0.65
D	1.63
E	2.07
F	0.00
G	3.91
H	0.00
I	2.00
J	0.00
K	0.00
L	0.00
M	0.00
N	0.00
O	0.00
P	0.00
Q	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

N
0 200 Feet

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2100 Sea Level Change Projection

Stabilized Emission Pathway (RCP 4.5)
5.8 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area A
2022

Depth Value for Flooding
Chesapeake Beach
100 Year Floodplain (1% Chance)
2100 Mean Sea Level
2100 10% Annual Chance Flooding Area
2100 1% Annual Chance Flooding Area

Point	2100 SLC RCP4.5	2100 SLC RCP4.5 & 10% (ft)	2100 SLC RCP4.5 & 1%
A	1.80	3.5	4.15
B	1.65	3.5	4.15
J	0.00	2.48	3.13
K	0.00	1.70	2.35

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

0 200 Feet

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2100 Sea Level Change Projection

Growing Emission Pathway (RCP 8.5)

7.0 Feet Above 2000 Water Benchmark

Town of Chesapeake Beach, Calvert County

Area A

2022

Depth Value for Flooding

Chesapeake Beach

100 Year Floodplain (1% Chance)

2100 Mean Sea Level

Point	2100 SLC RCP8.5
A	3.00
B	2.85
J	0.56
K	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

0 200 Feet

N

ESRGC EASTERN SHORE REGIONAL GIS COOPERATIVE

2100 Sea Level Change Projection

Growing Emission Pathway (RCP 8.5)

7.0 Feet Above 2000 Water Benchmark

Town of Chesapeake Beach, Calvert County

Area A

2022

Depth Value for Flooding
Chesapeake Beach
100 Year Floodplain (1% Chance)
2100 Mean Sea Level
2100 10% Annual Chance Flooding Area
2100 1% Annual Chance Flooding Area

Point	2100 SLC RCP8.5	2100 SLC RCP8.5 & 10% (ft)	2100 SLC RCP8.5 & 1%
A	3.00	3.50	4.15
B	2.85	3.50	4.15
J	0.56	3.50	4.15
K	0.00	2.90	3.55

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

0 200 Feet

N

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2030 Sea Level Change Projection

1.3 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area B
2022

Depth Value for Flooding
100 Year Floodplain (1% Chance)
2030 Mean Sea Level

Point	2030 MSL (ft)
C	0.00
D	0.00
E	0.00
F	0.00
L	0.00
M	0.00
N	0.00
O	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

0 200 Feet

2030 Sea Level Change Projection

1.3 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area B
2022

Depth Value for Flooding
100 Year Floodplain (1% Chance)
2030 Mean Sea Level
2030 10% Annual Chance Flooding Area
2030 1% Annual Chance Flooding Area

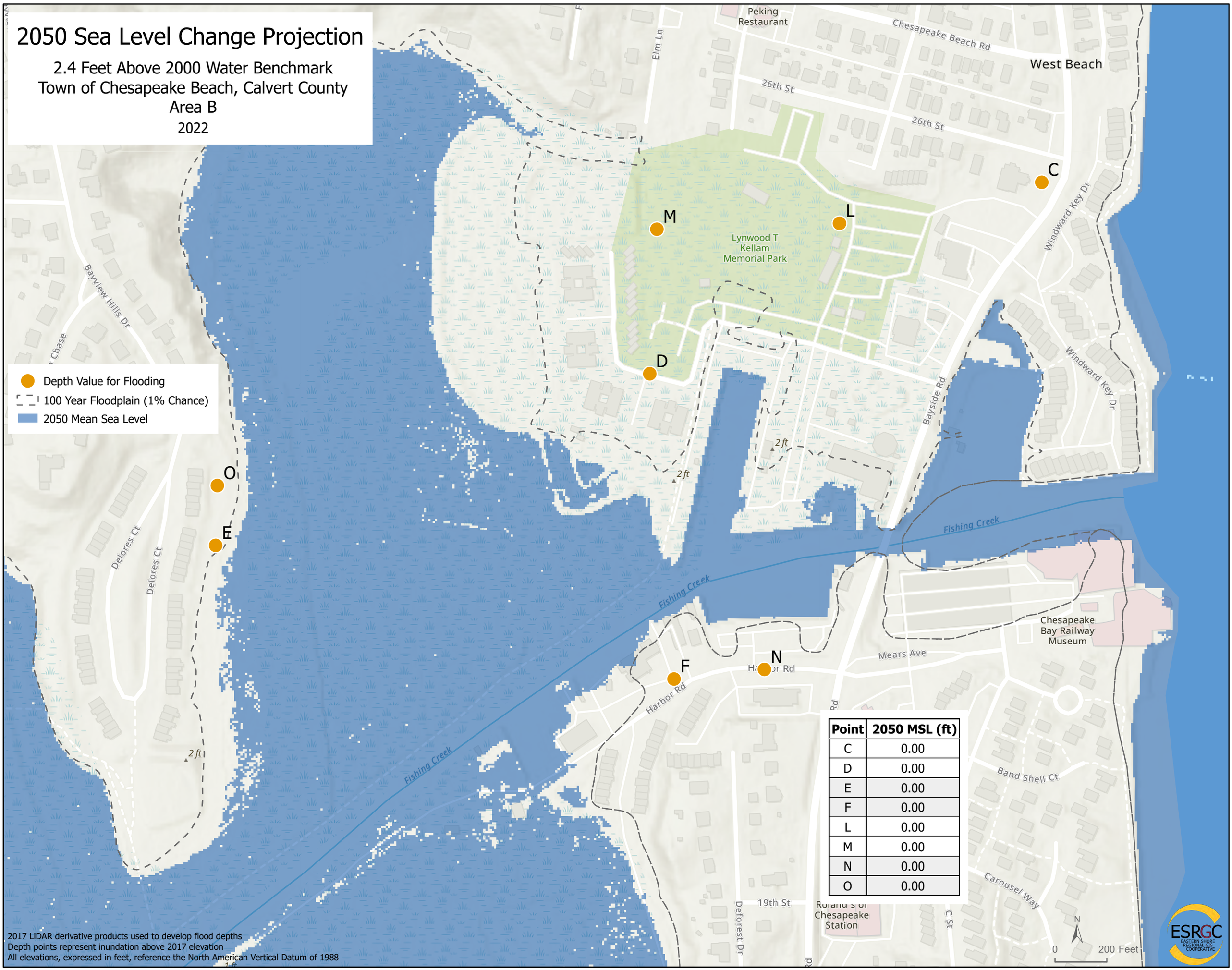
Point	2030 MSL (ft)	2030 MSL & 10% (ft)	2030 MSL & 1% (ft)
C	0.00	0.00	0.00
D	0.00	0.63	1.28
E	0.00	0.66	1.31
F	0.00	0.00	0.00
L	0.00	0.00	0.00
M	0.00	0.00	0.00
N	0.00	0.00	0.00
O	0.00	0.00	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

0 200 Feet

2050 Sea Level Change Projection

2.4 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area B
2022



C
M
L
D
O
E
F
N

- Depth Value for Flooding
- 100 Year Floodplain (1% Chance)
- 2050 Mean Sea Level

Point	2050 MSL (ft)
C	0.00
D	0.00
E	0.00
F	0.00
L	0.00
M	0.00
N	0.00
O	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

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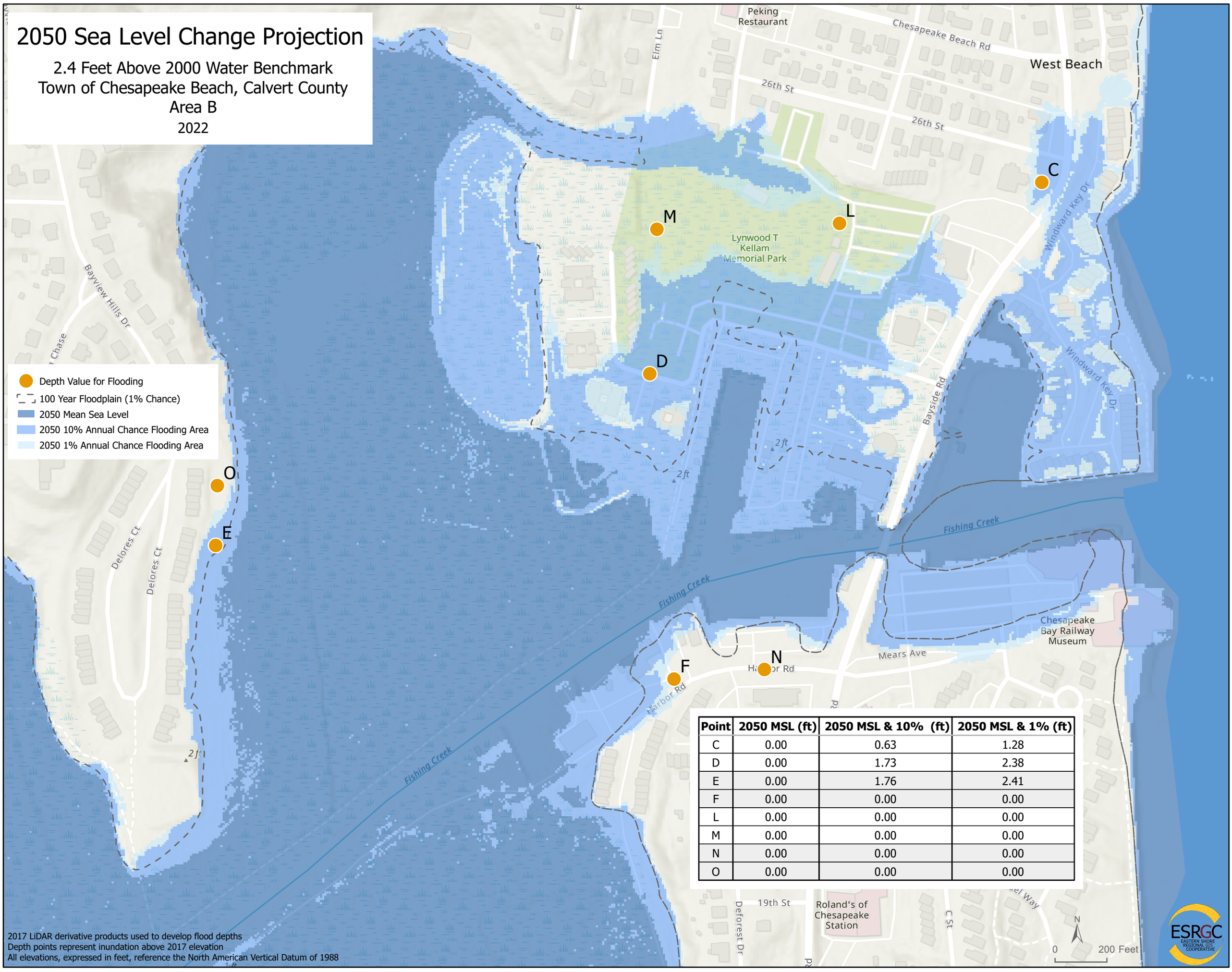
2050 Sea Level Change Projection

2.4 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area B
2022



- Depth Value for Flooding
- 100 Year Floodplain (1% Chance)
- 2050 Mean Sea Level
- 2050 10% Annual Chance Flooding Area
- 2050 1% Annual Chance Flooding Area

Point	2050 MSL (ft)	2050 MSL & 10% (ft)	2050 MSL & 1% (ft)
C	0.00	0.63	1.28
D	0.00	1.73	2.38
E	0.00	1.76	2.41
F	0.00	0.00	0.00
L	0.00	0.00	0.00
M	0.00	0.00	0.00
N	0.00	0.00	0.00
O	0.00	0.00	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

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EASTERN SHORE REGIONAL GIS COOPERATIVE

2100 Sea Level Change Projection

Stabilized Emission Pathway (RCP 4.5)
5.8 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area B
2022

Depth Value for Flooding
100 Year Floodplain (1% Chance)
2100 Mean Sea Level

Point	2100 SLC RCP4.5
C	0.65
D	1.63
E	2.07
F	0.00
L	0.00
M	0.00
N	0.00
O	0.00

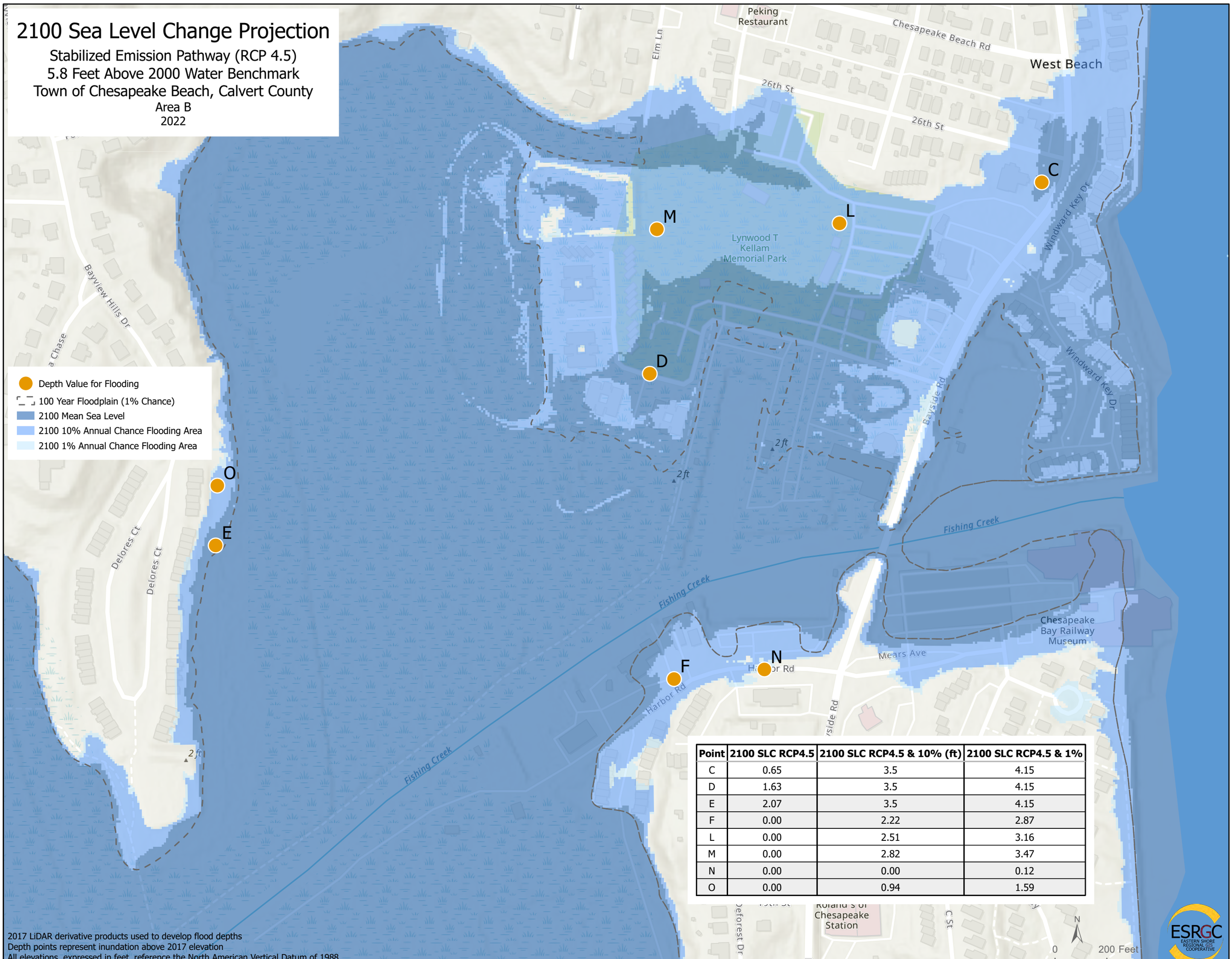
2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

0 200 Feet

ESRGC EASTERN SHORE REGIONAL GIS COOPERATIVE

2100 Sea Level Change Projection

Stabilized Emission Pathway (RCP 4.5)
5.8 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area B
2022



Point	2100 SLC RCP4.5	2100 SLC RCP4.5 & 10% (ft)	2100 SLC RCP4.5 & 1%
C	0.65	3.5	4.15
D	1.63	3.5	4.15
E	2.07	3.5	4.15
F	0.00	2.22	2.87
L	0.00	2.51	3.16
M	0.00	2.82	3.47
N	0.00	0.00	0.12
O	0.00	0.94	1.59

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

ESRGC
EASTERN SHORE REGIONAL GIS COOPERATIVE

2100 Sea Level Change Projection

Growing Emission Pathway (RCP 8.5)
7.0 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area B
2022

Depth Value for Flooding
100 Year Floodplain (1% Chance)
2100 Mean Sea Level

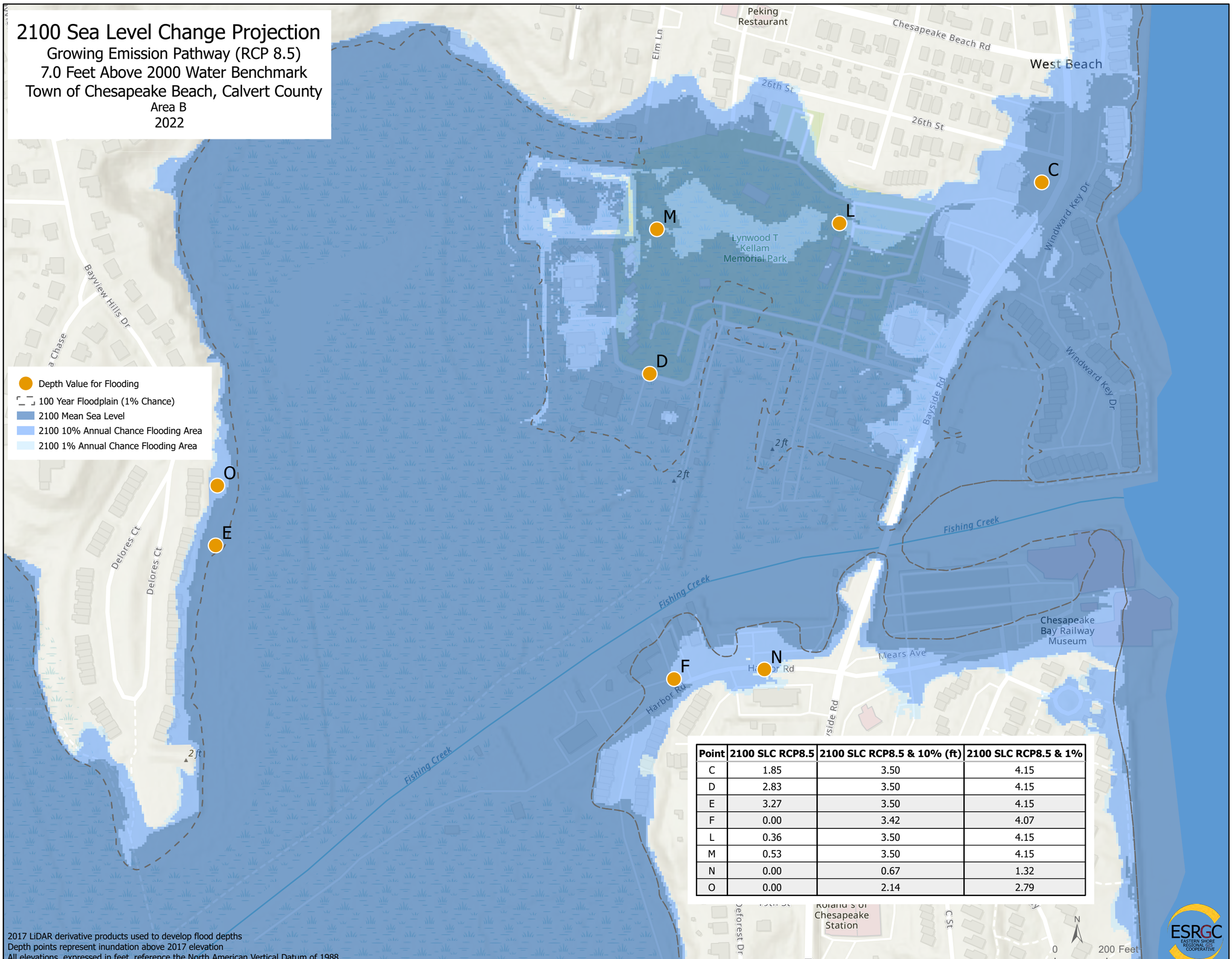
Point	2100 SLC RCP8.5
C	1.85
D	2.83
E	3.27
F	0.00
L	0.36
M	0.53
N	0.00
O	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

0 200 Feet

2100 Sea Level Change Projection

Growing Emission Pathway (RCP 8.5)
7.0 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area B
2022



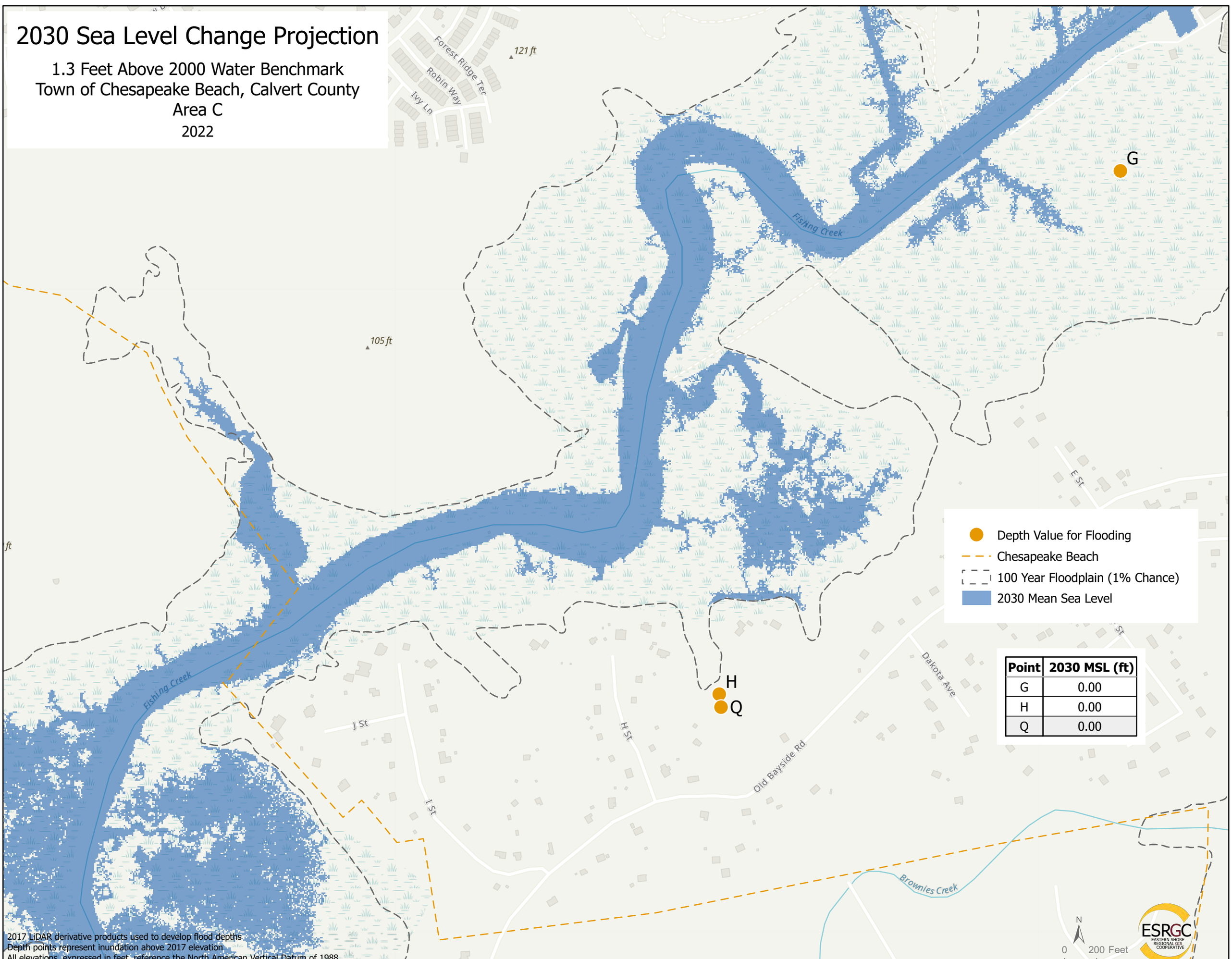
Point	2100 SLC RCP8.5	2100 SLC RCP8.5 & 10% (ft)	2100 SLC RCP8.5 & 1%
C	1.85	3.50	4.15
D	2.83	3.50	4.15
E	3.27	3.50	4.15
F	0.00	3.42	4.07
L	0.36	3.50	4.15
M	0.53	3.50	4.15
N	0.00	0.67	1.32
O	0.00	2.14	2.79

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

ESRGC
EASTERN SHORE REGIONAL GIS COOPERATIVE

2030 Sea Level Change Projection

1.3 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area C
2022



Point	2030 MSL (ft)
G	0.00
H	0.00
Q	0.00

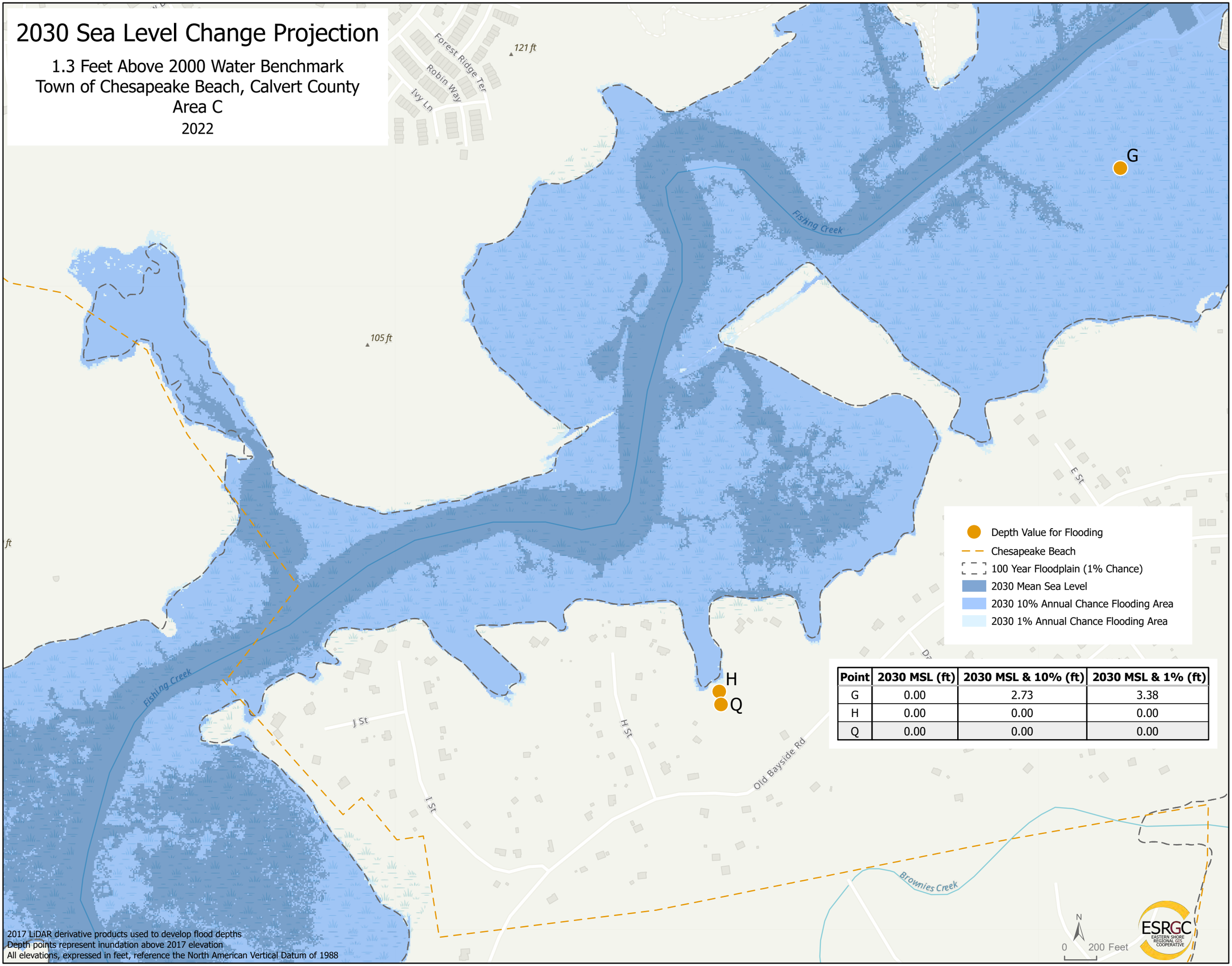
2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

N
0 200 Feet

ESRGC
EASTERN SHORE REGIONAL GIS COOPERATIVE

2030 Sea Level Change Projection

1.3 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area C
2022

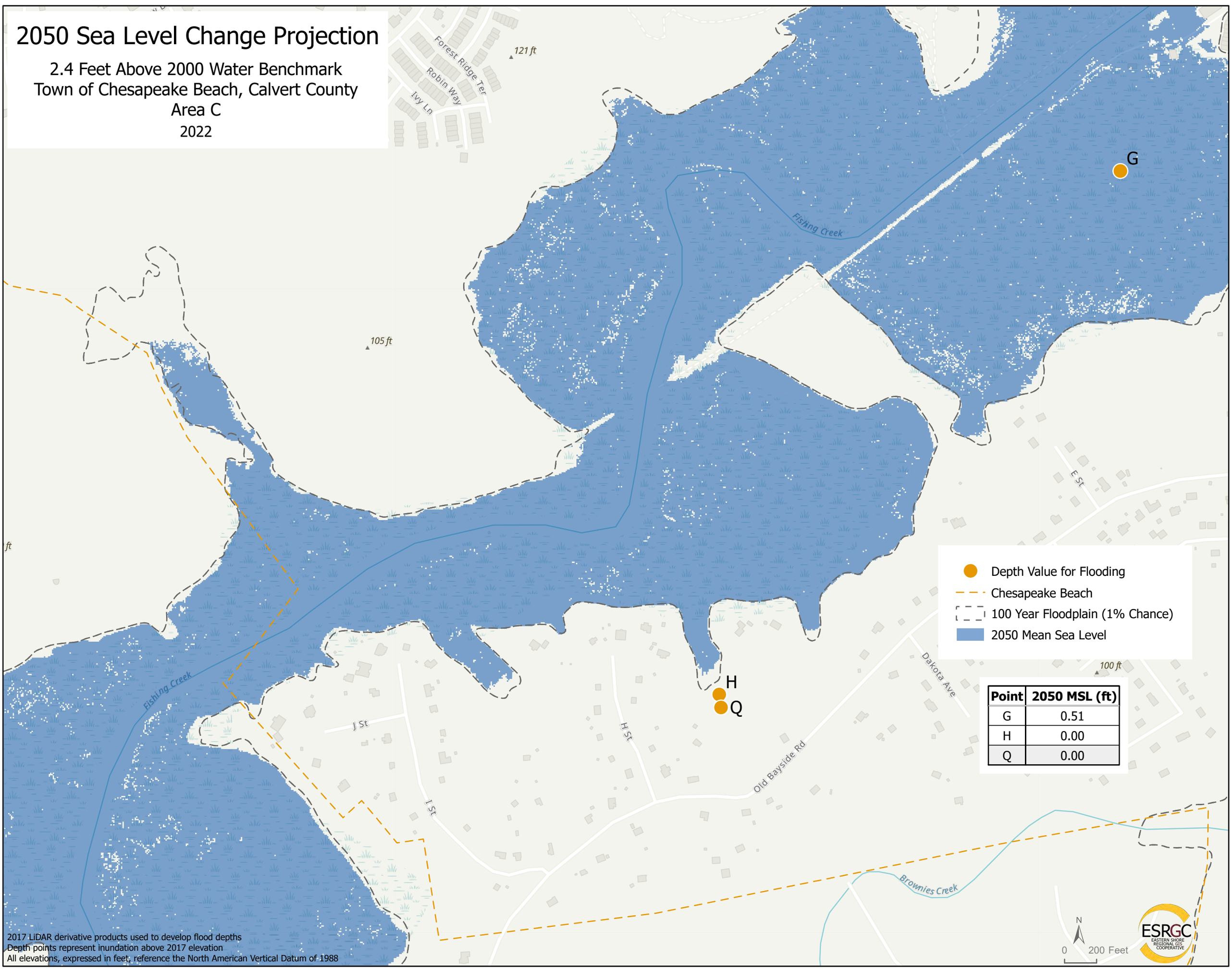


Point	2030 MSL (ft)	2030 MSL & 10% (ft)	2030 MSL & 1% (ft)
G	0.00	2.73	3.38
H	0.00	0.00	0.00
Q	0.00	0.00	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

2050 Sea Level Change Projection

2.4 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area C
2022

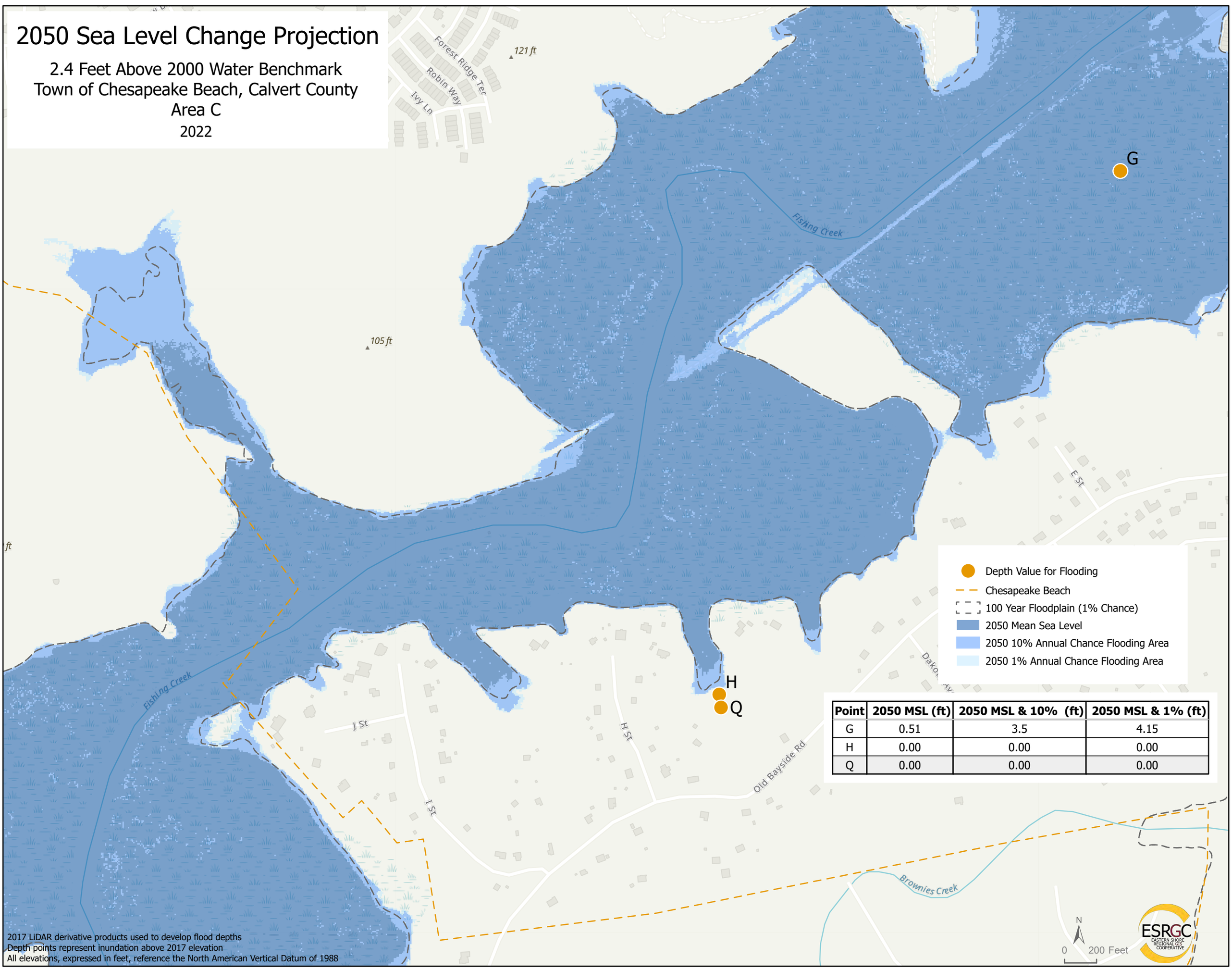


Point	2050 MSL (ft)
G	0.51
H	0.00
Q	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

2050 Sea Level Change Projection

2.4 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area C
2022

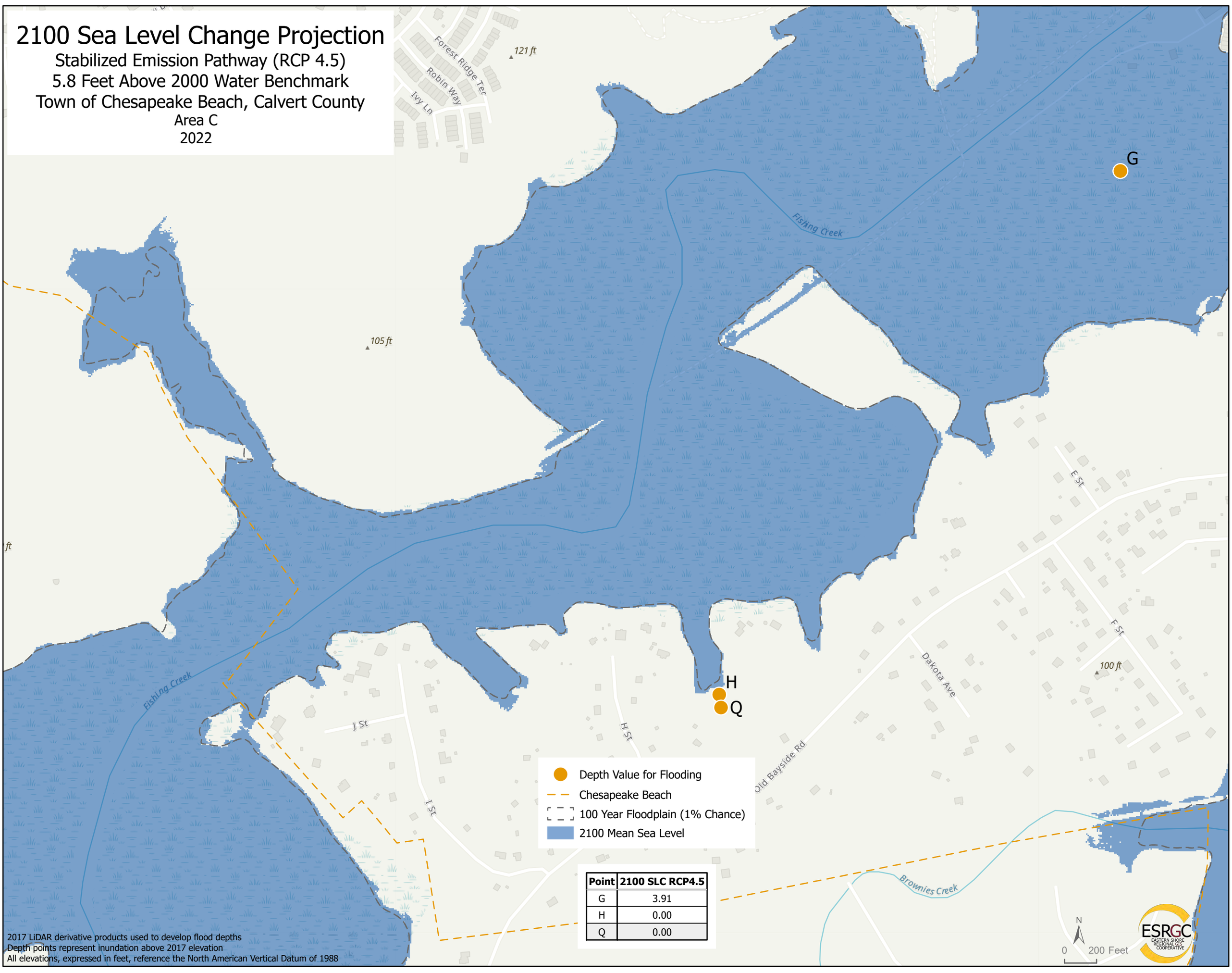


Point	2050 MSL (ft)	2050 MSL & 10% (ft)	2050 MSL & 1% (ft)
G	0.51	3.5	4.15
H	0.00	0.00	0.00
Q	0.00	0.00	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

2100 Sea Level Change Projection

Stabilized Emission Pathway (RCP 4.5)
5.8 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area C
2022

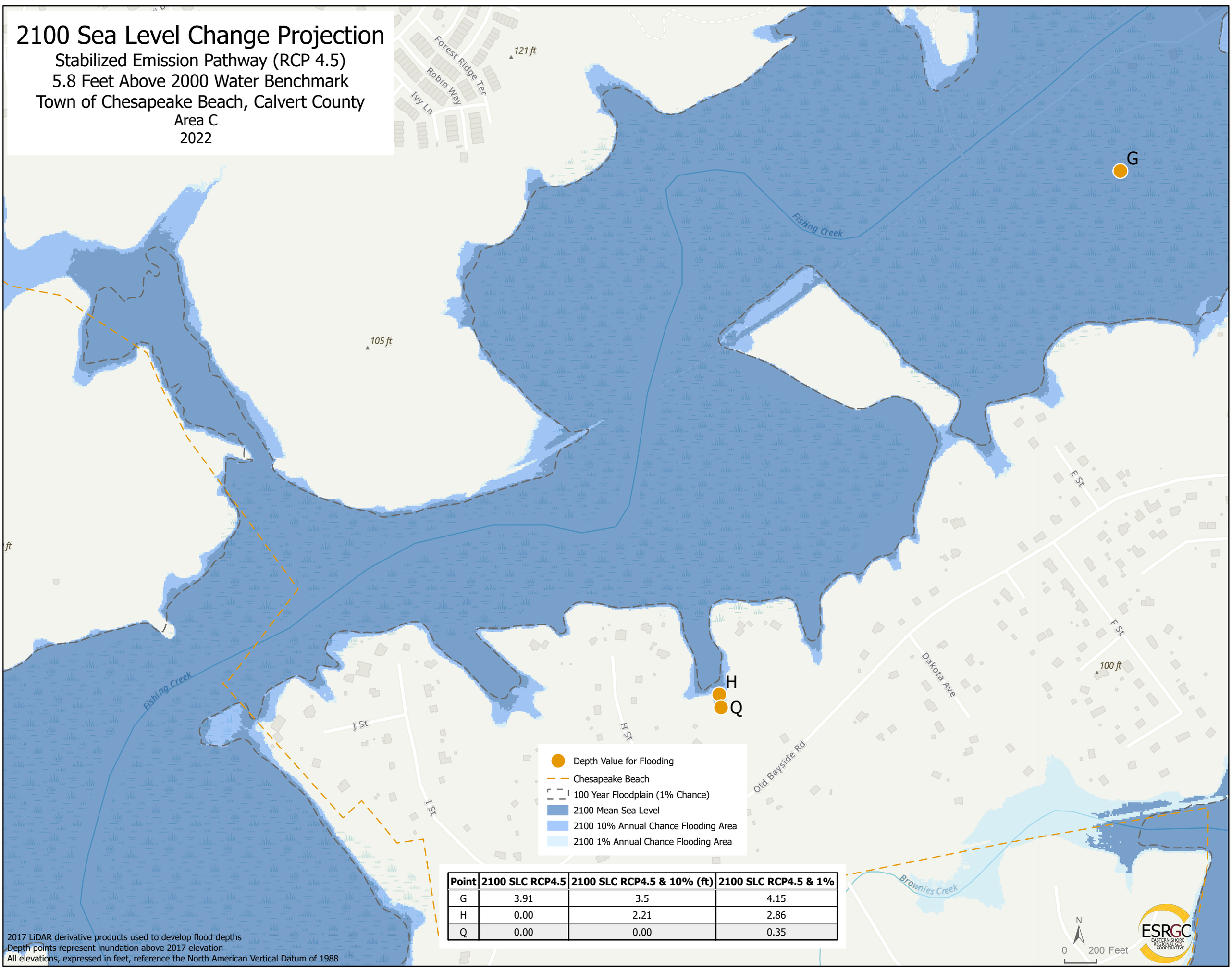


Point	2100 SLC RCP4.5
G	3.91
H	0.00
Q	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

2100 Sea Level Change Projection

Stabilized Emission Pathway (RCP 4.5)
5.8 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area C
2022

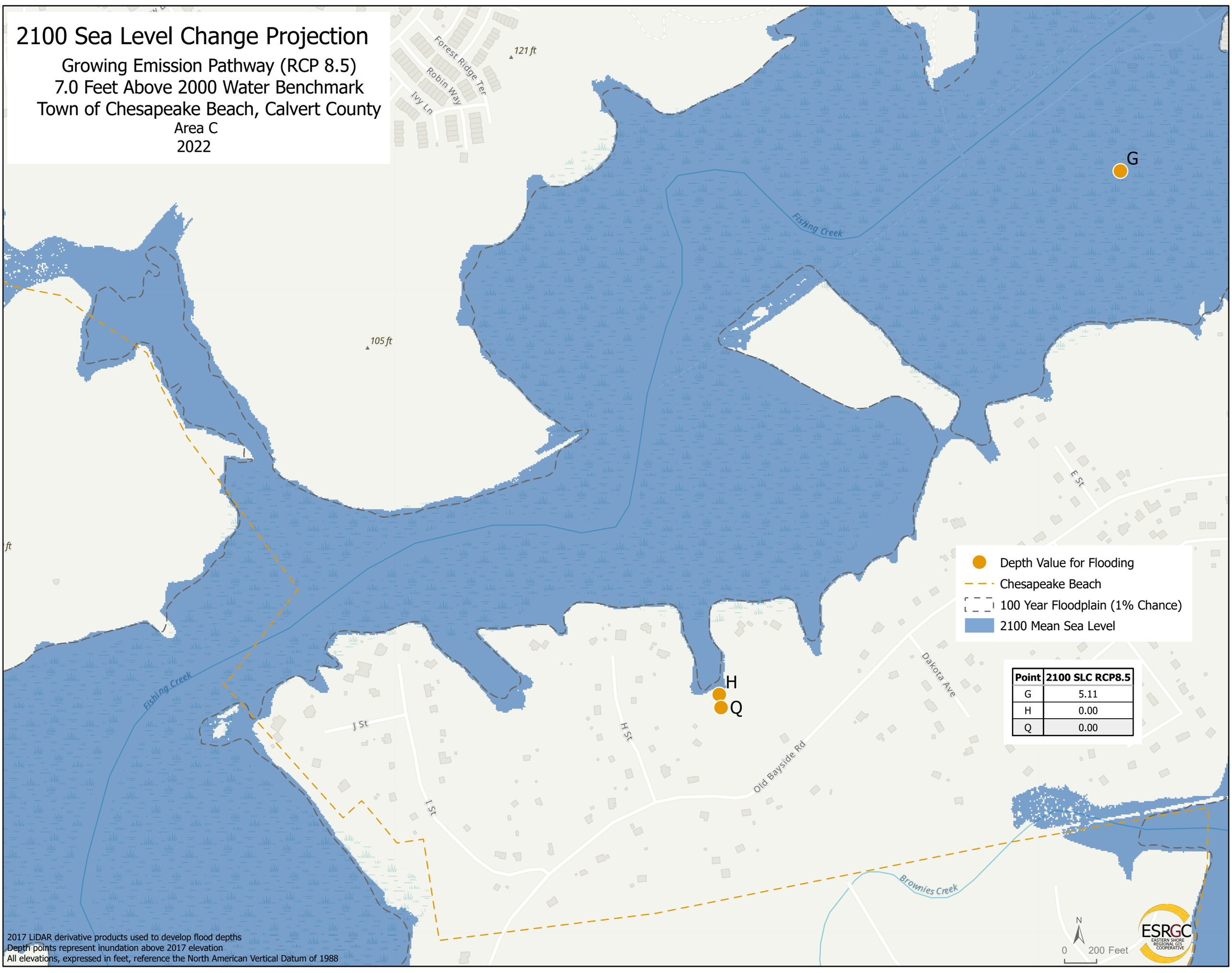


Point	2100 SLC RCP4.5	2100 SLC RCP4.5 & 10% (ft)	2100 SLC RCP4.5 & 1%
G	3.91	3.5	4.15
H	0.00	2.21	2.86
Q	0.00	0.00	0.35

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

2100 Sea Level Change Projection

Growing Emission Pathway (RCP 8.5)
7.0 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area C
2022

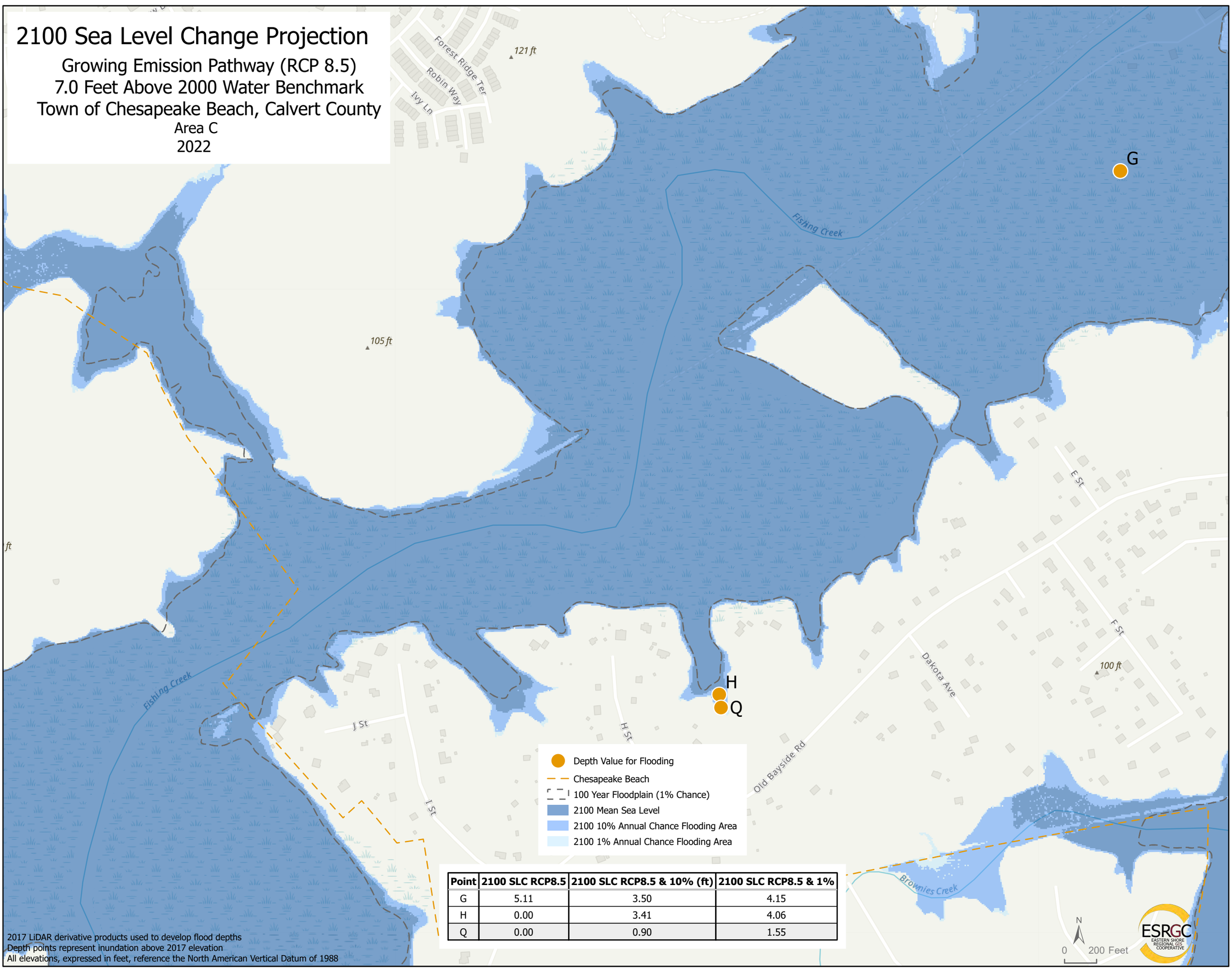


Point	2100 SLC RCP8.5
G	5.11
H	0.00
Q	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

2100 Sea Level Change Projection

Growing Emission Pathway (RCP 8.5)
7.0 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
Area C
2022

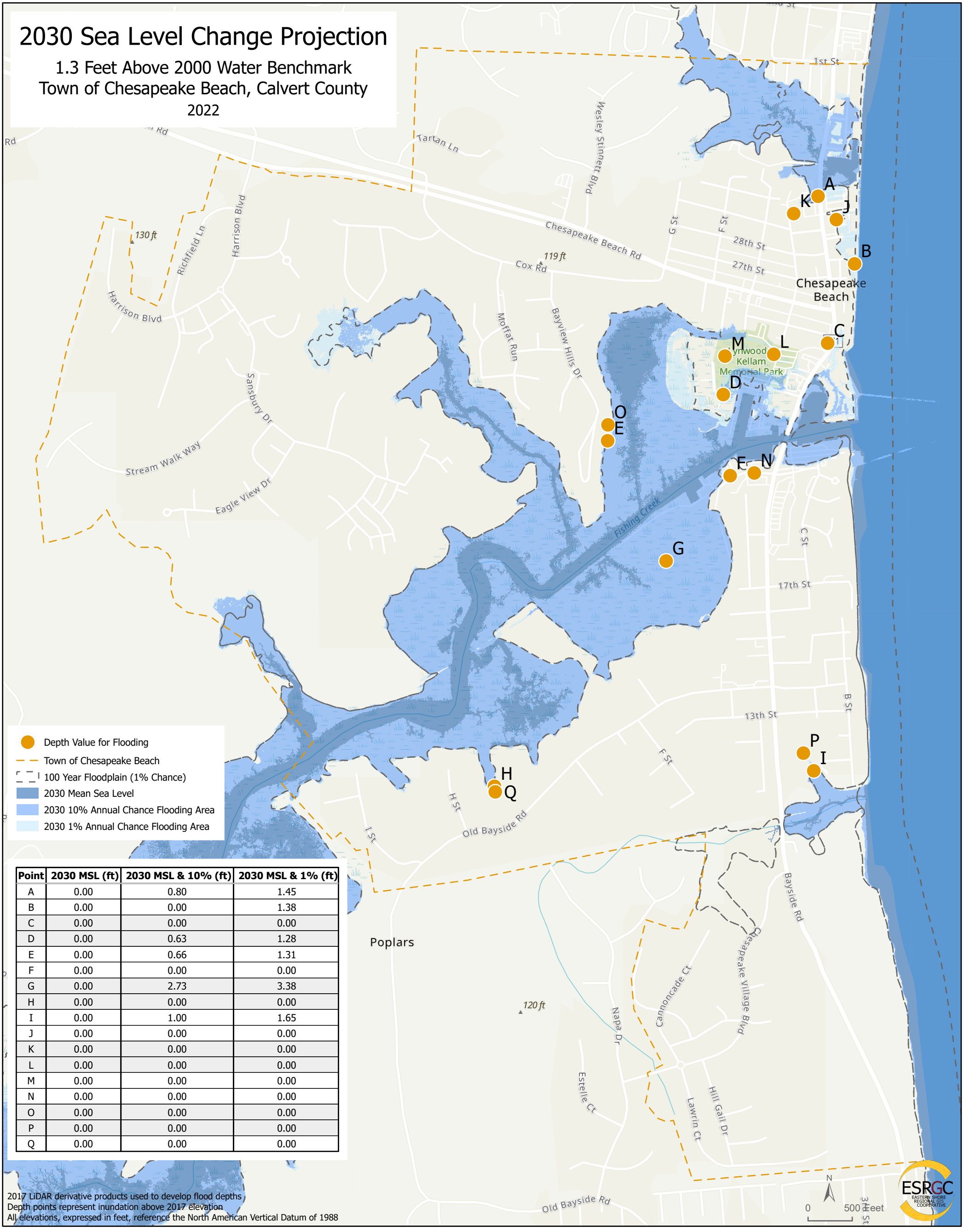


Point	2100 SLC RCP8.5	2100 SLC RCP8.5 & 10% (ft)	2100 SLC RCP8.5 & 1%
G	5.11	3.50	4.15
H	0.00	3.41	4.06
Q	0.00	0.90	1.55

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

2030 Sea Level Change Projection

1.3 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
2022

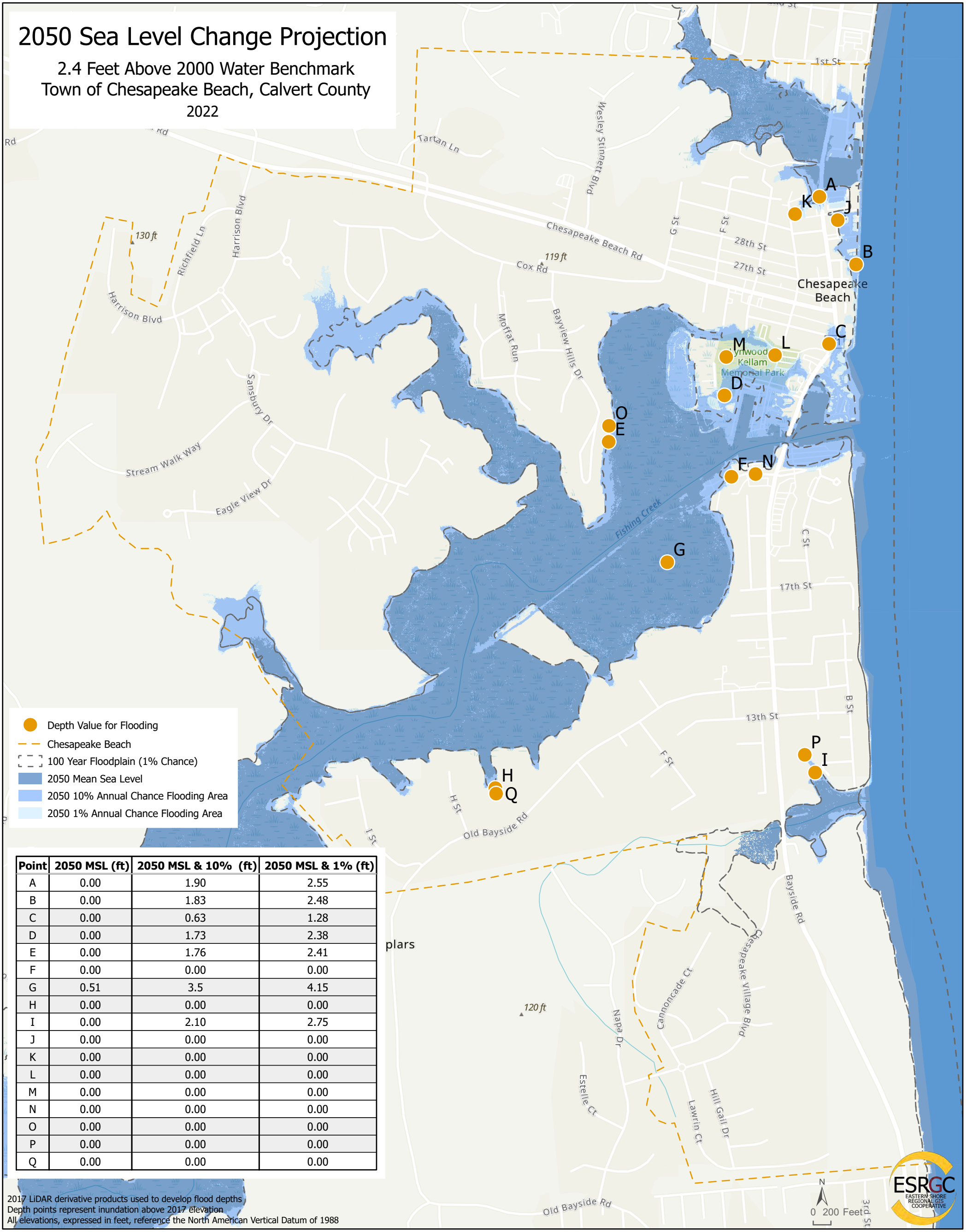


Point	2030 MSL (ft)	2030 MSL & 10% (ft)	2030 MSL & 1% (ft)
A	0.00	0.80	1.45
B	0.00	0.00	1.38
C	0.00	0.00	0.00
D	0.00	0.63	1.28
E	0.00	0.66	1.31
F	0.00	0.00	0.00
G	0.00	2.73	3.38
H	0.00	0.00	0.00
I	0.00	1.00	1.65
J	0.00	0.00	0.00
K	0.00	0.00	0.00
L	0.00	0.00	0.00
M	0.00	0.00	0.00
N	0.00	0.00	0.00
O	0.00	0.00	0.00
P	0.00	0.00	0.00
Q	0.00	0.00	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

2050 Sea Level Change Projection

2.4 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
2022

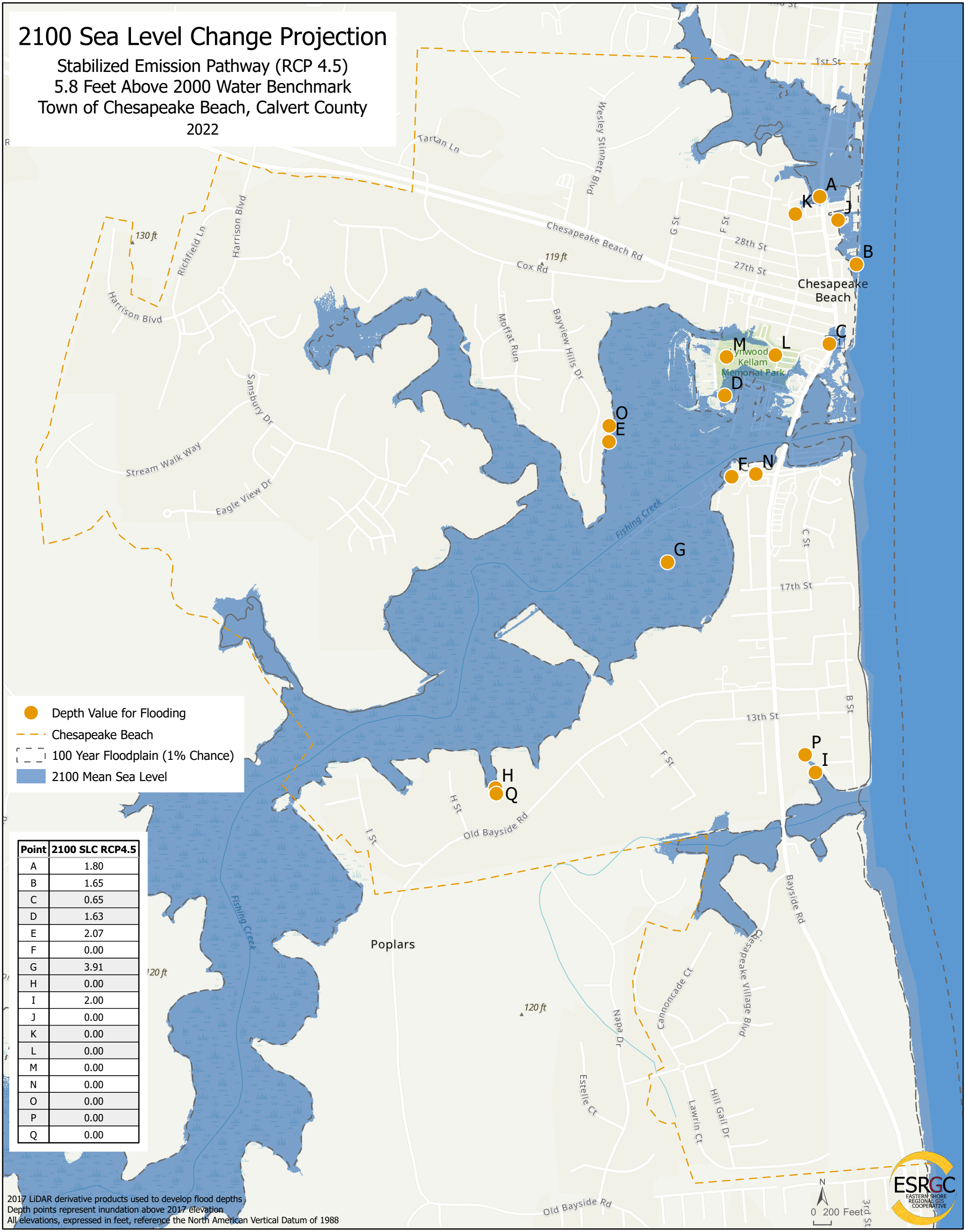


Point	2050 MSL (ft)	2050 MSL & 10% (ft)	2050 MSL & 1% (ft)
A	0.00	1.90	2.55
B	0.00	1.83	2.48
C	0.00	0.63	1.28
D	0.00	1.73	2.38
E	0.00	1.76	2.41
F	0.00	0.00	0.00
G	0.51	3.5	4.15
H	0.00	0.00	0.00
I	0.00	2.10	2.75
J	0.00	0.00	0.00
K	0.00	0.00	0.00
L	0.00	0.00	0.00
M	0.00	0.00	0.00
N	0.00	0.00	0.00
O	0.00	0.00	0.00
P	0.00	0.00	0.00
Q	0.00	0.00	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

2100 Sea Level Change Projection

Stabilized Emission Pathway (RCP 4.5)
5.8 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
2022



- Depth Value for Flooding
- Chesapeake Beach
- 100 Year Floodplain (1% Chance)
- 2100 Mean Sea Level

Point	2100 SLC RCP4.5
A	1.80
B	1.65
C	0.65
D	1.63
E	2.07
F	0.00
G	3.91
H	0.00
I	2.00
J	0.00
K	0.00
L	0.00
M	0.00
N	0.00
O	0.00
P	0.00
Q	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

N
0 200 Feet

ESRGC
EASTERN SHORE REGIONAL GIS COOPERATIVE

2100 Sea Level Change Projection

Growing Emission Pathway (RCP 8.5)
7.0 Feet Above 2000 Water Benchmark
Town of Chesapeake Beach, Calvert County
2022

Depth Value for Flooding
Chesapeake Beach
100 Year Floodplain (1% Chance)
2100 Mean Sea Level

Point	2100 SLC RCP8.5
A	3.00
B	2.85
C	1.85
D	2.83
E	3.27
F	0.00
G	5.11
H	0.00
I	3.20
J	0.56
K	0.00
L	0.36
M	0.53
N	0.00
O	0.00
P	0.00
Q	0.00

2017 LiDAR derivative products used to develop flood depths
Depth points represent inundation above 2017 elevation
All elevations, expressed in feet, reference the North American Vertical Datum of 1988

0 200 Feet

ESRGC EASTERN SHORE REGIONAL GIS COOPERATIVE

TOWN OF CHESAPEAKE BEACH

DRAFT – ~~September 18~~OCTOBER 17, 2023

CRITICAL AREA ORDINANCE

Based on the Critical Area Commission's Model Ordinance, 2022 Version. For review only. Not organized into Town of Chesapeake Beach code format. To be drafted as a repeal and replacement of Section 290-17 and 290-18 of the Town of Chesapeake Beach Zoning Ordinance.

Key to CJ changes

Text to be added: red font
Text to be removed: strikethrough with yellow

Key to SF Changes

TEXT TO BE ADDED
~~Text to be removed~~

Please note: Formatting of this ordinance is a continuing process. Additional formatting changes are still needed.

Part 1. Implementation of the Critical Area Program Purpose and Goals

A. Goals.

The goals of the Town of Chesapeake Beach (Town) Critical Area Program are to accomplish the following:

(1) Minimize adverse impacts on water quality that result from pollutants that are discharged from structures or run off from surrounding lands;
(2) Conserve fish, wildlife, and plant habitat; and
(3) Establish land use policies for development in the Critical Area which

accommodate growth as well as address the environmental impacts that the number, movement, and activities of people may have on the area.

B. Critical Area Program.

(1) The Town OF CHESAPEAKE BEACH adopted its Critical Area Program on ~~[Insert Date]~~ DECEMBER 1, 1985. The Chesapeake Beach Critical Area Program consists of the Chesapeake Beach Zoning Ordinance, the Official Critical Area map(s), and any other related provisions within the Town's ordinances.

(2) Notwithstanding any provision in this ordinance, or the lack of a provision in this ordinance, all of the requirements of Natural Resources Article 8-1801 through 8- 1817 and COMAR Title 27 shall apply to and be applied as minimum standards.

(3) In the case of conflicting provisions, the stronger provision applies.

C. Responsibilities.

The Town OF CHESAPEAKE BEACH's Critical Area Program and all applicable provisions of this Ordinance shall be implemented and enforced by the Town Zoning Administrator.

(1) The Zoning Administrator shall review a permit, license, or other authorization for a development or redevelopment activity in the Critical Area for compliance with this Critical Area Ordinance prior to issuance of that permit or license.

(2) SHOULD THE Critical Area Program be brought to the attention of any Town official, said official shall contact the Zoning Administrator.

(3) As provided elsewhere in this Ordinance, in the review and approval of plans and applications, the local Approving Authority shall be with either the Zoning Administrator, the Planning Commission, or the Board of Zoning Appeals, depending on the specific petition or application filed with the Town.

D. Critical Area Overlay District Map.

(1) The Official Critical Area Overlay District Map is maintained as part of the Official Zoning Map for the Town of Chesapeake Beach. The Official Critical Area Map delineates the extent of the Critical Area Overlay District that shall include:

a. All waters of and lands under the Chesapeake Bay and its tributaries to the head of tide [as indicated on the State wetland maps][1], and all state and private wetlands designated under Title 16 of the Environment Article of the Annotated Code of Maryland; and
b. All land and water areas within 1,000 feet beyond the landward boundaries of state or private wetlands and the heads of tides designated under Title 16 of the Environment Article of the Annotated Code of Maryland.

(2) Within the designated Critical Area Overlay District, all land shall be assigned one of the following land classifications, based on land uses and development in existence on December 1, 1985:
a. Intensely Developed Area (IDA).
b. Limited Development Area (LDA).
c. Resource Conservation Area (RCA).

(3) The Critical Area Overlay District Map may be amended by the Mayor and Town Council in compliance with amendment provisions in this Ordinance the Maryland Critical Area Law, and COMAR Title 27.

E. Applications Referred to the CHESAPEAKE BAY Critical Area Commission (CBCAC)

(1) The TOWN OF CHESAPEAKE BEACH shall send copies of applications for all developments, subdivisions, and site plans wholly or partially within the Critical Area as specified in COMAR 27.03.01.04 to the CBCAC for review and comment, except the following.
(a) A single family dwelling unit or addition thereto
(b) Any structure accessory to a single family dwelling unit
(c) Development in which land disturbance does not exceed 15,000 square feet
(d) Subdivision resulting in 10 lots or less, or 10 dwelling units or less.

(2) The copy of the application shall be accompanied by a completed "Project Notification Application" form downloaded from the Commission's website.

(3) Chesapeake Beach may not process an application, which has been sent to the Commission for notification until it has received notice of receipt by the Commission or the close of the fifth business day, whichever comes first.

(4) Any action by the TOWN OF CHESAPEAKE BEACH in violation of these procedures shall be void.

Part 2. Development Standards in the Critical Area.

A. General Requirements in all Critical Area Overlay Zones.

(1) Development and redevelopment shall be subject to the Habitat Protection Area requirements prescribed in Parts 3-5 of this Ordinance.

(2) Development and redevelopment shall be subject to the water-dependent facilities requirements of Part 6 of this Ordinance;

(3) The Town OF CHESAPEAKE BEACH shall maintain areas of public access to the shoreline, and, if possible, encourage the establishment of additional areas of shoreline access for public use, such as foot paths, scenic drives, and other public recreational facilities.

(4) Development shall comply with the following complementary State statutes and regulations, including:

a. For soil erosion and sediment control, management measures shall be consistent with the requirements of Environment Article, §§4-101—4-116, Annotated Code of Maryland, and COMAR 26.17.01;

b. For stormwater runoff, stormwater management measures shall be consistent with the requirements of Environment Article, §§4-201—4-215, Annotated Code of Maryland, and COMAR 26.17.02;

c. For shore erosion, shoreline stabilization measures shall be consistent with the requirements of Environment Article, Title 16, Annotated Code of Maryland, and COMAR 26.24.04; and

d. Any other applicable State statute or regulation.

(5) A development activity or facility may not be authorized in the Critical Area if, by its intrinsic nature, the activity or facility has the potential to cause an adverse effect on water quality, wildlife, or fish habitat or plant habitat, unless:

a. For an activity or facility such as nonmaritime heavy industry:

i. It is located within an intensely developed area;

ii. It fully complies with all requirements under Part 6 of this Ordinance of this chapter; and

iii. The owner or operator of the activity or facility demonstrates to all applicable State and local agencies that there will be a net improvement in water quality to the adjacent body of water; or

b. For an activity or facility such as a sanitary landfill or a solid or hazardous waste collection or disposal facility:

i. There is no environmentally acceptable alternative outside the Critical Area; and

ii. The activity or facility is necessary in order to correct a water quality or wastewater management problem.

(6) A transportation facility or a utility transmission facility or activity may not be authorized in the Critical Area, unless it is:
   a. A facility that serves a use identified under this Critical Area program;
   b. A linear regional or interstate transportation facility that must cross tidal waters; or
   c. A linear regional or interstate utility transmission facility that must cross tidal waters.

(7) A new permanent sludge handling, storage, or disposal activity or facility may not be authorized in the Critical Area, unless:
   a. The activity or facility is associated with a wastewater treatment facility; or
   b. In accordance with an approved nutrient management plan under Agriculture Article, Title 8, Subtitle 8, Annotated Code of Maryland, and COMAR 15.20.04 and COMAR 15.20.06 -- .08, sludge is applied on agricultural land that is not in the buffer.

(8) Roads, bridges, and utilities are prohibited in a Habitat Protection Area unless no feasible alternative exists. If a road, bridge, or utility is authorized, the design, construction and maintenance shall:
   a. Provide maximum erosion protection;
   b. Minimize negative impacts on wildlife, aquatic life and their habitats; and
   c. Maintain hydrologic processes and water quality.

(9) Development activities that cross or affect a stream are prohibited unless there is no feasible alternative. All development activities that must cross or affect streams shall be designed to:
   a. Reduce ~~increases in~~ flood frequency and severity that are attributable to development;
   b. Retain tree canopy so as to maintain stream water temperature within normal variation;
   c. Provide a natural substrate for stream beds; and
   d. Minimize adverse water quality and quantity impacts of stormwater.

(10) Reasonable accommodations for the needs of individuals with disabilities.
   a. An applicant seeking relief from the Critical Area standards contained in this Ordinance in order to accommodate the reasonable needs of disabled citizens shall have the burden of demonstrating by a preponderance of evidence the following:
      i. The alterations will benefit persons with a disability within the meaning of the Americans with Disabilities Act;
      ii. Literal enforcement of the provisions of this Ordinance would result in discrimination by virtue of such disability or deprive a disabled resident or user of the reasonable use and enjoyment of the property;

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iii. THE accommodation would reduce or eliminate the discriminatory effect of the provisions of this Ordinance or restore the disabled resident's or user's reasonable use or enjoyment of the property;

iv. The accommodation requested will not substantially impair the purpose, intent, or effect, of the provisions of this Ordinance as applied to the property; and

v. The accommodation would be environmentally neutral with no greater negative impact on the environment than the literal enforcement of the statute, ordinance, regulation or other requirement; or would allow only the minimum environmental changes necessary to address the needs resulting from the particular disability of the applicant/appellant.

b. The Approving Authority shall determine the nature and scope of any accommodation under this Ordinance and may award different or other relief than requested after giving due regard to the purpose, intent, or effect of the applicable provisions of this Ordinance. The Board may also consider the size, location, and type of accommodation proposed and whether alternatives exist which accommodate the need with less adverse effect.

c. The Approving Authority may require, as a condition of approval, that upon termination of the need for accommodation, that the property be restored to comply with all applicable provisions of this Ordinance. Appropriate bonds may be collected or liens placed in order to ensure The Town of Chesapeake Beach's ability to restore the property should the applicant fail to do so.

B. Intensely Developed Areas.

All development in the Intensely Developed Area shall meet the following standards:

(1) Intensely Developed Areas (IDA) include areas where residential, commercial, institutional, and/or industrial development uses predominate and where relatively little natural habitat occurs. At the time of the initial mapping, these areas shall have had at least one of the following features:

(a) Housing density equal to or greater than four dwelling units per acre;

(b) Industrial, institutional, or commercial uses are concentrated in the area; or

(c) Public sewer and water collection and distribution systems serving the area and housing density greater than three dwelling units per acre;

(2) In addition, IDAs shall be located in an area of at least 20 adjacent acres

unless it is the entirety of the upland area of the TOWN OF CHESAPEAKE BEACH, or it is consistent with Part 7;

(3) Land use activities within the IDA will be managed in accordance with the land use policies of COMAR 27.01.02.03;

(4) Development activities shall be designed and implemented to minimize destruction of forest and woodland vegetation; and

(5) All development and redevelopment activities shall include stormwater management technologies that reduce pollutant loadings by at least 10 percent below the level of pollution on the site prior to development or redevelopment as provided in *Critical Area 10% Rule Guidance Manual – Fall 2003* and as may be subsequently amended.

(6) No use shall be permitted in the IDA that is not permitted in the underlying zoning district.

C. Limited Development Areas.

(1) Limited Development Areas (LDA) are those areas that are currently developed in low or moderate intensity uses. They also contain areas of natural plant and animal habitats. The quality of runoff from these areas has not been substantially altered or impaired. At the time of the initial mapping, these areas shall have had at least one of the following features:

(a) Housing density ranging from one dwelling unit per five acres up to four dwelling units per acre;

(b) Areas not dominated by agricultural, wetland, forest, barren land, open water, or open space;

(c) Areas meeting the conditions of Intensely Developed Area but compromising less than 20 acres; or

(d) Areas having public sewer or public water, or both.

(2) Land use activities within the LDA will be managed in accordance with the land use policies of COMAR 27.01.02.04.

(3) If a wildlife corridor system is identified by the Department of Natural Resources on or near the site, the following practices are required:

(a) The applicant shall incorporate a wildlife corridor system that connects the largest undeveloped or most vegetative tracts of land on and adjacent to the site;

(b) The TOWN OF CHESAPEAKE BEACH shall require and approve a conservation easement, restrictive covenant, or similar instrument to ensure maintenance of the wildlife corridor;

(c) The wildlife corridor shall be preserved by a public or private group.

(4) Development on slopes 15 percent or greater, as measured before development, shall be prohibited unless the project is the only effective way to maintain or improve the stability of the slope and is consistent with the policies and standards for Limited Development Areas.

(5) Except as otherwise provided in this subsection, lot coverage is limited to 15% of a lot or parcel or that portion of a lot or parcel that is designated LDA.

(a) If a parcel or lot of one-half acre or less in size existed on or before December 1, 1985, then lot coverage is limited to twenty-five (25%) of the parcel or lot.

(b) If a parcel or lot greater than one-half acre and less than one acre in size existed on or before December 1, 1985, then lot coverage is limited to fifteen percent (15%) of the parcel or lot.

(c) If an individual lot one acre or less in size is part of a subdivision approved after December 1, 1985, then lot coverage may exceed fifteen percent (15%) of the individual lot; however the total lot coverage for the entire subdivision may not exceed fifteen percent (15%).

(d) Lot coverage limits provided in §(a) and §(b) above may be exceeded, upon findings by the Planning Commission or its designee that the following conditions exist:

(i) The lot or parcel is legally nonconforming. A lot or parcel legally developed as of July 1, 2008 may be considered legally nonconforming for the purposes of lot coverage requirements.

(ii) Lot coverage associated with new development activities on the property have been minimized;

(iii) For a lot or parcel one-half acre or less in size, total lot coverage does not exceed the lot coverage limits in §(a) by more than twenty-five percent (25%) or five hundred square feet (500 square feet), whichever is greater;

(iv) For a lot or parcel greater than one-half acre and less than one acre in size, total lot coverage does not exceed the lot coverage limits in §(b) or five thousand, four hundred and forty-five (5,445) square feet, whichever is greater;

(v) The following table summarizes the limits set forth in §(i) through §(iv) above:

Table C.(3)(d). Lot Coverage Limits.

Lot/Parcel Size (Square Feet)	Lot Coverage Limit
0 – 8,000	25% of parcel + 500 SF
8,001 – 21, 780	31.25% of parcel
21,781 – 36,300	5,445 SF

36,301 – 43,560	15% of parcel

(e) If the Approving Authority makes the findings set forth in §(d) above and authorizes an applicant to use the lot coverage limits set forth in that paragraph, the applicant shall:

(i) Demonstrate that water quality impacts associated with runoff from the development activities that contribute to lot coverage have been minimized through site design considerations or the use of best management practices to improve water quality; and

(ii) Provide on-site mitigation in the form of plantings to offset potential adverse water quality impacts from the development activities resulting in new lot coverage. The plantings shall be equal to two times the area of the development activity.

(iii) If the applicant cannot provide appropriate stormwater treatment and plantings due to site constraints, then the applicant shall pay a fee to the Town of Chesapeake Beach in lieu of performing the on-site mitigation.

(f) For the purposes of calculating limitations on lot coverage, is as follows:

(i) When a site is mapped entirely as LDA, lot coverage is based on the entire site area; and

(ii) When a portion of a lot or parcel is mapped as LDA, lot coverage is based on the area of the LDA.

(6) The alteration of forest and developed woodlands shall be restricted and mitigated as follows:

(a) The total acreage in forest and developed woodlands within the TOWN OF CHESAPEAKE BEACH in the Critical Area shall be maintained or preferably increased;

(b) All forests and developed woodlands that are allowed to be cleared or developed shall be replaced in the Critical Area on not less than an equal area basis;

(c) If an applicant is authorized to clear more than 20 percent of a forest or developed woodlands on a lot or parcel, the applicant shall replace the forest or developed woodlands at 1.5 times the entire areal extent of the forest or developed woodlands cleared, including the first 20 percent of the forest or developed woodlands cleared.

(d) An applicant may not clear more than 30 percent of a forest or developed woodlands on a lot or parcel, unless the Board of Appeals grants a variance, and the applicant replaces forest or developed woodlands at a rate of 3 times the areal extent of the forest or

developed woodlands cleared.

(7) If no forest exists on proposed development sites, these sites shall be planted to provide a forest or developed woodland cover of at least 15 percent. The applicant shall designate, subject to the approval of the TOWN OF CHESAPEAKE BEACH, a new forest area on a part of the site not forested.

(8) If the areal extent of the site limits the application of the reforestation standards in this section, the TOWN OF CHESAPEAKE BEACH may allow an applicant to plant offsite within the LDA or RCA within the Town ~~of Chesapeake Beach~~, or upon finding that offsite planting is not possible, to pay a fee in lieu of planting.

(9) The applicant shall ensure that any plantings that die within twenty-four (24) months of installation shall be replaced. A performance bond in an amount determined by the TOWN OF CHESAPEAKE BEACH shall be posted to assure satisfactory replacement as required in (5) above and plant survival;

(10) THE APPLICANT SHALL OBTAIN a permit ~~shall be obtained~~ from the TOWN OF CHESAPEAKE BEACH before forest or developed woodland is cleared. The clearing of forests and developed woodlands before obtaining a TOWN OF CHESAPEAKE BEACH permit is a violation and any area cleared shall be replanted at three times its areal extent;

(11) Clearing of forest or developed woodlands that exceeds the maximum area allowed in (5) above shall be replanted at three times the areal extent of the cleared forest;

(12) All forest, including afforested areas, shall be maintained through conservation easements, restricted covenants, or other protective instruments.

(13) New, expanded or redeveloped industrial facilities may only be permitted in Limited Development Areas (LDA) if such a use is permitted in the underlying zoning district and provided such facilities meet all requirements for development in the LDA.

(14) No use shall be permitted in the LDA that is not permitted in the underlying zoning district.

D. Resource Conservation Areas.

(1) RCAs are those areas characterized by nature dominated environments (wetlands, forests, abandoned fields) and resource utilization activities (agriculture, forestry, fisheries activities, or aquaculture). These areas shall have at least one of the following features: Density is less than one dwelling unit per 5 acres; or Dominant land use is in agriculture, wetland, forest, barren land, surface water, or open space.

(2) ~~Land use activities within the RCA will be managed in accordance with the~~

~~land use policies of COMAR 27.01.02.05.~~

(3) Development activity within the Resource Conservation Areas shall be consistent with the requirements and standards for Limited Development Areas as specified by in COMAR 27.01.02.04 and this Ordinance.

(a) For the purposes of calculating limitations on lot coverage, the following shall apply:

(i) When a site is mapped entirely as RCA, lot coverage is based on the entire site area; and

(ii) When a portion of a lot or parcel is mapped as RCA, lot coverage is based on the area of the RCA.

(4) Density

(a) Land within the Resource Conservation Area may be developed for residential uses at a density not to exceed one dwelling unit per 20 acres, except as may be further restricted by the underlying zoning district.

(b) The Town of Chesapeake Beach may not authorize a variance to the maximum density of one dwelling unit per 20 acres. In calculating the 1-in-20 acre density of development that is permitted on a parcel located within the Resource Conservation Area, the Town:

(i) Shall count each dwelling unit;

(ii) May permit the area of any private wetlands located on the property to be included under the following conditions:

(a) The density of development on the upland portion of the parcel may not exceed one dwelling unit per eight acres; and

(b) The area of private wetlands shall be estimated on the basis of vegetative information as designated on the State wetlands maps or by private survey approved by the TOWN OF CHESAPEAKE BEACH, the CBCAC, and Maryland Department of the Environment.

(5) Nothing in this Section shall limit the ability of a participant in any agricultural easement program to convey real property impressed with such an easement to family members provided that no such conveyance and will result in a density greater than one dwelling unit per 20 acres, except as may be further restricted by the underlying zoning district.

(6) RCA Uses

(a) Existing industrial and commercial facilities, including those that directly support agriculture, forestry, or aquaculture shall be allowed in RCAs.

(b) Expansion of existing industrial facilities and use in the Resource Conservation Area shall be subject to the non-conforming use provisions of this Ordinance and the Grandfathering provisions in

Part 8 and may require growth allocation.

(c) Additional industrial or commercial facilities shall not be located in the RCA.

(d) Any Institutional, Recreational, and Educational use permitted by right or special exception in the RC District shall be allowed in the RCA.

(e) ~~A commercial, institutional, or industrial solar energy generating system may be permitted in accordance with COMAR 27.01.14.~~

(f) New commercial, industrial, and institutional uses shall not be permitted in Resource Conservation Areas, except as provided for in the TOWN OF CHESAPEAKE BEACH's growth allocation provisions or as listed below.[10]

(i) A home occupation as an accessory use on a residential property and as provided for in the TOWN OF CHESAPEAKE BEACH's zoning ordinance; and

(ii) Any Institutional, Recreational, and Educational use permitted by right or special exception in this Ordinance's Resource Conservation (RC) zoning district.

(g) Additional RCA may not be zoned or used for industrial, commercial, or institutional development, except as provided by the TOWN OF CHESAPEAKE BEACH's growth allocation provisions.

(h) No use shall be permitted in the RCA that is not permitted in the underlying zoning district.

Part 3. The Buffer.

A. Applicability & Delineation.

An applicant for a development activity or a change in land use shall apply all of the required standards as described below. The Buffer shall be delineated in the field and shall be shown on all applications as follows:

(1) A Buffer of at least 200 feet is delineated, and expanded as described in A(3), based on existing field conditions landward from:

(a) The mean high water line of a tidal water;
(b) The edge of each bank of a tributary stream; and
(c) The upland boundary of a tidal wetland.

(2) Applications for a subdivision or development activity on land located within the RCA requiring site plan approval after July 1, 2008 shall include a minimum Buffer of at least 200 feet from a tidal waterway, tidal wetlands, or a tributary stream.

(3) The Buffer shall be expanded beyond 200 feet as described in §A(1) above~~,~~ and beyond 200 feet as described in §A(2) above , to include the following contiguous land features:
(a) A steep slope at a rate of four feet for every one percent of slope or the entire steep slope to the top of the slope, whichever is greater;
(b) A nontidal wetland to the upland boundary of the nontidal wetland;
(c) The 100-foot buffer that is associated with a Nontidal Wetland of Special State Concern, which shall be so designated and included in the list of such wetlands in COMAR §26.23.06.01; *[Drafter's Note: As of January 1, 2024, no such wetland exists in Chesapeake Beach.]*
(d) For an area of hydric soils or highly erodible soils, the lesser of:
(i) The landward edge of the hydric or highly erodible soils; or
(ii) Three hundred feet where the expansion area includes the minimum 200-foot Buffer.

B. Development Activities in the Buffer.

The TOWN OF CHESAPEAKE BEACH may authorize disturbance to the Buffer for the following activities, provided mitigation is performed in accordance with Section D of this Part and an approved Buffer Management Plan is submitted as required per Section F of this Part:

(1) A new development or redevelopment activity associated with a water-dependent facility as described in Part 6.
(2) A shoreline stabilization measure, which shall be otherwise authorized by the State in accordance with COMAR 26.24.02, and/or COMAR 26.24.04.
(3) A development or redevelopment activity approved in accordance with the variance provisions of this Ordinance.
(4) A new development or redevelopment activity on a lot or parcel that was created before January 1, 2010 where:
(a) The Buffer is expanded for highly erodible soil on a slope less than 15 percent or is expanded for a hydric soil and the expanded Buffer occupies at least 75% of the lot or parcel;
(b) The development or redevelopment is located in the expanded

portion of the Buffer and not within the 200-foot Buffer; and

(c) Mitigation occurs at a 2:1 ratio based on the lot coverage of the proposed development activity that is in the expanded Buffer.

(5) ~~Associated with the placement of dredged material:~~ The TOWN OF CHESAPEAKE BEACH may approve the placement of dredged material in the buffer, including within any portion of the Critical Area designated as a Habitat Protection Area, for the following:

(a) A beneficial use approved by the Maryland Board of Public Works or Department of the Environment, such as the following purposes:

(i) Backfill for a shoreline stabilization measure;
(ii) Use in a nonstructural shoreline stabilization measure, including a living shoreline;
(iii) Beach nourishment;
(iv) Restoration of an island;
(v) The creation, restoration, or enhancement of a wetland, or a fish, wildlife, or plant habitat;
(vi) Land form measures to address coastal resiliency; and
(vii) Any other approved beneficial use.

(b) The placement in an area that was approved for the disposal of channel maintenance dredged material before June 11, 1988.

C. **Buffer Establishment.**

(1) The requirements of this regulation are applicable to:

(a) A development or redevelopment activity that occurs on a lot or parcel that includes a buffer to tidal waters, a tidal wetland, or a tributary stream if that development or redevelopment activity is located outside the buffer; and

(b) The approval of a subdivision that includes a buffer to tidal waters, a tidal wetland, or a tributary stream.

(2) If an applicant for a subdivision of a lot uses or leases the lot for an agricultural purpose, the applicant:

(a) In accordance with local land recordation requirements, shall record an approved buffer management plan under Part F of this chapter; and

(b) If authorized by the local jurisdiction, may delay implementation of the buffer management plan until the use of the lot is converted to a nonagricultural purpose.

(3) The requirements of this regulation are not applicable to an in-kind replacement of a structure.

(4) The TOWN OF CHESAPEAKE BEACH shall require an applicant to establish the Buffer in vegetation in accordance with the table below and Part E of this chapter and to provide a Buffer Management Plan under Part F of this chapter

when an applicant applies for:

(a) Approval of a subdivision;

(b) Conversion from one land use to another land use on a lot or a parcel; or

(c) Development on a lot or a parcel created before January 1, 2010.

(5) When the buffer is not fully forested or is not fully established in existing, naturally occurring woody or wetland vegetation, an applicant shall establish the buffer to the extent required in the following table;

Table 3.C.(5). Buffer establishment requirements.

Development Category	Lot Created Before ~~[Insert Local Program Adoption Date]~~DECEMBER 1, 1985	Lot Created After ~~[Insert Local Program Adoption Date]~~ DECEMBER 1, 1985
Development on a vacant lot	Establish the Buffer based on total square footage of lot coverage outside the Buffer	Fully establish the Buffer
Subdivision	Fully establish the buffer	
New lot with an existing dwelling unit	Establish the Buffer based on total square footage of lot coverage outside the Buffer	
Conversion of a land use on a parcel or lot to another land use	Fully establish the Buffer	
Addition, accessory structure, or redevelopment	Establish the Buffer based on net square footage increase in lot coverage outside the Buffer	
Substantial alteration	Establish the Buffer based on total square footage of lot coverage outside the Buffer	

(6) The TOWN OF CHESAPEAKE BEACH may authorize an applicant to deduct from the total establishment requirement an area of lot coverage removed from the buffer if:

(a) The lot coverage existed before the date of local program adoption or was allowed by the TOWN OF CHESAPEAKE BEACH; and

(b) The total area is stabilized.

D. Mitigation for Impacts to the Buffer.

An applicant for a development activity that includes disturbance to the Buffer shall mitigate for impacts to the Buffer and shall provide a Buffer Management Plan in accordance with the standards set forth in this Part.

(1) All authorized development activities shall be mitigated according to COMAR 27.01.09.01-2.
(2) All unauthorized development activities in the Buffer shall be mitigated at a ratio of 4:1 for the area of disturbance in the Buffer.
(3) Planting for mitigation shall be planted onsite within the Buffer. If mitigation planting cannot be located within the Buffer, then the TOWN OF CHESAPEAKE BEACH may permit planting in the following order of priority:
    (a) On-site and adjacent to the Buffer; and
    (b) On-site elsewhere in the Critical Area.
(4) For the removal of a dead tree, the affected area shall be stabilized with native groundcover or other native vegetation as necessary.
(5) The removal of a diseased, dying, invasive, or hazardous tree shall be mitigated with one tree of at least ¾-inch caliper for each tree removed or the affected area shall be stabilized in native woody vegetation if a tree cannot be replanted due to space constraints.
(6) The installation or cultivation of new lawn or turf in the Buffer is prohibited.
(7) The applicant shall restore area in the buffer that is temporarily disturbed by a development activity to pre-disturbance conditions.

E. Buffer Planting Standards.

(1) An applicant that is required to plant the Buffer to meet establishment or mitigation requirements shall apply the planting standards set forth in COMAR 27.01.09.01-2 and 01-4.
(2) A variance to the Critical Area planting and mitigation standards of this Ordinance is not permitted.

F. **Required Submittal of Buffer Management Plans.**

An applicant that is required to plant the Buffer to meet establishment or mitigation requirements shall submit a Buffer Management Plan in accordance with COMAR 27.01.09.01-3. The provisions of this Part do not apply to maintaining an existing grass lawn or an existing garden in the Buffer.

(1) Any permit for a development activity that requires Buffer establishment or Buffer mitigation will not be issued until a Buffer Management Plan is approved by the TOWN OF CHESAPEAKE BEACH.

(2) An applicant may not obtain final approval of a subdivision application until the Buffer Management Plan has been reviewed and approved by the TOWN OF CHESAPEAKE BEACH.

(3) The TOWN OF CHESAPEAKE BEACH may not approve a Buffer Management Plan unless:

(a) The plan clearly indicates that all planting standards under Part E of this chapter will be met; and

(b) Appropriate measures are in place for the long-term protection and maintenance of all Buffer areas.

(4) For a Buffer Management Plan that is the result of an authorized disturbance to the Buffer, a permit authorizing final use and occupancy will not be issued until the applicant:

(a) Completes the implementation of a Buffer Management Plan; or

(b) Provides financial assurance to cover the costs for:

(i) Materials and installation; and

(ii) If the mitigation or establishment requirement is at least 5,000 square feet, long-term survivability requirements as set forth in COMAR 27.01.09.01-2.

(5) Concurrent with recordation of a subdivision plat, an applicant shall record a protective easement for the Buffer.

(6) If an applicant fails to implement a Buffer Management Plan, that failure shall constitute a violation of this Ordinance. A permit for development activity will not be issued for a property that has the violation.

(7) An applicant shall post a subdivision with permanent signs prior to final recordation in accordance with COMAR 27.01.09.01-2.

(8) Buffer management plans that includes natural regeneration shall follow the provisions of COMAR 27.01.09.01-4.

Part 4. Modified Buffer Area (MBA).

Applicability.

The following provisions apply to areas designated and mapped as Modified Buffer Areas (MBA)on the map titled Modified Buffer Area, Town of Chesapeake Beach, which is a supplement to the Town's Critical Area Map.

G. General development standards.

(1) Development standards in MODIFIED BUFFER AREA.

(a) A "MODIFIED BUFFER AREA" means that area of the Buffer for which the Town has requested and the CBCAC has approved an exemption from the requirements of the Buffer.

(b) Water-polluting activities, including, but not limited to, storage of vehicles, fuel, or chemicals, shall be prohibited in the MODIFIED BUFFER AREAs.

(c) All uses shall be subject to the provisions established in other sections of this chapter. Development or redevelopment in a MODIFIED BUFFER AREA shall be subject to all of the criteria applicable to the underlying zoning district and shall be further subject to all of the criteria applicable to the governing land use classification. Permitted uses shall also be subject to the following:

[1] Shore erosion protection measures shall be provided in accordance with the criteria set forth in the Town Critical Area Protection Program.

[2] Cutting or clearing of trees or removal of vegetation is allowed in the Modified Buffer Area for the following purposes only:

[a] For personal use, provided that Buffer functions are not impaired and trees cut are replaced;

[b] To prevent trees from falling and blocking streams, causing damage to dwellings or other structures, or resulting in accelerated erosion of the shore or streambank;

[c] In conjunction with horticultural practices used to maintain the health of individual trees;

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[d] To provide access to private piers;

[e] To install or construct an approved shore erosion protection device or measure;

[f] To protect trees from extensive pest or disease infestation; and

[g] To permit the development allowed above to be constructed or installed.

[3] The expansion or redevelopment of existing structures in the Modified Buffer Area may not increase impervious surfaces shoreward of the existing structure and shall not result in greater than a twenty-five-percent increase in the total site area in impervious surface as existed at the time of adoption of the Town's Critical Area Protection Program. Offsetting of such increased impervious surfaces, as described below, shall be required.

[4] When a structure within the Modified Buffer Area is removed or destroyed, it may be replaced, insofar as possible, no closer than 100 feet to the edge of tidal waters, tidal wetlands, or tributary streams. In such cases where a setback line exists as defined by structures on adjacent lots or parcels, the structure may not be replaced shoreward of that line. Any impervious surfaces created greater in extent to the preexisting impervious surfaces within the MODIFIED BUFFER AREA shall be offset as described below.

[5] New development in the MODIFIED BUFFER AREA shall minimize the shoreward extent of impervious surfaces insofar as possible, taking into consideration existing Town yard setback requirements and other such factors. In no case may such impervious surfaces be extended shoreward of any setback line as defined by existing structures on adjacent lots or parcels.

[6] Definitions pertaining to implementation of MODIFIED BUFFER AREA provisions. As used in this Subsection **G(1)**, the following terms shall have the meanings indicated: **[Amended 12-6-2006 by Ord. No. O-06-14]**

DEVELOPMENT ACTIVITY

The construction or substantial alteration of residential, commercial, industrial, institutional, recreational or transportation facilities or structures by the proposed project. Development activities include, among other things, structures, roads, parking areas and other impervious surfaces, mining and related facilities, clearing, grading, and septic systems. For purposes of implementing these provisions, development activity does not include subdivision.

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NEW DEVELOPMENT

A development activity that takes place on a property with predevelopment imperviousness less than 15% as of March 15, 2003.

REDEVELOPMENT

A development activity that takes place on a property with predevelopment imperviousness greater than 15% as of March 15, 2003.

[7] Mitigation for area of disturbance for single-family residential development. **[Amended 12-6-2006 by Ord. No. O-06-14]**

[a] Mitigation for the area of disturbance in the MODIFIED BUFFER AREA shall be provided by planting an area of natural forest vegetation twice the size of the area of disturbance of the single-family residential development activity or redevelopment activity within the MODIFIED BUFFER AREA. Previously existing and legal development on the property that is not impacted by the proposed development or redevelopment shall not be considered as part of the area of disturbance.

[b] The mitigation shall be planted on-site in the Buffer or off-site in the Buffer or MODIFIED BUFFER AREA at another location approved by the Planning and Zoning Commission.

[c] Table 4 lists the basis for determining the amount of mitigation required for selected development activities. This chart is for general guidance only and the actual amount of development mitigation required is determined on a case-by-case basis.

Table 4

Mitigation Requirements for Single-Family Residential Development within the MODIFIED BUFFER AREA (MBA~~BEA~~)

Development Activity	Amount of Mitigation Based on
Build a new house, replace a house	Square feet of development activity
Build an addition	Square feet of development activity

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Add an additional floor on existing building footprint	NA
Construct a new accessory structure	Square feet of development activity
Replace or build a new deck	Square feet of development activity
Build a new patio, swimming pool	Square feet of development activity
Add an off-street parking space	Square feet of development activity
Construct a fence	NA
Build a retaining wall	Square feet of development activity
Individual tree cutting	2 trees planted for every 1 tree removed
Construct a pathway	Square feet of development activity

Notes:

Mitigation requirements for single-family residential development within the one-hundred-foot Buffer on non-MBA~~BEA~~ properties are based on limits of disturbance of development activity and require a variance from the Board of Appeals. Mitigation requirements for single-family residential development within the Critical Area, but not in a BEA or one-hundred-foot Buffer, are based upon the extent of the existing forest and developed woodland cover and proposed forest clearing.

[8] Mitigation requirements for all other types of development. All new development or redevelopment other than single-family residential in the MODIFIED BUFFER AREA shall be required to offset for such development by providing the following two forms of mitigation: planting a buffer yard as specified in Subsection G(1)(c)[8][a] below and mitigating for the area of disturbance as set forth below in Subsection G(1)(c)[8][b]:

[a] Buffer yard.

[i] On new development sites, a buffer yard 20 feet wide shall be required on the

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project site between the development and the water's edge or landward edge of revetment, unless a variance is obtained from the Board of Appeals. On redevelopment sites, a buffer yard 15 feet wide shall be required on the project site between the development activity and the water's edge or landward edge of revetment, unless a variance is obtained from the Board of Appeals. The buffer yard shall be at least 15 feet wide over at least 75% of its length.

[ii] The buffer yard shall be densely planted with native species such that full ground cover is achieved using guidance on plant materials provided by the Town Zoning Administrator. The buffer yard shall minimally include, or a similar combination thereof, the following planting requirements per 100 linear feet of buffer planting strip: four native species canopy trees, 10 native species understory trees or large shrubs, 25 native species small shrubs, and a sufficient number of native species herbaceous plants and grasses to provide complete ground cover.

[iii] On redevelopment sites, if existing structures or those rebuilt on an existing footprint limit the area available for planting, then appropriate modifications to the width of the planted buffer yard may be made on a case-by-case basis, but the area of buffer yard which would have been required to be planted under this section shall be included in the area proposed as an offset or for which fees-in-lieu are proposed to be paid.

[iv] Reasonable walkway access to the water's edge through the buffer yard shall be permitted.

[v] For properties in marina use, the fifteen-foot buffer yard is required only along 75% of the shoreline frontage.

[vi] The landscaping requirements of this chapter may be achieved through planting in the buffer yard where such planting reasonably achieves the stated purposes of the landscaping requirements.

[vii] On redevelopment sites, a fifteen-foot-wide buffer yard that is established where previously the area was a developed impervious area is eligible to be counted toward meeting the two-to-one mitigation for area of disturbance specified in Subsection G(1)(c)[8][b], as long as the square footage of the buffer yard is at least 450 square feet.

[viii] A buffer yard is eligible to be counted toward meeting the buffer yard planting

mitigation requirements of this subsection even if the buffer yard as proposed converts pervious nonnative planted areas (such as lawns or stone shoreline protection) to the planting requirements of the buffer yard.

[ix] Should the applicant provide a buffer yard meeting required planting specifications but wider than the required 20 feet for new development sites and 15 feet for redevelopment sites, the area of planting exceeding any on-site mitigation requirements shall be eligible for a mitigation credit that may be sold, should the Town adopt an ordinance allowing mitigation banking.

[x] The mitigation area shall include informational or educational signage indicating that the area is a protected area for water quality and habitat conservation.

[b] Mitigation for area of disturbance for all other development types.

[i] Mitigation for the area of disturbance in the MODIFIED BUFFER AREA shall be provided by planting an area of natural forest vegetation twice the size of the area of disturbance of the development activity or redevelopment activity within the MODIFIED BUFFER AREA. Previously existing and legal development on the property that is not impacted by the proposed development or redevelopment shall not be considered as part of the area of disturbance.

[ii] The mitigation area shall include informational or educational signage indicating that the area is a protected area for water quality and habitat conservation.

[iii] The mitigation shall be planted on-site in the Buffer or off-site in the Buffer or MODIFIED BUFFER AREA at another location approved by the Planning and Zoning Commission.

[iv] Table 5 lists the amount of mitigation required for selected development activities. This chart is for general guidance only and the actual amount of development mitigation required is determined on a case-by-case basis.

Table 5

Mitigation Requirements for All Other Development Types and Activities within the MODIFIED BUFFER AREA (MBA~~BEA~~)

Development Activity	Amount of Mitigation Based on

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Build a new structure, replace a structure	Square feet of development activity
Build an addition	Square feet of development activity
Add an additional floor on existing building footprint	NA
Construct a new accessory structure	Square feet of development activity
Replace or build a new deck	Square feet of development activity
Build a new patio	Square feet of development activity
Expand the parking area	Square feet of development activity
Construct a fence	NA
Build a retaining wall	Square feet of development activity
Individual tree cutting	2 trees planted for every 1 tree removed
Construct a pathway	Square feet of development activity

Notes:

All non-single-family development in the ~~BEA~~MBA must provide a buffer yard in addition to mitigation required by the development activity. An applicant must obtain a variance when proposing a non-single-family residential development activity that is not within the ~~BEA~~MBA but within the Critical Area or one-hundred-foot Buffer. The applicant must meet the standards found in § **290-32F** of this chapter in order for the Board of Appeals to issue a variance.

[9] Offsets. Applicants who cannot fully comply with the planting requirements in Subsection G(1)(a)[7] or [8] above may use offsets to meet a portion of the mitigation requirement. Offsets can include the removal of an equivalent area of existing impervious surfaces in the Buffer or MODIFIED BUFFER AREA, the construction of best management practices for stormwater in excess of those required, wetland creation or restoration, or other measures that improve water quality or habitat.

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[10] Fees in lieu of planting.

[a]. Applicants who cannot comply with the planting or offset requirements shall pay into a fee-in-lieu program.

[b] Fees-in-lieu shall be collected at the rate per square foot of required mitigation that cannot be satisfied through planting or offsets:

[i] For private development projects, the rate shall be $1.25 per square foot.

[ii] For public sector development projects, the rate shall be $2.50 per square foot.

[c] Both rates are effective until two years have elapsed from the date of adoption of this amendment, at which time the rates shall be re-evaluated and revised as needed to ensure that funds collected are sufficient to cover the cost of administering the mitigation program but do not exceed the costs of administering the mitigation program. The Town Council, in consultation with the CBCAC, shall reassess the rate every two years thereafter as needed.

[11] Any required on-site or off-site buffer yard mitigation area, limits of disturbance mitigation area, or offset area or structure must be protected from future development through an easement, development agreement, plat notes or other instrument and recorded among the land records of Calvert County.

[12] Alternative provisions for meeting the mitigation requirements may be used, provided the Planning and Zoning Commission and the CBCAC approve them and find that they meet the goals of the Critical Area regulations.

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Part 5. Other Habitat Protection Areas.

A. Identification.

(1) An applicant for a development activity, redevelopment activity or change in land use shall identify all applicable Habitat Protection Areas and follow the standards contained in this Ordinance.

(2) In addition to the Buffer, other Habitat Protection Areas include:

(a) Threatened and Endangered Species and Species in Need of Conservation;
(b) Plant and Wildlife Habitat Protection Areas; including:
(i) Colonial waterbird nesting sites;
(ii) Historic waterfowl staging and concentration areas in tidal waters, tributary streams or tidal and nontidal wetlands;
(iii) Existing riparian forests;
(iv) Forest areas utilized as breeding areas by forest interior dwelling birds and other wildlife species;
(v) Other plant and wildlife habitats determined to be of local significance; and
(vi) Natural Heritage Areas; and
(vii) Anadromous Fish Propagation Waters

(3) Maps identifying these specific Habitat Protection Areas are maintained by the Maryland Department of Natural Resources Wildlife and Heritage Division.

– STOPPED REVIEW HERE ON SEPT 26, 2023 –

B. Standards.

(1) An applicant for a development activity proposed for a site within the Critical Area that is in ~~or near~~ or within 50 feet of a Habitat Protection Area listed above; shall request review by the Department of Natural Resources Wildlife and Heritage Service (DNR WHS), and as necessary United States Fish and Wildlife Service (USFWS), for comment and technical advice. Based on the Department's recommendations, additional research and site analysis may be required to identify the location of threatened and endangered species and species in need of conservation on a site.

(2) If the presence of any Habitat Protection Area is confirmed by the Department of Natural Resources, the applicant shall follow the requirements of COMAR 27.01.09.02 through 27.01.09.05, all recommendations from DNR WHS, and as necessary all recommendations from USFWS.

(a) If potential FIDS habitat is identified, the proposed development shall conform to the CBCAC's FIDS Guidance Manual, dated June 2000 and as updated.

(b) If potential anadromous fish propagation waters are identified, the proposed development shall conform to the policies and criteria listed in COMAR 27.01.09.05

(3) The specific protection and conservation measures recommended by DNR, WHS

and USFWS shall be included on the site plan and shall be considered conditions of approval for the project.

Part 6. Water Dependent Facilities.

A. Applicability.

(1) The provisions of this ~~chapter~~ section apply to those structures or works associated with industrial, maritime, recreational, educational, or fisheries activities that require location at or near the shoreline within the Buffer.

(2) The provisions of this ~~chapter~~ section are not applicable to:

(a) A private pier that:

(i) Is installed or maintained by a riparian landowner; and

(ii) Is not part of a residential project that provides a community pier or other community boat-docking or storage ~~facility under Regulation .07 of this chapter~~; ~~or~~

(iii) A non-water-dependent project ~~covered under COMAR 27.01.13~~.

(3) ~~The requirements of COMAR 27.01.02 apply to this chapter section.~~

B. General Criteria.

The following standards shall apply to new or expanded development activities associated with water-dependent facilities:

(1) ~~In accordance with Natural Resources Article §8-1808.3, Annotated Code of Maryland, permitted d~~Development in the Buffer is limited to the minimum lot coverage necessary to accommodate each water dependent facility or activity.

(2) New or expanded development activities may be permitted in the Buffer in the Intensely Developed ~~Arebe~~ Area provided it is shown:

(a) That the facility or activity ~~are~~ is water-dependent;

(b) That the facility or activity meets a recognized private right or public need;

(c) That adverse effects on water quality, fish, plant and wildlife habitat are first avoided, or if unavoidable, minimized;

(d) That, insofar as possible, a non-water-dependent project associated with the water-dependent facility or activity is located outside the Buffer;

(e) Impacts to fish, wildlife, or plant habitat are avoided, or if unavoidable, minimized; and

(f) Mitigation is provided at a minimum ratio of 1:1 based on the square footage of canopy coverage removed.

(3) Except as otherwise authorized in this section, a water-dependent facility or activity is prohibited in the Buffer of the Resource Conservation Area.

(3) ~~The placement of dredged material in the Buffer or a portion of the Critical Area that has been designated as a habitat protection area is prohibited, except as necessary for:~~

(a) ~~A beneficial use approved by the Board of Public Works or the Department of the Environment, such as:~~

(i) ~~Backfill for a shoreline stabilization measure;~~

(ii) ~~Use in a nonstructural shoreline stabilization measure, including a living shoreline;~~

(iii) ~~Beach nourishment;~~

(iv) ~~Restoration of an island;~~

(v) ~~The creation, restoration, or enhancement of a wetland, or a fish, wildlife, or plant habitat; or~~

(vi) ~~Any other approved beneficial use; or~~

(vii) ~~Placement in an area that was approved for the disposal of channel maintenance dredged material before June 11, 1988; and~~

C. General Requirements for the Location of Water-Dependent Facilities or Activities.

(1) The TOWN OF CHESAPEAKE BEACH shall evaluate on a case-by-case basis all proposals for expansion of existing or new water-dependent facilities~~[**The Municipality]**~~ and ~~shall~~ work with appropriate State and federal agencies ~~to to develop a plan for the approval of an area suitable for the location of a new or expanded water-dependent facility or activity.~~ to ensure compliance with applicable regulations.

(2) The following siting factors shall be considered when evaluating proposals for new or expanded water-dependent facilities:

(a) The impact on the water body upon which the water-dependent facility or activity is proposed that would likely result from the approval of that location, including:

(i) Alteration of an existing water circulation pattern or salinity regime;

(ii) Adequacy of area flushing characteristics;

(iii) Necessity of, and proximity to, a dredging operation; and

(iv) Interference with the natural transport of sand;

(b) Disturbance to:

(i) An oyster harvest area, as defined i n COMAR 08.02.04.11;

(ii) An area covered in a current aquaculture lease, as defined in Natural Resources Article, §4-11A-01, Annotated Code of Maryland;

(iii) A harvest reserve area, as designated under Natural Resources Article, §4-1009.1, Annotated Code of Maryland;

(iv) An oyster sanctuary, as established in COMAR 08.02.04.15A; and

(v) Any other shellfish located in a shellfish area regulated by the Department of Natural Resources~~;~~.

(b) Avoidance of disturbance to water quality and aquatic or terrestrial habitat resulting from the method or manner of dredging; and

(c) The avoidance or, if unavoidable, the minimization of:

(i) Disturbance to:

a. A wetland;

b. Submerged aquatic vegetation;

c. A habitat of threatened or endangered species or species in need of conservation;

d. ~~In accordance with COMAR 26.08.02.04-1, a~~ A water body identified by the Department of the Environment as a Tier II, high quality water body and its watershed; and

e. A nontidal wetland of special State concern, ~~as set forth in COMAR 26.23.01.01 and .04 and COMAR 26.23.06.01;~~

and

(ii) Adverse impact on water quality that would likely result from the facility or activity, such as nonpoint source runoff, sewage discharge, or other pollution related to vessel maintenance.

D. Industrial and port-related facilities.

New, expanded or redeveloped industrial or port-related facilities or activities and the replacement of these facilities or activities may be permitted only in those portions of Intensely Developed Areas that have been designated as Modified Buffer Areas.~~as described in this ordinance and are subject to the provisions set forth in that Chapter.~~[14]

E. Commercial Marinas and Other Water-Dependent Commercial Maritime Facilities and Activities.

(2) ~~In addition to meeting the requirements of Part 6.B and 6.C;~~

(a) ~~A new or expanded commercial marina or related commercial maritime facility or activity may be permitted in the Buffer of an IDA or LDA;~~

(b) ~~A redeveloped or expanded commercial marina or related commercial maritime facility or activity may be permitted in the Buffer of a RCA; or~~

~~[14] A local jurisdiction may also allow an approved use in accordance with the local Critical Area Program.~~

(c) ~~A new commercial marina or related commercial maritime facility or activity may be permitted in the Buffer of an RCA, only if it is publicly owned and meets all the requirements of Section G of this Part.~~

(1) A new or expanded commercial marina or related commercial maritime facility or activity may be permitted in the Modified Buffer Area of an IDA;

(2) ~~The Town shall require that the operation of~~ The owner and operator of a ~~each~~ commercial marina and ~~each~~ related commercial maritime facility or activity ~~complies~~ shall demonstrate to the Approving Authority that the marina or facility has obtained all permits required by COMAR 26.08.04.09

(c) ~~The discharge requirements of COMAR 26.08.04.09 and, as applicable, COMAR 26.24.04.03; and~~

(d) ~~The stormwater, wastewater, noncontact cooling water discharge, and any other applicable requirements of the Department of the Environment~~.

F. Community Piers and Other Community Boat-Docking and Storage Facilities.

(1) In addition to meeting the requirements of Part 6.B and 6.C, new or expanded community pier or other community boat-docking and storage facilities may be permitted in the Buffer if:

(a) The owner or operator of the pier or facility provided does not offer food, fuel, or other goods and services for sale in the buffer or on the community pier.

a. ~~Does not offer food, fuel, or other goods and services for sale in the buffer or on the community pier; and~~

b. ~~As applicable, complies with the requirements of~~

~~COMAR 26.24.04.03;~~

(b) The pier or facility is community-owned and established and operated for the benefit of the residents of a platted and recorded riparian subdivision;

(c) The pier or facility is associated with a residential project approved by the TOWN OF CHESAPEAKE BEACH for the Critical Area and consistent with all State requirements and program requirements for the Critical Area;

(d) Disturbance to the Buffer is the minimum necessary to provide a single point of access to the pier or facility; and

(e) If community piers are provided as part of a new residential project, private piers in the development are not allowed.

(2) The number of slips authorized at a pier or facility shall be the lesser of (a) or (b) below:

(a) One slip for each 50 feet of shoreline in a residential project in the Intensely Developed and Limited Development Areas, and one slip for each 300 feet of shoreline in a residential project in the Resource Conservation Area; or

(b) A density of slips to platted lots or dwellings within a residential project in the Critical Area according to the following schedule:

Table 6.F.2 Number of Slips Permitted

Platted Lots or Dwellings in the Critical Area	Slips
up to 15	1 for each lot
16 – 40	15 or 75% whichever is greater
41 – 100	30 or 50% whichever is greater
101 – 300	50 or 25% whichever is greater
over 300	75 or 15% whichever is greater

G. **Public Beaches and Other Public Water-Oriented Recreation or Education Areas or Activities including public piers.**

(1) In addition to meeting the requirements of Part 6.B and 6.C, public beaches and piers or other public water-oriented recreation or education areas or activities may be permitted in the Buffer of:

(a) An Intensely Developed Area; or

(b) A Limited Development Area or a Resource Conservation Area provided that:

(i) Adequate sanitary facilities exist;

(ii) Sanitary and service facilities are, to the extent possible, located outside the Buffer;

(c) Permeable surfaces are used to the extent practicable, if no degradation of groundwater would likely result; and

(i) Disturbance to natural vegetation is first avoided or, if unavoidable, minimized.

(2) Areas for public passive outdoor recreation, such as nature study, and hiking, hunting, and trapping, and for education, may be permitted in the Buffer within a Limited Development Area or a Resource Conservation Area if sanitary and service facilities for these uses are located outside of the Buffer.

H. **Research-Associated and Education-Associated Water-Dependent Facilities or Activities.**

1. In addition to meeting the requirements of Part 6.B and 6.C, a research-associated water- dependent facility or activity or ~~of~~ an education-associated water-dependent facility or activity may be permitted in the Buffer of an IDA, LDA, or RCA, if any associated nonwater-dependent project or activity is located outside the Buffer to the extent possible.

Aquaculture and Fishery Facilities and Activities: Water Quality Restoration.

The following types of aquaculture and fishery facilities and activities may be permitted in the Buffer of an IDA, LDA, or RCA:

(1) A shore-based facility or activity necessary for a commercial aquaculture operation;

(2) A commercial water-dependent fishery facility or activity, including a structure for crab shedding, a fish off-loading dock, and a shellfish culture operation; and

(3) A facility or activity that supports water quality restoration in the Chesapeake Bay, the Atlantic Coastal Bays, or their watersheds.

Part 7. Growth Allocation.

A. Definition.

"Consistent with" means that a standard or factor will further, and not be contrary to, the following items in the comprehensive plan: (i). Policies; (ii) Timing of the implementation of the plan, of development, and of rezoning; (iii). Development patterns;

(iv). Land uses; and (v). Densities or intensities.[15]

B. Growth allocation acreage and deduction.

[15] This definition may be moved to the Definitions section if the municipality desires to do so.

(1) Growth allocation available to the Town of Chesapeake Beach includes:

(a) An area equal to five (5) percent of the RCA acreage located within Chesapeake Beach and;

(b) Growth allocation available to Chesapeake Beach as provided for by ~~**[County]**~~ Calvert County.

(2) ~~The Town's original growth allocation acreage is _____ acres. The Town's current growth allocation acreage remaining is ___ acres, as of ***[insert the date of adoption of this Ordinance]***.~~

(3) ~~A local jurisdiction~~ THE TOWN OF CHESAPEAKE BEACH shall deduct acreage from its growth allocation reserves in accordance with COMAR 27.01.02.06-4.

DRAFTER'S NOTE: The Town maintains a record of growth allocation and as of the date of adoption of this Ordinance _____, the growth allocation acreage remaining is 58.37 acres.

C. Purpose.

Growth Allocation is available for use in a Resource Conservation Area (RCA) or in a Limited Development Area (LDA) in the Chesapeake Beach Critical Area Overlay District. The purpose is to authorize a change in the Critical Area classification to develop at a higher density, intensity, or use than the current classification allows.

D. Process.

~~An applicant shall submit to **Chesapeake Beach** a complete application for growth allocation that complies with the submittal and environmental report requirements of COMAR 27.01.02.06-1—.06-2. A Growth Allocation request shall be approved by **[Local Approving Authority**] prior to submission to the Commission.[16]~~

(1) An applicant shall submit to the Zoning Administrator a complete application for growth allocation that complies with the submittal and environmental report requirements of COMAR 27.01.02.06-1—.06-2.
(2) The application for growth allocation shall be reviewed by the Planning Commission, who shall transmit a recommendation to the Mayor and Council.
(3) The application for growth allocation shall be approved by the Mayor and Town Council prior to submission to the CBCAC.
(4) The application for growth allocation shall be approved by the CBCAC before any site development plan, subdivision plan, or zoning permit application is submitted to the Planning Commission or Zoning Administrator for review.

E. Requirements.

When locating new Intensely Developed or Limited Development Areas, the following requirements apply:

(1) A new Intensely Developed Area shall be at least 20 acres unless it is adjacent to existing IDA ~~(or[17]).~~

~~[16] Existing procedures may vary among jurisdictions and incorporate Counties into the approval process. Amend as necessary.~~

~~[17] A new IDA may be less than 20 acres if, as part of a local Program, the Commission has approved an alternative standard for designation of an IDA; and the area is part of a growth allocation approved by the Commission.~~

~~Examples include provisions that allow for grandfathered industrial or commercial uses located on a parcel that is~~

(2) An application for a new IDA or LDA shall be:
   (a) In conformance with the requirements of COMAR Title 27 Subtitle 01; and
   (b) Designated on the approved Critical Area map that is submitted as part of its application to the Commission for growth allocation approval.
(3) As part of a growth allocation approved by the Commission, the following shall be enforced as applicable:
   (a) A buffer management plan
   (b) A habitat protection plan; and
   (c) Other applicable conditions of approval as determined by the Commission at the time of project approval.

F. Standards.

When locating new Intensely Developed or Limited Development Areas the following standards shall apply:

(1) A new Intensely Developed Area shall only be located in a Limited Development Area or adjacent to an existing Intensely Developed Area.~~18~~
(2) A new Limited Development Area shall only be located adjacent to an existing Limited Development Area or an Intensely Developed Area.~~19~~
(3) A new Limited Development Area or Intensely Developed Area shall be located in a manner that minimizes impacts to Habitat Protection Area ~~as defined herein and in COMAR 27.01.09~~ and in an area and manner that ~~optimizes benefits~~ minimizes impacts to water quality;
(4) ~~A new Intensely Developed Areas shall only be located where they minimize their impacts to the defined land uses of the Resource Conservation Area (RCA);~~

less than 20 acres.

~~18 A local jurisdiction may propose an alternative adjacency standard if the alternative standard is consistent with the local jurisdiction's comprehensive plan and approved by the Commission.~~

~~19 See footnote 18 above.~~

(5) A new Intensely Developed Area or a Limited Development Area in a Resource Conservation Area shall be located at least 300 feet beyond the landward edge of tidal wetlands or tidal waters unless Chesapeake Beach proposes, and the CBCAC approves, alternative measures for enhancement of water quality and habitat that provide greater benefits to the resources; and

(6) New Intensely Developed or Limited Development Areas to be located in Resource Conservation Areas shall conform to all criteria of **Chesapeake Beach** for such areas, shall be so designated on the **Chesapeake Beach** Critical Area Maps and shall constitute an amendment to this Ordinance subject to review and approval by the Mayor and Town Council and the CBCAC as provided herein.

G. Additional Factors.

In reviewing map amendments or refinements involving the use of growth allocation, both the Planning Commission and Mayor and Town Council in their respective reviews of an application, shall consider the following factors:

(1) Consistency with the Town of Chesapeake Beach's adopted comprehensive plan and whether the growth allocation would implement the goals and objectives of the adopted plan.
(2) For a map amendment or refinement involving a new Limited Development Area, whether the development is:
    (a) To be served by a public wastewater system ~~or septic system that uses the best available nitrogen removal technology~~;
    (b) A completion of an existing subdivision;
    (c) An expansion of an existing business; or
    (d) To be clustered on a portion of the tract so as to preserve land in open space, to the extent possible.

(3) For a map amendment or refinement involving a new Intensely Developed Area, whether the development is:
    (a) To be served by a public wastewater system;
    (b) Have an allowed average density of at least 3.5 units per acre as calculated under State Finance and Procurement Article, §5-7B-03(h), Annotated Code of Maryland; and
    (c) If greater than 20 acres, to be located in a designated Priority Funding Area; ~~and~~
    (d) ~~To have a demonstrable economic benefit.~~
(4) The use of existing public infrastructure, where practical;
(5) Consistency with State and regional environmental protection policies concerning the protection of threatened and endangered species and species in need of conservation that may be located on- or off-site;

(6) Impacts on a priority preservation area, if applicable;
(7) Environmental impacts associated with wastewater and stormwater management practices and wastewater and stormwater discharges to tidal waters, tidal wetlands, and tributary streams; and
(8) Environmental impacts, including risk of severe flooding, associated with location in a coastal hazard area ~~or an increased risk of severe flooding attributable to the proposed development~~.

Part 8. Grandfathering.~~20~~

A. Continuation of existing uses.

(1) The continuation, but not necessarily the intensification or expansion, of any use in existence on December 1, 1985 may be permitted, unless the use has been abandoned for more than one year or is otherwise restricted by existing municipal ordinances.

(2) If any existing use or structure does not conform with the provisions of this Ordinance pertaining to the Critical Area, its intensification or expansion shall be restricted in the same manner provided for in Section 290-28, Nonconforming Uses, of this Ordinance except that any allowable intensification or expansion may be permitted only in accordance with the variance procedures in Part 9.~~21~~

B. Residential density on grandfathered lots.

~~20 A local municipality may work with Commission staff to develop grandfathering provisions to address those development projects that have not received final local approval prior to the adoption of the updated Critical Area maps.~~

~~21 Reference should be provided to any existing non-conforming use expansion criteria that are specified elsewhere in the local jurisdiction's Zoning Ordinance.~~

Except as otherwise provided for, or restricted, by this Ordinance, the following types of land are permitted to be developed with a single-family dwelling, if a dwelling is not already placed there, notwithstanding that such development may be inconsistent with the density provisions of this Ordinance.

(1) Any land on which development activity has progressed to the point

of pouring of foundation footings or the installation of structural members;

(2) A legal parcel of land, not being part of a recorded or approved subdivision that was recorded as of December 1, 1985;

(3) ~~Land that received a building permit subsequent to December 1, 1985, but prior to (**Date of Program Approval**);~~

(4) Land that was subdivided into recorded, legally buildable lots, where the subdivision received final approval between June 1, 1984 and December 1, 1985; and

(5) Land that was subdivided into recorded, legally buildable lots, where the subdivision received the final approval after December 1, 1985 and provided that either development of any such land conforms to the IDA, LDA or RCA requirements in this Ordinance or the area of the land has been counted against the growth allocation permitted under this Ordinance.

~~**Implementation.**~~

(3) ~~For purposes of implementing this regulation, a local jurisdiction shall have determined, based on land uses and development in existence on December 1, 1985, which land areas fall within the three types of development areas described in this chapter.~~

(4) ~~Nothing in this Section may be interpreted as altering any requirements of this Ordinance related to water-dependent facilities or Habitat Protection Areas.~~

~~Part 9. Variances.~~

Use the variance procedures/standards already is Section 290-32F and therein see subsections (4) and (5) which expressly address Critical Area variances, keep the old sections as is.

~~**Applicability.**~~

~~**Chesapeake Beach** has established provisions where, owing to special features of a site or other circumstances, implementation of this Ordinance or a literal enforcement of provisions within this Ordinance would result in unwarranted hardship to an~~

applicant; a Critical Area variance may be obtained.

(1) In considering an application for a variance, **Chesapeake Beach** shall presume that the specific development activity in the Critical Area, that is subject to the application and for which a variance is required, does not conform with the general purpose and intent of Natural Resources Article, Title 8 Subtitle 18, COMAR Title 27, and the requirements of this Ordinance.

(2) Unwarranted hardship means that without a variance, an applicant would be denied reasonable and significant use of the entire parcel or lot for which the variance is requested.

Standing.

In accordance with Natural Resources Article, §8-1808(d)(2), Annotated Code of Maryland, if a person meets the threshold standing requirements under federal law, the person shall have standing to participate as a party in a local administrative proceeding.

Standards.

The provisions for granting a variance shall include written findings based on competent and substantial evidence that the applicant has overcome the presumption established under Section A(1) above and that each of the following standards are met:

(3) Due to special features of the site or special conditions or circumstances peculiar to the land or structure involved, a literal enforcement of provisions and requirements of this Critical Area Ordinance would result in unwarranted hardship;

(4) A literal interpretation of the provisions of this Ordinance will deprive the applicant the use of land or a structure permitted to others in accordance with the provisions of this Critical Area Ordinance;

(5) The granting of a variance will not confer upon an applicant any special privilege that would be denied by this Critical Area Ordinance to other lands or structures in accordance with the provisions of this Critical Area Ordinance;

(6) The variance request is not based upon conditions or circumstances which are the result of actions by the applicant;

(7) The request does not arise from any conforming or non-conforming condition on

any neighboring property;

(8) The granting of a variance would not adversely affect water quality or adversely impact fish, wildlife or plant habitat within the Critical Area; and

(9) The granting of the variance would be in harmony with the general spirit and intent of the State Critical Area law, the regulations in COMAR Title 27, Subtitle 01, and this Critical Area Ordinance.

Process.

Applications for a variance will be made in writing to the Town Board of Appeals[22] with a copy provided to the Critical Area Commission. **[Municipality]** shall follow its established procedures for advertising and notification of affected landowners. The Board's advertising and notification requirements set forth elsewhere in this Ordinance shall be used for Critical Area variances.

(10) After hearing an application for a Critical Area variance, the Board of Appeals shall make written findings reflecting analysis of each standard. With due regard for the person's technical competence, and specialized knowledge, the written findings may be based on evidence introduced and testimony presented by:

(a) The applicant;

(b) The Town of Chesapeake Beach or any other government agency; or

(c) Any other person deemed appropriate by **[Municipality]**. Board.

(11) If the variance request is based on conditions or circumstances that are the result of actions by the applicant, **[Municipality]** the Board shall consider that fact, and whether the application has met the requirements of Part E below, if applicable.

(12) The applicant has the burden of proof and the burden of persuasion to overcome the presumption of nonconformance established in paragraph (A) above.

(13) The Board of Appeals shall notify the Critical Area Commission of its findings and decision to grant or deny the variance request.

After-the-Fact Requests

(14) A local jurisdiction The Town may not accept an application of a variance to legalize a violation of this subtitle, including an unpermitted structure or other development

[22] Or other local appeals authority.

activity until the local jurisdiction:

(a) Issues a notice of violation; and

(b) Assesses an administrative or civil penalty for the violation.

(15) The Town shall not issue a permit, approval, variance, or special exception to legalize a violation of this Ordinance unless an applicant has:

(a) Fully paid all administrative, civil and criminal penalties imposed under Natural Resources Article, §8-1808(c)(l), Annotated Code of Maryland;

(b) Prepared a restoration or mitigation plan, approved by the local jurisdiction, to abate impacts to water quality or natural resources as a result of the violation; and

(c) Performed the abatement measures in the approved plan in accordance with the local Critical Area Ordinance.

(16) If the Board denies the requested after the fact variance, then the Town shall:

(a) Order removal or relocation of any structure; and

(b) Order restoration of the affected resources.

Appeals.

(17) Appeals from decision concerning the granting or denial of a variance under these regulations shall be taken in accordance with all applicable laws and procedures of the Town for variances.

(18) Variance decisions by the Board of Appeals may be appealed to the Circuit Court in accordance with the Maryland Rules of Procedure.

(19) Appeals may be taken by any person, firm, corporation, or governmental agency aggrieved or adversely affected by any decision made under this Ordinance or any person with standing as described in Section B above.

(20) The Town may not issue a permit, or any other type of authorization, until the applicable 30-day appeal period has expired.

Conditions and Mitigation.

The Board of Appeals shall may impose conditions on the use or development of a property which is granted a variance as it may find reasonable to ensure that the spirit and intent of this Ordinance is maintained including, but not limited to the following:

(21) Adverse impacts resulting from the granting of the variance shall be mitigated as recommended by the [**Local Planning Authority**], but not less than by planting on the site per square foot of the variance granted at no less

~~than a three to one basis.~~

(22) ~~New or expanded structures or lot coverage shall be located the greatest possible distance from mean high water, the landward edge of tidal wetlands, tributary streams, nontidal wetlands, or steep slopes.~~

~~**Commission Notification.**~~

~~Within ten (10) working days after a written decision regarding a variance application is issued, the Board will send a copy of the decision, be sent to the Critical Area Commission.~~

Part 10. Lot Consolidation and Reconfiguration.

A. Applicability.

The provisions of this part apply to a consolidation or a reconfiguration of any nonconforming legal grandfathered parcel or lot. These provisions do not apply to the reconfiguration or consolidation of parcels or lots which are conforming or meet all Critical Area requirements. Nonconforming parcels or lots include:

(1) Those for which a Critical Area variance is sought or has been issued; and
(2) Those located in the Resource Conservation Area and are less than 20 acres in size.

B. Procedure.

An applicant seeking a parcel or lot consolidation or reconfiguration shall provide the ~~required~~ information required in COMAR 27.01.02.08.E to the TOWN OF CHESAPEAKE BEACH.

(1) The TOWN OF CHESAPEAKE BEACH may not approve a proposed parcel or lot consolidation or reconfiguration without making written

findings in accordance with COMAR 27.01.02.08.F.

(2) The TOWN OF CHESAPEAKE BEACH shall issue a final written decision or order granting or denying an application for a consolidation or reconfiguration.

(a) After a final written decision or order is issued, the TOWN OF CHESAPEAKE BEACH shall send a copy of the decision or order and a copy of any approved development plan to the Commission within 10 business days.

(3) The TOWN OF CHESAPEAKE BEACH may not issue a permit or approval of any type on a property affected by the final written decision or order until after the expiration of the time within which the Commission may file an appeal or petition for judicial review.

Part 11. Local Development Projects

A. Applicability.

For all development in the Critical Area resulting from any action by the Town of **Chesapeake Beach** on ~~local~~ publicly or privately owned lands, the Town of Chesapeake Beach shall adhere to COMAR 27.02.02, COMAR 27.02.04 and COMAR 27.02.06.

B. Procedures.

(1) If the project meets the provisions of this Ordinance and is minor development, the Zoning Administrator shall prepare a consistency report and submit a copy of the report with relevant plans and information about the project to the CBCAC per the requirements of COMAR 27.02.02.

(2) If the project does not meet the provisions of this Ordinance, the TOWN OF CHESAPEAKE BEACH shall seek a conditional approval by the CBCAC per the requirements of COMAR 27.02.06.

(3) The TOWN OF CHESAPEAKE BEACH shall submit information as required in the Critical Area

Commission's *Local Project Submittal Instructions and Application Checklist*.

C. Notice and posting requirements for projects reviewed and approved by the CHESAPEAKE BAY CRITICAL AREA COMMISSION.

Public notice is required for all development projects that qualify under COMAR 27.03.01.03. Public notice shall be the responsibility of the TOWN OF CHESAPEAKE BEACH and evidence that those requirements have been met shall be included as part of the submittal to the Critical Area Commission.

~~Part 12. Program Changes.~~

Not using this section. Instead, the existing section of the Zoning Ord., Section 290-29 covers this. ~~**Program Changes.**~~

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~~The Mayor and Town Council may from time to time amend the Critical Area provisions of this Ordinance. Changes may include, but are not limited to amendments, revisions, and modifications to these zoning regulations, Critical Area Maps, implementation procedures, and local policies that affect the Town's Critical Area.~~

(1) ~~All such amendments, revisions, and modifications shall also be approved by the Critical Area Commission as established in § 8-1809 of the Natural Resources Article of the Annotated Code of Maryland. No such amendment shall be implemented without approval of the Critical Area Commission.~~

(2) ~~Standards and procedures for Critical Area Commission approval of proposed amendments are as set forth in the Critical Area Law § 8-1809(i) and § 8-1809(d), respectively.~~

~~**Comprehensive Review**~~

~~The Chesapeake Beach will review its entire Program and propose any necessary amendments to its entire Program, including this Ordinance, at least every six years in accordance with Natural Resources Article, §8-1809(g).~~

~~**Zoning Map Amendments.**~~

~~Except for Program amendments or Program refinements developed during a six-year comprehensive review, a zoning map amendment may only be granted by the Mayor~~

and Town Council upon proof of a mistake in the existing zoning. This requirement does not apply to proposed changes to a zoning map that meet the following criteria:

(3) Are wholly consistent with the land classifications as shown on the adopted Critical Area Overlay Map; or

(4) The use of growth allocation in accordance with the growth allocation provisions of this Ordinance is proposed.

Adoption of a Program Amendment or Refinement.

If approved by the Critical Area Commission, the Town shall incorporate a program amendment or refinement into its adopted Critical Area Program, including any conditions of approval, within 120 days of receiving notice from the Chairman of the Commission.

Part 13. Enforcement.

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A. Consistency.

The Critical Area provisions of this Ordinance, in accordance with the Critical Area Act and Criteria supersede any inconsistent law, Chapter or plan of the TOWN OF CHESAPEAKE BEACH. In the case of conflicting provisions, the stricter provisions shall apply.

B. Violations.

(1) No person shall violate any provision of this Zoning Ordinance. Each violation that occurs and each calendar day that a violation continues shall be a separate offense subject to separate fines, orders, sanctions, or other penalties.

(2) Noncompliance with any permit or order issued by the TOWN OF CHESAPEAKE BEACH related to the Critical Area shall be a violation of this Ordinance and shall be enforced as provided herein.

C. Responsible Persons.

The following persons may each be held jointly or severally responsible for a violation:

(1) any persons who apply for or obtain any permit or approval, (2) contractors, (3) subcontractors, (4) property owners, (5) managing agents, or (6) any person who has committed, assisted, or participated in the violation.

D. Required Enforcement Action.

When the TOWN OF CHESAPEAKE BEACH identifies a violation of this Ordinance, it shall take enforcement action, ~~including~~ which may include:

(1) Citing the violation;

(2) Issuing abatement, restoration, and mitigation orders as necessary to:
    (a) Stop unauthorized activity; and
    (b) Restore and stabilize the site to its condition prior to the violation or to a condition that provides the same water quality and habitat benefits;
(3) ~~Require~~ Requiring the implementation of mitigation measures, in addition to restoration activities, to offset the environmental damage and degradation or loss of environmental benefit resulting from the violation; and
(4) Assessing an administrative fine or pursuing a civil penalty in accordance with ~~Part 12.F below~~ Section 290-30, Violations and Penalties.

E. Restoration and Mitigation

(1) A restoration or mitigation order shall specify the amount of appropriate restoration and mitigation as necessary to offset the adverse impacts to the Critical Area, resulting from the violation, consistent with all other requirements of this Ordinance.
(2) For restoration or mitigation that exceeds 1,000 square feet or involves expenses exceeding $1,000, the TOWN OF CHESAPEAKE BEACH shall collect a performance bond or other financial security.
(3) If restoration or mitigation involves planting, a performance bond shall be held for at least 2 years after the date the plantings were installed to ensure plant survival.
(4) A property owner may request the TOWN OF CHESAPEAKE BEACH to schedule inspections as necessary to ensure compliance and the return of the bond or other financial security.

~~**Right to Enter Property.**~~ ***This is already covered in the zoning ordinance.***

~~Except as otherwise authorized and in accordance with the procedures specified herein, the Town or their its designee may obtain access to and enter a property in order to identify or verify a suspected violation, restrain a development activity, or issue a citation if the Town has probable cause to believe that a violation of this Ordinance has occurred, is occurring, or will occur. The Town shall make a reasonable effort to contact a property owner before obtaining access to or enter the property. If entry is denied, the Town may seek an injunction to enter the property to pursue an enforcement action.~~

~~Administrative Civil Penalties.~~ ***~~This is already covered – see-Section 290-30 of the zoning ord.~~***

~~In addition to any other penalty applicable under State or Town law, every violation of a provision of Natural Resources Article, Title 8 Subtitle 18, or the Critical Area provisions of this Ordinance shall be punishable by a civil penalty of up to $10,000 per calendar day.~~

(5) ~~Before imposing any civil penalty, the person(s) believed to have violated this Ordinance shall receive written notice of the alleged violation(s) including which, if any, are continuing violations, and an opportunity to be heard. The amount of the civil penalty for each violation, including each continuing violation, shall be determined separately. For each continuing violation, the amount of the civil penalty shall be determined per day. In determining the amount of the civil penalty, the Town shall consider:~~

i. ~~The gravity of the violation;~~
ii. ~~The presence or absence of good faith of the violator;~~
iii. ~~Any willfulness or negligence involved in the violation including a history of prior violations;~~
iv. ~~The environmental impact of the violation; and~~
v. ~~The cost of restoration of the resource affected by the violation and mitigation for damage to that resource, including the cost to the Town for performing, supervising, or rendering assistance to the restoration and mitigation.~~

(6) ~~Administrative civil penalties for continuing violations shall accrue for each violation, every day each violation continues, with no requirements for additional assessments, notice, or hearings for each separate offense. The total amount payable for continuing violations shall be the amount assessed per day for each violation multiplied by the number of days that each violation has continued.~~

(7) ~~The person responsible for any continuing violation shall promptly provide the Town with written notice of the date(s) the violation has been or will be brought into compliance and the date(s) for the Town's inspection to verify compliance. Fines and penalties for continuing violations continue to accrue as set forth herein until the Town receives such written notice and verifies compliance by inspection or otherwise.~~

(8) ~~Assessment and payment of fines and penalties shall be in addition to and not in substitution for recovery by the Town of all damages, costs, and other expenses caused by the violation.~~

(9) ~~Payment of all fines and penalties assessed shall be a condition precedent to the issuance of any permit or other approval required by this Ordinance.~~

~~Cumulative Remedies.~~

~~The remedies available to the Town under this Ordinance are cumulative and not alternative or exclusive, and the decision to pursue one remedy does not preclude pursuit of others.~~

~~Variances Pursuant to a Violation.~~

~~For any violation that requires a variance to this Ordinance, the Town shall follow the after-the-fact variance provisions in Part 9.E.~~

~~Permits Pursuant to a Violation.~~

~~The Town may not issue any permit, approval, variance, or special exception, unless the person seeking the permit has:~~

(10) ~~Fully paid all administrative, civil, or criminal penalties as set forth in Section F. above;~~

(11) ~~Prepared a restoration or mitigation plan, approved by the Town, to abate impacts to water quality or natural resources as a result of the violation;~~

(12) ~~Performed the abatement measures in the approved plan in accordance with the Town's regulations; and~~

(13) ~~Unless an extension of time is approved by the Town because of adverse planting conditions, within 90 days of the issuance of a permit, approval, variance, or special exception for the affected property, any additional mitigation required as a condition of approval for the permit, approval, variance, or special exception shall be completed.~~

~~Appeals.~~

~~An appeal to the Town of Chesapeake Beach Board of Appeals may be filed by any person aggrieved by any order, requirement, decision, or determination by the Town in connection with the administration and enforcement of this Ordinance.~~

(14) ~~An appeal is taken by filing a written notice of appeal with the Board of Appeals in accordance with the provisions in the Chesapeake Beach Zoning Ordinance and accompanied by the appropriate filing fee.~~

(15) An appeal must be filed within thirty (30) days after the date of the decision or order being appealed; and

(16) An appeal stays all actions by the Town seeking enforcement or compliance with the order or decisions being appealed, unless the Town certifies to the Board of Appeals that (because of facts stated in the certificate) such stay will cause imminent peril to life or property. In such a case, action by the Town shall not be stayed except by order of the Board of Appeals or a court up on application of the party seeking the stay.

(17) Application for a variance pursuant to a violation constitutes a waiver of the right to appeal any order, requirement, decision, or determination related to the violation and its final adjudication including the payment of any penalties and costs assessed.

Additional Enforcement Authorities.

(18) The Town is authorized to pursue violations in Circuit Court or District Court in accordance with Natural Resources Article §8-1815(a)(2).

(19) The Town is authorized to institute injunctive or other appropriate actions or proceedings to bring about the discontinuance of any violation of this Ordinance, an administrative order, a permit, a decision, or other imposed condition. The pendency of an appeal to the Board of Appeals or subsequent judicial review shall not prevent the Town from seeking injunctive relief to enforce an administrative order, permit, decisions, or other imposed condition, or to restrain a violation pending the outcome of the appeal or judicial review.

MEMO

To: Town of Chesapeake Beach Planning and Zoning Commission
From: Sarah Franklin, Town Planner
CC: Holly Whal, Town Manager
Date: 10/17/2023
Regarding: Comparison of COMAR 27.01.02.03 and 27.02.02.04

COMAR regulations 27.01.02.03 and .04 relate to allowable uses in Intensely Developed Areas (IDA) and Limited Development Areas (LDA). The following table compares the text (taken directly from COMAR) of each section and I have underlined higher level differences.

COMAR 27.01.02.	
.03 Intensely Developed Areas.	**.04 Limited Development Areas.**
A. Intensely developed areas are those areas where residential, commercial, institutional, and/or industrial, developed land uses predominate, and where relatively little natural habitat occurs. These areas shall have at least one of the following features: (1) Housing density equal to or greater than four dwelling units per acre; (2) Industrial, institutional, or commercial uses are concentrated in the area; or (3) Public sewer and water collection and distribution systems are currently	A. Limited development areas are those areas which are currently developed in low or moderate intensity uses. They also contain areas of natural plant and animal habitats, and the quality of runoff from these areas has not been substantially altered or impaired. These areas shall have at least one of the following features: (1) Housing density ranging from one dwelling unit per 5 acres up to four dwelling units per acre;

serving the area and housing density is greater than three dwelling units per acre. B. Location of Features. (1) Except as authorized under §B(2) of this regulation, the features in §A(1)—(3) of this regulation shall be located in an area of at least 20 adjacent acres, or that entire upland portion of the Critical Area within the boundary of a municipality, whichever is less. (2) The features may be located in an area of less than 20 adjacent acres if: (a) As part of a local program, the Commission has approved an alternative standard for designation of an intensely developed area; and (b) The area is part of a growth allocation approved by the Commission.	(2) Areas not dominated by agriculture, wetland, forest, barren land, surface water, or open space; (3) Areas meeting the conditions of Regulation .03A, but not .03B, of this regulation; (4) Areas having public sewer or public water, or both.
C. In developing their Critical Area programs, local jurisdictions shall follow these policies when addressing intensely developed areas: (1) Improve the quality of runoff from developed areas that enters the Chesapeake or Atlantic Coastal Bays or their tributary streams; (2) Accommodate additional development of the type and intensity designated by the local jurisdiction provided that water quality is not impaired; (3) Minimize the expansion of intensely developed areas into portions of the Critical Area designated as Habitat Protection Areas under COMAR 27.01.09 and resource conservation areas under Regulation .05 of this chapter; (4) Conserve and enhance fish, wildlife, and plant habitats, as identified in COMAR 27.01.09, to the	B. In developing their Critical Area programs, local jurisdictions shall follow these policies when addressing limited development areas: (1) Maintain or, if possible, improve the quality of runoff and ground water entering the Chesapeake Bay and its tributaries; (2) Maintain, to the extent practicable, existing areas of natural habitat; (3) Accommodate additional low or moderate intensity development if: (a) This development conforms to the water quality and habitat protection criteria in §C, below; and (b) The overall intensity of development within the limited development area is not increased beyond the level established in a particular area so as to change its prevailing character as identified by density and land use currently established in the area; and

extent possible, within intensely developed areas;	(4) Reduce the extent of lot coverage and maximize areas of natural vegetation through consideration of cluster development when planning for future development.
	C. In developing their Critical Area programs, local jurisdictions shall use all of the following criteria for limited development areas: (1) For all development activities in the limited development areas, the jurisdiction shall require that the developer identify any of the following environmental or natural features and meet all of the following standards of environmental protection: (a) Criteria as provided for the habitat protection areas in COMAR 27.01.09, and those for the water-dependent facilities in COMAR 27.01.03.
(5) Prohibit the location of a road, bridge, or utility in any portion of the Critical Area designated as a habitat protection area under COMAR 27.01.09, unless there is no feasible alternative; (6) If the location of a road, bridge, or utility in a habitat protection area is authorized under §C(5) of this regulation, design, construct, and maintain the road, bridge, or utility so as to: (a) Provide maximum erosion protection; (b) Minimize negative impact on wildlife, aquatic life, and their habitats; and (c) Maintain hydrologic processes and water quality; (7) Prohibit the location of a development activity if that development or any related activity would cross or affect a stream, unless there is no feasible alternative;	(b) Prohibition on the location of a road, bridge, or utility in any portion of the Critical Area designated as a habitat protection area under COMAR 27.01.09, unless there is no feasible alternative. (c) If the location of a road, bridge, or utility in a habitat protection area is authorized under §C(1)(b) of this regulation, design, construction, and maintenance of the road, bridge, or utility so as to: (i) Provide maximum erosion protection; (ii) Minimize negative impact on wildlife, aquatic life, and their habitats; and (iii) Maintain hydrologic processes and water quality. (d) Prohibition on the location of a development activity if that development or any related activity

(8) If the location of a development activity is authorized under §C(7) of this regulation, design and construct the development activity so as to: (a) Prevent increases in flood frequency and severity that are attributable to development; (b) Retain tree canopy and maintain stream water temperature within normal variation; and (c) Provide a natural substrate for affected streambeds; (9) Minimize the adverse water quality and quantity impact of stormwater and encourage the use of retrofitting measures to address existing stormwater management problems; and (10) Cluster future development as a means to reduce lot coverage and to maximize areas of natural vegetation.	would cross or affect a stream, unless there is no feasible alternative. (e) If the location of a development activity is authorized under §C(1)(d) of this regulation, design and construction of the development activity so as to: (i) Reduce increases in flood frequency and severity that are attributable to development; (ii) Retain tree canopy so as to maintain stream water temperature within normal variation; (iii) Provide a natural substrate for streambeds; and (iv) Minimize the adverse water quality and quantity impact of stormwater. (f) All development sites shall incorporate a wildlife corridor system that connects the largest undeveloped, or most vegetated tracts of land within and adjacent to the site in order to provide continuity of existing wildlife and plant habitats with offsite habitats. The wildlife corridor system may include habitat protection areas identified in COMAR 27.01.09. Local jurisdictions shall ensure the maintenance of the wildlife corridors by requiring the establishment of conservation easements, restrictive covenants, or similar instruments through which the corridor is preserved by public or private groups, including homeowners associations, nature trusts, and other organizations. (2) For the cutting or clearing of trees in forests and developed woodland areas which are associated with current or planned development activities in the limited development area, all jurisdictions shall: (a) Require that the developer consider the recommendations of the

	Forestry Programs and the Fish, Heritage and Wildlife Administration of the Department of Natural Resources when planning development on forested lands; (b) Provide regulations that development activities be designed and implemented to minimize destruction of woodland vegetation; and (c) Provide protection for forests and developed woodlands identified as habitat protection areas in COMAR 27.01.09. (3) For the alteration of forest and developed woodlands in the limited development area, the jurisdiction shall apply all of the following criteria: (a) The total acreage in forest and developed woodlands within a jurisdiction in the Critical Area shall be maintained or, preferably, increased; (b) All forests and developed woodlands that are allowed to be cleared or developed shall be replaced in the Critical Area on not less than an equal area basis; (c) If a developer is authorized to clear more than 20 percent of a forest or developed woodlands on a lot or parcel, the developer shall replace the forest or developed woodlands at 1.5 times the areal extent of the forest or developed woodlands cleared, including the first 20 percent of the forest or developed woodlands cleared; (d) A developer may not clear more than 30 percent of a forest or developed woodlands on a lot or parcel, unless the local jurisdiction: (i) Authorizes the removal of more than 30 percent by the granting of a variance; or (ii) Adopts procedures for the removal of more than 30 percent of a

	forest or developed woodland and the Commission has approved those procedures as part of a local program; and (e) If a developer is authorized to clear any percentage of forest or developed woodlands from forest use under §C(3) of this regulation, the remaining percentage shall be maintained through recorded, restrictive covenants or similar instruments. (4) In addition, local jurisdictions shall adhere to the following criteria for forest and woodland development: (a) Local programs shall make provision for surety to be provided by owners or developers in an amount acceptable to the local jurisdiction and suitable to assure satisfactory replacement as required by §C(3) of this regulation; (b) Local permits shall be required before forest or developed woodland is cleared; (c) Forests and developed woodlands which have been cleared before obtaining a local permit, or that exceed the maximum clearing allowed in §C(3) of this regulation shall be replanted at three times the areal extent of the cleared forest and developed woodlands; (d) If the areal extent of the site limits the application of §C(3) and (4)(c) of this regulation, alternative provisions or reforestation guidelines may be developed by the local jurisdiction, if they are consistent with the intent of COMAR 27.01.05, to conserve the forest and developed woodland resources of the Critical Area; alternative provisions may include fees-in-lieu provisions if the fee is adequate to ensure the restoration or establishment of an

	equivalent forest or developed woodland area; (e) If no forest is established on proposed development sites, these sites shall be planted to provide a forest or developed woodland cover of at least 15 percent; (f) All forests designated on development plans shall be maintained to the extent practicable, through conservation easements, restrictive covenants, or other protective instruments; (g) The developer shall designate, subject to the approval of the local jurisdiction, a new forest area on a part of the site not forested; and (h) The afforested area shall be maintained as forest cover through easements, restrictive covenants, or other protective instruments. (5) Development on slopes equal to or greater than 15 percent, as measured before development, shall be prohibited unless the project is the only effective way to maintain or improve the stability of the slope and is consistent with the policies in §B of this regulation. (6) A local jurisdiction shall limit lot coverage on a parcel in accordance with the following maximums: (a) When a site is mapped entirely as a limited development area, 15 percent of the total site; (b) When a portion of a lot or parcel is mapped as a limited development area, 15 percent of that portion of the lot or parcel; and (c) In the case of a growth allocation award: (i) 15 percent of the growth allocation development envelope; or

	(ii) 15 percent of the acreage proposed for growth allocation deduction. (7) Local jurisdictions shall allow for modifications in road standards to reduce potential impact to the site and Critical Area resources, where the reduced standards do not significantly affect safety. (8) Development may be allowed on soils having development constraints if it includes mitigation measures that adequately address the identified constraints and that will not have significant adverse impacts on water quality or plant, fish, or wildlife habitat.
D. In developing their Critical Area programs, local jurisdictions shall use the following criteria for intensely developed areas: (1) Local jurisdictions shall develop a strategy to reduce the impacts on water quality that are generated by existing development. This shall include an assessment of water quality and impacts to biological resources prompted by community redevelopment plans and programs and may further include a public education program, the implementation of urban best management practices, and the use of such techniques as are outlined in §D(9)(a), below. (2) Development and redevelopment shall be subject to the habitat protection area criteria prescribed in COMAR 27.01.09. (3) Stormwater. (a) The local jurisdiction shall require, at the time of development or redevelopment, technologies as required by applicable State and local ordinances to minimize adverse	D. In developing their Critical Area programs, the local jurisdictions shall refer to all of the following complementary existing State laws and regulations: (1) For soil erosion and sediment control, management measures shall be consistent with the requirements of Environment Article, §§4-101—4-116, Annotated Code of Maryland, and COMAR 26.17.01; and (2) For stormwater runoff, stormwater management measures shall be consistent with the requirements of Environment Article, §§4-201—4-215, Annotated Code of Maryland, and COMAR 26.17.02.

impacts to water quality caused by stormwater. (b) In the case of redevelopment, if these technologies do not reduce pollutant loadings by at least 10 percent below the level of pollution on the site prior to redevelopment, then offsets shall be provided. (c) In the case of new development, offsets as determined by the local jurisdiction shall be used if they reduce pollutant loadings by at least 10 percent of the predevelopment levels. (d) Offsets may be provided either on or off site, provided that water quality benefits are equivalent, that their benefits are obtained within the same watershed, and that the benefits can be determined through the use of modeling, monitoring, or other computation of mitigation measures. (4) Areas of public access to the shoreline, such as foot paths, scenic drives, and other public recreational facilities, should be maintained and, if possible, encouraged to be established within intensely developed areas. (5) Ports and industries which use water for transportation and derive economic benefits from shore access, shall be located near existing port facilities. Local jurisdictions may identify other sites for planned future port facility development and use if this use will provide significant economic benefit to the State or local jurisdiction and is consistent with the provisions of COMAR 27.01.03.03—.05 and 27.01.09, and other State and federal regulations. (6) Local jurisdictions shall be encouraged to establish, with assistance from the State, programs for the enhancement of biological resources within the Critical Area for	

their positive effects on water quality and urban wildlife habitat. These programs may include urban forestry, landscaping, gardens, wetland, and aquatic habitat restoration elements. (7) When the cutting or clearing of trees in forests and developed woodland areas is associated with current or planned development activities, the following shall be required: (a) Establishment of programs for the enhancement of forest and developed woodland resources such as programs for urban forestry (for example, street tree plantings, gardens, landscaping, open land buffer plantings); (b) Establishment by regulation that development activities shall be designed and implemented to minimize destruction of forest and woodland vegetation; and (c) Protection for existing forests and developed woodlands identified as habitat protection areas in COMAR 27.01.09.	

CHESAPEAKE BEACH PLANNING AND ZONING COMMISSION
RULES OF PROCEDURE
(Adopted <month, day, year>)

SECTION 1 – PURPOSE

The purpose of these rules is to establish procedures for the conduct of all matters which come before the Chesapeake Beach Planning and Zoning Commission (hereinafter referred to as the "Planning Commission"), by law or custom. These Rules of Procedure are in addition to and supplement any requirements of the Zoning Ordinance for the Town of Chesapeake Beach in Calvert County, Maryland (the "Zoning Ordinance"), the Land Use Article of the Annotated Code of Maryland and the State of Maryland Open Meetings Act. The Commission, by resolution, may adopt policies to implement these Rules of Procedure.

SECTION 2 – ORGANIZATION

A. Membership

In accordance with Chapter 290 (Zoning), 290-31 (Planning Commission) Subsection (C) The Planning Commission shall consist of seven members, the majority of whom are residents, appointed by the Mayor and confirmed by the Town Council for five-year terms, and terms of appointment shall be staggered. Any vacancy in membership for an unexpired term shall be filled by appointment by the Mayor and approved by the Council.

B. Officers

In accordance with Chapter 290 (Zoning), § 290-31 (Planning Commission), Subsection (D)(1) of the Code of the Town of Chesapeake Beach, the Planning Commission shall elect a Chair from its membership. The election shall occur annually at the first meeting of the Planning Commission **every** calendar year. **The Chair shall serve a term of one year, or until the Chair ceases to be a member of the Planning Commission, whichever comes first.** The Chair shall preside at all hearings and meetings of the Planning Commission. The Chair shall decide all points of order, objections and procedure, subject to these rules, unless otherwise directed by a majority of the Planning Commission members present. In addition to a Chair, the Planning Commission **simultaneously** shall elect a Vice-Chair who shall preside over the Planning Commission in the Chair's absence. The Vice-Chair shall succeed the Chair if that office is vacated before the term is completed and shall serve the unexpired term of the vacated office. A new Vice-Chair shall be elected at the next regularly scheduled meeting **after the Vice-Chair assumes the office of the Chair, and at such other time as the office of the chair is vacated.**

C. Secretary

The Town Clerk for the Town of Chesapeake Beach shall serve as the Secretary to the Planning Commission. The Secretary to the Planning Commission shall perform official duties assigned by these Rules or the Planning Commission. The Secretary shall prepare the agenda which shall be approved by the Chair. The Secretary is the contact person for all normal communications between Planning Commission members, applicants, staff and the public.

D. Removal of Members

Any appointed member may be removed, after a public hearing, by the Town Council.

SECTION 3 – APPLICATIONS

All applications shall be filed on forms approved by the Planning Commission and shall be accompanied by the filing fee established by the Town. Applications must be signed by the applicant and contain all requested information, or in the absence of such information an explanation shall be provided as to why the information is not provided. Applications failing to comply with this requirement shall be deemed incomplete, will not be accepted for filing and will be returned to the applicant with a statement of the required information that is missing or incomplete.

Commented [1]: This is from Board of Appeals, not sure if you all need it.

SECTION 7 – FILING AND SERVICE

Applications, notices, statements, exhibits, and other papers (collectively referred to as "documents") filed with the Planning Commission shall be filed with the Secretary to the Planning Commission. The Applicant shall provide the number of copies required by the Planning Commission. Copies of all exhibits offered or accepted into evidence at any hearing shall be provided to and served upon all other parties. The original of all exhibits shall be given to the Secretary, with a copy to each Planning Commission member and the Planning Commission's staff. In addition one copy of each exhibit shall be served upon each party of record.

Commented [2]: This is from Board of Appeals, not sure if you all need it.

SECTION 4 - NOTICE

Notice of all meetings of the Planning Commission shall be made as prescribed by the Zoning Ordinance. Notification shall follow the procedures outlined in § 290-32(D) of the Town Code.

SECTION 5 – QUORUM

A majority of the voting members of the Planning Commission shall constitute a quorum for voting purposes.

SECTION 6 – OPEN MEETINGS

All hearings and meetings of the Planning Commission shall be open to the public in accordance with the Maryland Open Meetings Act (Md. Code Ann., Gen. Prov. § 3-101, et seq.), as the same is amended from time to time. The Planning Commission may meet in closed session as authorized by the Maryland Open Meetings Act.

SECTION 8 – RECORD OF PROCEEDINGS

It shall be the duty of the Secretary to keep a true and accurate record of all proceedings at all meetings. Meetings shall be electronically recorded. A video or tape recording may be accepted as the official record. Recordings shall not be transcribed except at the request and expense of the person making the request. A request for a transcript must be in writing, addressed to the Secretary to the Planning Commission and be accompanied by a sufficient deposit as determined by the

Town.

SECTION 9 - ORDER OF BUSINESS

All meetings of the Planning Commission shall be open to the public. Promptly at the hour set on the day of each meeting, the business of the Planning Commission shall be taken up for consideration and disposition in the following order:

1. Approval of Agenda
2. Approval of Minutes
3. Other Administrative Items
4. Public Comment related to Agenda Items
5. Business Items
6. Commissioner Comment
7. Adjournment

SECTION 10 – INFORMATION FROM THE PUBLIC

A. The Chair may prescribe procedures for registration of speakers and may require that each person come forth and state the following information:

(1) name;
(2) address; and
(3) person or individual he/she represents, or that he/she is speaking as an individual.

The Chair may announce reasonable registration requirements for speakers so that all may have an opportunity to be heard. The Chair shall provide for the orderly conduct of hearings and may request the assistance of appropriate authorities to maintain order.

B. The following guidelines shall be observed for citizen participation:

Guidelines for Citizen Participation

(1) All statements or questions must be addressed to the Chair.
(2) Speakers will generally be called in the order appearing on the sign-up sheet.
(3) Members of the Planning Commission may address questions to each speaker.
(4) Persons whose names do not appear on the sign-up sheet when discussion on an item commences may be permitted to add their names during the course of the public hearing at the discretion of the Chair.

(5) Speakers and members of the audience shall maintain proper decorum. The Chair may request disruptive individuals to leave the hearing or meeting, and may have any disruptive individual who continues to interfere with the proceedings removed.

SECTION 11 – RULES OF ORDER

The rules of parliamentary practice and procedure as set forth in the latest published edition of Robert's Rules of Order shall govern the Planning Commission in all cases not otherwise provided for in these Rules of Procedure or the Zoning Ordinance. The conduct of meetings shall conform to these Rules of Procedure and the Charter and Ordinances of the Town.

1. Members of the Planning Commission or staff shall be recognized by the Chair before they have the floor to speak.
2. Members of the Planning Commission or staff shall follow standards of courtesy and decorum during meetings.
3. Discussion should be relevant to the agenda item the Planning Commission is discussing. If discussion has strayed from the agenda topic at hand any member of the Planning Commission may request a "call for orders of the day", and the Chair shall bring the discussion back to the agenda item.

SECTION 12 – RESCHEDULED OR CANCELED MEETING (Amended April 10, 2018)

The Chair, in consultation with other available members of the Planning Commission, may cancel or reschedule a meeting of the Planning Commission due to inclement weather, lack of business of the Planning Commission, lack of a quorum of the Planning Commission, or convenience of the Planning Commission or Town staff.

SECTION 13 – MINUTES

The Planning Commission shall have written minutes prepared to reflect each item that the Planning Commission considered, the action that the Planning Commission took on each item, and each vote that was recorded. If a member is absent or fails to vote, such fact should be recorded as well. Minutes shall be kept by the Secretary and shall also identify the date, time and place of the meeting and contain a record of attendance. Minutes shall be prepared as soon as practicable, but in all cases prior to the next scheduled hearing at which the minutes shall be placed on the Planning Commission's agenda for approval. Once approved, the minutes shall be placed in a record book for filing and shall be considered a matter of public record and shall be made available for inspection during regular business hours.

If the Planning Commission meets in closed session, the minutes for its next open session shall include (i) a statement of the time, place and purpose of the closed session; (ii) a record of the vote of each member as to closing the session; (iii) a citation of the authority under the Maryland Open Meetings Act for closing the session; and (iv) a listing of the topics of discussion, persons present, and each action taken during the session. Any minutes and any tape recording of a closed session shall be sealed and may not be open to public inspection, except as provided for in State law.

SECTION 14 – RECORDING OF PUBLIC HEARINGS AND MEETINGS

Persons desiring to videotape, televise, photograph, broadcast, or record a hearing or meeting of the Planning Commission shall submit a written request to the Secretary to the Planning

Commission at least five (5) days prior to the date of the hearing or meeting. Any such activity may be permitted only with the prior written consent of the Planning Commission.

SECTION 15 – CONFLICT

In the event that any of the provisions of these Rules of Procedure contradict or conflict with any provision of the Zoning Ordinance, said provisions shall be of no force and effect and the provisions of the Zoning Ordinance shall govern.

MEMO

To: Town of Chesapeake Beach Planning and Zoning Commission
From: Sarah Franklin, Town Planner
CC: Holly Whal, Town Manager
Date: 10/17/2023
Regarding: Fee-in-lieu & Mitigation fees in Critical Area Regulations

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Fees-in-lieu are fees collected by the Town from a site developer in the case that the property owner is unable to meet the requirements of the Critical Area Ordinance on the development site. While in some areas, fee-in-lieu may be used readily, the Town of Chesapeake Beach has no precedent of agreeing to fees-in-lieu with regard to Critical Area regulations. The Town has actively worked to ensure that on-site stormwater management and plantings are the standard for all development.

While fee-in-lieu has not been used in the past, it is possible it would be necessary in the future. In a case that fee-in-lieu were used after all other avenues are exhausted, the fees would be collected and then applied to offsets on public property.

The current rates for fee-in-lieu are:

- $1.25/sf for private development projects
- $2.50/sf for public sector development projects

The zoning ordinance recommends a review and recalculation of these fees to ensure they are adequate. Fee-in-lieu can be set at a rate that incentivises innovative stormwater management activities while allowing a solution that benefits the Town when these practices are not possible.