



COMPREHENSIVE PLAN

2021 UPDATE



Approved by the Town of Chesapeake Beach Planning and Zoning Commission: 11/09/2021

Adopted by the Town Council of the Town of Chesapeake Beach: 04/21/2022

#O-22-4

Passed: 4-21-22

Effective: 5-11-22

**AN ORDINANCE
OF THE TOWN COUNCIL OF CHESAPEAKE BEACH, MARYLAND,
FOR THE ADOPTION OF THE TOWN OF CHESAPEAKE BEACH
COMPREHENSIVE PLAN FOR LAND USE ISSUES**

WHEREAS: The Town Council of the Town of Chesapeake Beach is responsible for matters relating to the orderly growth of the Town of Chesapeake Beach.” Town of Chesapeake Beach, MD Code (hereinafter Code) § 290-31(A) Purpose; and

WHEREAS: The Planning Commission “shall prepare and recommend a Comprehensive Plan for the Town of Chesapeake Beach, and review and update said plan at least once every six years.” Code § 290-31(A)(1); and

WHEREAS: The Town’s Comprehensive Plan 2010 Update was adopted on January 20, 2011 and must be reviewed every 10 years. Md. LAND USE Code Ann. § 3-303(a) Required review; and

WHEREAS: Adoption of zoning laws, planned development ordinances and regulations, subdivision ordinances and regulations and other land use ordinances and regulations shall be consistent with the Comprehensive Plan. Md. LAND USE Code Ann. § 3-303(b) Implementation. review; and

WHEREAS: The Planning Commission began the process of updating the Comprehensive Plan by holding Town Workshops on September 12 and 18, 2018, during which five themes emerged, one of which is “Preserving and Enhancing our Small-Town Charm.”
https://www.chesapeakebeachmd.gov/sites/g/files/vyhl142611/uploads/vision_2040.pdf; and

WHEREAS: The direction provided by the workshops, and subsequent work on the update to the Comprehensive Plan, require a rewrite of the previous, Comprehensive Plan 2010 Update; and

WHEREAS: While updating and rewriting the Town Comprehensive Plan, the Planning Commission must also complete its routine workload; and

WHEREAS: The Planning Commission, after extensive study and deliberation in open meetings and work sessions, has prepared and recommended a Comprehensive Plan and implementing ordinances that will address the significant foreseeable challenges the community is and will face, including among others:

- (A) Rising groundwater tables, storm damage potential, increases in the projected depth and extent of flooding and storm surge, and the threat to public and private infrastructure and buildings related to rising water levels in the Chesapeake Bay,
- (B) The instability and potential erodibility of steep slopes, shorelines, and lands “made” through the historic reclamation of marshes and the irreparable loss of scenic natural beauty caused by the clearing of forests and poorly planned development,
- (C) Proposals for construction of large and tall buildings that would degrade the Town’s scenic vistas and the view of the water which are vital to the aesthetic and cultural values of Chesapeake Beach and antithetical to the public’s desire to “Preserve and Enhance our Small-Town Charm.,”
- (D) The paucity of vacant or undeveloped property to address the existing deficit in neighborhood park space,

#O-22-4

Passed:

Effective:

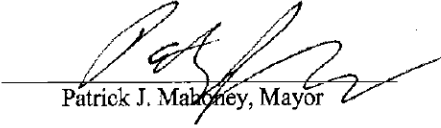
- (E) The adoption of new standards to guide the design of future buildings and building sites into ways that preserve the character of the Town;
- (F) The safety and convenience of walking in Town generally and along MD Route 260, within the areas zoned for commercial development where the calming of traffic speeds is insufficient, and the quality of the pedestrian environment is poor; and
- (G) Recent completion of an ongoing development of large-scale residential neighborhoods over the past 10 years with traffic implications that have not yet been assessed and similar issues facing the Town.

WHEREAS: The Planning and Zoning Commission prepared the Comprehensive Plan, held a public hearing on the Plan on November 9, 2021, and unanimously approved a resolution recommending the adoption of the Plan by the Mayor and Town Council on January 26, 2022; and

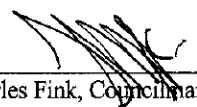
THEREFORE, BE IT RESOLVED THAT:

The Comprehensive Plan for the Town of Chesapeake Beach, as revised and attached, is hereby adopted.

Approved on April 21, 2022

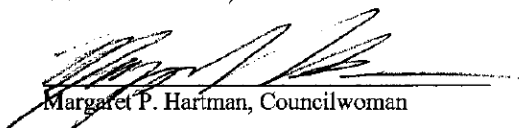

Patrick J. Mahoney, Mayor



Lawrence P. Jaworski, Council Vice-President


L. Charles Fink, Councilman


Valerie L. Beaudin, Councilwoman


Gregory J. Morris, Councilman


Margaret P. Hartman, Councilwoman


Keith L. Pardieck, Councilman

Resolution

Town of Chesapeake Beach Planning and Zoning Commission Approving the Comprehensive Plan

WHEREAS: it is the duty of the Planning and Zoning Commission, pursuant to the Land Use Article of the Annotated Code of Maryland, to make and approve a plan to guide the physical development of the Town; and

WHEREAS: the Planning and Zoning Commission has now prepared a new comprehensive plan to update the current plan, which was adopted by the Mayor and Town Council on January 20, 2011; and

WHEREAS: the work of the Planning and Zoning Commission in preparing the new plan has included:

1. The collection and analyses of information on demographics, land use, infrastructure, environment, water resources, and other aspects of the Town and its surroundings,
2. A forecast of growth and change,
3. The formulation of planning objectives and desired characteristics for future development,
4. The design of recommendations and policies to guide development and conservation and the provision of public facilities, and
5. The design of recommendations to guide implementation; and

WHEREAS: the Planning Commission conducted a public hearing on the draft Plan on November 9, 2021, and over the course of several subsequent meetings considered the comments from Chesapeake Beach citizens, local businesses, and including written comments from the Maryland Department of Planning and the Calvert County Department of Planning and Zoning, and deliberated on revisions to the draft Plan in response to those comments; and

WHEREAS: the Plan and its supporting findings and recommendations are set forth in text, maps, charts, and figures in a report entitled Comprehensive Plan: 2021 Update; and

WHEREAS: the Planning and Zoning Commission considers the plan to be a necessary guide to the future development of the Town of Chesapeake Beach.

NOW, THEREFORE, BE IT HEREBY RESOLVED, that the Planning and Zoning Commission on this day, January 26, 2022, hereby adopts the Chesapeake Beach Comprehensive Plan: 2021 Update and recommends the Plan to the Mayor and Town Council for adoption; and

BE IT FURTHER RESOLVED that the Clerk to the Planning and Zoning Commission hereby transmits a signed copy of this resolution to the Mayor and the Chesapeake Beach Town Council.



Larga Brown
Chair, Planning and Zoning Commission

Approved on January 26, 2022

Mayor and Town Council

Pat "Irish" Mahoney, Mayor

Valerie Beaudin

Larry Jaworski, CC-P

Greg Morris

Keith Pardieck

L. Charles Fink

Margaret (Peggy) Hartman

The Planning and Zoning Commission

Larry Brown, Chairman

Kathleen Berault

Laura Blackwelder

Cindy Greengold

Jeff Larsen

Jan Ruttkay

Holly Kamm Wahl, MBA, Town Administrator

Sharon Humm, Clerk to the Planning and Zoning Commission

Christopher N. Jakubiak, AICP, Town Planning and Zoning Administrator

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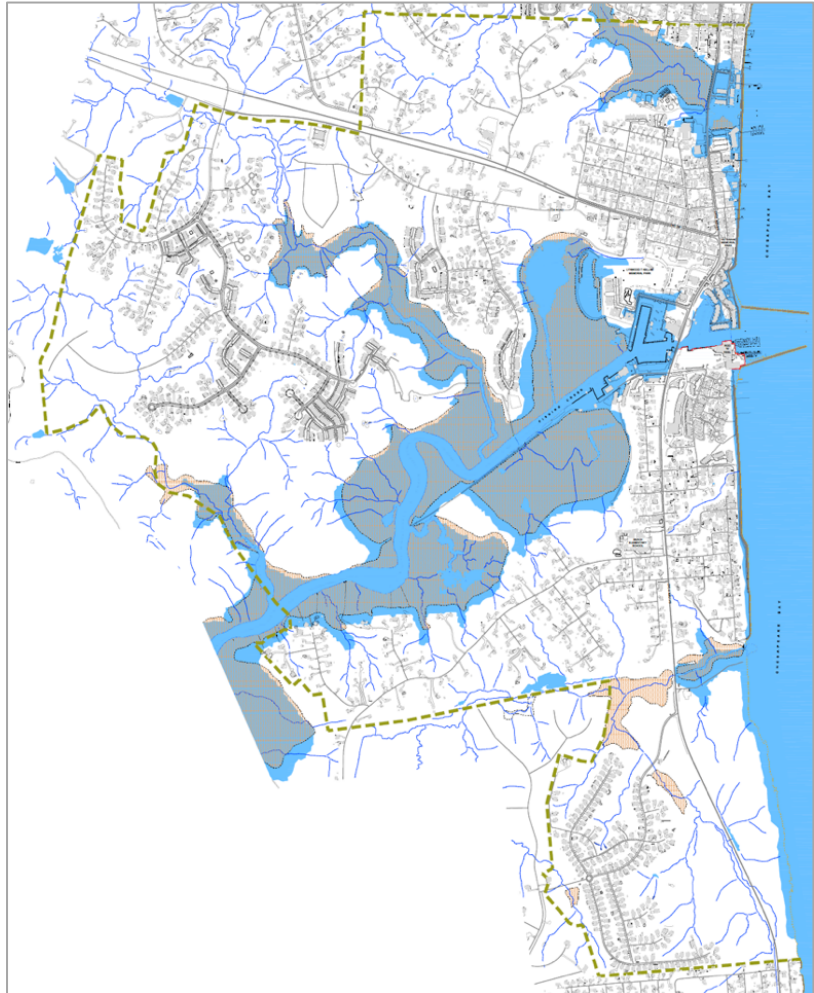
Appendix A	Comprehensive Plan, Summary of Progress on Recommended Policies and Actions
Appendix B	Sea Level Rise Projections, 2100 Mapping
Appendix C	Connectivity Study, February 2021
Appendix D	Copy of the Protective Covenant and Agreement, Richfield Station FIDS Habit

I. Introduction

Purpose

This Plan springs from our profound affection for Chesapeake Beach and our determination to take up the pressing needs of today and perfect the conditions for the future. The Plan's purpose is to bring about the careful development of our community and the conservation of what we find most exceptional about it. Upon its adoption, this Plan will guide public and private decisions on the use of land, protection of the environment, improvement of infrastructure, and other matters related to growth and development through the year 2040.

And so, with this document, we record conditions as they are today, explore how these conditions may be improved, take note of what the future may hold, assemble findings and projections into maps and drawings, and recommend policies that will guide Chesapeake Beach toward a healthy, balanced, and harmonious development over the next 20 years.



MAP 1

Appraisal of the Current Plan

The current comprehensive plan was adopted in 2002 and then revised and updated in 2010 mainly to incorporate Municipal Growth and Water Resource elements required by Maryland statutes adopted in 2006. The 2002 Plan established the principles, objectives and policies that have shaped development and conservation for the past nearly 20 years.

We have read and evaluated the 2002 plan and find much in it to recommend for the next 20 years. In fact, it is our view that the essential aim of our long-range planning is to refine and detail that plan, to advance many of its primary recommendations to 2040 and to apply many of its principles and objectives to the challenges we expect to face in the coming years. Appendix A is an evaluation of the implementation status of the 2002 plan.

Public Engagement

Seeking community input, the Planning Commission conducted multiple public workshops beginning in Fall 2018. Our aim in the initial workshops was to collect advice and opinions and synthesize them into a guiding statement about the Town's future; a vision of Chesapeake Beach in the year 2040. Then through the winter of 2019, we held working sessions to reflect on what was learned and to draw nearer to a broad vision that could sum up the insights and ideas that would ultimately shape this Plan. We also oversaw a survey of Town residents, which confirmed for us that we were on the right track in crafting the Plan's then emerging vision and the five themes that would later animate our master planning. These are described in the next section.

Through the Summer of 2021 the Commission conducted additional work sessions as the draft plan came together. The Planning Commission's public hearing was held on November 9, 2021, and then on January 26, 2022, the Commission voted unanimously to approve a resolution transmitting it to the Mayor and Town Council with a recommendation for adoption.

Maryland's Guiding Visions for Town Planning

The Town's authority to regulate land use and impose conditions on development is derived from Maryland's constitution and statutes¹. The State's guiding visions for comprehensive plans summarize the minimum criteria by which any comprehensive plan in the State is judged to be valid. It is these criteria that explain why no town, city, or county ought to allow haphazard development, or disregard planning for infrastructure, or neglect economic development and the need for housing to serve citizens of all incomes levels and ages. Local governments that regulate land use development are required by Maryland law to adopt comprehensive plans that align with the following 12 Visions:

1. A high quality of life is achieved through universal stewardship of the land, water, and air resulting in sustainable communities and protection of the environment.
2. Citizens are active partners in planning and implementing community initiatives and are sensitive to their responsibilities in achieving community goals.
3. Growth is concentrated in existing population and business centers, growth areas adjacent to these centers, or strategically selected new centers.
4. Compact, mixed use, walkable design consistent with existing community character and located near available or planned transit options is encouraged to ensure efficient use of land and transportation resources and preservation and enhancement of natural systems, open spaces, recreational areas, and historical, cultural, and archeological resources.
5. Growth areas have the water resources and infrastructure to accommodate population and business expansion in an orderly, efficient, and environmentally sustainable manner.
6. A well-maintained multimodal transportation system facilitates the safe, convenient, affordable, and efficient movement of people, goods, and services within and between population and business centers.
7. A range of housing densities, types, and sizes provides residential options for citizens of all ages and incomes.

¹ Maryland planning statutes are set forth in the Land Use Article of the Annotated Code of Maryland.

8. Economic development and natural resource-based businesses that promote employment opportunities for all income levels within the capacity of the State's natural resources, public services, and public facilities are encouraged.
9. Land and water resources, including the Chesapeake and coastal bays, are carefully managed to restore and maintain healthy air and water, natural systems and living resources.
10. Waterways, forests, agricultural areas, open space, natural systems, and scenic area are conserved.
11. Government, business entities, and residents are responsible for the creation of sustainable communities by collaborating to balance efficient growth with resource protection.
12. Strategies, policies, programs, and funding for growth and development, resource conservation, infrastructure and transportation are integrated across the local, regional, state, and interstate levels to achieve these Visions.

Chesapeake Beach 2040 Vision Statement

While the above visions outline the essential focus that is shared by all jurisdictions in Maryland, it is a community's own vision that gives life and special meaning to its comprehensive planning. A vision is future oriented. It explains why one town's plan is, at its heart, different than all others. A town's vision is a marker in time against which each succeeding generation can compare its experience. The vision statement below, that emerged from the public engagement process, was written from the perspective of 20 years in the future. It is as follows:

In 2040, Chesapeake Beach is a growing and economically vibrant and healthy town with a compact arrangement of housing, businesses, institutions, and green open spaces that honor the Town's historic development while broadening citizen connection with and access to the scenic and recreational attributes that Chesapeake Beach is endowed with by virtue of its unique geography and natural setting.

In embracing limited residential growth and focusing on steadily developing recreational and commercial amenities, we have guided residential and commercial development into ways that enriched the lives and experiences of Town residents and visitors. For example, we've achieved physical changes like a new town center, improved recreational amenities at Kellam's Field, a safer road system, walking and bike paths, enhanced water access, open spaces, and parks. This in turn has encouraged the formation of new businesses, broadened our tax base, and promoted walking, biking, outdoor sporting events, social offerings, and the continuation of popular community wide celebrations.

The Town has become resilient to ongoing sea level rise and the storm surges associated with hurricanes by thoughtfully designing and implementing land use, landscape, engineering, and open space strategies. We continued the Town's long tradition of improving water quality in Fishing Creek and the Chesapeake Bay and enhancing childhood education through interaction with the natural world around us and our waterfront heritage.

We became early adopters of technological changes that have made our streets safer, our town center more vibrant, our local environment healthier, and our town government more effective and responsive. We have created and enforced codes and development standards to improve the conditions of growth. We've improved the quality of life in neighborhoods by upgrading infrastructure, beautifying streetscapes, improving drainage, and making parks and open spaces more attractive and accessible to all.

Themes

We organized the community input we received under five guiding themes, which we returned to again and again to confirm and validate our work. They are written here as a record of what we learned at the public workshops, our work sessions, and our survey of residents. Not everything we recorded below was studied to understand its feasibility or even its desirability. The descriptions below are not the goals or recommended actions of this Plan; they are instead a recording of the ideas and insights that have helped shape this Plan.

Develop the Vibrancy of the Town

Participants in the planning process said they wanted to bring about a welcoming, thriving, and creative business community and tourism economy, expand dining and shopping opportunities, cultivate cultural activities and offerings, improve waterfront access, and create recreational options throughout the Town for the young. Ideas emerged about creating a town center and community gathering places, promoting new housing opportunities for residents of all income levels and for seniors and enhancing pedestrian safety, improving streetscapes, and “leveraging” technologies to improve the quality of life in “town centers”, including universal internet and Wi-Fi. Participants said the Town should grow in a steady and controlled manner and the Town should be “open to all ages and income levels”.

Building an Interconnected Town

Perhaps, recognizing the way the Town is fragmented by Fishing Creek and its tidal marshes and the connecting role that past projects like the Boardwalk and the Fishing Creek Railway Trail have played, participants stressed a desire to continue connecting communities and promoting “cohesive” development. Participants cited the need for bikeways and sidewalks, expanding trails, and creating or “expanding on the concept of a town center” and/or a “main street”.

Preserving and Enhancing our Small-Town Charm

Participants said they wanted to preserve the Town’s historic development as a Chesapeake Bay maritime community. Participants said they would like to preserve the “small town atmosphere”, “small town charm”, “sense of place”, and “promote education and activities that provide future generations a sense of pride for the Town’s past”. They also mentioned improvements that would enhance the Town’s historic character like placing utilities underground and reducing sign clutter.

In Balance with the Environment

Participants said they wanted to keep and expand the open spaces and park like elements of the Town, increase accessibility to nature, protect “open vistas” and “scenic character”, and expand public access to the Bay including from Bayfront Park (Brownie’s Beach) south to Randle Cliffs. They also want to safeguard the Town from the increasing threat of flooding and erosion, restore streams, improve, and maintain the quality of the Bay and its aquatic life, address runoff issues and stabilize the cliffs along the Boardwalk. They mentioned climate change and having “sustainable” development, being “stewards of natural resources” and preventing sewer overflows into the marsh at the Water Reclamation Treatment Plant (WRTP).

Innovative Public Works

The participants contributed ideas about infrastructure and utilities. They said they wanted to see wind and solar innovations in energy, elimination of the clutter of overhead wires, the extension of sewer service to areas of the Town now unserved, new sidewalks and improved crosswalks, emergency planning, a water taxi service, and the creation of more public parking and bus services. Improved telecommunications and faster internet services were also stressed.

Organization of the Plan

Following the next chapter about the population of Chesapeake Beach, this Plan is organized into five interrelated chapters each focusing on a major functional or policy area: Municipal Growth, Natural Environment, Land Use, Housing, Transportation and Circulation, Community Facilities, and Water Resources. Each chapter contains a description of existing conditions, objectives, and the Plan’s recommendations. The last chapter focuses on Implementation, including a section concerning recommended amendments to the Zoning Ordinance.

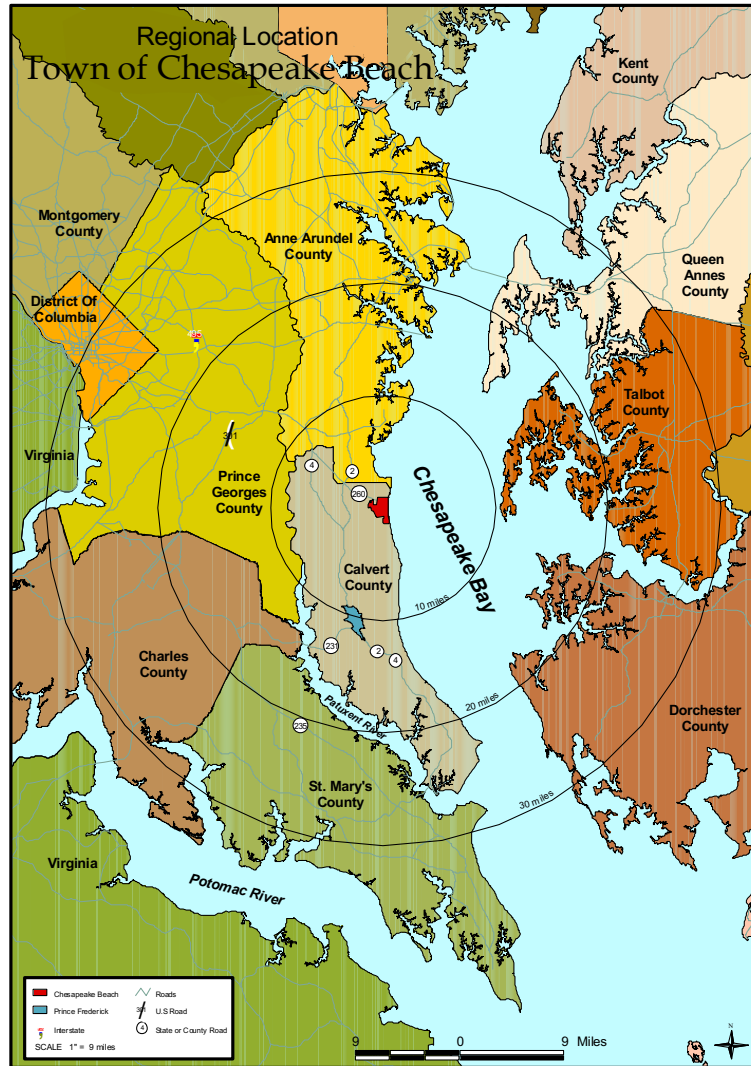
In conclusion, we understand that the Comprehensive Plan described in this report will not be realized in the short term or exactly as conceptualized. Our aim here is to anticipate the needs of the future and encourage growth, development, and conservation toward the greatest good possible. Departures from this Plan may, from time to time, be suggested; future information and a wider knowledge may point to better solutions or unforeseen opportunities. It is our intention that such departures be studied and if found justified considering the Plan’s goals, they be accepted by amending this Plan in the same way it was adopted.

II. The Town's Population

Location

The Town of Chesapeake Beach is on the eastern edge of the Washington Metropolitan Area, an urbanized region encompassing 6.3 million people². The Town lies 30 miles east of Washington, DC and is connected to the Nation's capital via MD Routes 260 and 4.

The Town is one of only two municipalities in Calvert County which is one of the oldest counties in the United States having been established in 1654. The County's population is estimated to be 93,072, and the Town's share of that population is 6.5%. In the northeastern corner of the Calvert County peninsula, the Town is a coastal community on the Chesapeake Bay, 20 miles south of the Maryland capital, Annapolis. Chesapeake Beach adjoins the Town of North Beach and together the coastal "twin beaches", plus the unincorporated community of Summer City, and their immediate environs, encompass a population of about 8,900 residents and 3,500 households.

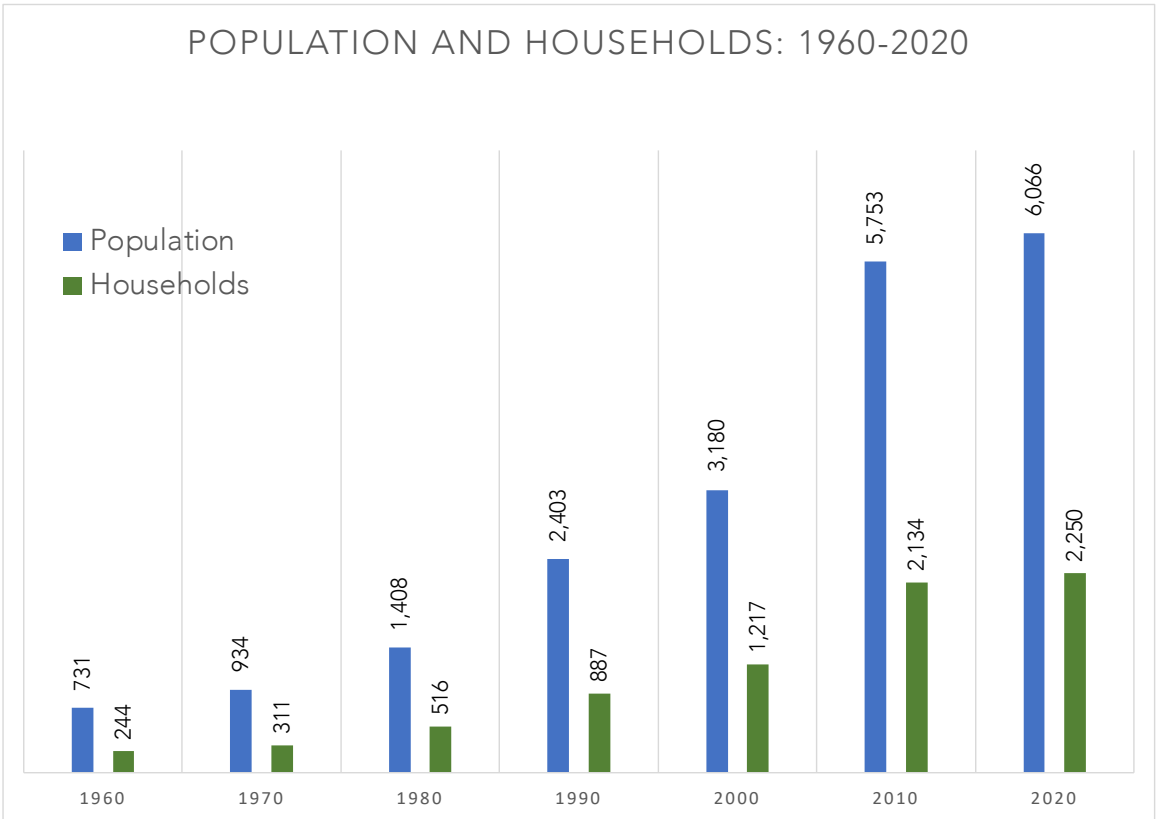


² Officially established by the U.S. Census Bureau as the Metropolitan Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area.

Demographics³

Population and Households

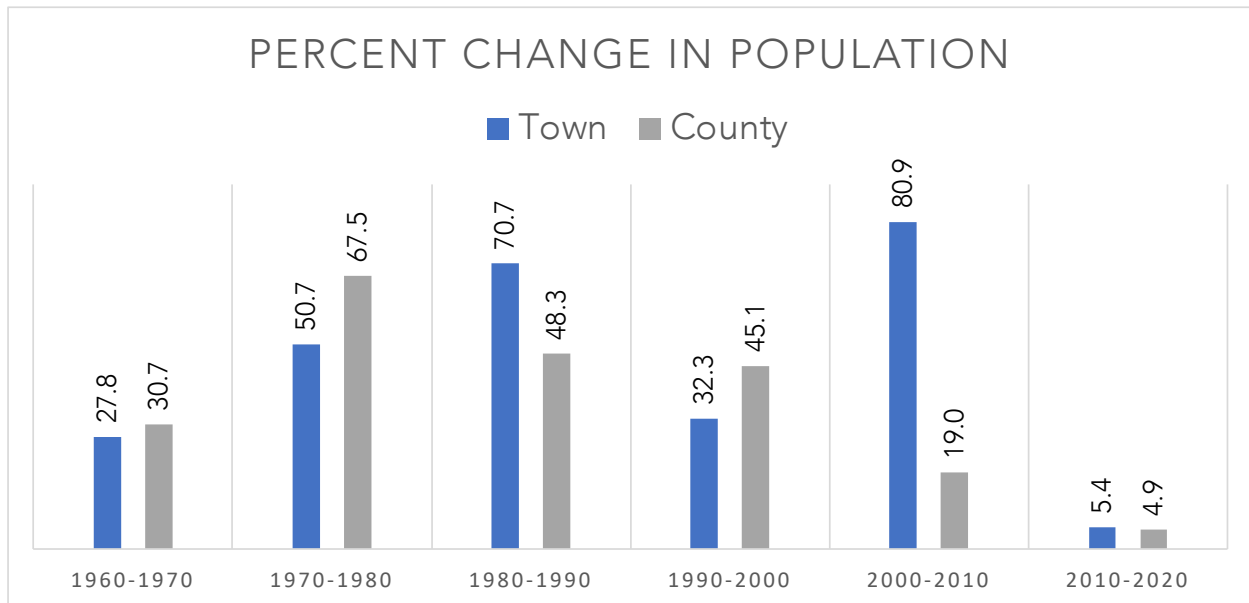
Decade by decade, between 1960 and 2000, Chesapeake Beach gained residents in a steady way, but between 2000 and 2010, the population surged. The Town grew at an unprecedented average annual rate of 6.2% and added 2,573 residents. Following this surge, growth stalled and between 2010 and 2020, 313 residents were added; representing only one-eighth of the total added a decade earlier. The 2020 U.S. Census estimated population is 6,066.



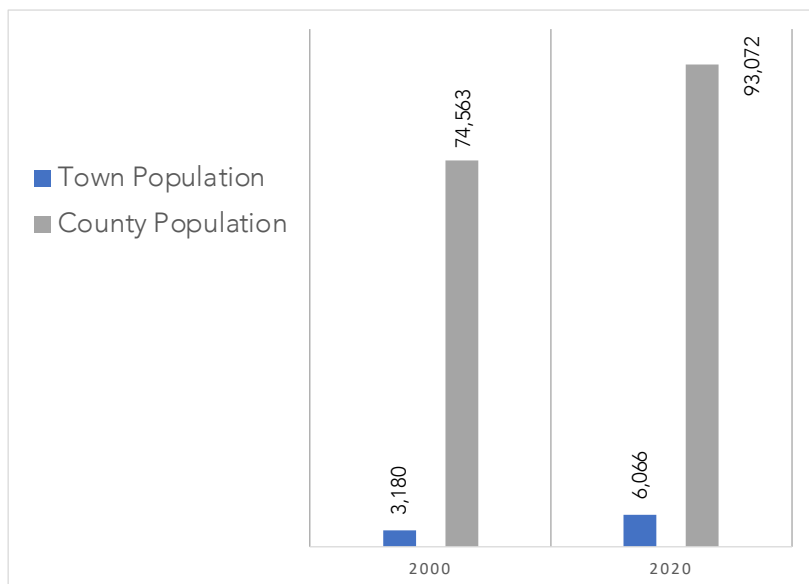
As shown in the chart above, population and household formation has grown in tandem. A household is an occupied dwelling unit (a house, an accessory dwelling within a house, or condominium or apartment). The 2020 estimated number of households is 2,250. The average size of a household has varied little in Chesapeake Beach for decades. Today it stands at 2.7 person per household.

³ At the time of publishing this final report, the U.S. Census had only released population and housing unit estimates at the municipal level from the 2020 decennial census, which are used here.

Here's a look at the Town's population growth relative to Calvert County's growth in 10-year intervals since 1960. The chart shows the decade-to-decade percent population change. Note the decelerating growth trend in the County beginning with the 1990-2000 period. This reflects the impact of the County's land use policies adopted in the late 1990's to slow housing development. Both the Town and County population increased by roughly 5 percent during the last decade, which stands as lowest percent change in modern times.

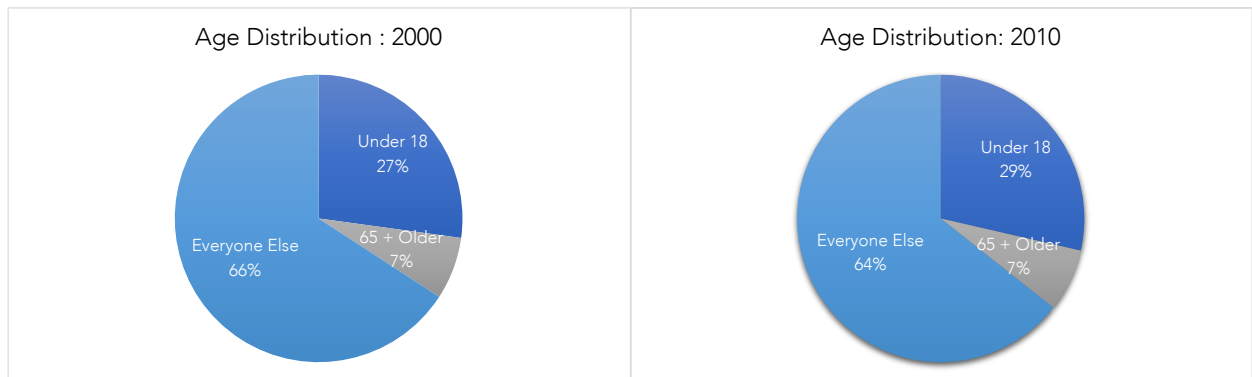


Over the past 20 years, the Town's share of the County population has increased. The chart below shows side by side population totals for 2000 and 2020. Given the County's decelerating growth and the Town's ten-year growth surge (between 2000 and 2010), the Town's share of County population grew from 4.3% in 2000 to approximately 6.5% today.

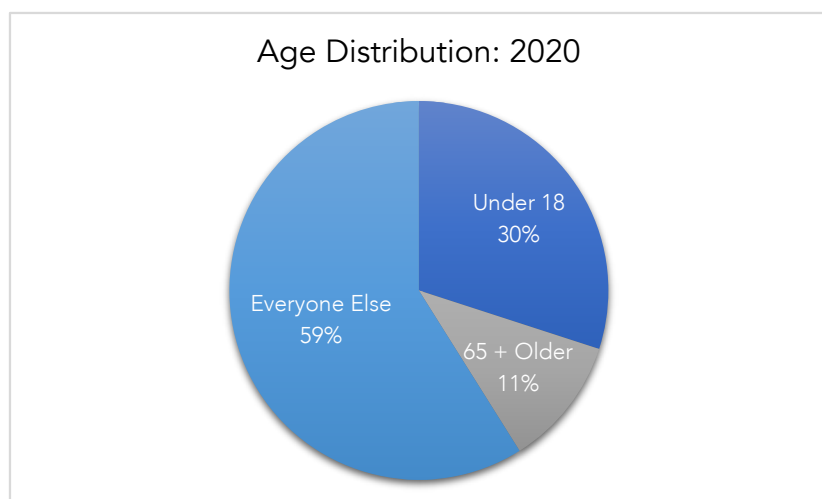


Age

Changes are underway. Between 2000 and 2010, the share of the Town's population under 18 years of age increased two percentage points to 29%, while the share of residents 65 years and older held steady at 7%. The median age also remained relatively unchanged at 36.



But by 2020, a younger overall population has been revealed; with an estimated median age of 34.5 years. The population is now more concentrated in the under 18 and 65 and older age cohorts. Children now comprise 30% of Town's residents and seniors comprise 11%. The Town's population is becoming both more youthful and more senior. Together these cohorts now make up 41% of the population, compared to 34% at the beginning of this decade.



Household Structure and Families

Like population growth and age, the makeup of households is an important indication of community character. Data on household structure from the 2020 Census is not available, so note that the data are nearly 10 years old. As shown in Table 1, as of 2010, 1,520 households, or about 71% of all households, are families--that is, the occupants are related to the householder by birth, marriage, or adoption. (This is unchanged from 2000.) The remaining 29% are non-family. Persons living alone make up nearly 22% of all households, same as in 2000.

TABLE 1

Composition of Housholds: 2010		
Type of Household	#	% of Total Households
Family Households		
Married Couple Families	1097	51.4%
Male Householder, no wife	98	4.6%
Female Householder, no husband	325	15.2%
Subtotal	1520	71.2%
Non-family Households		
Householder Unrelated to Occupants	152	7.1%
Householder Living Alone	462	21.6%
Subtotal	614	28.8%
Total Households	2134	100.0%

By comparison, in Calvert County (not shown above) families make up 77% of households and persons living alone make up 18%. Other findings about the Town's households in 2010:

- 43% of households had children compared to 39% in 2000.
- 15% of households had a person over 65 years of age, about the same as in 2000.
- Average family size remained at 3 persons per family.
- Average household size increased from 2.61 persons per household in 2000 to 2.7.
- 77% of households were owner-occupied and 23% were renter-occupied.

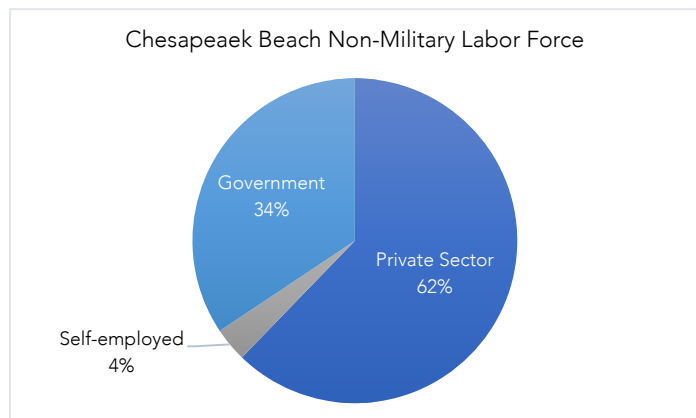
Apart from there being more households with children, there was little change in household structure between 2000 and 2010. As population increased substantially during that decade, the basic household structure held fast. As indicated previously with respect to age, residential development brought about a younger population and more children in more households.

Economic Character and Indicators

Labor Force

The U.S. Census, American Community Survey (ACS) provides current information on the economic character of Chesapeake Beach⁴. Of the Town's population that is 16-years of age and older, 73.5% or 3,252 people are in the labor force, meaning they are employed, or temporarily unemployed. Compared to Calvert County and Maryland, with labor forces of 69.6% and 68.1%, Town residents are more apt to be working productively in the economy. About 1.5% of the Town's labor force is in active military service. The remaining 98.5% is in the civilian or non-military labor force. As show below, about 1/3 are employed by the government.

Relative to Maryland (where 22% of the labor force is employed by the government), the Town's labor force is more weighted toward the public sector. Given the regional prevalence of private contractors to the federal government, it is certain that more than 1/3 of the local labor force is linked to governmental expenditures.



⁴ The U.S. Census, American Community Survey (ACS) is an ongoing accounting of certain demographic and economic data. Because the data are arrived at through statistical methods rather than just direct counts, the Census publishes a percent margin of error for almost every data point. Obviously, where sample sizes are smaller, such as at the town-level, the probability of error is increased. The data used here all have margins of error less than 5% (except as noted or for household income data, where we've included the margin of error in dollar amounts). Comparative conclusions made here are made only after considering the margins of error associated with the data points being compared. Data with margins of error greater than 5% are not presented. The advantage of using the ACS is that the data are more current, and the methods used span multiple years of study which can smooth out year to year deviations. The data presented here on labor force reflects the ACS's aggregation of the years 2013 through 2017.

Household Income⁵

The estimated median household income in Chesapeake Beach is \$104,318 (+/- \$10,083), which is in line with the County (\$109,313 +/- \$ 3,736)⁶. Among all 23 Maryland counties, Calvert County has the third highest median household income. And since the Town's median household income is on par with or just slightly lower than the County's, it is clear the Town's labor force is very highly compensated relative to the rest of the State. In fact, the median household income in Maryland stands at \$86,738(+/- \$934). This reflects a major reversal since 2000, when the Town's median household income amounted to just 64% of the County's and 80% of the State's.

Location of Employment

Regional commuting patterns for Town residents have changed over recent decades. Town workers still commute long distances to work, primary toward Washington, DC with a mean travel time of 42 minutes each way. However, today only about 46% (+/- 6.6) work outside of Calvert County compared to 58% in 2000. Today, 12% of the Town's labor forces works within Town limits.

⁵ Source of data: U.S. Census American Community Survey (ACS), 2015 – 2019.

⁶ The term describes the mathematical value that is positioned in an ordered list of values such that there is an equal number of values above and below it. The median value is used because it eliminates the distorting effects of extreme values in any given data set, as when for instance a small number of very high-income households can lift the average.

III. Municipal Growth

Introduction

Following highly successful endeavors to implement smart growth principals into neighborhood development projects, Chesapeake Beach saw its population double between 2000 and 2010, and then continue to grow through 2020. While the Town has excelled in offering a variety of housing types that can accommodate a diverse range of income levels, municipal infrastructure and commercial amenities needed to serve additional residents was not expanded in a corresponding degree.

Notably, the Town remains deficient by national standards in parkland and open space; the newly built Northern High School, which is the only public high school that serves the community, has already exceeded its capacity; and the Town's only two thoroughfares, MD Routes 260 and 261, require traffic solutions but lack the space needed to expand them in areas. Adding additional pressure to existing infrastructure, an expansive intensification of the Town's landmark commercial property, the Rod-n-Reel Resort, has been approved and is projected for completion in the coming year. With this commercial expansion, Chesapeake Beach's road, parking, and recreational asset capacity will be further burdened, thus heightening the need for walkability, pedestrian safety, and open space infrastructure.

This Plan signals that Chesapeake Beach will be especially intentional and purposeful in its decisions about growth and development over the next 20 years. It is the intent of this Plan that future growth in Chesapeake Beach advance the Town's improvement, progress, and enhancement--that is, its development as a Chesapeake Bay waterfront heritage community and recreation destination. Consistent with the Vision Statement in Chapter I, the completion of the currently approved subdivision projects and very limited infill on vacant parcels will primarily constitute residential growth through 2040.

The chapter explores alternative projections of household growth, evaluates the existing capacity within of the Town for new housing, forecasts household and population levels for the year 2040, assesses the impact of future growth on community facilities and provides recommendations.

Growth: Potential and Planned

Establishing a Baseline for Projections⁷

In town planning, the household is the “demand unit” considered when contemplating change and its impacts. With a reasonably accurate forecast of households, a town can estimate future demand for water and sewerage or future school enrollment.

Zoned Development Capacity

Zoned Development Capacity is the room within town boundaries for new households. A good estimate helps answer questions like: Is there enough buildable land to meet future demands for housing? “Buildable land” refers to land that is undeveloped (or under-developed), unencumbered by serious environmental constraints, and zoned to permit development. Table 2 is a description of the Town’s existing zoning districts and is provided here for context

in explaining the current potential for new household growth. A variety of housing types is permitted, and the greatest density is allowed within the Maritime (M) District. This also is the area with the greatest development potential measured in new housing units.

Recommendations about changing these classifications are set forth in Chapter V, Land Use.

TABLE 2

Zoning Districts that Permit New Housing

District	Description
Residential Low Density (R-LD)	Permits, single-family houses with min. lot size of 10,000 sq. ft. where a public water and sewer connection is available.
Residential Medium Density (R-MD)	Permits single-family houses with min. lot size of 7,500 sq. ft.
Residential High Density (R-HD)	Permits single-family, townhouses, and multi-family at 1 unit per 2,500 sq. ft. (or 17 units/acre). Max height is 50 ft.
Residential Village (R-V)	Permits single-family, townhouses, and multi-family at 1 unit per 6,000 sq. ft. (or 7.25 units/acre).
Commercial (C)	Permits townhouses and multi-family at 1 unit per 3,600 sq. ft. (or 12 units/acre). Max height is 70 feet.
Maritime (M)	Permits townhouses and multi-family at 1 unit per 3,600 sq. ft. (or 12 units/acre). Max height is 70 feet.
Residential Planned Community (RPC)	For approved master-planned communities. Permits single-family, townhouses, and multi-family.
Bonus Density Overlay District	Allows density for multi-family projects up to 1 unit per 1,200 sq. ft. (or 36.3 units per acre) and building heights in the RV & C Districts up to be 50 ft.

⁷ The U.S. Census Bureau had not conducted the decennial 2020 Census at the time the projections in this chapter were prepared therefore a locally derived 2020 estimate of the number of households was made. The Census has now released a 2020 population estimate but still has not released a count of households. For Chapter II of this report, the household estimate was updated using the recently released population estimate and assuming no change in average household size. The updated household estimate, 2,250, differs by 25 households or +1.1% from the number used as the baseline for the projections in this chapter. The difference has a negligible impact on the projections presented and does not affect the conclusions drawn therefrom.

Table 3 provides both the number of approved but unbuilt housing units in developing subdivisions and the infill potential on buildable land within each zoning district. Together these comprise the Town’s zoned development capacity.

The build-out of Richfield Station and the Heritage subdivisions would add 174 households to the baseline. As for infill, there is capacity for about 315 more housing units, and each has a fair probability of being built under current zoning.

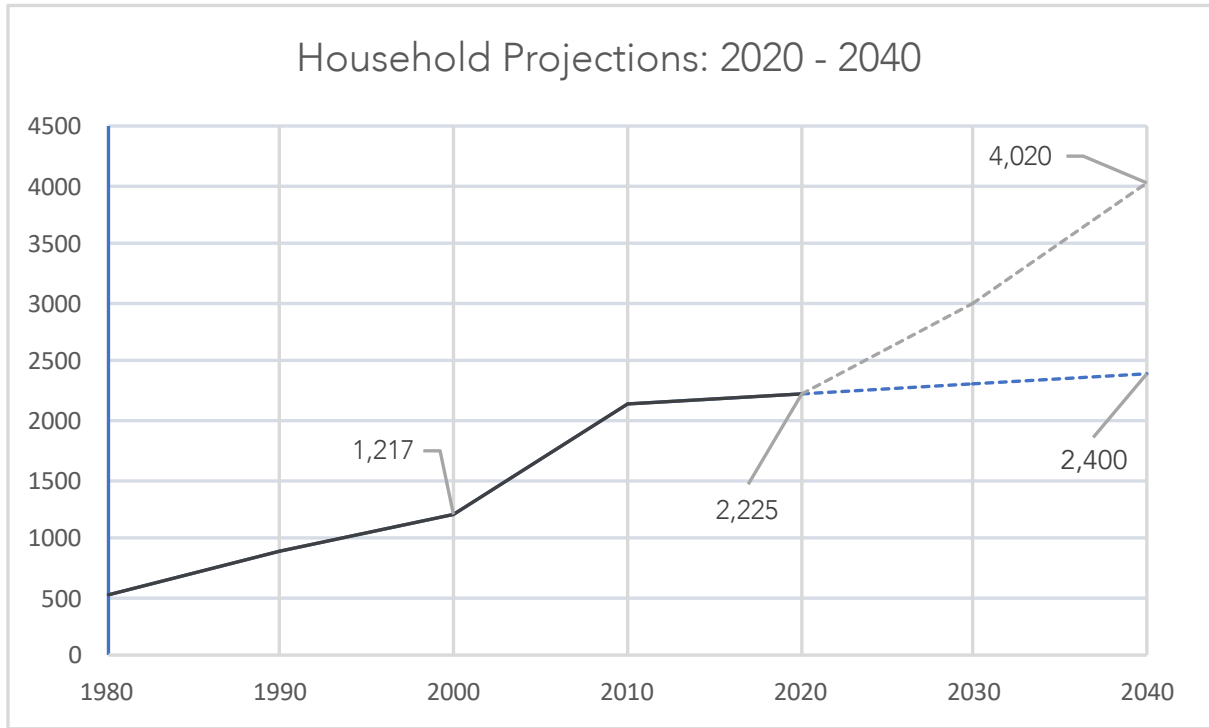
In sum then, the Zoned Development Capacity in Chesapeake Beach approximates 489 households (or about 1,320 people). Added to the baseline of 2,225, this potential could increase the number of households in Chesapeake Beach to 2,714 (and the population to 7,320).

TABLE 3

Zoned Development Capacity	
Build out of Existing Subdivision Plats	
Richfield Station	
Stream Walk Way Section	54
Crestview Lane Section	48
The Heritage	72
subtotal	174
Infill by Zoning District	
Residential Planned Community	50
Residential - Medium Density	5
Residential Village	100
Residential - High Density	10
Maritime	150
subtotal	315
Total Estimated Households	489
Total Estimated Population	1,320

Alternative Projections

This section describes two projections, one high and one low, which establish bounds within which the Town will grow. They are predictions based on trends alone, unconditioned by Town policy or planning. Later, a 2040 forecast is presented, and in contrast to these projections, the forecast signifies a desired outcome based on the goals and recommendations of this Plan. But for now, a range is established as graphed below.



High Projection

The high projection assumes that the 3.0% average annual rate of growth, recorded between 2000 and 2020, would continue through 2040. It results in a total of 4,020 households by 2040, representing an increase of 1,795 or 80% over 2020. For context, this means the Town would approve 179 units per year for 20 years, on average. This could not be achieved without changes in the Town’s land use and infrastructure planning and major redevelopment of existing residential areas.

Low Projection

The low projection assumes that the 0.4% average annual rate of growth, recorded between 2010 and 2020, would continue through 2040. This would represent an increase of 175 households or 7.9% over the 2020 level. For context, this means the Town would approve 17.5 units per year for 20 years, on average. It would represent the slowest 20-year decennial growth recorded for the Town (at least since 1960).

For context, note that the Stream Walk Way and Crest View Lane sections of Richfield Station plus the Heritage subdivision (presently being developed) would add 174 dwelling units, which about equals the entire 20-year projection under this Low projection. After accounting for these approved dwelling units, this projection would provide for no growth, and it would require changes to current zoning laws to eliminate the infill potential discussed in the previous section.

2040 Forecast

A reliable forecast allows a town to anticipate and prepare for the impacts of growth and the needs of future residents. The forecast presented here is the expected outcome of the 2040 Comprehensive Plan or in other words, it reflects the growth anticipated on account of this Plan's policies.

Implementing the following specific recommendations which are described in the Land Use Plan (Chapter V) would reduce the "zoned capacity" of Chesapeake Beach: (1) prohibiting residential development from the Maritime zoning district, (2) restricting building heights to 35 feet, (3) restricting non-single housing types to some parts of the current Residential Village zoning district, (4) downzoning forested and steeply sloping areas to Resource Conservation, and (5) removing the potential for new housing on properties zoned Resource Conservation.

This Plan would reduce the zoned development capacity (the potential for new housing) by 53 percent from 489 housing units to 230. This is the sum of the 174 currently approved housing units already discussed plus 56 potential housing units which might be created through infill. Since no further residential growth is contemplated by this Plan, the forecast is that the Town will grow by 230 housing units over the next 20 years which would add about 615 residents. This reflects an average annual rate of 0.5 percent, matching the Low projection illustrated and described above. By comparison, the Town's population increased by 2,886 residents over the preceding 20 years, but only 313 over the last decade.

Impacts of Planned Growth

Community facilities can be expected to remain adequate to accommodate the growth forecast in this plan through 2040 (see Chapter VIII, Community Facilities). The build-out of 174 approved housing units may be expected to generate 33 elementary students, 21 middle school students and 17 high school students. The potential addition of 56 single-family housing units through infill may be expected to generate 11 elementary school students, seven middle school students, and five high school students.

The new Beach Elementary school (set to open in 2023 with an initial rated capacity of 578 students) would operate at 97 percent capacity in 2040 under this Plan, all other things being equal. Windy Hill Middle School and Northern High School, presently at 97 and 101 percent of rated capacity, respectively, would slightly exceed capacity in 2040, all other things being equal.

The County Board of Education projects a reduction of 100 students within the northern elementary school district of which the Town is a part by 2030. It also projects a fall in public school enrollment County wide over the next decade. However, the Dunkirk Town Center at the northern end of the County and the Prince Frederick Town Center in the central portion of the County are both designated growth areas that are undergoing comprehensive planning which may affect current projections.

The Forecast growth under this Plan would create a demand to deliver 57,500 gallons per day of public water and a demand to manage 57,500 gallons per day of public sewerage. For context the excess capacity in the municipal water system can accommodate 734 housing units or provide 183,500 gallons per day. The Town's share of the excess capacity in the wastewater treatment plant could accommodate 1,215 units, equivalent to 303,750 gallons per day. As funds are available, the Town hopes to extend public water and sewer services to existing homes in underserved areas within and just beyond the municipal border to improve equity in public health, and to remove the risk of failing or overflowing septic tanks, which is a hazard of pollution in the Chesapeake Bay.

Zoning, Land Use, and Preservation Beyond the Town's Borders

County Zoning

Every town has an interest in the use and development potential of the land surrounding it. As shown on Map 3, the Town's boundaries are defined by North Beach to the north, Summer City to the South and property in farmland and forest preservation to the west. A summary of the map is provided here:

- Significant land along the Town's western border and beyond is in the Calvert County farmland preservation program, protected by perpetual restrictive easements that keep the land in agriculture, forestry, and natural conditions.
- Properties shown in a peach color are zoned Rural Residential. These areas may be developed at an overall density of one house per acre. However, such houses must be clustered with 80% of the development tract remaining in preserved open space. County zoning will largely maintain the rural open space feel throughout this area.
- Properties shown in yellow are zoned Residential District (RD) under the Calvert County Zoning Ordinance. These areas may be subdivided into one acre lots for residential use. If developed with public sewer and water services, the allowable density on these properties may increase to up to four houses per acre. As shown however on the Map, much of the RD zoned land is preserved farmland and cannot be developed.

Two Towns Side by Side

Together, the separate bayside municipalities of Chesapeake Beach and North Beach form a larger community. As discussed throughout the report, the towns are reliant on MD Routes 260 and 261, the wastewater treatment plant, Beach Elementary School, Windy Hill Middle School, Northern High School, the Twin Beaches Library and other public facilities and services. As coastal communities, they face similar challenges such as flooding, migration of wetlands, and limited transportation access.

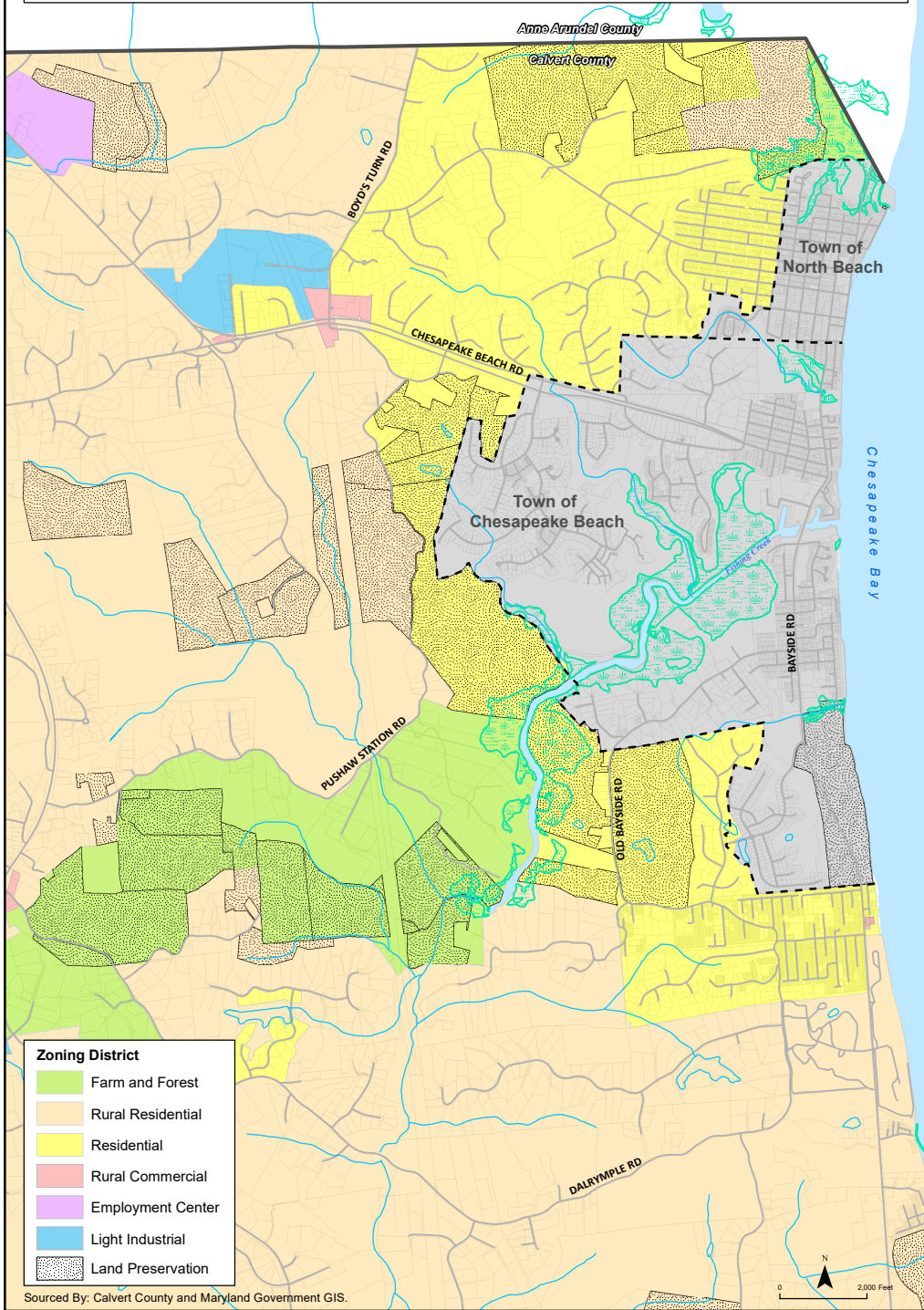
Rural Land Use

The land use pattern throughout the northeastern portion of Calvert County is mostly rural. The area is mostly wooded with large residential lots or rural very large lot subdivisions. Apart from properties at the intersection of Boyd's Turn Road and MD 260, commercial use is confined to the Towns of Chesapeake Beach and North Beach. Residential development, including the unincorporated community of Summer City, forms the southern border of Chesapeake Beach.

Greenbelt of Preserved Lands

A most significant land use feature, worth mentioning again, is the open space on the Town's western border; land permanently preserved through programs administered by Calvert County. These spaces form a permanent western greenbelt. Since they adjoin vast woodlands, which are within the Town itself and set aside for forest conservation, Chesapeake Beach has within and along its borders the makings of a future old growth forest, the preservation of which could help perpetually sustain the water quality of Fishing Creek, local bird and wildlife habitat, and the scenic beauty of the area.

County Zoning and Land Preservation Beyond Municipal Limits



MAP 3

A Plan for Municipal Growth

Several of the objectives and recommendation in this section overlay with the land use and community facilities objectives found elsewhere in the Plan.

Objectives

1. To grow only in a slow and measured way, through deliberate and strategic planning, to maximize the benefits that accrue to both existing and future residents.
2. To grow only in a manner that assures essential public facilities and infrastructure remain adequate and equipped with capacities to deliver exceptional services without compromise to existing residents, institutions, and businesses.
3. Through coordination with Calvert County, protect, conserve, and restore where possible natural resource lands outside of the Town, such as forests, floodplains, and water recharge areas, that form a Greenbelt around Chesapeake Beach.
4. Bring about the logical extension and development of streets, infrastructure, parks, and recreational trails to ensure a cohesive community encompassing Chesapeake Beach and North Beach and the surrounding areas including Summer City on the south and The Highlands on the north.

Recommendations

This plan does not designate a municipal growth area or propose that the Town annex land through 2040. However, as a means for guiding growth and development and protecting the Town's interest in good planning, annexation may become advisable. It is an important tool and if used, this Comprehensive Plan would first need to be amended to designate a municipal growth area because only properties within such an area are eligible for annexation under Maryland statutes.

A Focus on Conservation and Enhancement of the Existing Community

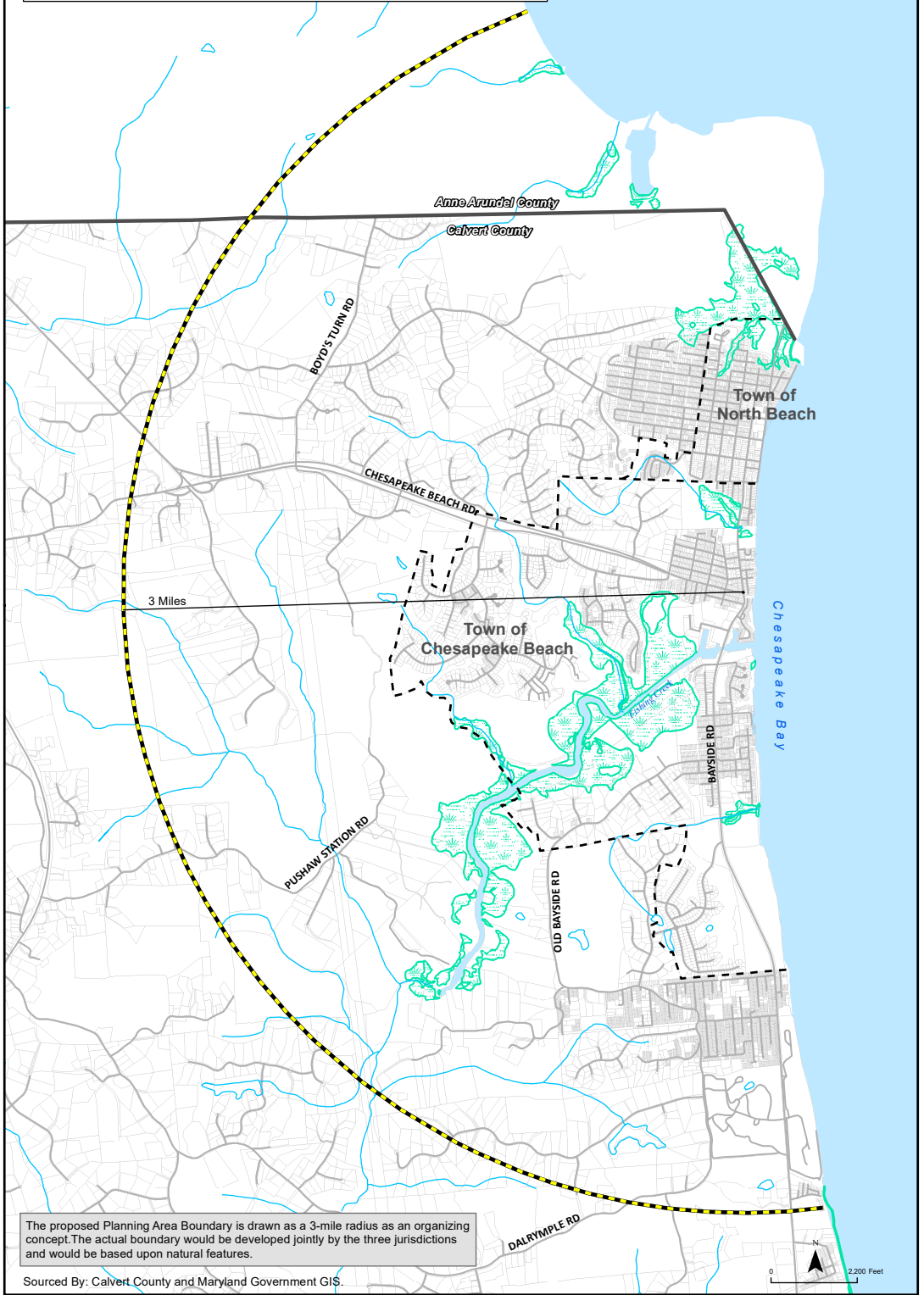
There is little housing or population growth anticipated under this plan. Therefore, for the first time in many decades the Town will not need to devote planning and engineering resources to managing major subdivision developments. This plan therefore recommends that the Town's focus for the next 20 years remain on enhancing the quality of life for residents and especially reinvesting in the physical aspects of the original residential cottage subdivisions. Aging infrastructure and changing environmental conditions, discussed elsewhere in this Plan, require it.

Establish a Joint Planning Area

This Plan recommends that a joint planning area outside the municipal limits be established. Map 4 shows the proposed boundaries where coordination in the review of major development projects and planning for community facilities could benefit both the Town and Calvert County. This plan therefore is an invitation to Calvert County (and the Town of North Beach) to coordinate with Chesapeake Beach in areas and on projects where our interests overlap. For the next 20 years, the main priorities for coordination on community facilities would be on developing park and recreational resources, managing water and sewer extensions outside of the towns, and building resiliency considering sea level rise.

There is precedent for joint planning. In 1990, all three jurisdictions adopted the Northeast Sector Community Facilities Plan. Its purpose was to evaluate the need for future road and community facilities and to make recommendations about parks and infrastructure development. One of the most significant findings was that the study area lacked sufficient public open space and parks, a finding especially relevant today. Most of Northeast Sector Plan's recommendations for parkland were not implemented and areas planned for parks west of Town were instead placed in farmland preservation. Nevertheless, the ideas about trails and park amenities beyond the Town's boundaries may still be viable and they are supported by this Comprehensive Plan. Updating the 1990 Northeast Sector Community Facilities Plan may be the first logical step to achieving recreational use of the Town's Greenbelt.

Proposed Planning Area Boundary



The proposed Planning Area Boundary is drawn as a 3-mile radius as an organizing concept. The actual boundary would be developed jointly by the three jurisdictions and would be based upon natural features.

Sourced By: Calvert County and Maryland Government GIS.

MAP 4

IV. Natural Environment

Introduction

Fishing Creek joins the Chesapeake Bay in the Town of Chesapeake Beach. Vast tidal marshes are surrounded by steeply sloping woodlands reaching elevations over 125 feet above sea level in many places, while the floodplain covers much of the Town's original settlement. Protected wildlife habitat and shoreline cliffs are also present in Chesapeake Beach. Despite significant residential development, forests are still a significant natural feature. This section of the plan explores conditions as they exist today and takes note of how things are changing. It provides objectives and recommendations.

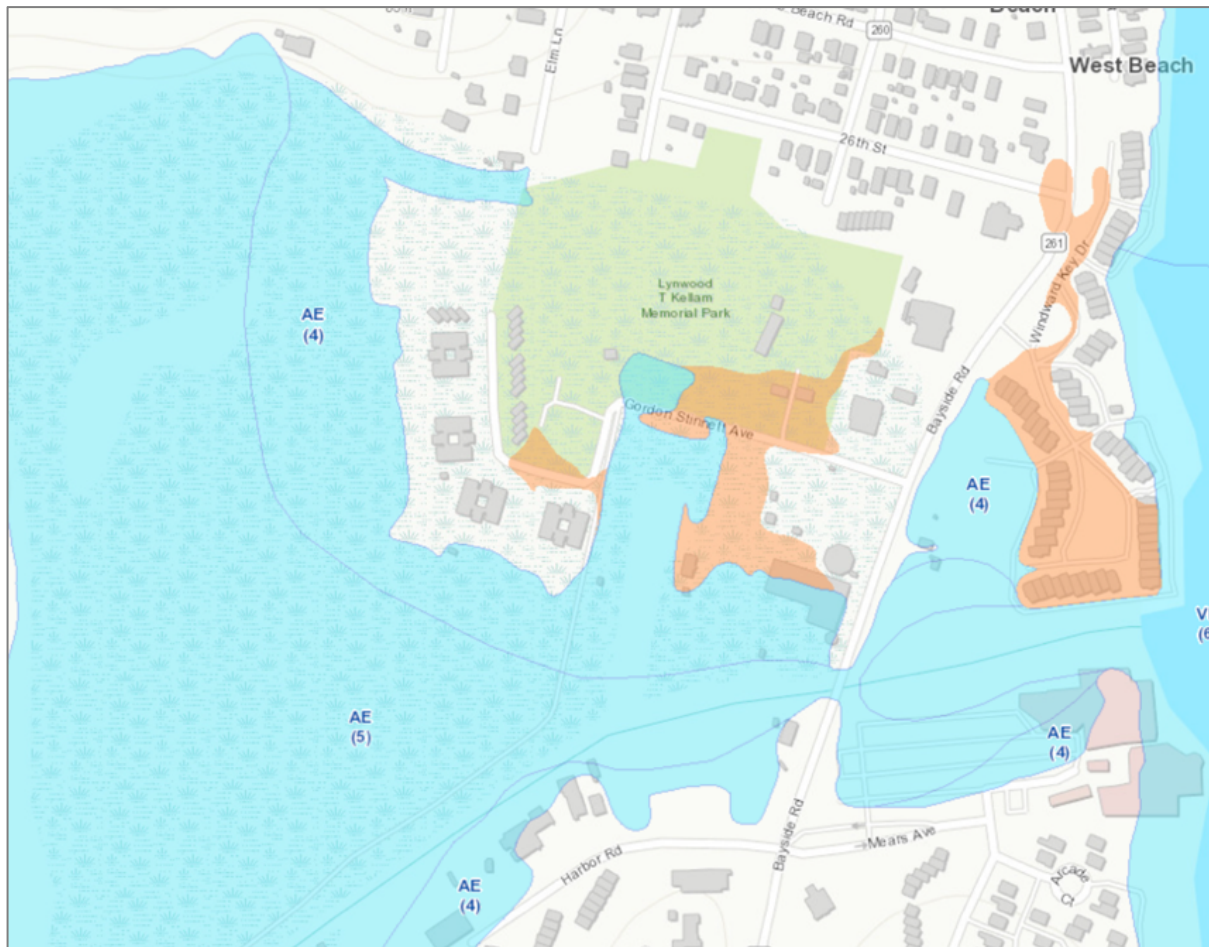


Existing Conditions

Comprehensive planning begins with an understanding of environmentally sensitive areas—the natural features that constrain and shape the patterns of development. In this section, we present information about Fishing Creek and its floodplains and wetlands; the shoreline of the Chesapeake Bay; and forests, steep slopes, and other sensitive areas.

Fishing Creek – Confluence with the Bay

Fishing Creek is a direct tributary to the Chesapeake Bay. The watershed it drains extends far beyond the Town's borders encompassing lands enclosed within ridgelines familiar to area residents: MD Route 2 to the west, Dalrymple - Guy Hardesty Roads to the south and 5th Street Extended to the north. The center of Town is the natural inlet to the Bay. As shown below on an excerpt of a previous floodplain map, at one time, this estuary and its marsh were extensive. Note the marshland grass symbol indicating the historic extent of tidal wetlands both the north and south side of Gordon Stinnett Avenue. Buildings, parking, and recreational facilities have been built on the marsh.



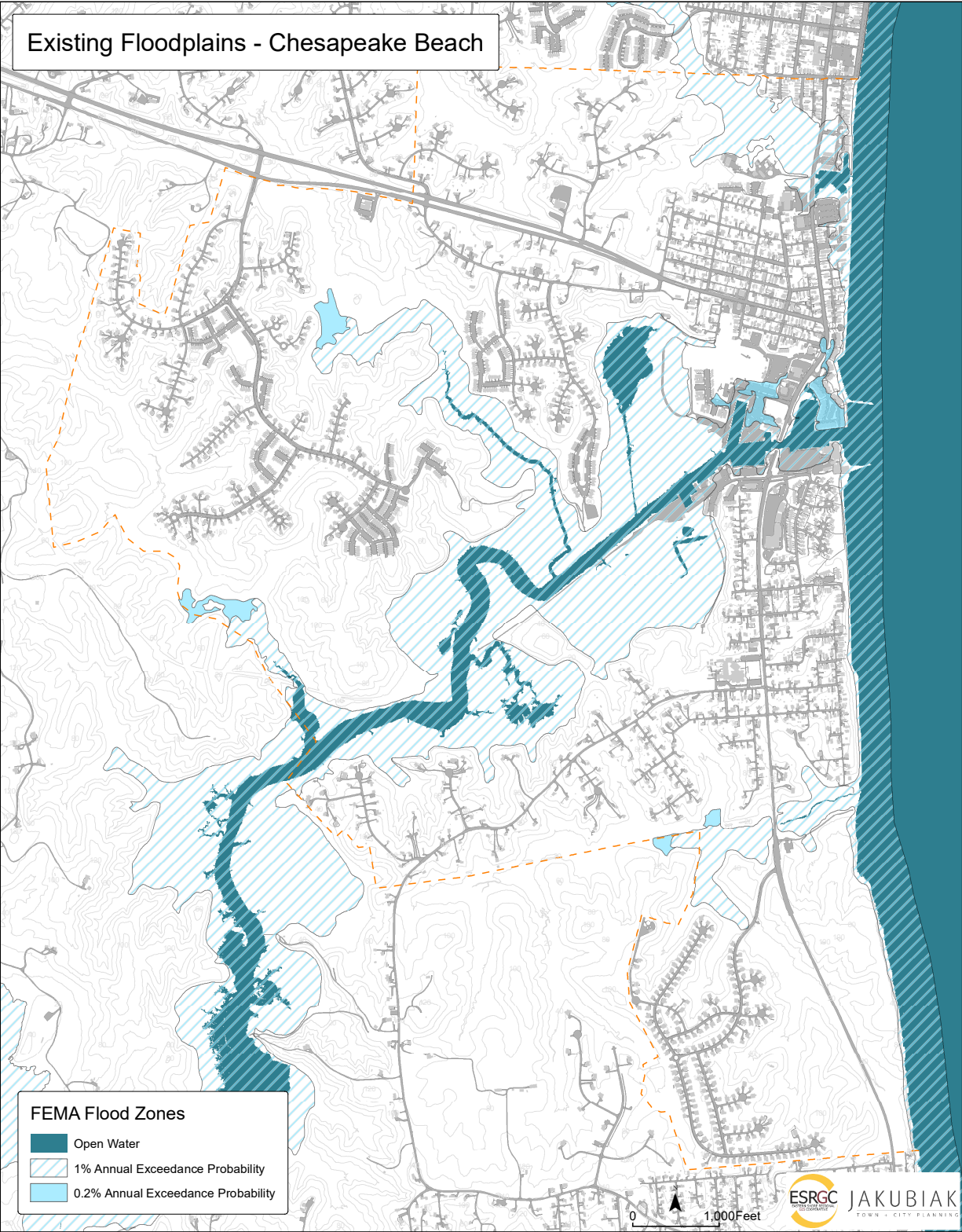
Floodplain

Map 5 shows the floodplains in Chesapeake Beach. 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). The Town regulates development activities within this zone through its Floodplain Management Ordinance. The orange areas have a 0.2% chance of flooding in any given year (i.e., the 500-year floodplain).

Areas closest to the Bay are vulnerable to both floodwaters and wave action. Areas further removed from the shoreline are vulnerable to moving water to some extent as well but only in the event of storm surges. The 2003 storm surge of Hurricane Isabel (which peaked at levels of 6 to 8 feet above the normal tide in the Chesapeake Bay and Potomac River basin) topped the bulkhead on the south side of Fishing Creek and inundated Mears Avenue. It also submerged Bayside Road at Chesapeake Beach Road. As shown below, near the North Beach Volunteer Fire Station, the storm surge submerged Bayside Road in waist deep water⁸.



⁸ 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>



MAP 5

Wetlands

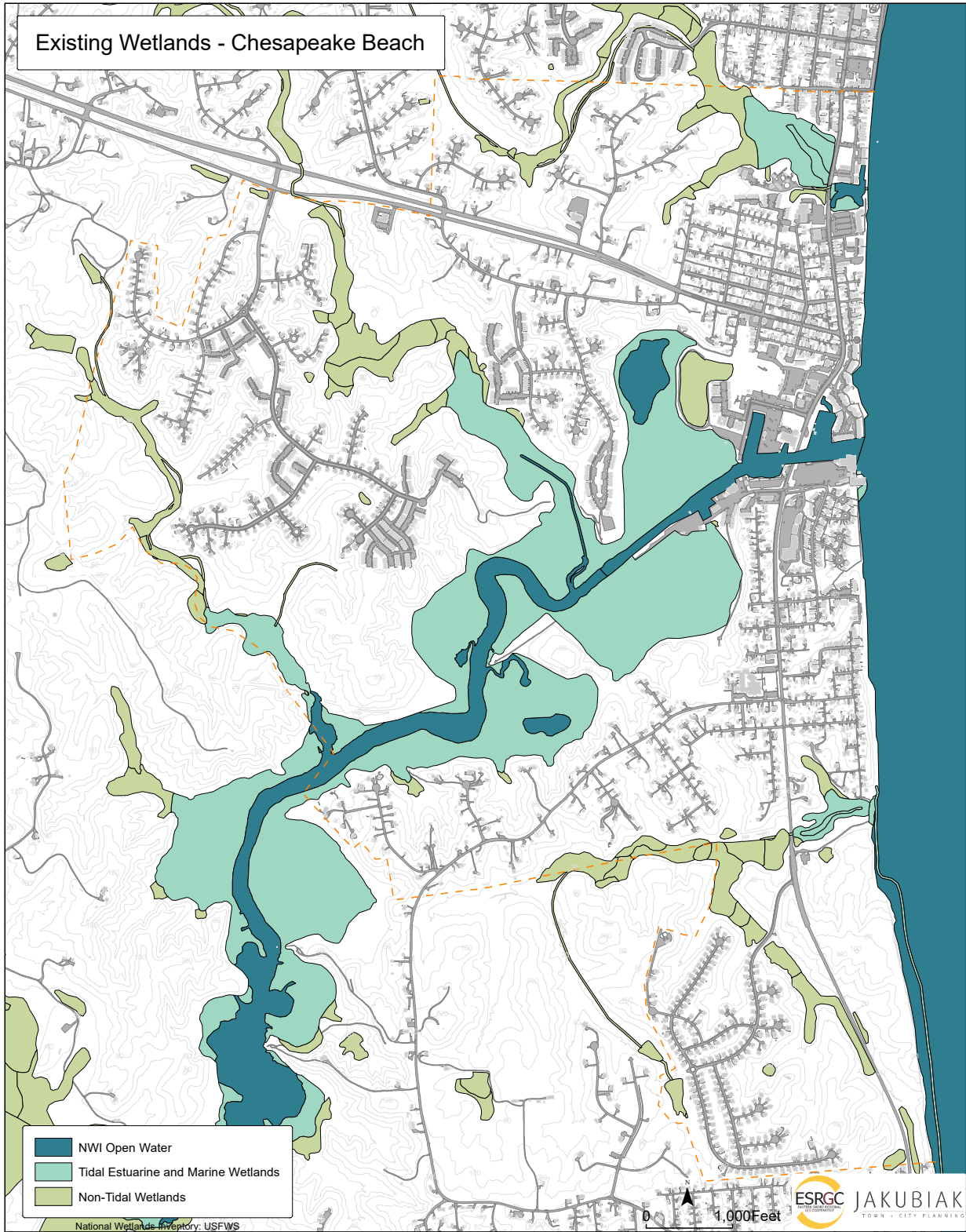
Most of the floodplain is tidal wetlands (marsh). These wetlands attenuate flooding, prevent shoreline erosion, improve the water quality of the Bay, and provide habitat for native plants and wildlife. They are critical to the quality and health of existing and future development especially in the historic center of Chesapeake Beach. Map 6 shows the 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 Map 6, 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.

There is a similar but smaller (12.5-acre) wetland complex of the same type on the north end of Town that extends into North Beach and is associated with South Creek (see photograph below). Though it is mainly on the western side of MD Route 261, it is associated with the tidal action controlled by the seawall gate between the Seagate and Horizons on the Bay housing communities. These marshes are a major nurse for fish, bird, and wildlife.



The 12.5 acre Estuarine and Marine Wetland on the west side of Bayside Road and the growing open water west of the sea gate.



MAP 6

Map 6 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 is seven acres in size, and it separates Kellam's Field and the Courtyards at Fishing Creek from the Town's central tidal marsh.

Today, wetlands are protected from being filled in through a variety of local, state, and federal laws and regulations. However, the marshes and wetlands are changing as the mean high tide in Town steadily increases. As sea levels rise, the Town's marshlands are expected to gradually transform into open water and simultaneously grow where they can in response to both higher surface and ground water levels. This is evident now along the edges of the marsh in the north part of Town. Which is to say, the wetlands and marshes in Chesapeake Beach 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 is safeguarded by revetments. A revetment is permeable wall of stones set at an angle away from the water to absorb wave action and protect against erosion. Only a small section of the shoreline, at the Chesapeake Beach Hotel and Resort, is protected by bulkheading. Except for this small run of bulkhead, from North Beach south to 17th Street, the shoreline is gradual and mostly planted in lawn.



Looking south along the shoreline and the Chesapeake Station neighborhood.

There are two small private beach areas, one at Chesapeake Station and the other at the Rod-n-Reel Resort and Spa. 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. The cliffs extend to Brownies Beach, where the shoreline flattens out again allowing Brownies Creek to flow into the Bay. 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.

After leveling out at Brownies Beach, the shoreline rises steeply again, this time in a naturalized state 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 there⁹.

The 2002 Comprehensive Plan recommended protecting the Randle Cliffs Natural Heritage Area through the creation and adoption of a new zoning district called Resource Conservation. A year later the Mayor and Town Council amended the zoning map to create and apply this district, which has limited the potential for development and disturbance. Critical Area regulations have ensured further protection.

Steep Slopes

Steep slopes are not confined to the shoreline cliffs; they are a significant feature of the Chesapeake Beach landscape. Town regulations consider hillsides with grades of 15% or greater to be steep. Land disturbance on these slopes can lead to soil erosion, excessive stormwater and pollutant runoff, slope failures and ongoing post-development maintenance problems related to building foundations, infrastructure, and hillside stability in areas of significant mass grading.

Bayview Hills, Richfield Station, Chesapeake Village, (the Town's three largest modern subdivisions), each were developed in areas of significant sloping terrain requiring mass grading. Considering problems with hillside stability, the Town in recent years has required third-party engineering evaluations of post-development slope stability as part of a development inspection process. The ongoing development of The Heritage subdivision and all future developments will be subject to these requirements.

Soils

⁹Puritan Beetle found in the intertidal zone, beach, cliff face and upland forest along Bay shoreline. Red Turtle Head (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.

The properties of the soils underlying a community (such as depth to bedrock and drainage) can severely limit land development. Soil types are inventoried in the Chesapeake Beach Critical Area Protection Program. Soil conditions are not limiting factors for development in Chesapeake Beach except in tidal marsh and non-tidal wetland areas, lands along streams and drainage ways, and steeply sloping terrain with high runoff potential. These soil conditions correspond to other sensitive natural features.

Chesapeake Bay Critical Area

The Town is required by the State of Maryland to administer regulations limiting the use and development of land within 1,000 feet of tidal waters, an area known as the Chesapeake Bay Critical Area (see the exhibit below). All lands within 1,000 of the Bay, its tributaries, and tidal marshes are designated as Critical Area. Properties within the Critical Area are designated one of three categories: Resource Conservation Area (RCA), Limited Development Area (LDA), and Intensely Developed Area (IDA). The rules and criteria for classifying properties into these categories are set forth in the Critical Area regulations within the Town's Zoning Ordinance. The Critical Area map and development regulations are adopted and amended, when necessary, jointly by the Town of Chesapeake Beach and State Critical Area Commission.

Resource Conservation Area (RCA)

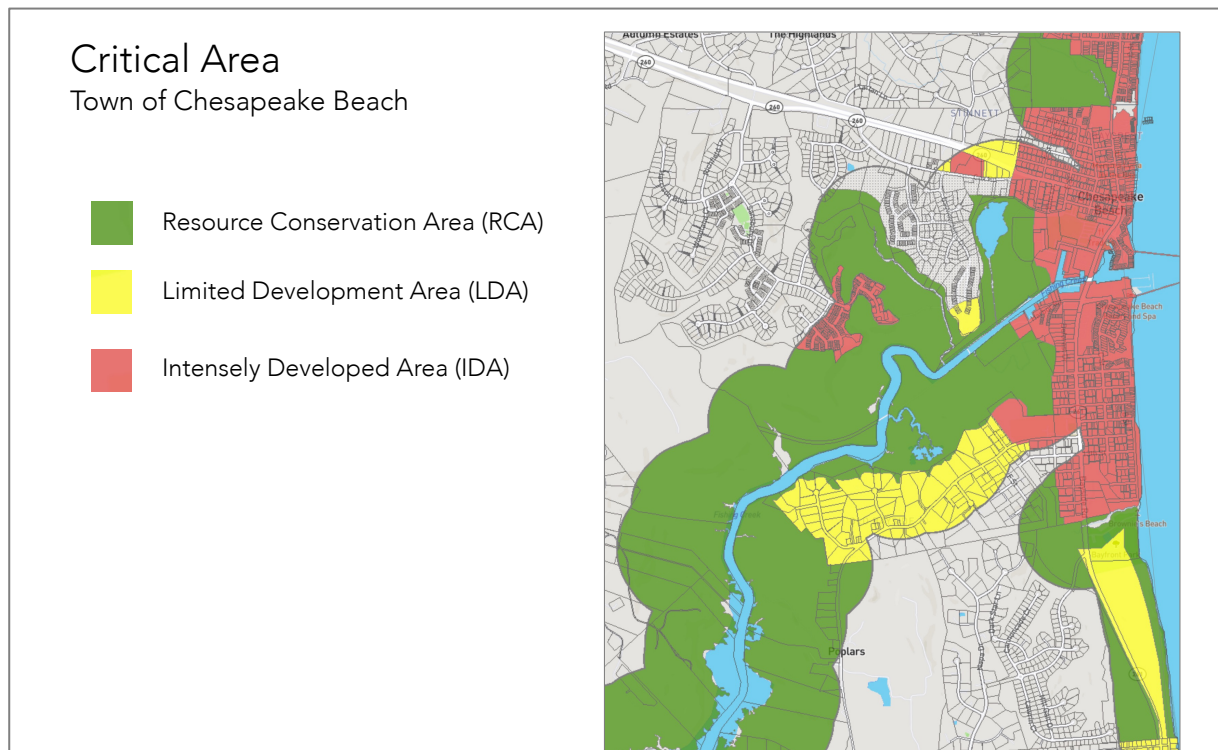
The RCA is meant to cover the most environmentally sensitive parts of the Critical Area, such as intact riverine forests, natural shorelines, wetlands, and wildlife habitats; areas that function naturally to protect the Bay's water quality and wildlife. These areas are shown in green on the Critical Area map. Development activities are strictly limited in the RCA. It is important to note that for 20 years the Town has had a separate and distinct zoning district called Resource Conservation. There is substantial geographic overlap between the two areas, but they are distinct. The RCA is mapped and applied under rules and regulations administered by the State Critical Area Commission. The Town's Resource Conservation zone however is a conventional zoning district mapped and applied by the Mayor and Town Council without the need for joint State approval.

Limited Development Area (LDA)

The LDA designation is meant for those areas, where limiting the amount of additional land development (i.e., the coverage of the land with impervious surfaces such as buildings and parking lots), will protect water quality. This area coincides with portions of Chesapeake Beach that have lower intensities of development such as along Old Bayside Road and are shown in yellow on the Map. The LDA classification places significant limitations on development, requiring for example that no more than 15% of a lot be covered with impervious surfaces and requiring the protection of forests and wildlife habitat.

Intensely Developed Area (IDA)

The IDA is meant for intensely developed areas where houses, businesses, marinas, parking lots, etc. were constructed mostly before the State's adoption of the Critical Area Program in the 1980's. The IDA generally coincides with areas where land development has substantially altered the natural capability of the land to protect water quality. This area is shown in red on the Critical Area map. The IDA classification does not significantly restrict development but does require that applicants for development approval put measures into place that can reduce stormwater pollutant runoff by at least 10% below pre-development conditions.



Sea Level Rise

Overview

The Chesapeake Bay is rising. In its 2018 report, [Sea Level Rise Projections for Maryland](#), the Maryland Commission on Climate Change (MCCC) noted that the Bay's water levels have been rising for a long time, since Last Ice Age actually, as the Bay filled up and coastal Maryland settled (which is still happening)¹⁰. But during the 20th century, with warming waters and glacial melt, the oceans began to expand their volumes steadily and rise. Now, well into the 21st century, the warming of the earth is accelerating and so is the rise of the water level in the Chesapeake Bay and Fishing Creek.

The effects of sea level rise are apparent throughout coastal Maryland and include shoreline erosion, deterioration of tidal wetlands, nuisance flooding, rising groundwater, and storm surges that spread further over the land. Chesapeake Beach is especially vulnerable to these impacts. The MCCC's report notes that the rate of sea-level rise will continue to accelerate into the foreseeable future, even if global society is able to limit greenhouse gas emissions.

Sea Level Rise Projections

When this Plan refers to an increase in sea level, it means an increase over the level recorded in Maryland in 2000. The projections by the MCCC for 2050 include a Central Estimate having a 50% probability that sea levels rise 1.2 feet, a Likely Range having a 67% probability that levels rise between 0.8 and 1.6 feet and a 1 in 20 Chance or five percent probability, that levels rise two feet or more. The year 2050 mapping in this Comprehensive Plan correspond to the 1 in 20 annual probability. The Plan's 2100 mapping corresponds also to a 1 in 20 chance and the assumption that carbon emissions continue to grow well into the second half of this century.

The MCCC's guidance on using sea level rise projections in planning confirms this Plan's decision to use the five percent probability projection through 2050. Beyond 2050, there is variability among projections since they are based on alternative scenarios for global carbon emissions. Given the life expectancy of new buildings and infrastructure, the fundamental and lasting impact of land development on the Town, and the low risk tolerance that communities prudently adopt when life and property are at stake, the 1 in 20 chance is a reasonable one for long term planning too.

¹⁰ The Maryland Climate Change Commission has published and updated sea level rise projections since 2008 at five-year intervals.

In future projecting for periods beyond 2050, Chesapeake Beach may decide to be either more or less risk averse as scientific consensus forms around a trend for global carbon emissions. In the meantime, the MCCC's 2050 and 2100 projections used in this Plan will inform and shape policy decisions about development and conservation. In summary, the projections mapped here are as follows:

- By 2050 sea levels in Maryland will rise 2.1 feet over the 2000 levels.
- By 2100, sea level in Maryland will rise 5.2 feet over the 2000 levels¹¹.

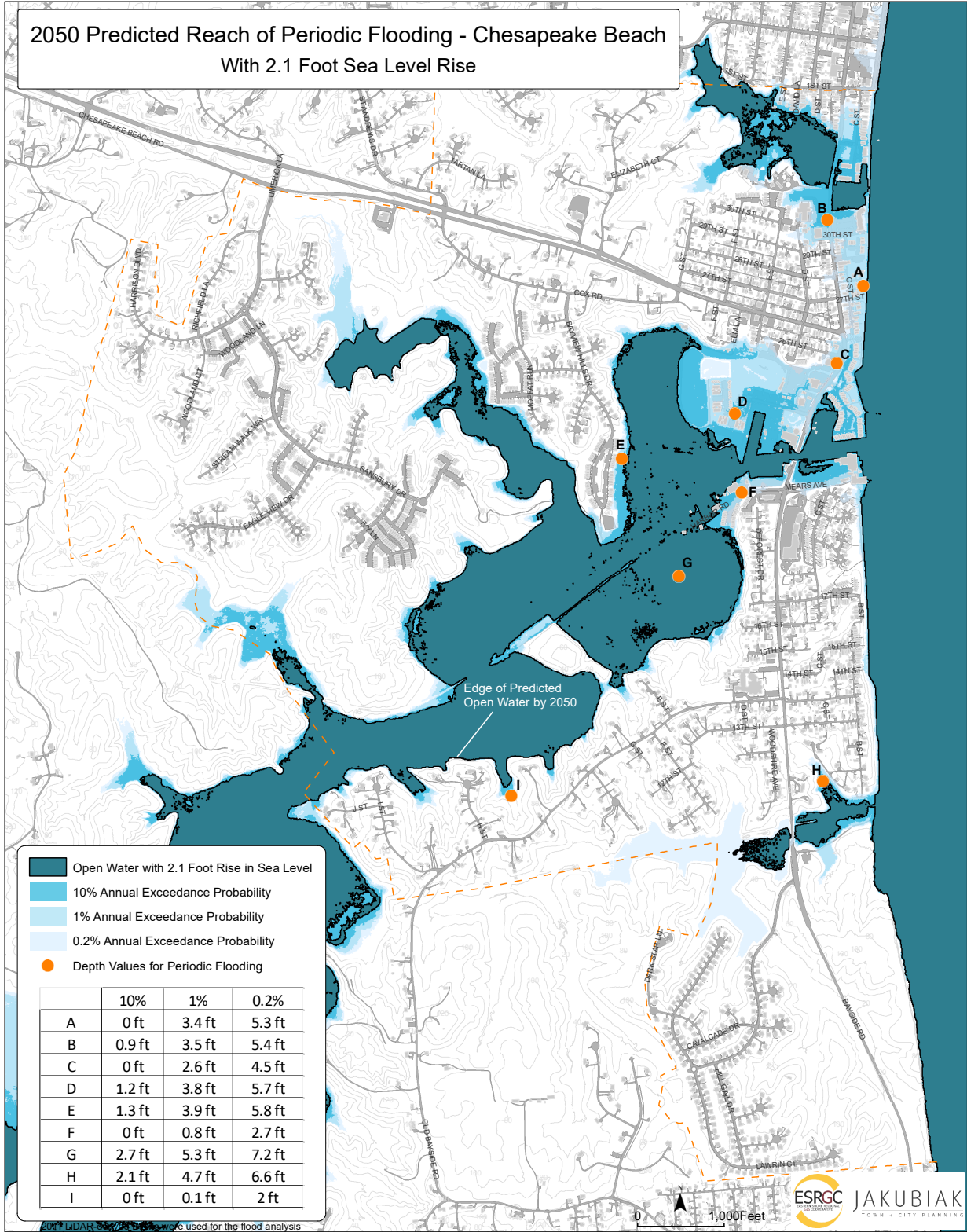
To put the 2050 projection into perspective, all land at elevations of about two feet or less above sea level and associated in some way with an inlet to the Bay, is at heightened risk of being permanently submerged over the next two or three decades. These lands are impacted directly by sea level rise and tidal action. However, these are not the only areas at risk. Sea level rise affects ground water making those parts of Chesapeake Beach built on filled wetlands especially vulnerable. While modern construction techniques using deep piles may support buildings, the ground surface and public infrastructure on or under that surface cannot be similarly stabilized. Gordon Stinnett Avenue has sunk about 18 inches over the past 15 years¹².

Lastly storm surges associated with major storm events are more severe when the elevation of the water is higher. Future hurricanes and storms matching those of the Town's past will have far greater impact on Chesapeake Beach and place more people and a greater area at risk because of sea level rise. Maps 7 and 8 show the extent of future tidal waters (open water) and projected floodplains in 2050 and 2100 respectively. Each map shows areas projected to be open water and areas projected to have a 10% annual chance of flooding, a 1% annual chance of flooding (i.e., the future 100-year floodplain) and a 0.2% annual chance of flooding (i.e., the future 500-year floodplain). The maps also show the projected depth of floodwaters during each of the three storm surge events and various locations. For example, on Map 7, at Point B, located near the North Beach Volunteer Fire Company, the projected depth of water in a flood with a 10% annual probability would be 0.9 feet, the depth of water in a flood with an 1% annual probability would be 3.4 feet, and the depth of the 0.2% annual probability flood (such as Hurricane Isabel in 2003), would be 5.3 feet.

¹¹ The year 2100 mapping used in this report and provided in Appendix B of this report illustrates the impact of flooding given a 5.7 foot sea level, not 5.2 feet, because the mapping used the long term projection data adopted in the 2013 report of the Maryland Climate Change Commission.

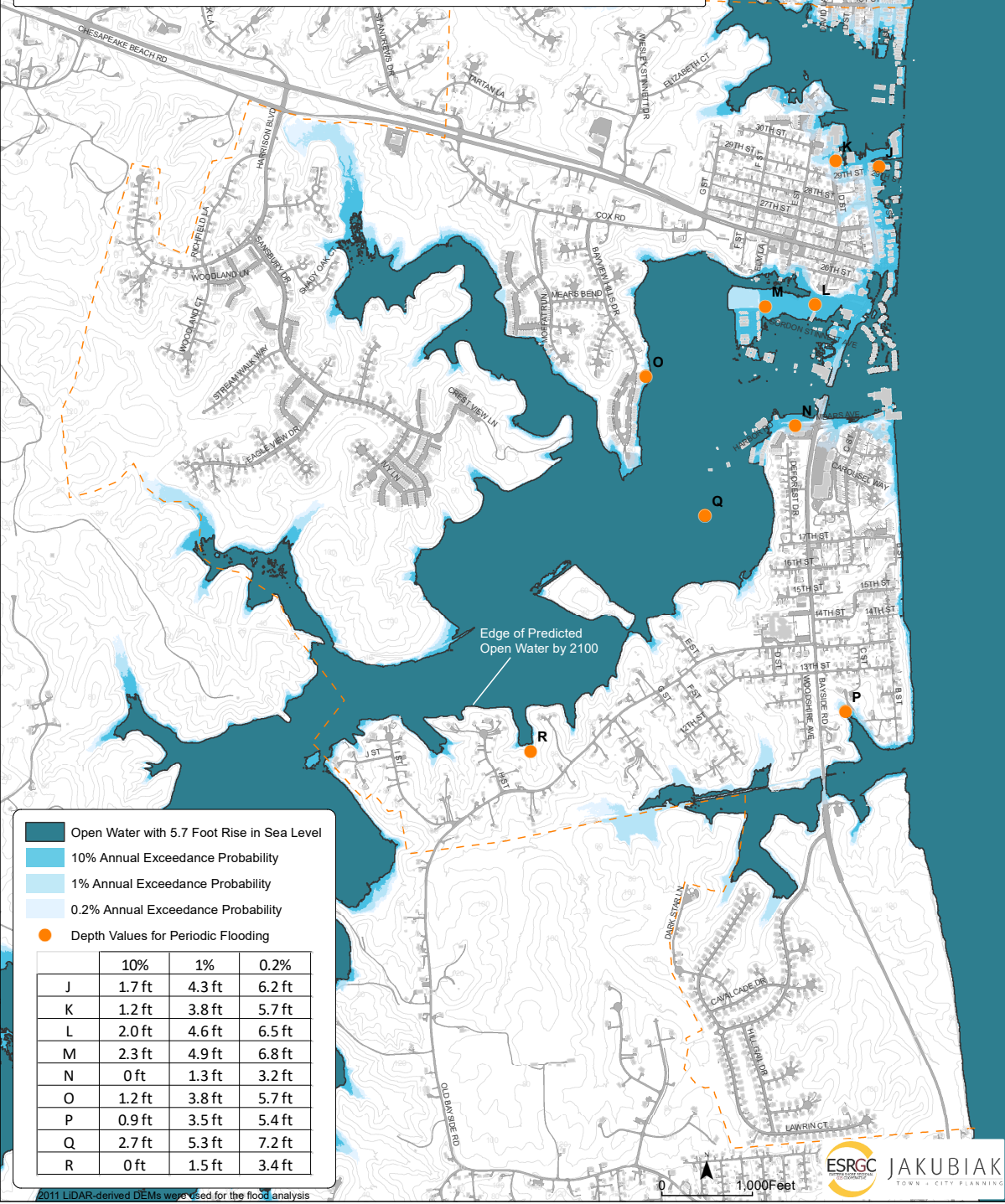
¹² Jay Barry, Director Public Works, Town of Chesapeake Beach.

2050 Predicted Reach of Periodic Flooding - Chesapeake Beach With 2.1 Foot Sea Level Rise



MAP 7

2100 Predicted Reach of Periodic Flooding - Chesapeake Beach
With 5.7 Foot Sea Level Rise

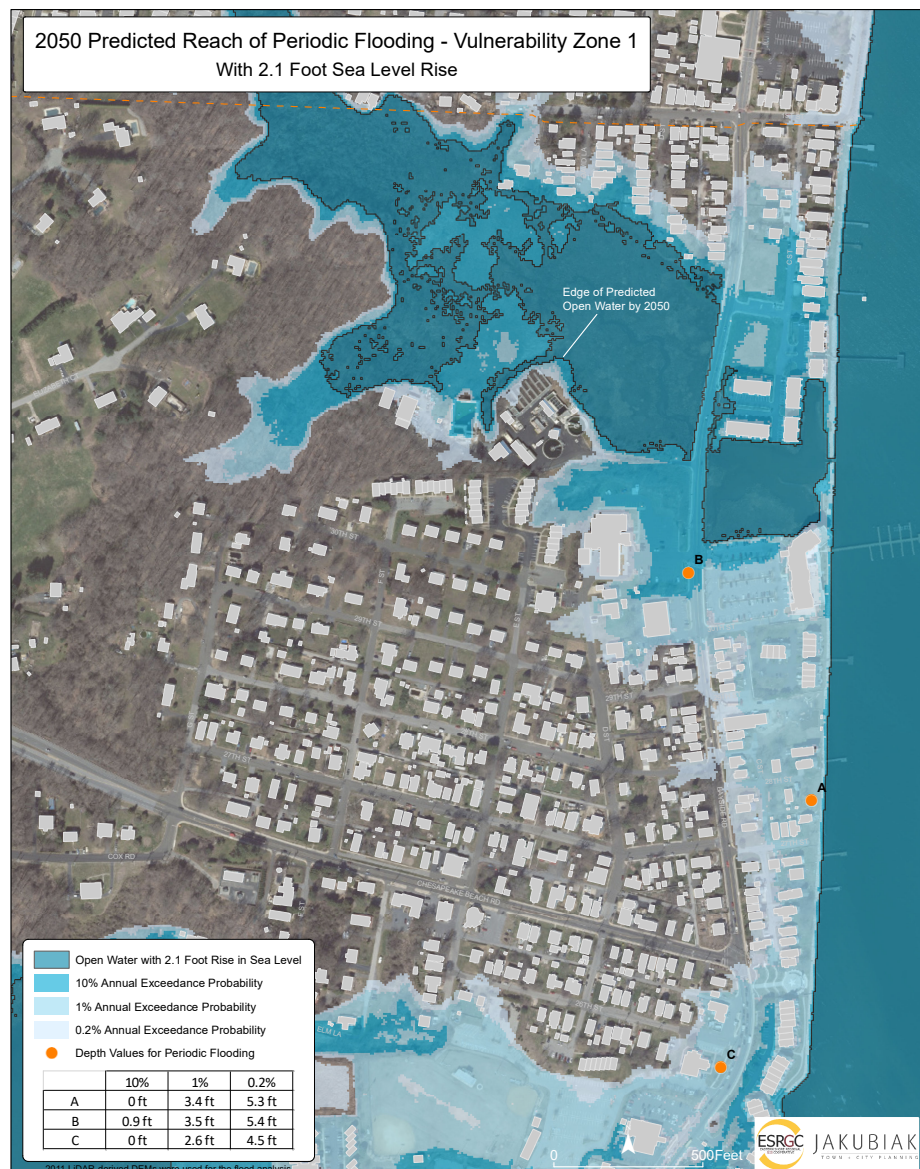


MAP 8

Zones of Vulnerability

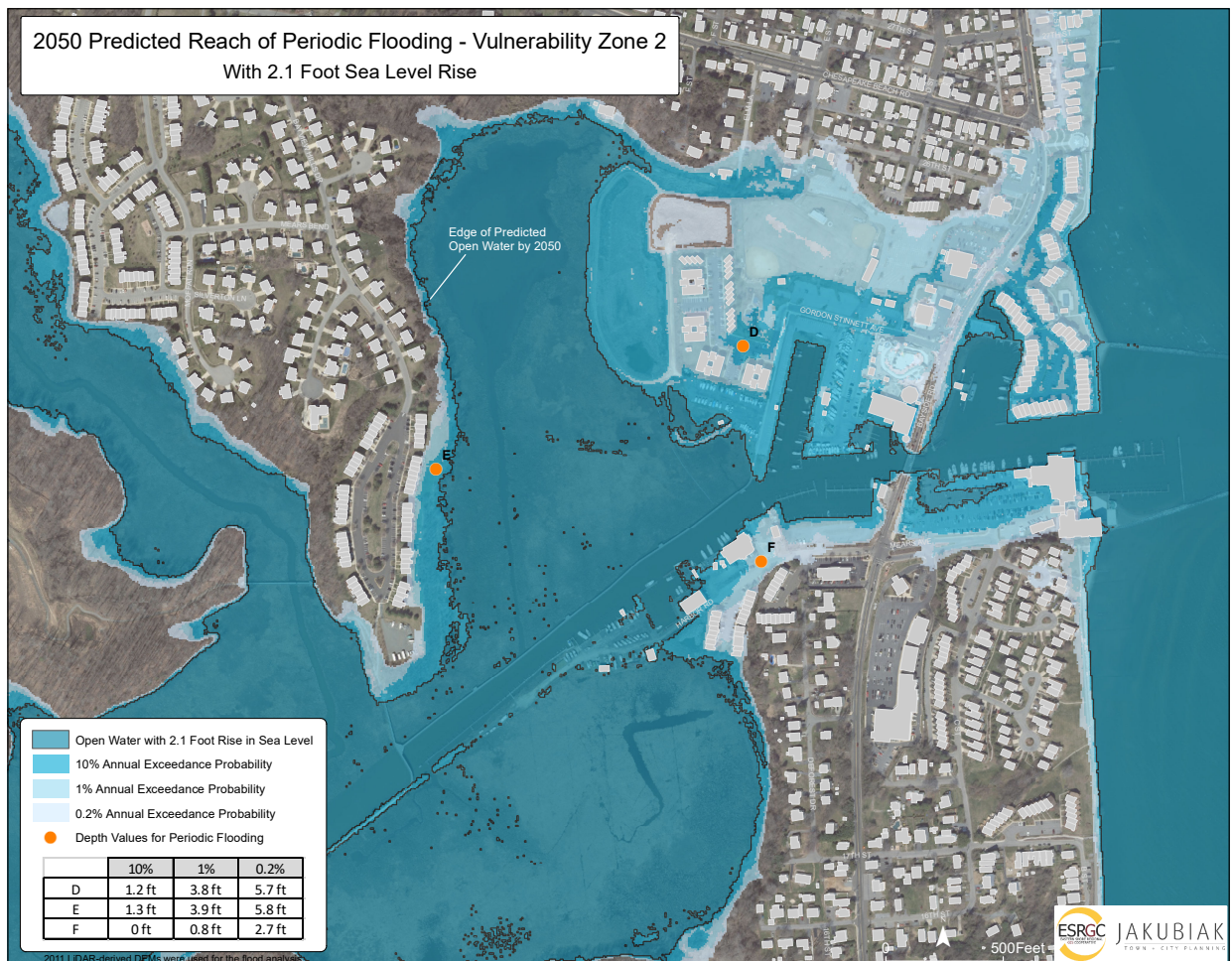
There are principally three areas or zones in Chesapeake Beach that are most vulnerable to the rising level of the Bay. The maps in this section show the projected extent of the Bay's water in 2050 within each zone. Similar maps for the year 2100 are in Appendix B. Note that the maps, like the Town wide maps presented above, show the projected floodplains in addition to the extent of future tidal waters. Each map shows areas projected to have 10% annual chance of flooding, a 1% annual chance of flooding (i.e., the future 100-year floodplain) and a 0.2% annual chance of flooding (i.e., the future 500-year floodplain). Within each zone sea level rise will extend the reach of floodwaters beyond the boundaries of today floodplain. As time goes by, more streets, houses, and businesses will be susceptible to flooding and severe storm surge events.

Map 9 shows Vulnerability Zone 1, the northern section of Town. Note that the marsh on the east side of MD Route 261, between the Seagate townhouses and Horizons on the Bay, and on the west side of MD Route 261 is projected to be open water by 2050. MD Route 261 would be at a 10% annual risk of inundation.



MAP 9

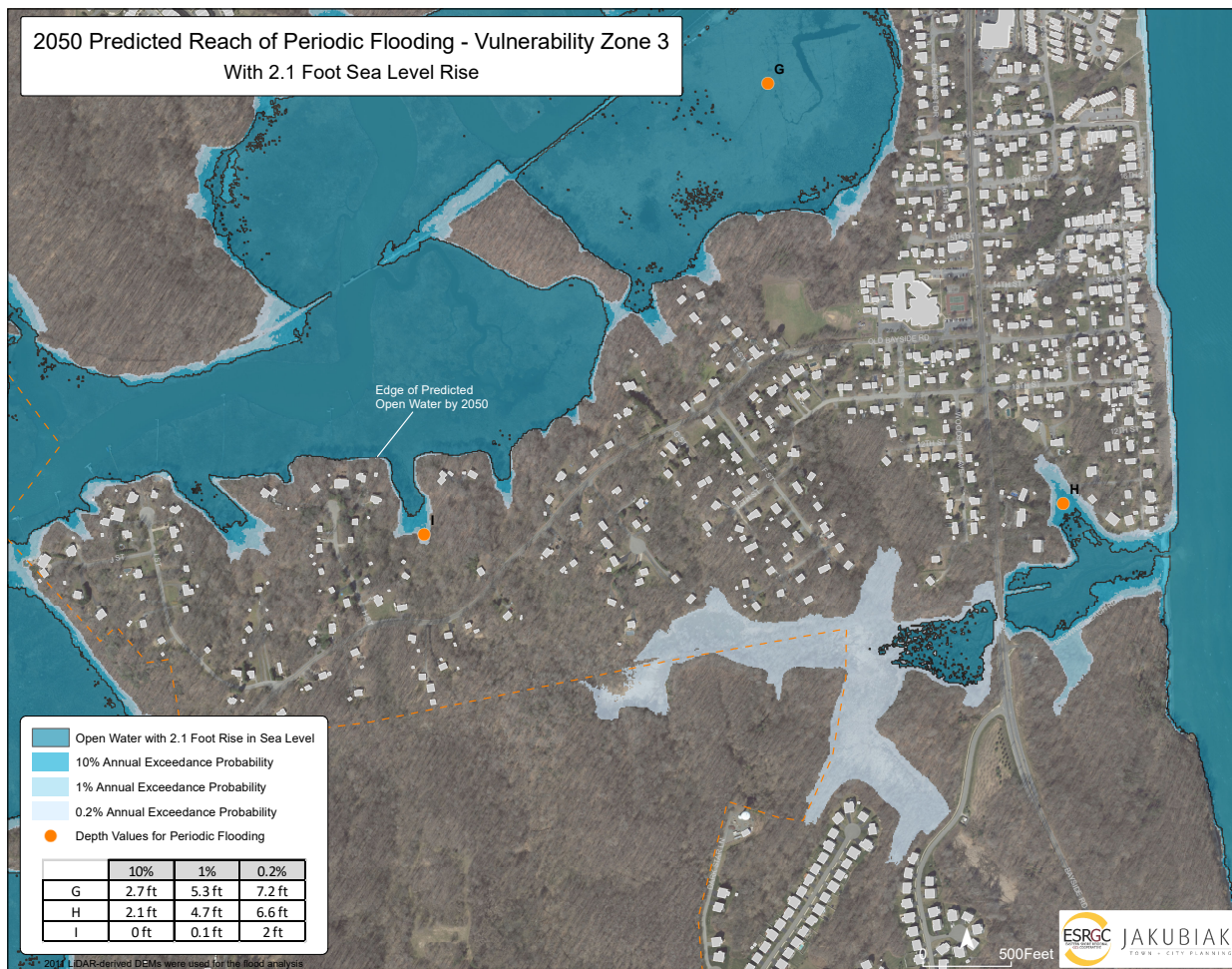
Map 10 shows Vulnerability Zone 2, which is the center of Town, along both sides of Fishing Creek. The extensive marshes that exist today would be open water by 2050 with wetland migration expected along the edges of the marsh. By 2050, much of the area around the marina at Fishing Creek would have 1 in 10 probability of flooding each year. As shown, the depth of flood water at Point D, which is on the grounds of the Courtyards at Fishing Creek housing development would be 1.2 feet in the 10% storm event, 3.8 feet in the 1% event, and 5.7 feet in the 0.2% storm event.



MAP 10

The recent redevelopment of the Chesapeake Beach Hotel and Resort property included elevating the site and the bulkhead, which its engineers believe will protect the site from sea level rise. This change to the land elevation is not reflected in this mapping. Elevating land and constructing bulkheads displaces flood energy unto other properties; so, in the future, the Town must allow these activities only within the context of an adopted area plan.

Vulnerability Zone 3 is the western extent of the Fishing Creek marsh (see Map 11). By 2050, the marsh and the adjoining low-lying lands would have converted to open water. This can be expected to come about along with the migration of wetlands and the loss of forests further ashore. The lowest lying parts of the residential lots on H, I and J Streets would be especially vulnerable and since they are not served by municipal sewerage, septic fields may be impacted by increased groundwater levels, even if the houses are not. The marsh at Bayfront Park along the north side of Brownie’s Beach Road would be open water by 2050.



MAP 11

Impacts to Wetlands

The most significant and obvious environmental impact of sea level rise in Chesapeake Beach will be the conversion of the great estuarine and marine marshes to open water. The vulnerabilities and opportunities this will create for the Town, especially along Bayside Road are not yet fully understood. However, it is known that these marshes do absorb rainwater and storm energy during storms and therefore reduce the severity of flooding. This function will wane as the wetlands are replaced by open water. If the existing wetlands are prevented from expanding, a natural flood control system will have been severely weakened.

The succession from marsh to open water is expected within the time horizon of this Comprehensive Plan. It is therefore reasonable to plan for an increase in the incidence and extent of flooding in future decades. The risks of not planning for this change may be high in possible loss of life, property, public investment in infrastructure, not to mention the forgone opportunities to sensibly adjust to environmental change.

Impacts to Made Land

The second significant impact is of special concern to the Town's recreational center. Kellam's Field, the public boat launch at the marina, Northeast Community Center, the Waterpark, and the tot lot at Gordon Stinnett Boulevard are all built on "made land"—that is, atop the filling of the marshes and these are especially susceptible to the intrusion of ground water and land subsidence. See [Fishing Creek – the Confluence with the Bay](#) earlier in this chapter.

A Plan for the Natural Environment

Objectives

- Preserve, protect, and grow the remaining natural environmental features and sensitive areas and the key roles they play in sustaining life and property in and around Chesapeake Beach.
- As Bay water levels rise, make way for the natural migration of the Town's marshes and wetlands so that development and land conservation are balanced.

- Adjust to sea level rise by building a community of landscaped and natural spaces along with shoreline structures that together protect the Town and advance other goals.
- Develop a high quality environmental planning and coastal engineering capability, including updated codes and regulations, sophisticated mapping and modeling of the floodplain, sea levels, and risk assessments, and new organizational approaches to guide the future.
- Cultivate a love for the outdoors and greater access to the Chesapeake Bay shoreline, Fishing Creek, the marshlands, and the forests, which together make up the natural wonder of Chesapeake Beach.

Plan Recommendations

The Future Old Growth Forests of Chesapeake Beach

Change the zoning map to classify the forest stands that comprise the open spaces in and adjoining the Town's major subdivisions as "Resource Conservation", which is the Town's zoning district intended to protect natural resources and sensitive areas. Improve public recreational access to and within these forest stands to elevate public appreciation for lasting conservation¹³. In compliance with Maryland statutes, the Town maintains and enforces forest conservation regulations, (Section 290, Article X of the Zoning Ordinance) as part of development plan review. The purpose is generally to prohibit the cutting and clearing of forested areas on development tracts and to require developers to prepare conservation plans to retain or replant forests.

An Urban Forestry Program

Institute an urban forestry program aimed at growing the town-wide tree canopy by planting street trees, requiring a minimum tree coverage on new lots, encouraging the planting of native species on existing lots, and preserving wooded areas throughout Chesapeake Beach, to the extent possible. Also work to protect and sustain native vegetation in parks and publicly owned spaces and adopt a plan to eliminate invasive plant species in these areas and replace them with native species.

¹³ See Chapter VII and VIII, for recommendations on recreational trails. Chapter III also addresses this Plan's recommendation to extend existing and planned trails throughout a proposed joint planning area (beyond the municipal boundary) in coordination with Calvert County.

A Sanctuary at Randle Cliffs Natural Heritage Area

The property has been only partially protected from development and disturbance through Town zoning including its Critical Area rules¹⁴. Permanent conservation, either through easements and/or public acquisition, can ensure this property remains a sanctuary for its endangered species and a world class recreational and educational resource. This Plan recommends public acquisition of the land in fee simple.

Protecting Brownies Beach

Brownies Beach is the Town's only public beach providing direct water access to the Chesapeake Bay and access to a unique and sensitive environmental area. Like other shorelines, the viability of Brownies Beach is under threat due to regular wave action and storm surge, events compounded by the rising levels of the Bay. As a natural shoreline however, it is largely unprotected. The Town should undertake an environmental study and plan to protect Brownies Beach and its natural and recreational amenities primarily using living shorelines techniques to extend its life as an essential community amenity. A similar study and plan should be considered for Randle Cliffs.

Reappraising Development Regulations

It goes without saying that this Plan supports the continuation of zoning, subdivision, and other development regulations in the areas of floodplain management, forest conservation, sediment and erosion control, stormwater management, and the Critical Area. However, these regulations and how they are enforced will need to be adjusted considering rising sea levels. Conditions will change and the rules for development will need to be adjusted. It is imperative that the entire suite of regulations, standards and specifications be reappraised and updated to ensure the best outcomes in the years ahead.

Protect the Remaining Steep Slopes

Revise the zoning ordinance to limit the amount of disturbance allowed on the remaining steeply sloping lands. This may include requirements to cluster development on the least environmentally sensitive parts of larger tracts and/or reductions in the number of dwelling units permitted per acre.

¹⁴ The land is classified as a Resource Conservation District on the Town of Chesapeake Zoning Map and as Resource Conservation Area (RCA) in the Town's Critical Area program. The Critical Area RCA designation restricts residential use to one house per 20 acres.

Activate the Board of Port Wardens

Town Code (Article IX of the Zoning Code) creates a Board of Port Wardens whose responsibility it is to regulate the placement and construction of structures and barriers within or on the waters in Town (such as raising stone revetments, and building marinas, bulkheads, wharves, community, and private piers, etc.), taking into consideration impacts to marine life, water pollution, erosion, navigation, and riparian rights. This entity has not been active, and these types of development activities have been regulated only by outside agencies¹⁵. Having a local body who can act with respect to shoreline development in the best interest of the entire community will be essential to coordinate policy responses to flooding and sea level rise and guide waterfront conservation and development.

Prevent Development in Areas that will be Inundated

For areas that are expected to be submerged when the Bay water level rises to 2.1 feet, this Plan recommends that regulations and policies be adopted to prevent further development or intensification of land use activities, and that no residential uses be permitted. The Land Use Plan, Chapter V, designates such areas as "Resource Conservation", recommending that only low intensity and water related non-residential uses be conducted thereon. See also Chapter V, Land Use for guidance and recommendations pertaining to areas projected to have a 1 in 10 annual probability of flooding and other high-risk areas. As part of the master planning discussed in Chapter V, the Town would evaluate, adopt, and enforce standards regarding the elevation of lands and structures and the construction of shoreline protective measures such as revetments and bulkheads.

Plans for Vulnerability Zones

As discussed in the Land Use chapter, prepare detailed plans for the three Vulnerability Zones, which will address the environmentally sensitive areas, infrastructure and community facilities, land use and development. Until such plans are adopted, the Town should postpone formal review and approval of development plans in these areas.

¹⁵ The Maryland Department of the Environment and Army Corps of Engineers.

V. Land Use

Introduction

The term “land use” refers to the way people use land and therefore it reflects the cultural, economic, and environmental character of an area. The existing and proposed future land use maps in this chapter are visual expressions of the Town’s character. They show the location of natural areas and the distribution and intensities of residential, institutional, and commercial activities. Ultimately the way the land is used impacts demographics, economics, and housing as well as man-made and natural resources including streets, community facilities, marshlands, and floodplains. This land use element therefore is intrinsically connected to all the other elements of this Plan.

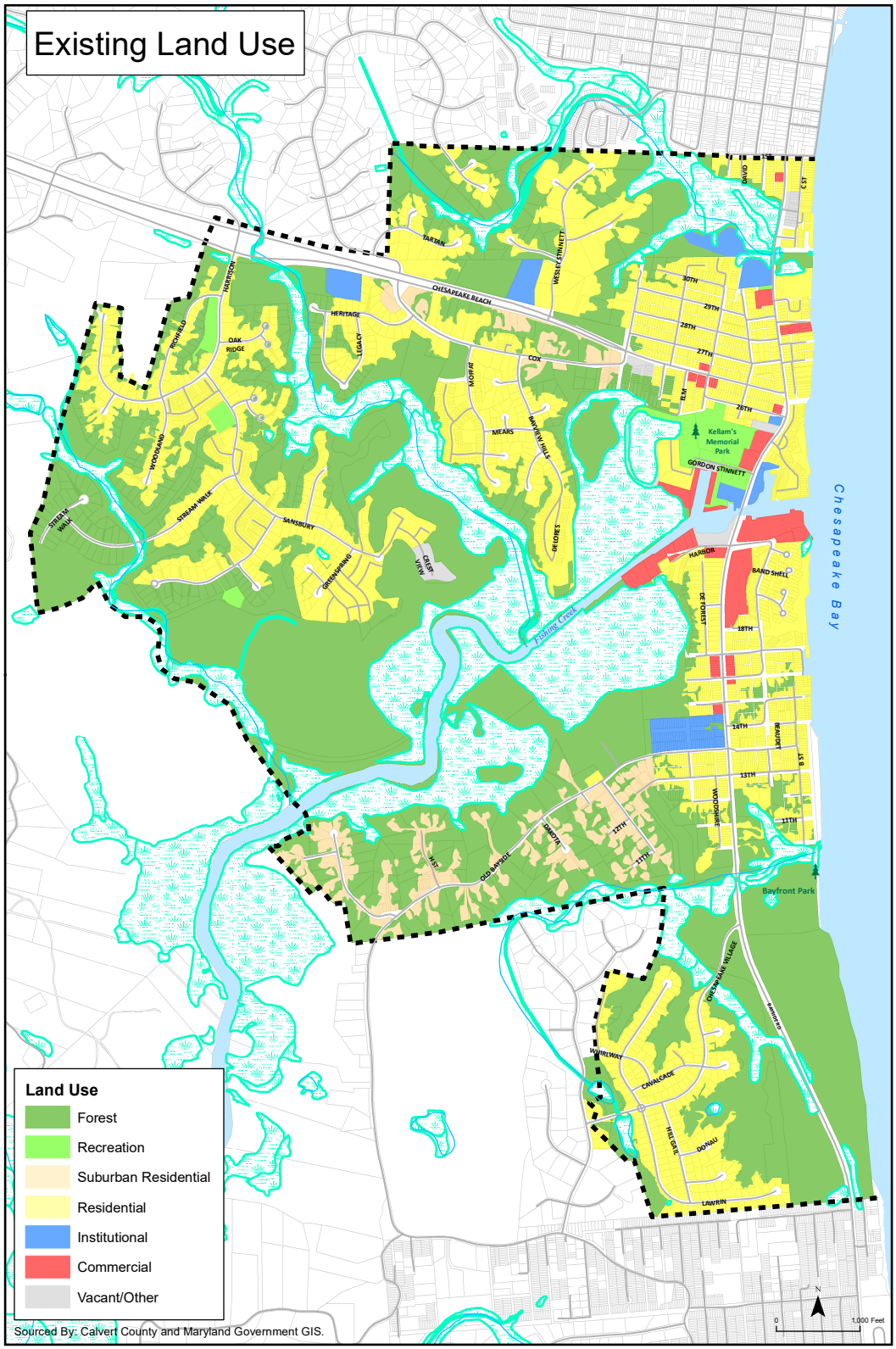
Existing Conditions

This review of existing conditions addresses the general land use pattern within Town limits. Map 12 shows this pattern and each of the general categories on the map is described below.

Forests and Other Natural Resource Lands

Environmental features, including floodplains, tidal marshlands, steeply sloping woodlands, and streams extend through Town and often separate residential neighborhoods from each other. The residential lots along Bayside Road and north of MD 260 are developed in a wooded setting and the Town’s major residential subdivisions (Bayview Hills, Richfield Station, Chesapeake Village and Heritage Woods), were each carved out of large intact forests. Some of the remnants are protected by conservation easements, required under the Forest Conservation Ordinance, as well as by Open Space agreements and Residue designations required by Stormwater Management and Open Space regulations associated with the Residential Planned Community (RPC) floating zone under which they were originally approved.

Tidal wetlands are also a major feature as described in Chapter IV. Despite the historic filling-in of the wetlands at the natural confluence of Fishing Creek and Bay, significant wetlands remain as shown on the Existing Land Use Map. As for the Town’s shorelines, except where natural conditions have prevented it, the shorelines of Fishing Creek and the Chesapeake Bay have been developed. The shoreline of Fishing Creek, within the center of Town, is largely covered by impervious surfaces such as buildings and parking lots. The only part of the Bay’s shoreline that is still in a natural condition is the 4,300-foot stretch from Bayfront Park to the southernmost municipal limits.



MAP 12

Recreational Land Uses

Map 12 shows areas devoted to park and recreational use. There are three HOA-owned neighborhood parks; in Richfield Station, Bayview Hills, and Windward Keys. There are no publicly owned neighborhood parks in Chesapeake Beach.

The Town is home to the publicly owned community-level park at Kellam's Field, a publicly owned memorial park (Veterans Park), a publicly owned boat ramp and the 18.8-acre natural area, Bayfront Park, which includes Brownies Beach. The publicly owned and operated Chesapeake Beach Waterpark is also located in Town along Gordon Stinnett Boulevard. The Beach Elementary School property includes tennis courts and a playground.

A full evaluation of park and recreational facilities is provided in Chapter VIII of this report. To summarize that section: the Town is significantly underserved in terms of parkland. With only three HOA-owned neighborhood parks, most households do not have ready access to a neighborhood park. Except for Kellam's Field, there are no parks serving the older town neighborhoods or waterfront housing developments and the modern Chesapeake Village subdivision does not have a park. Except for small spaces at the terminus of public streets and the Veterans Park memorial, there are no publicly owned waterfront lands that most residents can safely walk or bike to.

Residential Land Use

As shown on Map 12, the developed land use covering more land than any other is residential. Residential building types and densities vary from high-density (up to 20 units/acre) multi-family structures along the Bay front, to very low-density (2 units/acre) single-family homes along Old Bayside Road and in The Highlands, located north of Chesapeake Beach Road. The Town's residential zoning districts are presented in Chapter III, Municipal Growth and an evaluation of housing is presented in Chapter VI, Housing.

Commercial Land Use

The Town of Chesapeake Beach boasts an array of commercial entities, commensurate with the size of its population. As of 2021, the Town's website references over 80 commercial businesses.

Within five miles of the Town Hall, a visitor or resident can access businesses and services including, but not limited to the following: fast- or take-out food, indoor dining, grocery/ liquor supplies, hair salons, cleaners, real estate offices, financial consultants, tackle shops, marinas, venues for antiques, kettle corn, teas and sweets, pet hotels/day care, a major hardware store, gas stations, car wash, the local chapter of the American Legion which includes party rooms and dining; and a major hotel and resort, that offers gaming, wedding venues and music concerts. Other businesses, that may have not been listed above, are also a valued part of the business community. Finally, many other small businesses using Chesapeake Beach addresses, such as music teachers and pet walkers, contribute to the local economy and serve as very significant community resources.

The Town's proximity to North Beach also affords the opportunity to utilize nearby dental, medical, legal, financial, and other professionals and various popular restaurants, short term rental facilities and ice cream, art, and appliance stores. Town residents can also take advantage of the various delivery services that major grocery stores have provided from the nearby Dunkirk town center.

Institutional

Institutional uses such as religious, public service, administrative, education, and cultural buildings are distributed throughout the Town and include among others, the Bayside Baptist Church on Chesapeake Beach Road, the North Beach Volunteer Fire Company, Town Hall, the Northeast Community Center, Beach Elementary School, and the Chesapeake Railway Museum.

A Plan for Land Use

Introduction

This land use plan focuses on the general pattern and distribution of land uses through 2040. A land use plan is not a zoning map. Instead, it is a guide that can shape how the zoning map is drawn. The zoning map is, of course, much more than a guide; it is part of the Town's zoning laws and it divides the Town into zones, each having its own set of use and development regulations. For example, some zones permit housing while excluding most commercial uses. While a zoning map is not a land use plan, it is required to be consistent with a land use plan. Ultimately, many of the land use recommendations in this chapter will be codified into law through zoning amendments.

A land use plan is best thought of as the official guide to the use and development of land, showing the preferred general use of every parcel. For example, since the 2002 adopted Comprehensive Plan, the Town has recommended a land use called Resource Conservation. After that Plan was adopted both the Zoning Ordinance and Map were amended to create a zone called Resource Conservation. This zone was applied to areas recommended for resource conservation and regulations were approved for this zone that strictly limited the amount and type of development to minimize forest clearing and water pollution. Later in this Chapter, recommendations for expanding the Resource Conservation zone are discussed.

This new 2040 Plan advances many of the previous plan's recommendations and policies and provides guidance for future land uses and development. As noted above, following, or concurrent with the adoption of this Plan, a new zoning map would be adopted with the aim of implementing the Plan.

With a few notable exceptions discussed in this Chapter, implementing the land use plan recommended here would not intrinsically change the existing land use pattern in Chesapeake Beach. The originally platted parts of Town form a bayfront community with cottage style neighborhoods and modern waterfront housing developments. These are complemented by more recently constructed neighborhoods built at higher elevations and flanked by forests sloping toward Fishing Creek and the Bay. Maritime, tourism, and shopping areas are located along Bayside Road where Fishing Creek joins the Chesapeake Bay. It is not the intent of this Plan to change any of this. Instead, this Plan proposes to optimize this pattern for the benefit of residents and visitors and to prevent erosion of the Town's intrinsic bayfront character.

The Plan seeks to conserve the Town's heritage neighborhoods, guide recreational and civic uses into a town center arrangement, protect the remaining forests in Town, repair a deficit in the amount of parkland, protect the small town character with new restrictions on building heights, and adjust to the Town's vulnerabilities related to the rising level of the Chesapeake Bay.

Land Use Objectives

These are the objectives this land use plan is intended to achieve:

1. Develop land use decisions that are compatible with protecting and enhancing the quality of the Chesapeake Bay and its surrounding ecosystem while discouraging land development that promotes negative impacts.
2. Recognize the Bay and its tributaries as focal points of the local and regional economy and as treasured community amenities.
3. Adapt to the vulnerabilities of sea level rise and flooding in a way that incorporates the Town's heritage as a Bayfront destination and adds to the Town's scenic beauty and natural resources.
4. Protect the Town's unique small town bayfront character and setting through regulations on new development and redevelopment. Encourage zoning and density levels that do not overburden current Town infrastructure.
5. Enhance and protect the residential qualities of the Town's original cottage neighborhoods through a program of improving infrastructure (including neighborhood parks, modernizing drainage, and installing sidewalks, curbs, crosswalks, and street trees), and promoting compatibility in the design of new buildings.
6. Within the boundaries of current infrastructure, expand commercial development including tourism opportunities, foster the redevelopment and revitalization of commercial properties, and bring about an arrangement of shops, and commercial offices and services that improve the convenience and joy of living in Town.

7. For the local environmental benefits they provide, secure for all time the conservation of the remaining forest stands, especially those adjoining the Town's major residential subdivisions, the parcel known as the Randle Cliffs Heritage Area, and where possible and practical allow for hiking trails and related low impact community enjoyment of the forests.
8. Provide for increased public recreational access to the Chesapeake Bay and Fishing Creek waterfront shorelines.

General Organizing Framework

Conservation and Community Development

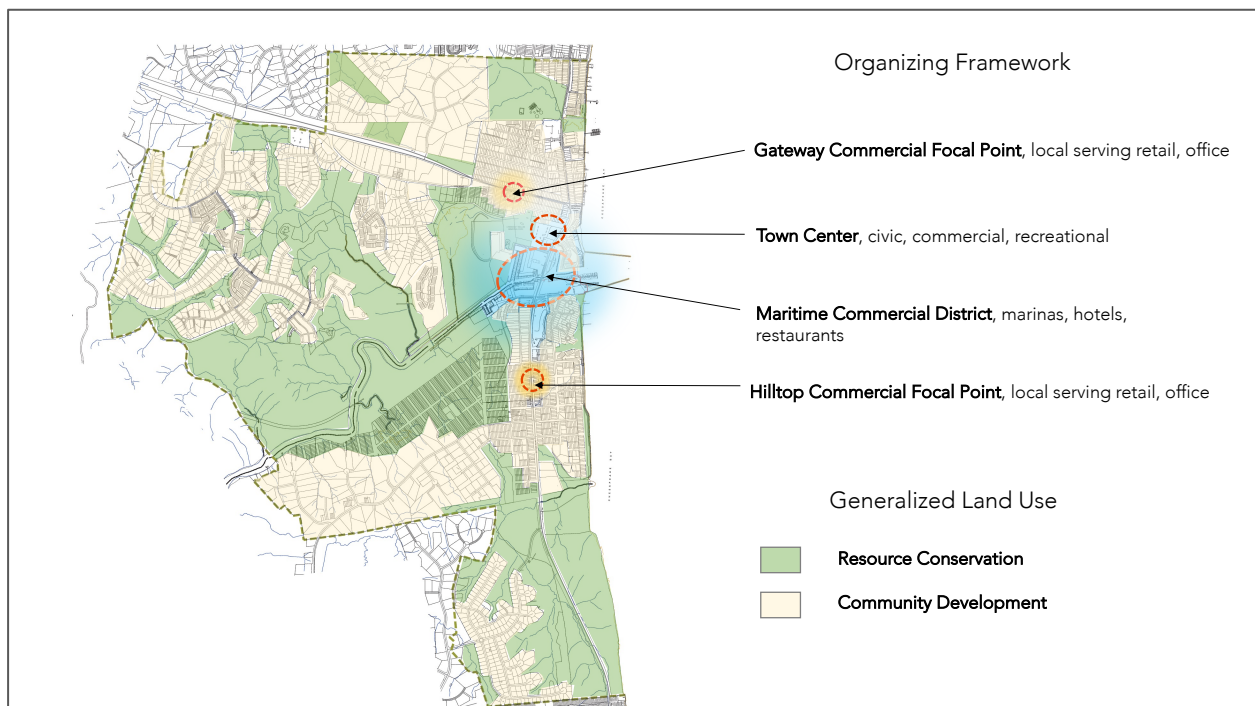
Before more specific land use recommendations are addressed, this chapter presents a general framework or pattern for Town land use through 2040. As shown on the next exhibit, Chesapeake Beach can be broadly organized into two major use categories:

- Resource Conservation (green on the exhibit), and
- Community Development (beige on the exhibit).

The resource conservation category encompasses the major remaining forests, undeveloped steep slopes, wetlands, and stream buffers. The Plan recommends, to the extent possible, that these areas be preserved and protected from the impacts of development, land clearing, and grading. It is recommended that land uses within them be restricted to very low intensity uses only and that public facilities generally not be extended within them.

The community development category encompasses all lands that have been or may be developed. The Plan recommends, to the extent possible, that existing community development be conserved, enhanced, and renewed over time to meet the needs of the Town's existing and future residents and to sustain a high quality of life. Within this context, four commercial centers are planned: a recreational and civic town center, a vibrant maritime district, and two focal points for commercial revitalization and/or development. Each center is intended to be a priority for public and private investment over the next 20 years. The principles intended to guide the design, building, and use of these commercial centers are as follows:

- Compact and Walkable: Pedestrians will be given the priority. Emphasis is to be placed on traffic calming, sidewalks, bike paths, street lighting, crosswalks, and pedestrian amenities.
- Parking Management: Parking will be managed which may include consolidating it in designated locations so buildings and outdoor amenity spaces can be located close to each other.
- Unified Character: Landscaping, site design, architecture, street trees, and signage will be coordinated to bring about a unified character in each area.



Town Recreational and Civic Center

Of special note is the proposed town center, located on the west side of Bayside Road roughly between the Town Hall and Gordon Stinnett Boulevard on property owned by the Town of Chesapeake Beach and presently in use as parking. The Plan recommends that as part of the reimagining of Kellam's Field (See Chapter VIII), the Town create a central community gathering place that could contain outdoor seating, a bandstand, recreational amenities for all age groups like bocce ball and other lawn or court games, and concessionaires to provide food and beverages. It could be the location for a future Christmas Market and outdoor festivals that showcase local businesses. A limited amount of commercial enterprise might also be feasible like a coffee shop or restaurant. The recommended elements of the town center vision include:

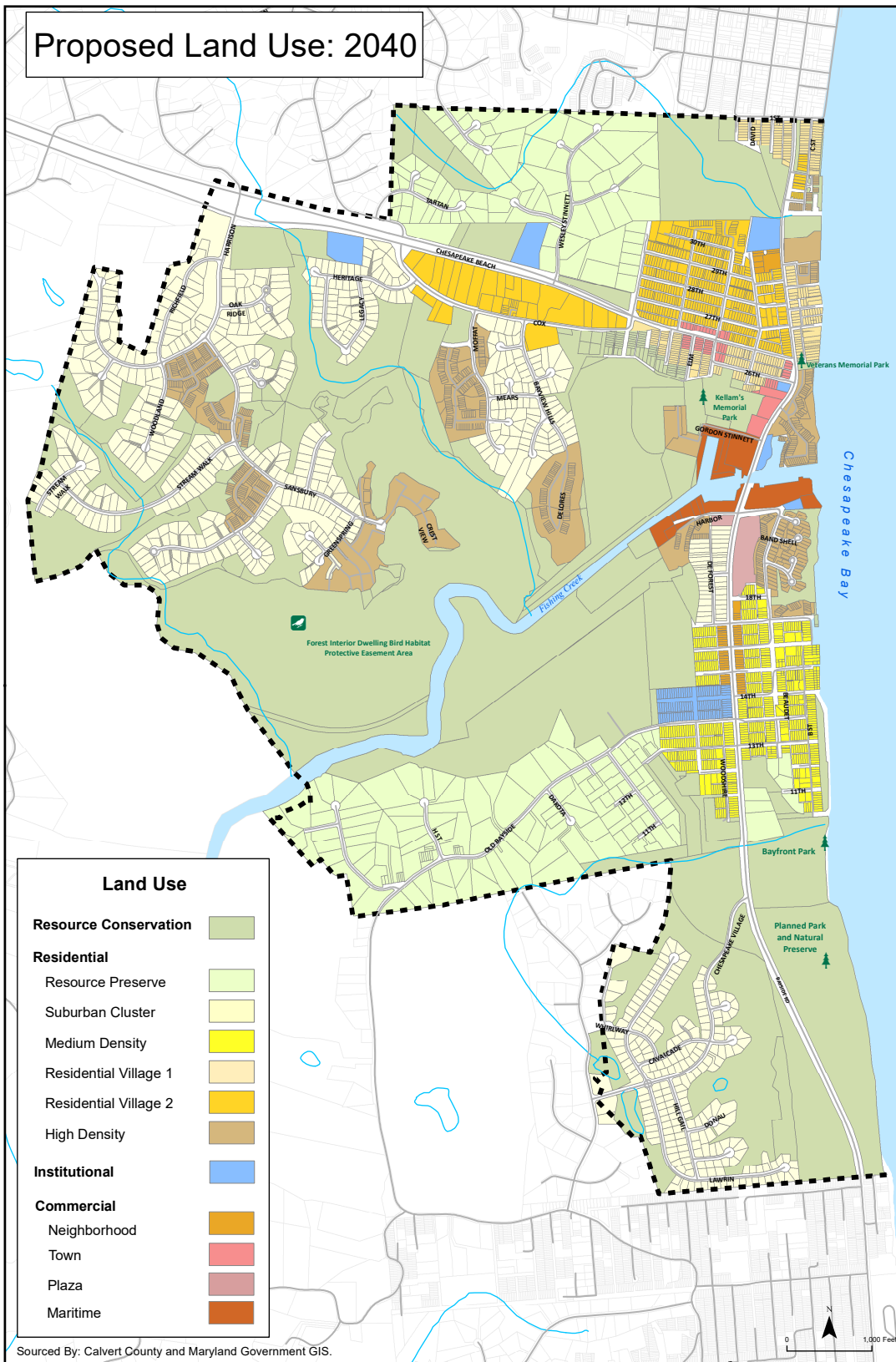
- An activity center aligned with the water, Kellam’s Field, and Fishing Creek Trail.
- A site for local business activity aligned with the marina, Kellam’s Field, views of the water, boats, and nature, and within easy walking access to neighborhoods.
- Improved connection between Kellam’s Field and the rest of Town, bringing life and purpose to the space.
- Reimagining Kellam’s Field with both ballfields and the conversion of lower lying areas into a naturalized landscaped park for walking and biking and designed to handle flooding, high water tables, and the emergence of wetlands (See Chapter IV).
- Small cottage-type structures reminiscent of the Town’s heritage, that could replace the pavilions that exist today and/or serve as space for special events and fairs.

In summary, the overall framework for land use favors preserving the remaining natural resource areas and sustaining the quality of life and vitality by conserving, enhancing, and renewing the parts of Town already developed. In this regard, public and private investment is encouraged to promote the emergence of vibrant commercial and civic centers. Most notably the Plan encourages the development of a new town center.

Future Land Use

Map 13 designates the following general recommended land use categories: resource conservation, residential, institutional, and commercial. They are described in Table 4 and discussed below. The Land Use Plan map is the Town’s official guide to the use and development of land through 2040 and the basis for updating the official Zoning Map.

Proposed Land Use: 2040



MAP 13

TABLE 4

General Land Use Categories

Land Use	Purpose	Primary Example Uses
Resource Conservation	Protect natural resources and sensitive areas from the impacts of development	Trails, parks, woodlands, nature centers, and where applicable, water-dependent low impact resource and recreational uses such as aquaculture, fishing, boating.
Residential		
Resource Reserve	Conserve the wooded and naturalized residential setting, and where existing steep slopes, stream buffers, and wetlands	Single-family detached houses on large lots, open space and woodlands
Suburban, cluster	Conserve the character of more recently developed neighborhoods which are clustered among preserved woodlands and open spaces	Single-family detached houses
Medium Density	Conserve the character of the neighborhoods south of Fishing Creek distinguished by houses built along narrow streets on the hilly and wooded terrain	Single-family detached houses
Residential Village 1	Conserve traditional cottage neighborhood character	Single-family detached houses
Residential Village 2	Conserve the traditional cottage neighborhood character	Single-family detached with allowance for other housing types compatible with neighborhood character
High Density	Conserve the quality of denser housing projects	Single-family attached and multi-family buildings
Institutional	Foster the preservation of local institutions	Government offices, schools, religious and community buildings and facilities
Commercial		
Neighborhood	Promote neighborhood scale commercial uses	Retail, restaurants, offices
Town	Foster commercial redevelopment and vibrant business centers	Retail, restaurants, offices, and housing above commercial
Commercial Plaza	Retain shopping center and essential local serving commercial activities with space for parking	Retail including grocery and pharmacy, banking, and other local serving commercial services
Maritime	Encourage a thriving maritime and entertainment district	Retail, restaurants, offices, marinas and maritime uses

Resource Conservation¹⁶

The Resource Conservation land use designation identifies natural lands and open spaces that either cannot safely support development, would be irreparably harmed by development, or whose loss would impair local water quality, flood management, wildlife habitat, and scenic beauty.

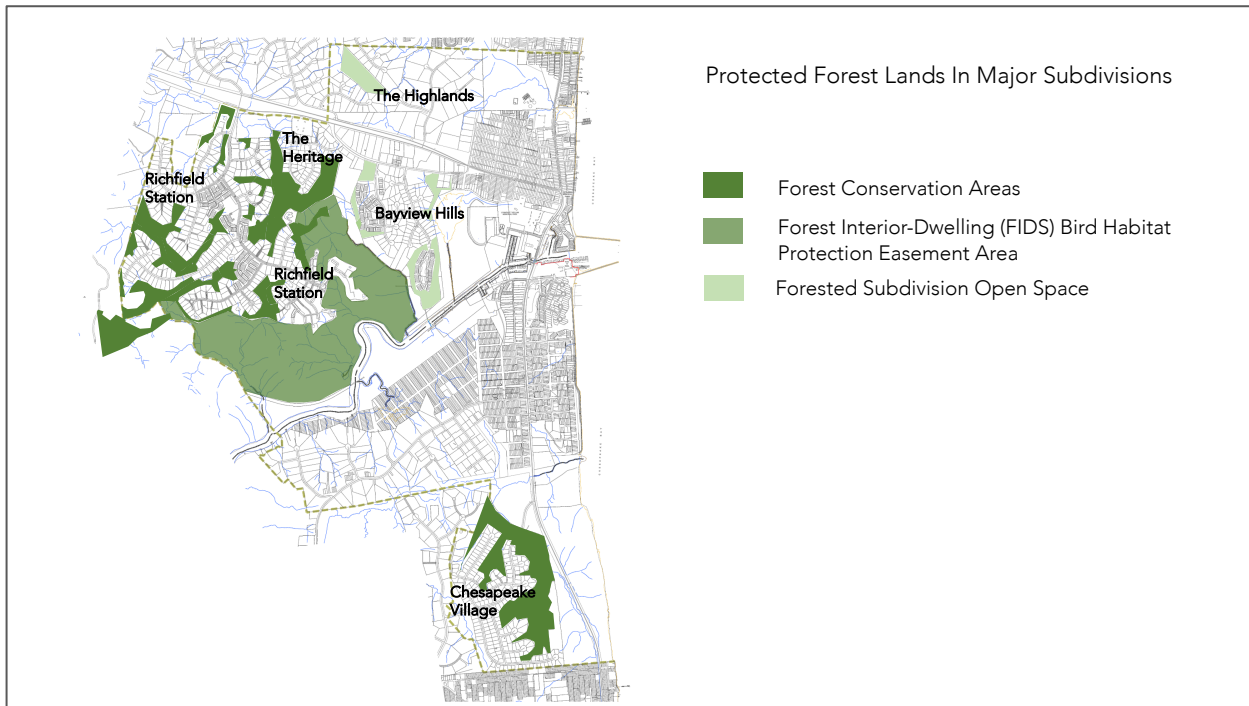
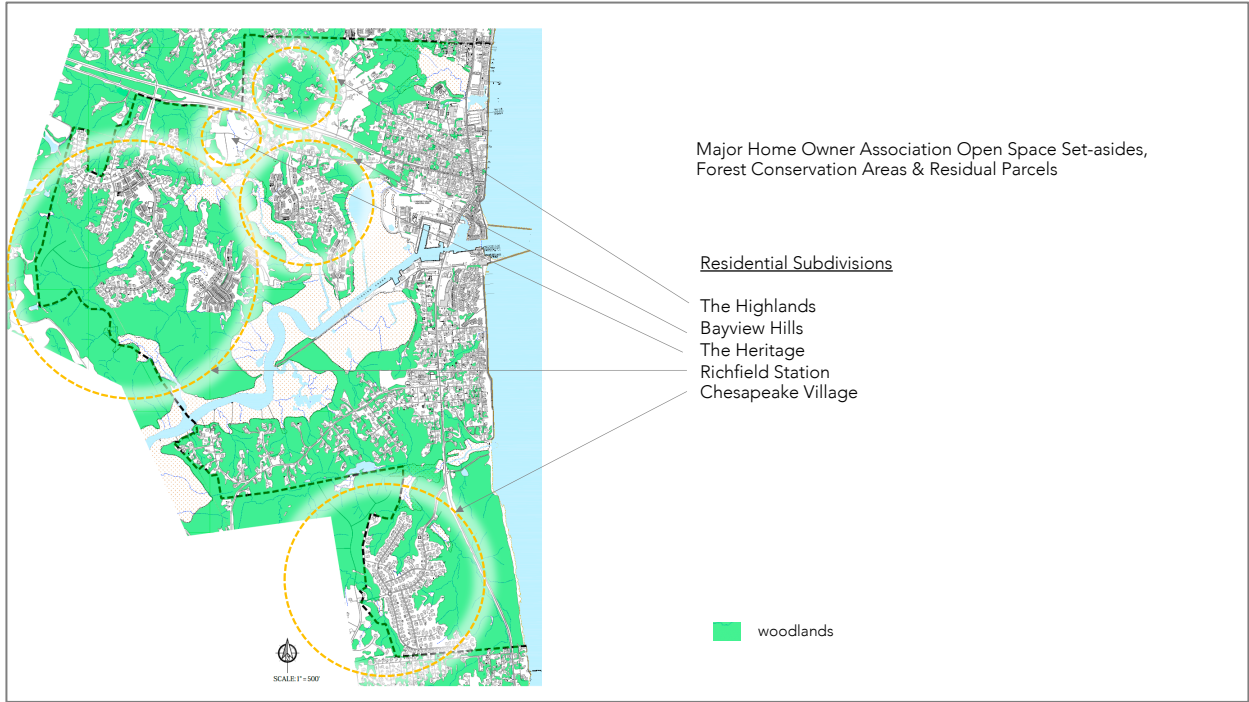
Sensitive natural areas sustain the quality of life, public health, and natural beauty of Chesapeake Beach. Marshlands and wetlands help attenuate flooding in the lower lying sections of Town, improve the water quality of Fishing Creek and the Bay, and provide habitat for native plants, fish, and wildlife that are part of the Town's character and beauty. Steep slopes left in a natural wooded condition minimize soil erosion and pollutant runoff to streams and by extension the Bay. Forested areas moderate temperatures for nearby residents and provide habitat for the birds and wildlife that residents and visitors see from the Fishing Creek Trail. Vegetated buffers along streams maintain water quality and slow erosion. The preservation of these natural resources is also important to the Town's economy which is supported by tourism.

The 2002 Comprehensive Plan first applied the Resource Conservation category. With the subsequent adoption of the zoning district, also called Resource Conservation, areas so designated have been protected from development and loss. This Plan expands the areas recommended for Resource Conservation to much of the remaining undeveloped steeply sloped forested areas, to areas most acutely impacted by sea level rise, and to woodlands preserved when residential subdivisions were platted.

The measures available to the Town to protect areas planned for Resource Conservation include amending the zoning map to reclassify them as Resource Conservation, requiring that the most sensitive parts of sites remain in a natural condition if land development on the less restrictive parts of a site is allowed, and acquiring conservation easements or the properties themselves in fee simple. Some of the very large woodlands surrounding recent subdivisions for example are protected by plat restrictions and conservation easements.

The next two exhibits highlight the Town's modern residential subdivisions and associated forests. The first shows the inventory of forest cover throughout the Town. The second shows the portions of these forests that are protected through forest conservation or through a special covenant for wild bird habitat protection. It also shows forested areas that are platted as open space within subdivisions. Each category is described below:

¹⁶ Also See Chapter IV, Natural Resources.



- In compliance with the requirements of the Natural Resources Article of the Annotated Code of Maryland, Chesapeake Beach administers forest conservation regulations. These are set forth in Article X, Forest Conservation, of the Town’s Zoning Ordinance. The Town secured the retention and protection of those forests shown in the exhibit as “Forest Conservation Areas” through its forest conservation regulations during the subdivision approval process. These forests are preserved by recorded plat within Richfield Station, The Heritage, and Chesapeake Village.
- The largest area shown in the exhibit above is a 202.78-acre forest which is protected by covenant and agreement between the Richfield Station II Joint Venture, LLP, and the Town of Chesapeake Beach. By covenant, enforceable by the Town, it must remain preserved forest interior bird habitat as a required mitigation for development in the Critical Area. No development activities, agricultural use or forestry is permitted; however recreational activities including walking trails are permitted upon review and approval of the Critical Area Commission. A copy of the Protective Covenant and Agreement can be found in Appendix D of this report.
- The exhibit above also shows forested areas, platted as open space before the enactment Forest Conservation statues and regulations. These are within Bayview Hills and The Highlands, subdivisions that predate the Maryland Forest Conservation Act of 1991 and the Regulations, enacted in 1992. While the open space status of these areas is secured by recorded plats, the tree cover on those parcels is not protected by Town or State law or regulation. This Plan recommends that the Town investigate the ownership of forests platted as open space and the effectiveness of protective measures now in place and pursue optimal approaches to ensure permanent preservation as may be needed.

The Resource Conservation designation is also drawn to encompass lands that are currently in use for parks such as Kellam’s Field and Bayfront Park. It also includes lands that this Plan recognizes as potential park sites to provide public recreational access to the water. These areas are discussed and mapped in Chapter VIII, Community Facilities. The most prominent of these is the 50-acre forested shoreline property extending from Bayfront Park along the east side of MD Route 261 to the southern municipal border. This area, known as the Randle Cliffs Heritage Area, is the last remaining undeveloped bay front parcel in Chesapeake Beach. At the earliest opportunity, the Town should secure its public acquisition for much needed parkland and recreational water access and protect its unique biodiversity for all time¹⁷.

¹⁷ This has long been planned, dating at least back to the adopted 1990 Northeast Sector Community Facilities Plan which was adopted jointly by Calvert County, North Beach and Chesapeake Beach. The Northeast Sector Community Facilities Plan is discussed in Chapter III, Municipal Growth.

The Resource Conservation areas within Chesapeake Beach encompass the shoreline beaches and cliffs, the wetland tributaries, and the forest buffers of the Chesapeake Bay. In addition to sustaining important ecological functions necessary to the Bay's health, these areas play an important role in supporting Chesapeake Beach in its historic capacity as a recreation destination.

The scenic forest buffers outlining the wetland bird habitat that can be viewed from the Railway Trail at Fishing Creek; the fossil filled eroding cliffs, forest wildlife habitat and natural beaches within and adjoining Bayfront Park, and other water, wetland and forest access points and vistas cultivate the natural allure of Chesapeake Beach, the value of which cannot be measured. For this reason, we recommend that the Resource Conservation areas do not permit residential land use, and that they are instead maintained in their most pristine and natural form, allowing only for, under very stringent requirements, low impact access to recreation and commercial activities.

Residential

The Residential category is divided into six land use types reflecting the development patterns, character, and housing types that exist today. No substantive change is contemplated in existing neighborhoods or housing developments. This Plan's main recommendation is to conserve and enhance the Town's diverse residential areas and their housing types. Chapter VI, Housing contains specific recommendations regarding zoning changes to facilitate new housing units in residential areas without the necessity of new development such as through converting large residences into assisted senior care homes.

The Town's original cottage neighborhoods include the Stinnett Subdivision and the Middle Subdivision both of which are designated Residential Village on Map 13 and the Campgrounds, which is designated Medium Density. To varying degrees, these original neighborhoods contend with drainage issues, limited on-street parking shortages, narrow and steeply sloping hillside streets, missing sidewalks, and street lighting, and to some extent property maintenance and zoning code violations. The Town will enhance older neighborhoods by:

- Preparing neighborhood-based improvement plans in coordination with residents to address sidewalks, crosswalks, streetlights, street trees, parking issues, drainage, open space, and other matters.

- Strictly enforcing the Town’s new livability and rental codes (enacted in 2018) to ensure that safe and high-quality housing is sustained in Chesapeake Beach for the Town’s renters.
- Encouraging applicants for zoning approvals to prepare and record amendment plats to eliminate platted parcel lines that bare no semblance to actual property ownership, which will improve the informed transfer of property, the drawing of zoning district lines, and the construction of improvements on private property.
- Adopting new development standards, including lot coverage standards to regulate building activities more appropriately on lots in the Residential Medium Density district on or near steep slopes, especially along the shoreline cliff on B Street.
- Preparing a Town wide property survey to ensure a sound basis for establishing legal property boundaries to support real property searches and rebuilding in the event of catastrophic storm events.

To promote compatibility between new and existing housing and generally to favor housing types that readily fit in with existing neighborhoods, the Plan recommends the following with respect to the Zoning Ordinance:

- Rescind the bonus density overlay district in its entirety. This provision of the Zoning Ordinance has allowed the Planning Commission to approve apartment and condominium buildings that can exceed 50 feet in height. Without the overlay district, building height would remain capped at 35 feet and new housing would be compatible with existing housing.
- Replace the High-Density residential district on the east side of MD Route 261 between Veterans Park and 28th Street with the Residential Village district. This area is designed RV-1 on the Future Land Use Map. With this change in land use policy the High-Density zoning district would apply only to existing high density housing.

- Remove multi-family housing, duplexes, and townhouses as permitted uses in those parts of the Residential Village district designated on Map 13 as Residential Village 1 (RV-1). With this change, townhouse developments in areas designated RV-1 would be permitted only where they are built today.
- Continue to allow a variety of housing types in those parts of the Residential Village district designated on Map 13 as Residential Village 2 (RV-2), provided applicants obtain site plan approval and comply with building design standards once they are adopted.
- Prepare and adopt building design standards applicable to residential areas, which may be a combination of regulatory requirements and recommended guidelines, as discussed later in this Chapter under the subheading, Community Character.

Institutional

The Institutional land use includes government, non-profit, and quasi-public uses such as schools, museums, and libraries. Institutional uses shown on Map __ are the North Beach Volunteer Fire Company, Town Hall, Northeast Community Center, the U.S. Navy boat launch at Fishing Creek, Chesapeake Railway Museum, Beach Elementary School, Bayside Baptist Church, and the American Legion¹⁸. This designation signals the Town’s intent that these properties remain in institutional use through 2040.

Commercial

The Commercial designation is divided into four types reflecting the relative intensity of planned commercial activity. As with the Residential designation, it is recommended that new buildings in all Commercial areas comply with building design standards and be limited to a maximum building height of 35 feet. It is further recommended that the bonus density overlay district, which is currently shown on the Town’s Zoning Map, be removed entirely.

¹⁸ The Twin Beaches Branch of the Calvert Library is presently located in a commercial building at 3819 Harbor Road but will be relocating to a newly developed site in North Beach in 2023.

Neighborhood Commercial

As shown on Map 13, the Neighborhood Commercial designation encompasses existing commercial uses and parcels zoned commercial on Bayside Road south of 18th Street.

The purpose is to allow space for low intensity commercial uses (such as coffee shops, florists, salons, and offices) and to ensure that new buildings are generally compatible with surrounding houses. The long-standing practice of converting houses to low intensity commercial uses in this area is supported as well as the construction of new residentially scaled commercial buildings provided building design standards are complied with. New residential uses would be allowed only as residences above street level commercial and existing residential uses would remain as permitted uses.

Town Commercial

As shown on Map 13, the Town Commercial designation encompasses two existing clusters of commercial use which are discussed below. The Plan recommends that a variety of commercial uses continue to be allowed in each area with the goal of fostering architecturally unified and walkable areas. The first is the area roughly between E and F Streets on Chesapeake Beach Road. This is referred to earlier in this Chapter as the Gateway center and, as shown on Map 13, it is drawn to encompass several lots currently zoned for residential use near the road's intersections with E and F Street. The proposed Gateway center is approximately 3.2 acres. The second is the existing commercial uses along the west side of Bayside Road from Chesapeake Beach Road to Gordon Stinnett Boulevard.

The purpose of the Town Commercial designation is to promote commercial revitalization and the emergence of a more attractive and welcoming gateway into Town. New residential uses would be allowed only as residences above street level commercial and existing residential uses would remain as permitted uses. The Commercial area, unlike other locations, would allow a mix of commercial and residential uses.

Commercial Plaza

As shown on Map 13, the Commercial Plaza designation applies to the Chesapeake Station Shopping Center and the commercial parcel at the intersection of Harbor and Bayside Roads. This designation signals the Town's intent that this area remains as a valuable center for local retail uses with space for parking.

Maritime Commercial

As shown on Map 13, the Maritime designation encompasses the part of Town centered on the Fishing Creek Bridge, including the existing boating and marina activities along Harbor Roads and Mears Avenue. These include the Town's working waterfront uses, recreational boating, overnight accommodations, and restaurants. The goals for this special area are:

- Promoting the diversity of maritime and water-related commercial uses and intensities that have long defined the Town's historic waterfront
- Promoting active and vibrant commercial activities at the street (grade) level where walking is safe and enjoyable
- Establishing public pedestrian access to and along the waterfronts
- Preserving the remaining scenic vistas to the Chesapeake Bay (on the east) side and the expansive Fishing Creek marsh (on the west).



Because the Maritime area is especially impacted by sea level rise, as documented in Chapter IV, it is recommended that land uses, development, and building activities adhere to the policy guidance in this Chapter, under the heading, Adapting to Sea Level Rise and Flooding Vulnerabilities. Additionally, over-intensification of development in this area is a concern, and assessments of public infrastructure, traffic studies, noise or light pollution, and other relevant factors should be carefully evaluated when considering project approvals to avoid adverse impacts to residents and nearby recreational or commercial properties.

Community Character

A recurring theme in this chapter of the Plan is the promotion of compatibility between new and traditional buildings with the objective of protecting the Town's essential character. Promoting harmony and cohesiveness is an essential objective of town planning, one that was traditionally achieved in large part because property owners within a place (and local builders) shared a common design language. But that is hardly the case anymore.

Local properties can be owned by outside corporations that design their buildings to advance brands rather than to complement a streetscape. Regretfully, many builders have their "models" which work for consumers whether a lot is in a small coastal town or a new suburban subdivision, which means that, even in the oldest neighborhoods of Chesapeake Beach, traditional cottages can be replaced with homes that bear no resemblance to the Town's unique history and setting. Because many property owners build with little regard for community character, it can be eroded over time, leaving fewer and fewer examples of traditional character remaining as guideposts. Even local property owners, when they contend with the opportunities and constraints of land economics and finance can lose sight of the shared building norms and ideas that shaped the character of buildings and sites throughout the Town's history.

It is the Town's position that the essential character defining elements of buildings in Chesapeake Beach must be used as the model for future buildings, site improvement and development. The Planning Commission rejects formulaic building design and franchise architecture and signage and new buildings or site layouts that impair rather than complement the Town's bayside character.

It also rejects the idea that builders should slavishly adhere to architectural styles customary to Chesapeake Beach or mimic existing buildings. The important thing is that new buildings be compatible with the old, not that they look like the old. New buildings should look like they belong; they should have elements, scale, massing, colors, and materials that harmonize with the established community character.

This Plan recommends that a study be commissioned to evaluate the character of the buildings, signs, and structures in Town and to select those buildings and building elements that set the standard for a traditional architecture and design character that is unique to Chesapeake Beach. Upon completion of this study, the Town could create and adopt architectural, building, and site design guidelines that would shape both infill on vacant lots and redevelopment. Application of design standards is most appropriate where the physical and visual properties of development can significantly influence the character of the Town.

Because buildings and community design cannot be separated from their unique physical setting and “sense of place”, the above mentioned study should identify all character-defining landmarks and the best sight lines to the Bay, Fishing Creek, and elsewhere. The preservation of sight lines would then be protected through new development regulations.

Community character is also defined in part by the types of uses, especially commercial uses, permitted within a town. While Chesapeake Beach has a tourism base owing to its waterfront setting, it is primarily and overwhelmingly a residential community. Since the Town is relatively compact, commercial uses have the potential to adversely impact residential character and public health and welfare. The Town currently prohibits adult entertainment establishments and massage parlors, and this Plan recommends that the following additional uses be specifically prohibited: industrial uses, landfills, junk and salvage yards, medical and recreational cannabis dispensaries, casino gambling venues, drive in movie theaters, and smoke and vape shops¹⁹.

Adapting to Sea Level Rise and Flooding Vulnerabilities

Introduction

The Town’s vulnerability to sea level rise and increased incidence of flooding is explored in Chapter IV and significant recommendations that have a bearing on this land use plan are presented there. Chapter IV focuses on three vulnerability zones:

- Zone 1 is located along the shoreline north of north of Chesapeake Beach Road to North Beach town line.
- Zone 2 is in the center of Town encompassing the maritime areas.
- Zone 3 is located along the southern shoreline of Fishing Creek.

Chapter IV also identifies parts of each of the vulnerability zones that may be permanently covered with tidal water by 2050 and 2100 and areas subject to significantly higher risks of flooding. The maps presented there also show the projected extent of the future floodplains and depth of flood waters considering the rising water levels of the Bay over the next 30 years.

Sea level rise presents a serious long-term challenge for Chesapeake Beach. But if the response is coordinated and planned, it also presents an opportunity to build on the Town’s heritage as a bayfront destination and to bring about new and desirable land use patterns. A Comprehensive Plan is not the place to propose or design specific solutions. For now, it is enough to state that sea level rise will require new approaches to town planning, land development, and regulation.

¹⁹ Town referendum and Ordinance O-21-1 convey the Town’s strong opposition to sport gambling.

Principles to Guide Planning

Because sea level rise is a long-term challenge, this Plan adopts basic principles to guide Chesapeake Beach for the very long term, recognizing that once every 10 years, the Town would revisit them and the recommendations that flow from them. The principles are 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 events²⁰.

Master Plan for Flood Risk Reduction

At the earliest date possible, it is advisable that the Town prepare and adopt a master plan for flood risk reduction. This plan would include land use and infrastructure guidance for risk reduction. It could be adopted as an amendment to this Comprehensive Plan.

The purpose of the plan will be to evaluate and select flood mitigation techniques at both parcel and zonal levels (see Chapter IV). Following the Guiding Principles and recommendations of the Comprehensive Plan, the master plan would advance specific land use policies, landscape design measures to lower the risk of flooding, architectural guidance for new buildings and structures, and civil engineering recommendations.

Measures which may flow from this master plan could include building seawalls and revetments, creating wetlands, artificial flood retention ponds, floodwater diversion channels, shoreline and inland berms, and other measures that can both mimic natural drainage patterns as well as structurally hold back floodwaters.

Land Use and Development Recommendations

Three layers of recommendations flow from the principles noted above and the findings and analyses in Chapter IV of this Plan.

Layer 1: The Conversion of Land Uses to Resource Conservation

The Land Use Plan (Map 13) reflects a change in the Town's planning specifically regarding areas along Fishing Creek and elsewhere which, over the next 30 years, are projected to be either underwater or at a 10% annual probability of flooding. Such areas are generally the most exposed to flooding now and lie furthest from existing public infrastructure such as roads and municipal water and sewerage lines. This Plan recommends that the Town's zoning map be amended to classify these most vulnerable areas as Resource Conservation.

²⁰ Chapter IV contains maps that show areas projected to be underwater in 2050 and other areas projected to have an annual 1 in 10 probability of flooding by 2050. One in ten is an unacceptably high risk to public health and safety; it is 10 times the potential found in the officially regulated FEMA (100-year) floodplain. With sea level rise beyond 2050, areas predicted to have a 1 in 10 annual probability of flooding by 2050 are predicted to be open water by 2100.

These include the western portion of the Harbor Road peninsula (on which the historic Chesapeake Railway once ran), the area on the south and west sides of the Courtyards at Fishing Creek, and the area between the parking lot at Horizons on the Bay and the Sea Gate townhouses. Also included in this category is Kellam's Field. Existing and future environmental conditions make these areas unsuitable for urban development, which would expose future persons and property to an unacceptably high risk of harm from flooding and rising water tables.

As discussed in Chapter VIII, Community Facilities, this Plan recommends against extending public water, sewerage, roads, and other infrastructure into areas that are at risk of regular or permanent inundation. Acceptable land uses in these areas would include uses such as, aquaculture, commercial fishing, charter boating, parks, and even the outdoor recreational uses and amenities associated with more intensive development on other properties. In the case of Kellam's Field, this Plan acknowledges that sea level rise has constrained the development of park resources and infrastructure and that its optimal use is as a low impact recreational amenity and a natural resource for buffering the impacts of flooding.

Layer 2: Land Use and Development in High-Risk Areas

There are other areas, such as along Gordon Stinnett Boulevard, Harbor Road, and Bayside Road from the fire station north, that are expected to be at a substantially higher risk of severe flooding. As these areas lie adjacent to existing development and/or front directly on public streets, development and redevelopment would not be restricted to the same degree as in Layer 1. In other words, it is not necessary that these areas be rezoned to Resource Conservation through the year 2040. Considerable care, however, will need to be taken in using, building, and developing these areas to mitigate risks and to reduce impacts to adjoining areas.

Therefore, developers would be required to adhere to Town approved defenses to secure the safety and sustainability of these properties and ensure the public's health, safety, and wellbeing are protected. Designing and building flood mitigation measures will need to become as customary a part of the development process as designing and building streets and stormwater management. Also, efforts must be taken to ensure development activities do not make it more difficult for the public to respond effectively to the risks of sea level rise.

Layer 3: Existing Areas at High Risk

As the maps in Chapter IV show, there are also areas, already developed, expected to be at increasingly higher risks of flooding over the next several decades and beyond. Many of these areas already experience high water tables, encroaching wetlands vegetation, standing water, and nuisance flooding. In these areas, properties and the public and private streets that provide access to them are expected to be at heightened risk of sustaining damage and loss. These areas are shown on the maps in Chapter IV to be either open water or at a 10% annual probability of flooding and include:

- Houses on the south ends of David and D Streets
- Houses clustered along C Street just north of 31st Street
- Seagate townhouse community
- North Beach Volunteer Fire Department
- Windward Key townhouse community
- Fishing Creek Marina including the public boat launch
- Northeast Community Center
- Courtyards at Fishing Creek community

There are various options to address existing areas projected to be at higher risks of flooding, including infrastructure improvements like raising streets, re-positioning or re-routing drainage facilities and public utilities, building sea walls or elevating bulkheads. All such actions will be considerably expensive, and, in some cases, property owners may also need to elevate buildings or sites altogether. Other options may include the use of state or federal funding to encourage owners to sell and relocate especially after sustaining storm damage. The master plan recommended above, and other future studies and plans, done in coordination with residents and property owners, will ultimately shape the approach over the long term. In the meantime, should redevelopment be proposed for any property in the aforementioned areas, the redevelopment should be treated in the same manner as new development under the Layer 2 recommendations noted above.

Waterfront Access²¹

Chesapeake Beach is adjacent to the Chesapeake Bay and Fishing Creek, and it is difficult to quantify in acreage the equivalent value that the Bay contributes in the way of parks and recreation. However, public access to the waterfront shoreline is significantly obstructed and limited by private residential and commercial entities. Developing the Chesapeake Beach waterfront as a site for community recreational activities reflects an appreciation of this valuable and scarce community resource. Besides serving the needs of Town citizens and landowners, the waterfront is an attractive destination for visitors from nearby areas.

Chesapeake Beach has a long history of being oriented to the Bay for waterfront recreation. Piers that extended out into the water played an important role in the Town's history. One of the richest resources in Chesapeake Beach is the panoramic view of the Bay. A new, modern, and substantial public pier would facilitate abundant activities to be enjoyed by citizens and tourists throughout the year. In addition to mitigating the lack of public parks in Town, a pier would attract economic development, and create multiple employment opportunities for Chesapeake Beach citizens.

The Town should initiate a study to determine where, how, and what type of pier could be built. A new pier would be a key component of any waterfront revitalization program, both as it relates to the Town's history and the future enhancement of citizen enjoyment of the beautiful Chesapeake Bay.

With respect to Fishing Creek, the sea level rise is increasing reducing the viability of development on lands set far into the estuary. The Town should consider if opportunities exist to acquire private open spaces or to develop publicly owned spaces for recreational access to the waterfront.

The Town should collaborate with Calvert County and Maryland State departments to develop plans to enhance citizen access to the Chesapeake Bay. Town officials should work cooperatively with the County and the Town of North Beach to establish a connected network of walking, hiking and bicycle routes so that recreational features of each jurisdiction can be shared.

²¹ Chapter VIII presents recommendations concerning parks and recreation.

VI. Housing

Introduction

The Land Use Article of the Annotated Code of Maryland was amended in 2019 to require that comprehensive plans contain a housing element to address affordable workforce and low-income housing. Affordability is measured in relation to the Area Median Income (AMI), a measure set by the federal Department of Housing and Urban Development (HUD). The “area” in the term AMI, for Chesapeake Beach, is the Washington-Arlington-Alexandria Metro Region. The median annual income for the Region is \$126,000.

This chapter of the report provides a summary and evaluation of existing conditions, objectives, and recommended policies. By way of introduction to the topic of housing affordability in Chesapeake Beach, Table __ shows pertinent statistics on housing values and costs for owners and renters.

Local housing prices are affected by local zoning decisions. Municipal zoning regulations can constrain the supply of housing, and where land is limited, they can restrict it eventually to levels well below the level that is demanded. This has the effect of raising housing prices. While zoning can minimize potential adverse impacts of development, it is important to keep in mind that where undeveloped land for new housing is in short supply, such as in Chesapeake Beach, restrictive zoning rules over time worsen affordability.

TABLE 5

Value and Costs

Owner Occupied Units	1,591
Median value, owner occupied unit	\$338,600
Median monthly owner occupied costs ¹	\$2,183
Renter Occupied Units	698
Median gross rent	\$1,699

¹ For households with a mortgage.

Source U.S. Census, American Community Survey (2019).

The above is a somewhat simple formulation. There are many variables at work both on the demand and supply sides, but it is useful because it focuses our attention on what the Town can accomplish on behalf of all its households if it wants to: the Town can address housing through its zoning tools. As shown in Chapter III, if the Town would grow at about the same rate over the next 20 years that it did over the past 20, nearly 1,800 more households would seek to call Chesapeake Beach their home. At its core, this is a measure of the future demand for housing.

If new housing supply does not match it, housing price inflation, above what is typical, is more likely. Higher prices due to restricted supply can be expected over the next twenty years. The impacts of higher prices are felt by families with lower incomes who must pay a greater share of their income for it or find housing elsewhere.

Increasing the availability of affordable housing as a goal can conflict with other vital planning goals but policies about housing are especially important because they directly shape who can live in a community and who cannot. In this chapter, we seek to balance competing goals and aim to encourage affordable housing options that can fit compatibly within the Town over the long run.

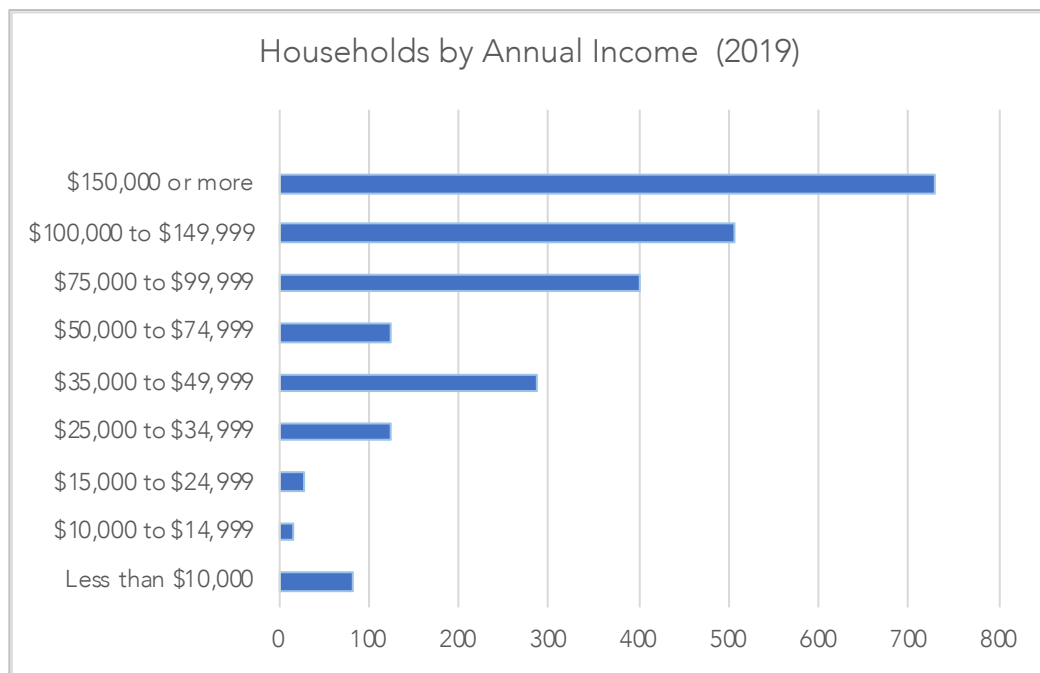
Existing Conditions

Affordability in Chesapeake Beach

It is important to note that Chesapeake Beach has achieved better than average metrics for providing affordable and workforce housing when compared to Calvert County at large and when compared to other areas within its designated AMI, the Washington-Arlington-Alexandria Metro Region. While increasing the supply of affordable and workforce housing is not a top priority for Chesapeake Beach at this time, it is always important to maintain an understanding of local and regional affordability, and to remain informed of what opportunities and challenges may exist in relation to housing opportunities and needs.

HUD’s “housing cost burden” is the standard measure of housing affordability in the United States²². According to the standard, households that are housing cost-burdened pay 30% or more of their gross income on housing expenses (such as rent, mortgage, utilities, condominium and HOA fees, and taxes) and thus have more difficulty affording other necessities such as food, clothing, transportation, and medical care. Not surprising households that are most cost burdened have the lowest incomes.

For the Town’s renter households, 44.7% of them, or 312 households, are cost burdened. This is less than the State and Region, where about one-half are. For homeowners, 19% or 246 households pay more than 30%. Again, this is less than the State and Region where 26.5 and 28%, respectively, are burdened by housing costs. Therefore, relative to the State and Region, a smaller share of the Town’s households is burdened by housing costs. Relative to the State, this finding is largely a function of income; the State’s median annual household income (\$84,805) is substantially less than the Town’s, which is \$104,318, consequently a greater share of households statewide find housing costly. Within the Washington Metro Region, while AMI is high relative to Chesapeake Beach, so is the cost of housing.



²² This derives from the Brooke Amendment, Section 213(a) of the Housing and Urban Development Act of 1969, which amended the federal Housing Act of 1937. It capped the rent in public housing at 25% of a tenant’s income. It was revised to 30% in 1981 through another amendment. The 30% standard has since been used to measure the affordability of housing. This method of measuring housing affordability is mostly effective at describing the problem of affordability for the lower- and middle-income households. Households with higher incomes generally have the capacity to take on higher housing costs without impacting the ability to provide for the other necessities. In this way the standard can exaggerate the affordability problem so care must be taken to evaluate household incomes of those classified as “housing cost burdened”.

The chart shows the distribution of the Town's households by annual income. The Town's median income is \$104,318 which means that one-half of all households earn below that and one-half earn incomes above it. Within the Region median income is \$126,000 as noted previously.

Workforce housing is housing that is affordable for a household making between 60 and 100% of median income. For the official AMI, that means between \$75,600 and \$126,000. Ideally households in this range should be able to find an apartment renting for no greater than 30% of annual income. A renter household earning \$75,600 would pay up to \$22,689 per year, or \$1,890 per month before becoming cost-burdened. Since the median rent in Chesapeake Beach is \$1,699, or about \$190 per month less, one could conclude the Town is a good value relative to the Region.

However, to appreciate local affordability—that is, the relative cost for Chesapeake Beach residents, the Town's median income is used. A renter household in Chesapeake Beach earning 60% of the Town's median income (or \$62,590) would be cost-burdened if paying more than \$18,777 per year in rent, or \$1,564 per month. Recall the median monthly rent in Town is \$1,699; this exceeds the local affordability level by \$135 per month. In fact, the U.S. Census 2019 American Community Survey shows that 280 of the Town's households are paying monthly rents between \$1,500 and \$1,999, 149 are paying rents between \$2,000 and 2,499, and 32 are paying more than \$2,500.²³

This above explains the finding that 44.7% of the Town's renter households are housing cost-burdened. For lower income households, making less than 60% of local median income, housing is unaffordable in Chesapeake Beach.

The same applies with respect to owner occupied housing. At the Town's current estimated median sales price of \$340,000 a household would pay about \$1,960 per month in mortgage, insurance, and taxes. At this median price, a household earning 60% of the Region's AMI would pay 31% of its income on housing. But closer to home, a household making 60% of the Town's median income would pay 38% of its income on housing. In both cases households earning incomes in the lower end of the workforce housing range would be cost-burdened while those with incomes much closer to the actual median income would find owner housing more affordable. Households earning less than 60% would not find affordable housing to buy in Chesapeake Beach.

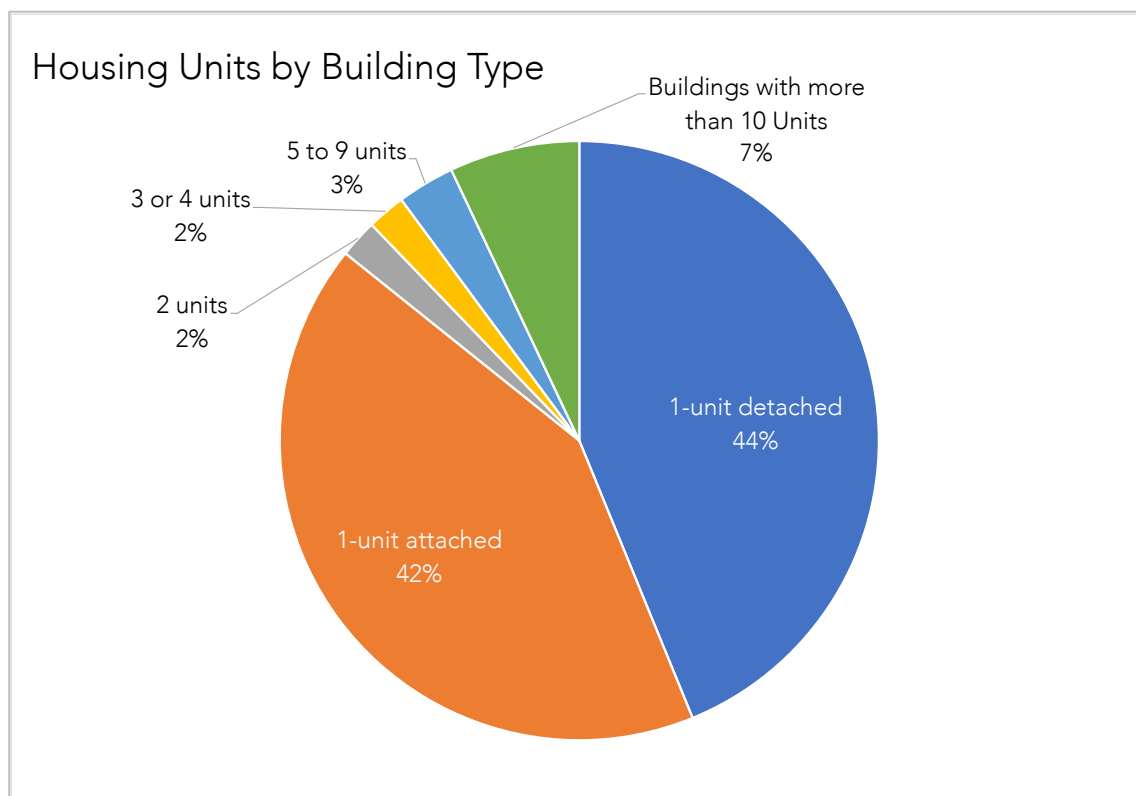
²³ If instead of the official Regional AMI, the Town's median income were used in these calculations, monthly rents "affordable" to households making 60 to 100% of the Town's median income, would fall within the range of \$1,565 and \$2,610. By this measure households earning less than the median income would find it difficult to find an apartment that costs less than 30% of their annual income.

Vacancy in Housing Units

The Town has an estimated 2,519 housing units. About 219 or 8.7% are vacant according to the 2019 ACS estimates²⁴. During the last decennial census (2010), 9.3% or 220 units were found to be vacant. The largest share of those, 37%, were vacant because they were used as second or seasonal homes.

Housing Unit Type and Decade of Construction

As shown in the pie chart, "Housing Units by Type", about 44% of the Town's, 2,519 total units are single-family detached units and 42% are single-family attached units (townhouses). Combined, single-family units comprise 86% of the Town's housing units. The remaining 14% is found in buildings with two or more housing units. About 7% are in buildings with nine or fewer units and 7% in buildings with 10 or more units.



²⁴ ACS stands for American Community Survey. It is the U.S. Census's ongoing survey and statistical approach to tracking demographic, housing, and income data in the United States. It is comprehensive but cannot cover all the data captured in the decennial census.

The next pie chart shows the share of housing units constructed in each decade. It is striking that 31% of the housing units were built in one decade alone, 2000 to 2009. Only one-quarter of the Town’s housing units were constructed before 1980.

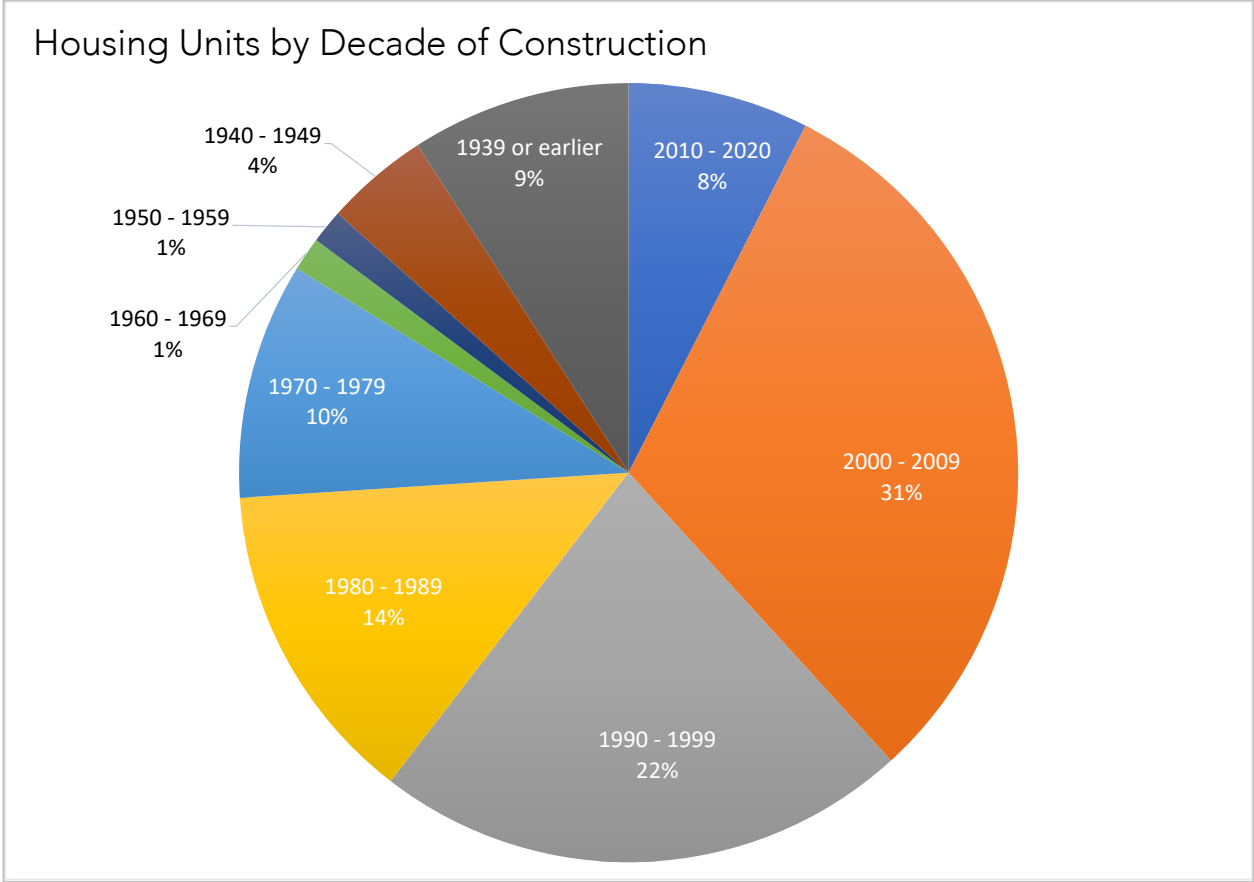


Table 6 shows that the Zoning Ordinance allows a diversity of housing types and residential densities, with the greatest variety permitted within the Residential High Density (R-HD), Residential Village (R-V) and Residential Planned Community (RPC) Districts. The Ordinance also supports mixed use development wherein housing and commercial uses can sit side-by-side on adjoining lots or within the same building. This is allowed in the Commercial and Maritime Districts and with certain restrictions also within the RPC District. Table 6 reflects the zoning standards effective at the time this Plan is being prepared. See Chapter V, Land Use, for recommended changes.

TABLE 6

Housing Types Permitted by Zoning District

Housing Types	Zoning Districts							
	R-LD	R-MD	R-HD	R-V	C	M	RC	RPC ⁴
Single-family detached	permitted	permitted	permitted	permitted			permitted	permitted
Single-family attached (townhouse)		permitted	permitted	permitted	permitted	permitted		permitted
Multi-family ¹			permitted	permitted	permitted	permitted		permitted
Accessory dwelling ²	permitted	permitted	permitted	permitted	permitted	permitted	permitted	permitted
Dwelling unit with commercial ²				permitted	permitted	permitted		
Minimum Lot Size (square feet)	10,000	7,500	5,000	6,000	5,000	5,000	43,560	varies
Maximum Effective or Permitted Density ³ (housing units / acre)	3.5	4.6	17.4	8.7	12.1	12.1	1	varies

¹A building containing two or more housing units including duplexes and apartment buildings.

²Conditional use only. Conditions for the use must be met and maintained.

³Allowable density may be increased by the Planning Commission up to 36.3 units per acre, upon establishing certain findings, within Bonus Density Overlay zones that are designated on the Zoning Map. The overlay zone is currently mapped over the Maritime District and two existing high density residential communities, Windward Key and Chesapeake Station.

⁴The Residential Planned Community (RPC) District is a special floating zone which may be applied to eligible tracts of land by amendment to the Zoning Map. Permitted lot sizes and densities are established when the RPC district is applied and must conform to an approved master development plan for the tract.

Note: This table shows existing zoning use standards. Chapter V, Land Use recommends changes to the permitted uses in the zoning districts.

Housing for Lower Income Households

There is one low-income housing development in Town and several households in rental assistance programs sponsored by the Housing Authority of Calvert County (HACC). The Courtyards at Fishing Creek on Gordon Stinnett Boulevard is a housing project developed in 1989 under the federal Low Income Housing Tax Credit program (LIHTC). Under the program, the federal Department of Housing and Urban Development grants state and local agencies authority to issue tax credits for the acquisition, rehabilitation, and construction of rental housing for lower income households. The units 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 Courtyards, combined with its adjoining Fishing Creek Townhomes, comprise 76 units, which are owned by the Southern Maryland Tri-County Action Committee. There is a similar housing project in North Beach on Chesapeake Avenue called Town Center Apartments. It has 49 units. Multiple other projects in Prince Frederick provide 339 housing units. Each of the communities mentioned above have extensive waiting lists extending between five and eight years. Practically speaking such affordable housing is unavailable for households looking for it. There is also a housing authority called the Housing Authority of Calvert County (HACC). It manages several housing programs aimed at ensuring safe and sanitary affordable housing:

- The Housing Choice Voucher program provides vouchers used by low income households to rent houses or apartments from private owners in the County. Presently there are 346 Housing Choice Vouchers active including several in the Town. The program however is no longer funded so that no vouchers have been approved since 2017. The waiting list is extensive housing.
- Through its rental assistance program called the Demonstration Project-Based Vouchers, HACC owns and maintains approximately 74 single-family dwellings in the County for low income households.
- HACC operates three senior housing communities: two in Prince Frederick (Calvert Pines I and II) and one in Lusby (Southern Pines I). Together they provided 176 units. Residency in each is income restricted and available to disabled persons and/or residents 62 years of age or older.
- The Authority also owns the Project Echo Homeless Shelter in Prince Frederick which has a capacity for 40 beds.

Town Housing Code

The Town adopted a Housing Code in 2019 with the main purpose of protecting public health, safety, and welfare in connection with all buildings used for housing. It established minimum housing unit maintenance, use, and operational standards and created a rental licensing and inspection program. Under the licensing program the Town's Code Enforcement Officer or her designee inspects all rental units to ensure they meet basic quality and life safety standards and are otherwise in compliance with the Zoning Ordinance.

Senior Housing

Between 2010 and 2020 the share of the Town's population 65 years or older (seniors) rose from 7% to 11%. Projections by the State of Maryland for Calvert County indicate this trend will continue. Between 2020 and 2040 the senior share of the County's population is projected to increase from 16.4% to 24.6%. While the Town's population may remain more youthful generally than the County, it is reasonable to conclude that the population aging expected at the County, State, and national level wide will occur in the Town too.

Multiple national studies and surveys indicate that seniors want to remain at home rather than relocate to senior housing as they age. And yet seniors, especially as they progress through the 70's, do encounter difficulties with living at home and can benefit from specialized health care and interacting with other people. Traditional large scale assisted living facilities or convalescent homes are one option but there can be other smaller housing options that might fit well within the Town's existing neighborhoods so residents can remain in Chesapeake Beach. In fact, other options may become a necessity as the cost of private assisted living care can be considerable and outpace the savings of middle and lower income seniors.

A Plan for Housing

Goals and recommendations for residential land use, growth, and neighborhood investments are set forth in the Land Use and Municipal Growth section of this report. This chapter's objectives and recommendations focus mostly on housing affordability and adapting to changes in housing needs. The Town's goal for housing through 2040 is that Chesapeake Beach is a place where residents of all ages and income levels have housing options that allow them to live comfortably and affordably in our community.

Objectives

- Encourage a variety of housing types in Chesapeake Beach to maintain the Town as an inter-generational community.
- Protect and improve the supply of quality housing to meet the affordable housing needs of the Town's households that earn less than 60% of the median household income and thus face a high-cost burden.

- Remain flexible to accommodate changing housing needs over time in both the production of new housing and the preservation and repurposing of existing units especially considering the aging trends in area population.
- Assess and consider affordable housing and senior housing needs when reviewing development and redevelopment opportunities.
- Over the long term, in planning to become resilient to sea level rise, aim to ensure no net loss of housing in Chesapeake Beach.
- Infill development should be constructed to promote a small-town charm. Residents should feel safe, secure, and confident that neighboring structures will have a size, design, and appeal that is similar to surrounding buildings.

Recommendations

The Town's land use plan is the overall policy framework within which the housing recommendations must fit. The intent is that within the land use vision of Chesapeake Beach, there will always be housing options that meet the needs of lower income households and seniors for quality and affordable housing. In this regard, this Plan recommends that minor zoning adjustments and active coordination with HACC be pursued to encourage housing types that are found to be compatible with their surroundings.

Consider a Land Use Pattern that Encourages Multiple Housing Types, at Varying Densities

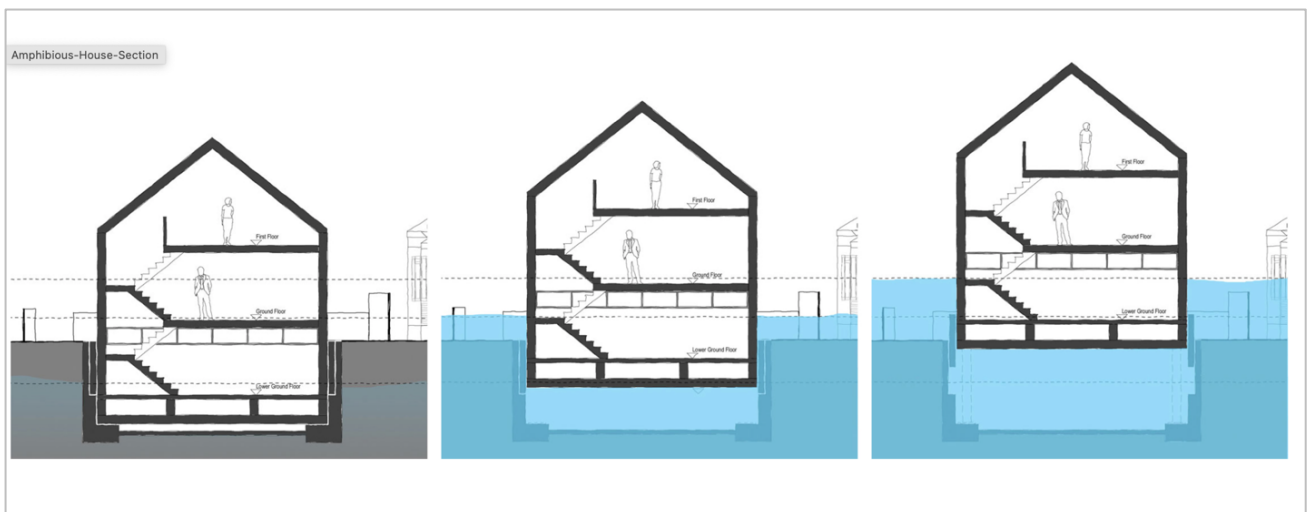
The Town's current zoning generally allows for a variety of housing types, including duplexes, accessory apartments, apartments in combination with commercial buildings and multi-family dwellings. In practice though specific zoning make it difficult for property owners to deliver these housing options, even when they would be otherwise compatible with neighborhood character.



Most of the Town's land base has been already developed for single-family neighborhoods and their conservation is a long-term priority. Increasing the supply of new housing somewhat, while conserving these neighborhoods, is possible and the Town should continue to encourage a mix of housing types, especially since a variety of housing options such as duplexes and accessory apartments can often deliver homes without land development and these buildings can be essentially indistinguishable from a single-family house as shown in the photographs here²⁵.



The Town should also be open to modern construction techniques that allow housing to be flexibly designed to adapt to floodwaters. For example, modern houses can be anchored to the land but made capable of rising and falling with the tide and flood waters. Flood resilient houses as diagrammed below are already constructed throughout the world²⁶.



Source: Bacca Architects London, Amphibious House

²⁵ Photo credit: the source of these photos and the outline of housing types herein is Opticos Design, "Missing Middle Housing" which is available at www.missingmiddlehousing.com.

²⁶ Source: Bacca Architects London, Amphibious House.

Explore and Consider-Opportunities for More Affordable Housing Units

The Town could consider coordinating with the HACC and private low-income tax credit developers to facilitate the development of housing meeting the needs of residents with incomes below 60% of the median household income. Existing residents and people who work in Chesapeake Beach could be granted priority access to available units. The challenge with this idea though it that there is little land within the Town for housing developments at a scale typical of low-income tax credit projects. However, existing, or new HACC programs, could be considered. The Town could coordinate with HACC's rental assistance programs to facilitate acquisition of units for Town residents. The Town could also either incentivize private developers to provide units that are affordable within market rate projects or require that they do so through regulations, which are used in some Maryland communities²⁷.

Lastly, since housing affordability is a challenge that extends beyond the Town, this Plan recommends that Calvert County, Chesapeake Beach and North Beach, work together to address it²⁸. As discussed in Chapter III, Municipal Growth, while this Plan does not designate an official Growth Area beyond the Town's current boundaries, the three jurisdictions can work together to target lands that might be developed for housing, both market rate and subsidized. Using the capacity available in the public water and sewer service area, the jurisdictions can coordinate the necessary public services to support new housing²⁹.

Create a Town Inter-generational Housing Taskforce

A town that is intergenerational will have housing and social options that allow older adults and young people and families to mix within neighborhoods. Because workable solutions to any important and complex goal require focused long-term community attention, the Town might consider sponsoring a citizen committee to study and recommend approaches for addressing housing needs for middle- and lower-income seniors especially.

The committee could suggest ways the Town might facilitate senior housing and aging in place within existing neighborhoods. Options might include repurposing houses into small senior living and care arrangements, co-housing options where seniors share expenses, and universal design principles in new or rehabilitated housing to make it easier for seniors to live at home.

²⁷ These are commonly referred to as "inclusionary zoning" and include programs to encourage private development to supply "moderately priced dwelling units (MPDUs)".

²⁸ See the 2019 adopted Calvert County Comprehensive Plan, Housing Chapter.

²⁹ Each jurisdiction is a partner in the wastewater treatment plant operated by the Town of Chesapeake Beach.

Efforts to promote new senior housing within existing neighborhoods should be investigated and adopted, if found workable. The committee could also work to understand the full scope of the needs of older residents like the availability of specialized local medical care, shopping, community events, social interaction, and recreation. Absent innovations in senior housing, both middle and lower income senior citizens may increasingly find housing difficult to afford as retirement savings fall short of high housing and long term care costs. The Town zoning code will need to be flexible to accommodate senior housing as described here.

Prioritize Residents in Sea Level Rise Planning

As documented elsewhere in this Plan, the water levels of the Chesapeake Bay are rising and are projected to significantly expand the extent and severity of flooding over the next decades. Many housing units in Chesapeake Beach will be directly or secondarily impacted by this long-term trend, some already have been. Specific public policies will need to be designed and refined over time to manage this challenge in Chesapeake Beach.

Innovations in flood resilient housing are being made globally and hold promise for those that live in flood prone coastal communities. However, flood resilient housing may not be universally available, affordable, or desirable in every context. As water tables continue to rise, tidal wetlands migrate further into developed areas, and the extent and depth of flooding grows, some parts of the Town may not be habitable over the long term, except at considerable public and private costs.

This housing plan recommends that, since individual residents (homeowners and renters) have the greatest personal stake in the outcome of these trends, they engage in local planning to help shape the outcome of public decision making and acquire the information needed to make decisions in their best interest. This Plan recommends that the Town be pro-active and committed to engaging with residents as it addresses flooding over the next two decades.

Consider Creating Grant and/or Loan Programs for Exterior Upkeep of Original Cottages

The Town's cottage neighborhoods grew up around and in conjunction with the historic resort development of Chesapeake Beach and its railway by the Washington and Chesapeake Beach Railway Company. The original homes were built as cottages on small lots, and many remain today as enduring landmarks of the Town's heritage. These homes have historic and architectural value.

This Plan supports voluntary efforts to sustain them and recommends that the Town consider grants, loans, and/or historic tax credit programs to assist property owners in restoration and rehabilitation. A coordinated approach, for example, could help preserve the cottage character along Chesapeake Beach Road at the approach to Bayside Road and help preserve this unique point of entry into the Town for future generations.



VII. Transportation and Circulation

Introduction

This section of the report provides a summary and evaluation of existing conditions, a list of objectives, and recommended policies on transportation and circulation. This plan does not call for the construction of new streets; they are not needed to meet the Town's transportation and land use objectives. Chesapeake Beach is largely built-out, at least through the next 20 years, and no physical expansions of the Town are proposed. The Plan does recommend close monitoring of existing heavily traveled streets and enhancements to make them safer, walkable, and attractive. The essence of this chapter of the Plan recommends that the Town continue the course of building an interconnected network of sidewalks, trails, and bikeways.

Existing Conditions

Streets and Highways

Major traffic movement in and out of Chesapeake Beach is confined to two highways: MD Route 260 (Chesapeake Beach Road) and MD Route 261 (Bayside Road). These highways are also the primary routes to the communities along the Bay from points north and south of Town. The Regional Location Map in Chapter II of this report illustrates the highway network.

MD Route 260 connects Chesapeake Beach to Annapolis via MD Route 2 and Washington, DC via MD Route 4 which is a four-lane divided highway. MD Route 261 is a rural two-lane highway. It parallels the Chesapeake Bay from MD Route 263 (Plum Point Road) north through the Towns of Chesapeake Beach and North Beach into Anne Arundel County before connecting to MD Route 2 near the village of Friendship. Within the center of Town, Bayside Road features two lanes plus a continuous left-hand turning lane. The recently reconstructed Fishing Creek Bridge and the improvements to the intersection MD 261 and Mears Avenue has relieved capacity constraints that long existed at this location.

The Maryland State Highway Administration's average annual daily traffic counts along the MD Routes 260 and 261 in both 2000 and 2020 are shown in the exhibit here. Traffic volumes have not increased substantially in 20 years' time, certainly not like they did between 1970 and 2000, when volumes doubled. However, a significant



expansion of the Rod-n-Reel Resort is currently underway and the effect this will have on capacity constraints along Bayside Road is not yet known.

Both MD Routes 260 and 261 have a significant effect on the quality of life in Chesapeake Beach since almost every trip in or through Town requires travel on one or both streets. Both serve the purpose of moving vehicular traffic through the community and both provide access to the businesses and residential areas in the center of Town. Both however, must also serve local trip making; short trips such as, between home and the grocery store, local restaurants, Beach Elementary, Kellam's Field, and town hall meetings. Many of these trips can be made by walking or biking.

Transit

The Maryland Transit Administration (MTA) provides area residents with express commuter bus service to Washington, DC. The service operates seven trips per day beginning at the North Beach municipal lot at 5th Street and Chesapeake Avenue before proceeding west on MD Route 260.

Calvert County Public Transportation (CCPT) provides weekday and Saturday fixed-route bus service in Chesapeake Beach and North Beach over MD Routes 261 and 260 as part of its North Route service between the Twin Beaches and Prince Frederick. It also provides “curb-to-curb” demand responsive para-transit to the public generally and to the elderly and persons with disabilities. This service operates during the same days and hours as the North Route and provides bus service between Prince Frederick and points north including the Twin Beaches and within the Twin Beaches and Owings area.

Local Circulation and Safety

The Town’s original road network is based on a grid with Bayside Road being the main axis. Intersections and multiple driveways to adjacent property have been permitted. In this way, the older sections of Chesapeake Beach are interconnected despite significant environmental constraints. Chesapeake Beach is sufficiently compact and generally organized in a way that promotes walking. This is especially the case in the older residential neighborhoods along Bayside Road. The most intensely developed part of Town lies along a one-half mile section of Bayside Road in the center of Town and contains a mix of commercial and institutional land uses and dense waterfront communities.

It is generally recognized that an average walker can cover about one-quarter of a mile in five minutes. For context, this ratio puts Beach Elementary School within a ten-minute walk of the Northeast Community Center. The Town Hall, the Chesapeake Station Shopping Center, and other commercial and civic uses are all within a reasonable walking distance of most housing located between 30th Street on the north side of Town and Old Bayside Road.

Newer roads, particularly in the Bayview Hills, Richfield Station, and Chesapeake Village follow conventional suburban layouts featuring curvilinear streets and cul-de-sacs. Because of environmental constraints and distance from the center of town, these subdivisions are not interconnected with the original Town street network. The Fishing Creek Railway Trail however has achieved its purpose in connecting the western outlying neighborhoods to the Town’s center.

The Town owns and maintains all the public streets in Chesapeake Beach except Old Bayside Road west of MD Route 261, which is under County jurisdiction and of course the two State highway routes. Traffic is controlled by traffic signals at two intersections: MD Route 260 at MD Route 261 and MD Route 261 at Harbor/Mears Road. Each experiences some congestion during morning and evening peak periods but are not operating at degraded or failing conditions. Pedestrian safety remains a serious concern at both locations.

Sidewalks and Bikeways

A partial lack of sidewalks has hindered residents and visitors from capitalizing on the Town's favorable layout and mix of uses. Sidewalk improvements have been made over the past 20 years but walking in Town is still not up to the standard residents expect. Sidewalks are incomplete on Bayside Road, north of MD Route 260 and south of the Town center. Additionally, residents of Summer City regularly walk to and from Chesapeake Beach along a stretch of MD Route 261 where there is a dangerously narrow shoulder and no sidewalks, and to and from Beach Elementary School along Old Bayside Road, which also has a narrow shoulder and no sidewalks. The Town's Walkable Community Advisory Group recently completed, and the Mayor and Town Council recently adopted a walkability study that recommends improving pedestrian and bicycle connectivity throughout Chesapeake Beach (see Appendix C of this report).

Trails

The Town's most prominent trail, the multi-purpose Fishing Creek Railway Trail serves a recreational and functional purpose. It connects residents in the outlying subdivisions of Bayview Hills and Richfield Station to the center of Town. The part of the trail that is elevated above Fishing Creek has opened this natural resource area to residents and visitors of the community. Opportunities exist to expand this trail and interconnect it with other amenities such as Beach Elementary School. These are explored in the Connectivity Study.

The other existing trail is the Chesapeake Bay Boardwalk that extends from 17th Street south to Bayfront Park. This provides a pedestrian connection from points north to the park, alleviating the need to walk or bike along Bayside Road.

Electric Vehicle Infrastructure

In 2020 the Baltimore Gas and Electric, in coordination with the Town of Chesapeake Beach, developed the first public electric vehicle charging station in Town. It is located at Kellam's Field just off Gordon Stinnett Avenue. This is one of two such stations in the Twin Beaches; the other is on the North Beach municipal lot.

A Plan for Transportation

Chesapeake Beach has a great opportunity to build a truly interconnected town where motorists, pedestrians, and bicyclist can move easily and safely throughout the community. While Chesapeake Beach and Bayside Roads operate to carry through traffic, they are also the axis streets that link the Town together and connect it with North Beach. The original town grid in combination with these major streets are the foundation for connectivity and circulation.

The geological and environmental conditions of Chesapeake Beach do present barriers to connectivity, but as the Railway Trail and Boardwalk have shown, these can be overcome and in fact capitalized on to create unique travel experiences for residents and visitors. As the Town's 2002 Comprehensive Plan put it: "Small towns can capitalize on their compact nature by building pathways along existing roads, between existing roads, and through natural resource areas".

The Town's most basic goal with respect to transportation is to bring about a transportation system that serves the Town's long range land use plan and addresses the Town's circulation needs and its economic development.

Objectives

- Long-term street access and circulation throughout Chesapeake Beach is protected so that business goods and commercial services are efficiently transported, tourism and visitation are accommodated, and emergency access to and within, and egress from, the Twin Beach's area remain secure.
- Modernize the street infrastructure in Chesapeake Beach by making use of existing and emerging technologies and supporting the development of alternative fuel vehicles.

- Residents of all stages of life and abilities have the freedom to move about Town and be active participants in the business, cultural, and civic life of the Town without unnecessary or unjustified transportation obstacles.
- Members of every household have safe, convenient, and continuous access by walking to the following: the Town's center including Town Hall, Kellam's Field, Chesapeake Station Shopping Center, the planned mixed use Gateway Center on Chesapeake Beach Road, Beach Elementary School, Bayfront Park, and the Town of North Beach.
- Bikeways and recreational trails provide access to and through natural scenic and recreational amenities fostering for residents a healthy lifestyle and an affection for the natural environment.
- The same attention that has been devoted to building quality streets in new subdivisions is invested in the Town's existing streets, which serve its traditional neighborhoods and residential areas.
- Chesapeake Beach and Bayside Roads are made attractive and functional, with the complete set of features that make them a joy to drive on, walk or bike along.
- The streets that serve the community will be properly designed and reconstructed as needed to make them resilient to flooding and the other effects of sea level rise.

Recommendations

Great Streets Fitted to the Town's Character and Heritage

This Plan envisions that the role of Chesapeake Beach and Bayside Roads as local "main streets" will be elevated over time. Each will be gradually transformed into attractive, functional, and walkable avenues, contributing to the joy of living in Chesapeake Beach and the vibrancy of existing and future businesses in Town. Here are the essential elements:

- Major traffic calming: slowing traffic speeds to ensure a safe and pleasant pedestrian experience.
- Quality and coordinated signage to direct visitors to centers of business activity, institutions, and recreational assets.
- Enhanced pedestrian safety, along the street and at intersections using highly visible crosswalks and along walkways over commercial driveway entrances.

- Additional street lighting that is pedestrian scaled, including possibility of pedestrian posts like those used at the Town Hall.
- Street trees that can shade sidewalks and create seasonable beauty and a sense of change throughout the year.
- Coordinated intersection spacing and a reduction of driveway connections where possible to provide a more seamless curb line and sidewalk grade.

Work to ensure that all aspects of the general transportation system are accessible and safe to people with disabilities, the very young, and the old.

Through development plan review and attention to the details of street design the Town can ensure that new and redeveloped parking lots, sidewalks, crosswalks, transit stops, trails, boardwalks, and entrance ways into commercial and institutional buildings or sites meet the objectives of the federal Americans with Disabilities Act.

Systematically Upgrade Residential Streets

A program should be undertaken to systematically upgrade residential streets in the original parts of Chesapeake Beach. Such a program would include repaving, curb, gutter, sidewalks, and crosswalks; upgraded and repaired storm drainage; and streetlights and street trees. The Town should work at the neighborhood level to establish priorities for residential street improvements. Improvement projects should then be scheduled as part of the Town's overall Capital Improvements Program. Ongoing maintenance and preservation of Town streets could be facilitated through an asset and performance management program administered by the Director of Public Works and Town Engineer.

Deploy Smart Street Technologies

For MD Routes 260 and 261, encourage the State Highway Administration to deploy smart street technologies such as sensors that monitor and record traffic volumes, wear and tear, and roadway conditions such as temperature, ice, and floodwater that would allow for the most efficient operation and the best long-term care of the streets and sidewalks. Also use streetlight technologies that can detect traffic at signalized intersections and adjust red and green times and crosswalk times to improve convenience and safety. Consider streetlights that can adjust to ambient light conditions and increase in intensity when pedestrians approach on a sidewalk or crosswalk. Examine the use of embedded lights in crosswalks that light up to signal to oncoming vehicles that a pedestrian is about to enter the crosswalk.

Coordinate with Calvert County to Ensure Continued Transit and Paratransit

Calvert County provides essential bus service to Town residents to Prince Frederick. Over time the Town, the County and North Beach should coordinate in the context of the County’s five year transit planning process to determine if adjustments and expansions of the services would be beneficial to local mobility goals. To be a vibrant intergenerational community, paratransit service within the Twin Beaches area may need to become especially useful given the trends toward an increasingly older population³⁰. The Plan specifically recommends that the Town coordinate with Calvert County Public Transportation and local transit users to improve the conditions of bus stops by using shelters where appropriate to provide shade and shelter from wind and rain.

Incorporate Transportation in the Flood Resilience Planning the Town Will Undertake

As documented in Chapter IV of this Plan, parts of Harbor Road and Gordon Stinnett Avenue and a section of Bayside Road are projected to be significantly impacted by sea level rise over the next couple of decades. These streets access community facilities such as North Beach Volunteer Fire Company, the wastewater treatment plant, Northeast Community Center, the Chesapeake Beach Water Park, and Kellam’s Field. They also serve residential communities whose access via public streets will need to be addressed in the future.

Residents and emergency vehicles will need to be able to circulate through the area on other routes to avoid flooded areas where possible. Elevating roads and constructing bridges may be necessary and should be considered to maintain connectivity and optimum access to key destinations. Importantly private streets in several existing residential bayfront communities are also projected to be increasingly impacted by sea level rise. In its flood resiliency planning, the Town will also need to coordinate with Home Owners’ Associations to address their risk of flooded streets.

Implement Planned Bicycle Trail and Walkway Improvements

The Town’s Walkable Community Advisory Group completed, and the Mayor and Town Council recently adopted, the Chesapeake Beach Connectively Study which recommends specific improvements for pedestrian and bicycle connectivity throughout Chesapeake Beach. The Study is available in the Appendix of this report and its priority recommendations are set forth in Chapter X, Implementation. It is hereby adopted as part of this Comprehensive Plan.

³⁰ As documented in both this Plan and in the Calvert County Comprehensive Plan, 2019.

The Town should actively implement projects recommended in the study, supported where possible by State and federal grant programs. While not specifically mentioned in the Connectivity Study, this Comprehensive Plan also recommends construction of a sidewalk from the south end of the Town to Summer City.

Extend the Fishing Creek Railway Trail

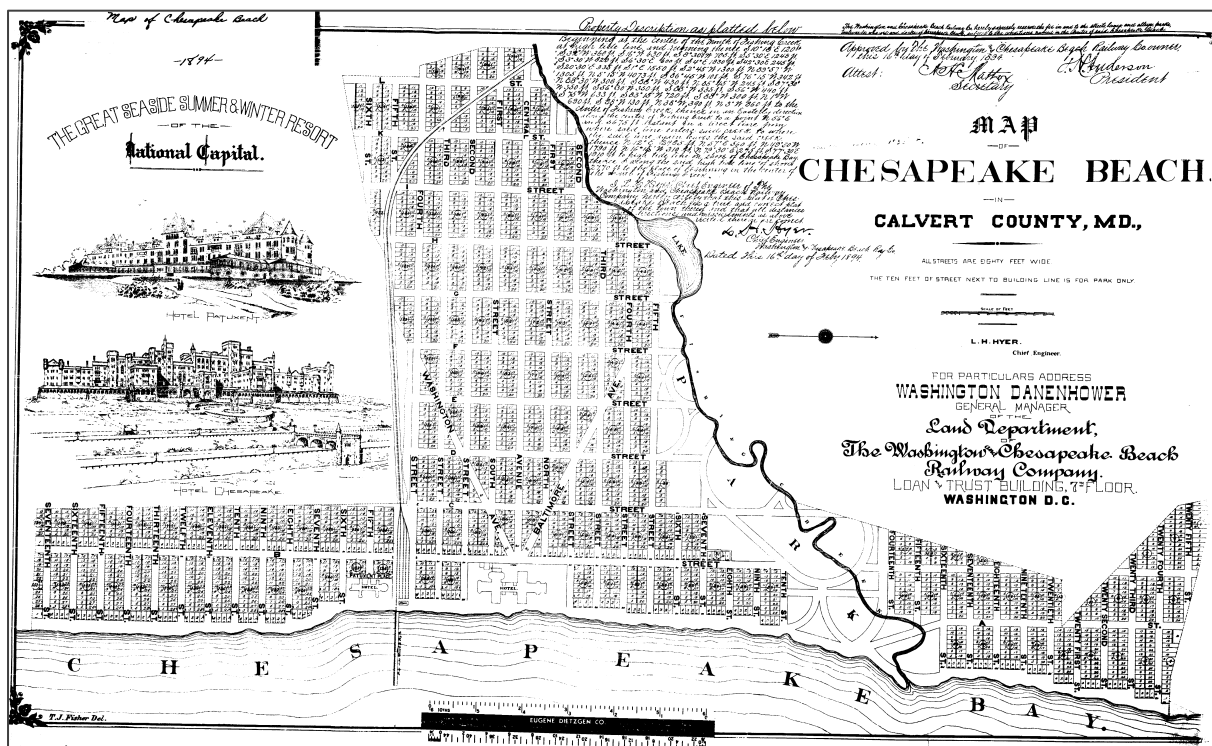
The railway trail is a regionally prominent resource based recreational amenity that the Town planned and achieved. It traverses Fishing Creek connecting Kellam's Field to Bay View Hills and Richfield Station. This Plan reaffirms the Town's original vision for the Trail; to extend it with multiple linkages including to the west through the forests and beyond the municipal limits ultimately to Seat Pleasant, Maryland which was the starting station for the Washington, DC, and Chesapeake Beach Railway. Especially important is an extension of the Trail into and through the greenbelt of preserved farm and forest lands beyond the Town's western edge. The other essential connection is to Beach Elementary School which would provide residents and especially students direct connectivity between the main stem of the Trail and the school. The recently approved site development plan for the new school includes proposed connecting points for the Trail when it is extended to the school grounds.

Adopt a Strategy for Un-opened Rights-of-Way

The streets, alleys, blocks, and lots that comprise the Town of Chesapeake Beach derive from numerous maps and land subdivision and right-of-way plats dating back to the late 19th century as shown in the exhibit below. A plat is a map showing the division of property into lots and rights-of-way for streets and alleys. In Chesapeake Beach many streets and alleys were platted that were never constructed and many will never be because they were drawn over marshes and steep slopes that prevent development. Most of the platted alleys were not improved and today they remain as linear unimproved open spaces running behind residential lots.

Though these spaces are commonly understood to be owned by the Town, most are not maintained by the Chesapeake Beach, and some have been enclosed by adjoining property owners. Town Code provides a process for closing alleys, that is—for transferring the land officially to the adjacent lot owners, and this happens from time to time, but a systematic inventory of these unopened rights-of-way or an evaluation of their value to the community has not been completed.

Some of these areas hold potential as walkways and recreational paths, easements for the installation of utilities and management of drainage, and vehicular access routes to the rear of lots for parking and service delivery. Many unopened alleys are forested contributing to the Town's tree canopy, local wildlife habitat, and water quality protection. Lastly, they hold potential to expand and improve the private properties that lie next to them and in so doing to increase the Town's assessable tax base. This Plan recommends that a study be completed and that a policy be devised to guide decisions about which unimproved rights-of-way to preserve and for what public purpose and which to make eligible for transfer to the property owners along them.



VIII. Community Facilities

Introduction

Community facilities are the part of municipal development that most depends on coordination between multiple agencies and units of government to deliver benefits to all residents. Because of their complexity and the efficiencies that must be obtained, public facilities are provided to all residents within designated service areas which sometimes means residents of separate jurisdictions. Community facilities, at least when they are operated optimally and provided fairly, are available to everyone in the community and delivered in such a way that one person's enjoyment is not diminished by another person use.

This section of the report focuses on public water and sewerage services, public education, libraries, parks, and police and fire protection. These are the primary community facilities and services that benefit the Town residents. This section of the report provides a summary and evaluation of existing conditions, a list of objectives, and recommended policies.

Existing Conditions

Public Water

Chesapeake Beach operates a municipal water supply and distribution system. It consists of three operating wells and three water storage tanks. The permitted extractive capacity is an average of 630,000 gallons per day (gpd) on a yearly basis³¹. Current average daily use approximates 446,400 gpd. Therefore, there is an excess capacity of 183,600 gpd.

For comprehensive planning purposes, this excess capacity can be converted into equivalent dwelling units (EDUs) where dwelling units are assumed to consume water at a rate of 250 gallons per day³². Assuming 250 gallons per day per EDU, Chesapeake Beach has excess capacity for 734 EDU's (that is, households).

³¹ Source: Maryland Department of the Environment. During the month of maximum use, the daily average is permitted by MDE to reach 975,000 gpd.

³² This demand factor is higher than that actual per household daily use so that it provides a conservatively higher estimate of demand given the critical nature of water infrastructure.

As discussed in Chapter III, there are 174 dwelling units in approved housing projects. Assuming each is built the available capacity would be reduced to 560 EDU's. All developed parts of Chesapeake Beach are served with municipal water except two areas, and these are planned for future service³³:

- The area extending from the east side of E Street, north of Chesapeake Beach Road to and including Wesley Stinnett Boulevard and its intersecting cul-de-sacs: Daphne Court, Elizabeth Court, and May Lou Lane, (comprising 37 houses and one institutional use).
- Along Old Bayside Road, west of Bayside Road including all the intersecting streets such as E, F, G, H, and I Streets (comprising 137 houses).

Public Sewerage

As part of an interjurisdictional agreement with the Town of North Beach, Calvert County and Anne Arundel County (encompassing nearby Rose Haven and Holland Point), the Town operates a public sewerage system. It consists of a wastewater treatment plant (WWTP), pumping stations and distribution lines. The wastewater treatment plant is rated and permitted to operate at 1.5 million gpd. It is located within Town limits on Bayside Road and discharges treated wastewater to the Chesapeake Bay.



The current flow to the plant approximates 918,000 gallons per day. This means the plant is operating at 61% of its available capacity and has a remaining capacity of 582,000 gpd. For context, this is equivalent to the flow generated by 2,580 more households. Under the interjurisdictional agreement, the Town's share of this remaining available capacity is 273,540 gpd; enough for 1,215 more households. The plant was upgraded to operate with Enhanced Nutrient Removal technology, as discussed in Chapter IX, [Water Resources](#).

³³ Calvert County Water and Sewer Master Plan, 2104 update.

The WWTP is operating well below its design capacity, yet there are developed parts of the Town where houses are not connected to the municipal system and are instead served by individual on-site septic systems. This includes the same areas that are not served with municipal water supply and the part of the Highlands Subdivision (Tartan Lane and St. Andrews Drive) located within Town boundaries. In total there are 220 single-family houses and one institutional use not provided with public sewer service.

As on-site septic systems age, they become more polluting and contribute to water quality problems in area waterways and the Bay. Older septic systems are a source of pollution and new modern systems are very expensive, so over time, connecting to the public system may be more economical for property owners. The Town has more than sufficient capacity to serve these 220 potential connections and each area is eligible for sewer service under the State required Water and Sewer Master Plan³⁴.

Public Schools

Children in Chesapeake Beach attend Beach Elementary School, Windy Hill Middle School, and Northern High School. Table 7 shows the enrollment and capacity of each public school in Spring 2020. As shown, each is operating at or near 100 % capacity.

TABLE 7

Public School Enrollment and Capacity: 2019-2020 School Year

School	Rated Capacity	Enrollment (Spring)	Excess Capacity (students)	Enrollment as a % of Capacity
Beach Elementary*	517	517	0	100.0%
Windy Hill Middle	817	798	19	97.7%
Northern High	1463	1477	-14	101.0%

Source: Calvert County Department of Planning Adequate Public Facilities Report for Schools, April 1, 2020. Based on the data provided by the Calvert County Board of Education, Spring 2020.

³⁴ Calvert County Water and Sewer Master Plan, 2104 update.

The Town Planning Commission approved a site development plan for a new Beach Elementary School in 2020. The school is targeted to open in time for the academic year beginning August 2023, with a rated capacity of 578 students, 61 greater than the current rated capacity. For context, this designed excess can accommodate 305 single-family detached housing units, 350 new townhouse units, or 1,220 new multi-family units³⁵.

The Calvert County Board of Education projects a decline in enrollment of 100 students in the elementary schools that comprise the northern part of Calvert County: Beach, Windy Hill, Plum Point, Sunderland Mt. Harmony³⁶. It also projects a total reduction in public school enrollment Countywide through at least 2030. However, comprehensive planning of the Dunkirk Town Center in the North and the Prince Frederick Town Center in Central area of the county are underway and will likely impact current projections.

Public Library

Calvert County operates the Calvert Library, Twin Beaches Branch which currently consists of 4,240 square feet of space at 3819 Harbor Road. The new Twin Beaches Branch, long planned, will open in North Beach in the Spring of 2023. The new library will be about four times the size of the current space. The Southern Maryland Library Association (SMLA) serves the library system in Calvert County as well as in Charles and St. Mary's Counties. As part of the State Library Network, SMLA coordinates interlibrary loans and other coordinating services between public libraries in southern Maryland and the statewide library system.

Parks

Parks and recreational resources are best viewed as a system of parts that function together to provide a suite of recreational amenities. There are three levels of municipal parkland: Level 1, Mini Parks; Level 2, Neighborhood Parks; and Level 3, Community Parks. A fourth type, Natural Resource Areas, can also fit into a larger system of recreational assets and this is certainly the case in Chesapeake Beach. Each of the types are present in Chesapeake Beach as shown on the exhibit below called Existing Parks in Chesapeake Beach and summarized in Table 8.

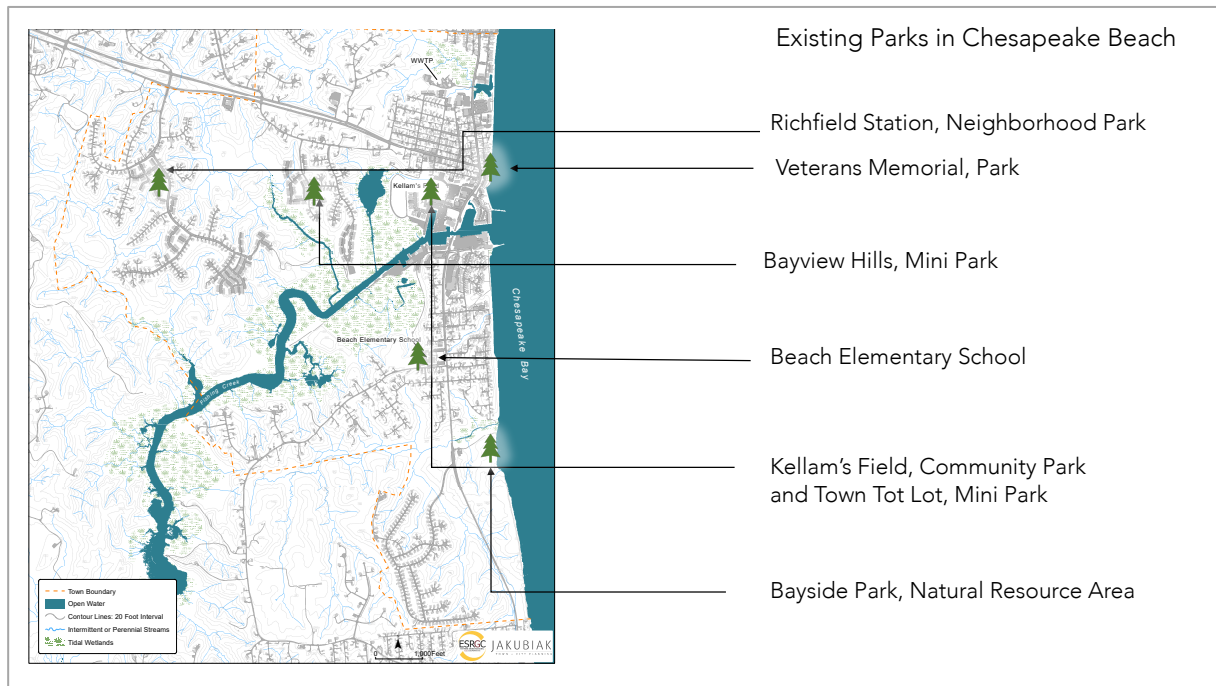
³⁵ According to the adopted pupil generation rates used by Calvert County: 0.20 pupils per unit for single-family attached, 0.17 pupil per unit for townhouses, and 0.05 pupils per units for multi-family housing units.

³⁶ Calvert County Public School Facilities master plan. Elementary school enrollment projects to fall from 3,074 in 2019 to 2,974 in 2026.

Mini-Parks

A mini-park is a very small park that addresses specific needs of a population within less than one-quarter mile walking distance. A mini-park is typically less than one acre in size and can be either passive or active. The Town owns and maintain one public mini-park, the Tot Lot at Gordan Stinnett Avenue near Kellam's Field. Because of its location, it is a primary resource for the 76 households in the Courtyards at Fishing Creek and Fishing Creek Townhomes.

There are other mini-parks that are owned and maintained by homeowners associations, including the 0.6 acre park in Bayview Hills and recreational areas in Windward Keys and Chesapeake Station. There soon will be another; in 2019, the Planning Commission gave final plat approval to the last phase of townhouses in Richfield Station and required the developer to improve an open space for a publicly accessible mini-park. It will serve the residents of the townhouses and since it will be located at the western end of the Fishing Creek Railway Trail, Town residents may benefit from it too.



Neighborhood Parks

Neighborhood parks generally serves residents within a distance ¼ to ½ mile, which is synonymous with a 5 to 10 minute walk. These parks contain active recreational amenities like ball fields, tennis or basketball courts, and playgrounds. The Town does not own and maintain a neighborhood park, but there are two in Town. The three-acre park in Richfield Station on Sansbury Drive is owned and maintained by the homeowners association. Beach Elementary School on Bayside Road provides recreational resources and open space especially for residents that live nearby. There are no neighborhood parks situated in the originally platted parts of Chesapeake Beach or in the Town’s newest neighborhoods.

TABLE 8

Existing Parks and Recreational Resources																					
Type of Park	Size (acres)	Publicly Accessible	Private	Pedestrian Access	Walking Path/Trails	Vehicle Access / Parking	In a neighborhood	Benches	Picnic Facilities	Playground	Tennis	Basketball	Athletic Field(s)	Unprogrammed Open Space	Fishing	Swimming Pool	Community Center	Water Access	Beach	Woods	
Level 1: Mini Parks																					
	Tot Lot, Gordon Stinnett Blvd.	0.8	X		X			X		X											
	Windward Keys (excluding trail)	1.0		X	X	X				X					X	X		X	X		
	Chesapeake Station Beach	0.4		X	X													X	X		
	Bayview Hills, Silverton Lane	0.6	X		X			X		X			X								
Level 2: Neighborhood Parks																					
	Richfield Station, Sansbury Blvd.	3.0	X		X	X	X				X	X	X	X		X					X
	Beach Elementary School	1.0								X	X		X								
Level 3: Community Parks																					
	Veterans Park	0.4	X		X																X
	Kellam's Field (excludes boat trailer parking)	7.1	X		X	X							X								
Natural Resource Areas																					
	Bayfront Park (including Brownie's Beach)	18.82	X		X	X	X						X					X	X	X	
Public Non-Park Improved Recreational Resources																					
	Veterans Park	0.4 acre waterfront monument site.																			
	Chesapeake Railway Trail	Walking and biking nature trail connecting Richfield Station and Bayview Hills to Kellam's Field.																			
	Chesapeake Beach Boardwalk	0.5 mile shoreline boardwalk trail between Brownie's Beach and 14th Street.																			
	North-East Community Center	Located at 4075 Gordon Stinnett Blvd. Includes gymnasium, indoor basketball, and multi-purpose rooms.																			
	Chesapeake Beach Water Park	Located at 4079 Gordon Stinnett Blvd. Admission fee-based water park.																			
	Public Boat Ramp and Boat Trailer Parking	Located at Fishing Creek Marina, totaling 2.2 acres including parking and access drive.																			

Community Parks

Community parks are larger than neighborhood parks and serve residents drawn from a larger area. Generally, community parks contain fields for team sports and amenities including courts, walking trails, playgrounds, and picnic pavilions. The Lynwood Kellam Memorial Recreation Park (Kellam’s Field) is primarily an athletic field, though there are several picnic shelters. At only seven acres in size its offerings are limited. There are no community parks in the northeast part of Calvert County. The closest community park outside of Town is in the Dunkirk town center, eight miles from Kellam’s Field.

Natural Resource Areas

The fourth type of park, the natural resource area, is location-dependent; meaning parks of this type are located where natural and sensitive environments exist and encompass areas that cannot or should not be developed because of their resource value or development constraints. The principal function of natural resource areas is resource preservation, and the secondary function is allowing human interaction with and connection to the natural environment through low impact activities such as hiking, beachcombing, swimming, fishing, wildlife photography, and picnicking. The Town's Bayfront Park qualifies as a natural resource area park.

Overall View

Table 8 also shows that the Town has six other public recreational resources including the Veterans Memorial Park. The Fishing Creek Railway Trail is a multi-use recreational trail that spans Fishing Creek and connects the communities of Richfield Station and Bayview Hill to the center of Town at Kellam's Field. In so doing it provides public access to Fishing Creek and its marshes.

Among the four types of parks noted above, the Town is deficient in neighborhood parks and mini-parks. Most residents have little to no direct walking access to a mini- or neighborhood park. The historic development of Chesapeake Beach did not provide traditional neighborhood parks and playgrounds and the Town's focus on tourism oriented most recreational pursuits to the Bay's waterfront. Over time the waterfront was developed for housing developments which would seem to have permanently foreclosed opportunities for broad public access. Also, while the Town could have, it did not, require adequate parkland as part of the approval of its major modern subdivisions (Richfield Station, Bayview Hills, Chesapeake Village and The Heritage). Therefore, none of these neighborhoods are served adequately with accessible parks. The Chesapeake Village subdivision was developed without a park and since the neighborhood is situated south of the historic center of Town and is otherwise separated from it, ready access to Kellam's Field or even Beach Elementary School, is not viable except by driving.

The Town has, however, developed recreational resources including the Public Boat Ramp at Fishing Creek, the Boardwalk along the Bay, the Fishing Creek Railway Trail, and Bayfront Park (Brownie's Beach). These nature-based recreational resources are significant amenities, and the Town is unique among municipalities in Maryland in thoughtfully developing natural resource areas for public recreation. The Town has also preserved significant unimproved woodland in and around its residential subdivisions. While these subdivision "open spaces" are generally not programmed, improved, or maintained for recreational use, there is a potential they could be.

Police and Fire Protection

The Maryland State Police and the Calvert County Sheriff's Office provide police service in Town. The Town contracts with the County Sheriff's Office under a resident deputy program.

The North Beach Volunteer Fire and Rescue Department provides fire protection in Chesapeake Beach. The company's service area encompasses about 20 miles. The company has a mutual aid agreement with other companies in Calvert County as well as some in Anne Arundel County.

Its physical plant, totaling 3.65 acres, is located on Bayside Road within Chesapeake Beach. There are no current plans to expand the existing plant or to add other fire companies in the area. As noted elsewhere in this report, the company's location is in a high risk area for flooding as is Bayside Road in the vicinity of the station. Sea level rise is projected to make flooding more frequent and severe.

Hospital and Emergency Facilities

The primary hospital care facility is Calvert Health Medical Center (formerly the Calvert Memorial Hospital) located in Prince Frederick. The facility is a full service community hospital whose service area encompasses Calvert County and communities lying adjacent to the County, including in Anne Arundel, Charles, and St. Mary's Counties. Calvert Health Medical Center provides both emergency and outpatient services. Calvert Health also operates an urgent care facility in Dunkirk, the Dunkirk Medical Center, and the Twin Beaches Community Health Center in North Beach. This local health center provides primary health care services.

A Plan for Community Facilities

The Town's basic goal with respect to community facilities is that they be expanded and maintained to deliver exceptional service to existing, residents, visitors, institutions, and businesses. Since for the most part the delivery of community facilities in Chesapeake Beach is based on cooperation between local jurisdictions and agencies, it goes without saying that this Plan envisions continued cooperation with police and fire agencies to ensure that current levels of service are maintained; the Board of Education to ensure the school facility planning is aligned to meet the needs of Town residents; and the partners to the Interjurisdictional Agreements so that the area's sewerage needs are met and extensions of service are aligned with Town planning policy.

Objectives

- Natural resource areas and recreational assets are prioritized for funding and projects are undertaken that enhance their value to residents and highlight their importance as dominant features of the Town.
- The Town's community facilities are accessible to and provide benefit and value to all members of the community.
- Community facilities in the Town are protected from the effects of sea level rise including both nuisance and storm surge events.
- Public sewerage is extended to areas in the Town that are developed with on-site septic systems, and municipal water service is extended to areas now served with individual wells.
- The Town develops a system of interconnected parks and open spaces built on its strong foundation of natural resource recreational areas including the water.
- Parks and open spaces will be added to the Town.
- Developers contribute to providing and enhancing community facilities commensurate with the expected impact of proposed projects; this is standard operating procedure.

Recommendations

Prepare and Adopt a Park and Open Space Plan

As noted in this Chapter Chesapeake Beach has a strong base of natural resource related recreational assets but lacks basic neighborhood parks. Many parts of Town are not served by mini- and neighborhood parks. This Plan recommends that the Mayor and Town Council appoint a citizen committee to study the recreational needs for the Town, to develop standards that will shape how parks space is provided or improved overtime and guide the preparation of a master plan. From a comprehensive planning standpoint, the goals of the study should include substantially improved public access to the shoreline of the Chesapeake Bay, and the creation of more mini-parks and neighborhood parks.

Reimagining Community Parks: Kellam's Field Blue-Green Park and a Bay Front Pier

The Lynwood Kellam Memorial Recreation Park (Kellam's Field) is now primarily a ballfield. Associated with it are parking lots and picnic pavilions that serve patrons of the Waterpark. Kellam's Field was built atop a marsh and its ground is inherently unstable.



Plan: Community Parks

Veterans Community Park and Pier

Monument and recreational / cultural amenities on pier.

Kellam's Community Park

Community level park amenities planned combination with resilient management of sea level rise.

This plan recommends that Kellam’s Field be reimaged as a blue-green park – a recreational resource with both water and green open spaces (including a ballfield) and designed to attenuate flooding, allow wetland migration, and otherwise play a role in the Town’s efforts to be resilient in the face of projected sea level rise. The images below are visual expressions of this idea available widely on the internet and used here for community interest purposes.

Acquire and Develop New Park Space as Opportunities Arise

Until a park plan is adopted, the Town should be guided by this Comprehensive Plan and consider acquiring park land for mini-parks and neighborhood parks and working with the homeowner associations and residents in existing neighborhoods to improve existing open spaces for active recreation.

To build a better park system, the Town will have to actively work to acquire new property and/or expand or repurpose other existing public lands. As discussed in Chapter V, Land Use, this Plan recommends that the Town develop a major recreational pier over the Chesapeake Bay and seek public acquisition of the 50-acre tract of bayfront forest known as the Randle Cliffs Natural Area. As discussed in Chapter VII, Transportation and Circulation, the Plan recommends significant improvements in bike and pedestrian mobility that will interconnect the Town’s recreational resources.

Extend Municipal Water and Sewerage to Planned Service Areas within Town

As opportunities arise to achieve environmental and public health benefits, extend municipal water and sewer services to areas within the Town that rely on individual wells and septic systems and are planned for future service. Provided the services can be extended cost effectively, the Town should coordinate with property owners especially so that septic systems can gradually be eliminated from the Town.

Incorporate Community Facilities in the Flood Resilience Planning the Town Will Undertake

As documented in Chapter IV of this Plan, the North Beach Volunteer Fire Company is being impacted currently by the migration of ground water and wetland vegetation. Its access to Bayside Road will increasingly be hampered by both nuisance flooding and storm surge events.

The access road to the WWTP is similarly projected to be impacted by rising water levels. Kellam's Field, which was established on filled wetlands is generally unstable and increasingly prone to severe flooding during the later years of this 20-year plan. Gordon Stinnett Boulevard which connects Bayside Road to Kellam's Field, the Northeast Community Center, and the Waterpark is built on fill and is continually sinking. Lastly, the Town's waterfront assets like the public boat launch and Brownies Beach at Bayfront Park are at risk due to sea level rise and its effects. The Town will need to coordinate with all concerned stakeholders.

Consider and Adopt Necessary Growth Management Tools

This Plan recommends that the Town systematically study, and if found advisable adopt, regulations such as adequate public facilities ordinances (addressing facilities such as schools, parks, streets, water, and sewer), impact fees, parkland dedication requirements, and other growth management tools and programs that could be administered to ensure all community facilities are appropriately funded and that their capacity and functionality are retained or expanded. Specifically, the Town should require that all future residential developments set aside improved amenity open space, on a per housing unit basis, to meet the recreational needs of the new residencies and thus contribute to meeting the objectives of this Plan.

IX. Water Resources

Introduction

This section addresses both the quality of the Town's drinking water and the water quality of Fishing Creek and the Chesapeake Bay. Information on population growth and the demand, supply, production, capacity and distribution of drinking water and the provision and capacity of sanitary sewer service is provided and discussed in Chapter III, Municipal Growth and Chapter VIII, Community Facilities. Technical assessment data related to wastewater treatment pollutant loadings are provided for the municipalities of Chesapeake Beach and North Beach in the Water Resources Element adopted within the Calvert County Comprehensive Plan, 2019. Information on existing streams, stream buffers, and wetlands and the roles they play are discussed in Chapter IV, Natural Resources.

In this chapter, we discuss the Town's good fortune in having municipal wells in the Acquia aquifer, which, unlike so many other water sources are naturally protected from land-based pollution, being deeply set below ground, and shielded by a packed layer of sand and silt. We also review information on the Town's two sub-watersheds and discuss how the Town's residents, builders, and developers, by following State, County and Town regulations and guidance, are with each zoning permit issued, improving the Bay by reducing the pollutants that wash off property with stormwater.

High quality water resources have long been and continue to be centrally important to the Town's economy which is connected to commercial fishing, crabbing, aquaculture and to maritime based tourism. In fact, the protection of local water quality is part of the very ethic of Chesapeake Beach. The emergence, longevity, and community support of the Chesapeake Beach Oyster Cultivation Society (CBOCS) demonstrates this.

The Town sponsors CBOCS, a volunteer organization which among other things grows oyster spat in cages extended from the Fishing Creek Railway Trail before transporting them to oyster bars in the Bay. Each adult oyster can filter 50 gallons of water per day, removing phytoplankton, pollutants, and microorganisms from the water. This natural process reduces the likelihood of oxygen depletion in the water and improves water clarity, allowing sunlight to reach underwater plants, restoring natural conditions to the Bay. In association with Beach Elementary School, CBOCS's work facilitates field trips and supports the school's science curriculum by introducing children to the unique natural systems at work in Town.

The Town also sponsors the Green Team, a committee of resident volunteers that help set community priorities and strategies for projects that improve the water quality of the Bay and the environment generally. The Green Team's current three-year plan is available for review on the Town website. It notes that "the wellbeing of our community is intimately related to that of the Bay itself". The Green Team's vision statement includes "promoting stewardship and understanding of the Chesapeake Bay environment by reducing stormwater runoff and expanding efforts like CBOCS".

The recommendations set forth in the Natural Environment and Land Use chapters are integral to this chapter. In their entirety, these three chapters advance a comprehensive policy aimed at improving and sustaining the water related natural resources that protect the health and well-being of the Town's existing residents and the future generations that will call Chesapeake Beach home.

Existing Conditions

Drinking Water Resources³⁷

Chesapeake Beach's unique geological condition in the Atlantic Coastal Plain has influenced the location, quality, and accessibility of its drinking water. Its water supply is drawn from the Aquia aquifer, which is a naturally protected confined aquifer. This means it is secured by a finely packed layer of clay and silt.

³⁷ The information under this heading is primarily drawn from a report titled: Source Water Assessment for Community Water Systems in Calvert County, Maryland. MDE, Feb. 2004.

The aquifer is directly overlain by a deep sediment layer called the Nanjemory formation which ranges between 100 and 200 feet thick. The aquifer itself is composed of deep layers of loosely packed sediments, mostly sand, and shells in the upper portion. The top of the aquifer is about 125 feet below sea level in the northern part of Calvert County and 450 feet below sea level in the southern part of the County. The Town's water is drawn from deep below the land surface.

The Maryland Department of the Environment permits the Town to withdraw 630,000 gallons per day (gpd) averaged over a year. The Town's daily use based on withdrawal data is 446,400 gpd, which approximates 71% of the permitted amount. It is worth noting too there are residential areas in Town with on-site wells along both sides of Old Bayside Road and along Chesapeake Beach Road west of G Street.

Source Water Protection Areas

As noted above, Chesapeake Beach's wells draw from a confined aquifer, and thereby its water source is well protected from land-based contamination (i.e., from land use activities)³⁸. With such confined aquifers, it is intrusions into the aquifer from new and existing wells, that present the main potential pathway for contamination and pollution. Abandoned and unsealed wells therefore have the potential to impact drinking water because they might allow surface water contaminants eventual access to the source water. The Maryland Department of the Environment and its local implementing agency, the Calvert County Department of Environmental Health, regulates wells and the Town's water is continually tested and the results published per federal Environmental Protection Agency and State of Maryland standards and requirements. The Town holds MDE permits for ground water withdrawals from three wells and relies on no other sources of water.

- Well 1 is located east of Bayside Road in a forested area near 16th Street. The wellhead protection area (WHPA) encompasses marshland and a forested hillside south of Harbor Road.
- Well 2 is located, along with the water storage tank, in Richfield Station within a wellhead protection area composed mostly of forests and marshland near the southern tip of Ivy Lane.

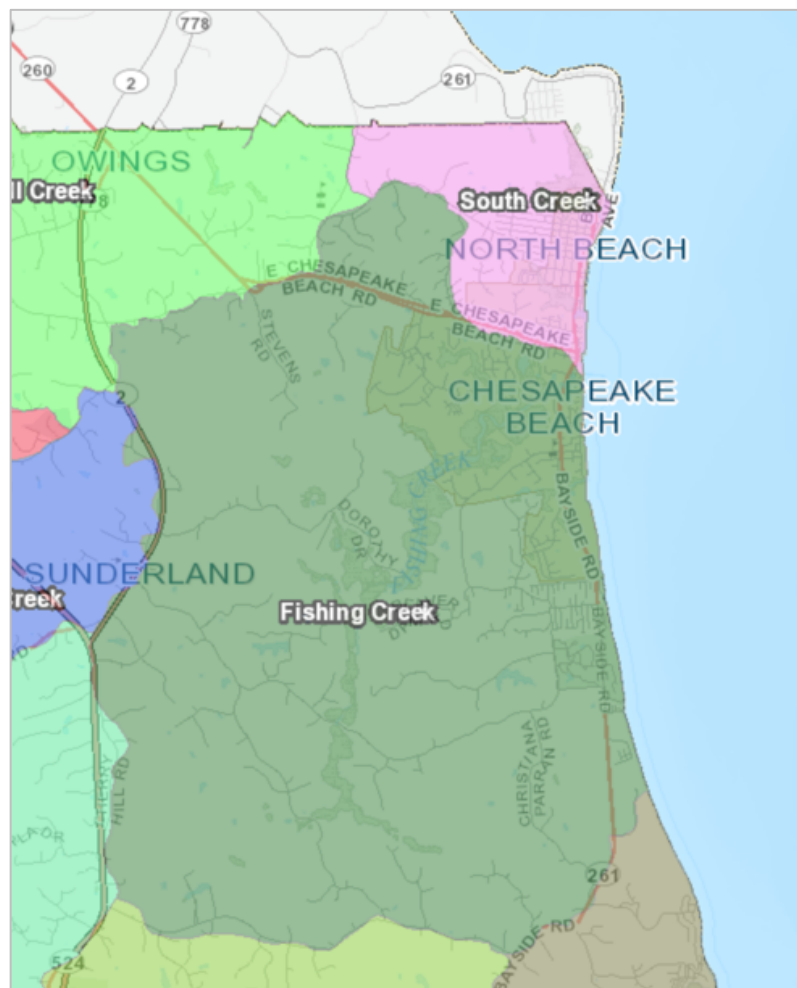
³⁸ Chesapeake Beach Source Water Protection Plan, June 2020. This report is available upon request of the Town Administrator. The Federal Safe Drinking Water Act requires public water systems to conduct Source Water Assessments to evaluate potential vulnerabilities to drinking water sources.

- Well 3 is located, along with the water storage tank, in the Chesapeake Village subdivision within the wellhead protection area encompassing newly constructed homes just beyond Town limits.

The Town's source water therefore is protected by the natural structure of the aquifer and generally by abundant undeveloped resource areas or sparsely developed lands that minimize the likelihood of local intrusions. For Chesapeake Beach then, it is the naturally occurring contaminants that are more typically the concern for water drawn from the Aquia. The Town's drinking water undergoes regular testing in compliance with the U.S. Environmental Protection Agency's requirements. Results are published by the Town.

Local Watersheds and Non-Point Source Water Pollution

A watershed is the land area that channels rainfall and snow melt to creeks, streams, rivers and eventually to major bodies of water like the Chesapeake Bay³⁹. Chesapeake Beach is situated within the West Chesapeake Bay watershed and further subdivided into two sub-watersheds as shown on exhibit here.



³⁹ See National Ocean Service, National Oceanic and Atmospheric Administration, <https://oceanservice.noaa.gov/facts/watershed.html>

The Fishing Creek sub-watershed comprises 13,278 acres and extends south to Ponds Wood Road. The South Creek watershed encompasses the northern part of Town and all North Beach and extends into Anne Arundel County. South Creek is the stream that merges into a large wetland complex north of Town and is conveyed under Bayside Road to the Chesapeake Bay at Seagate.

Non-point source refers to pollutants that are carried off the land by rainfall and washed into streams or make their way into ground water. There is no single discharge point for these pollutants; their sources include farm fields, parking lots, streets, roofs, and other impervious surfaces. Nutrients, fertilizers, sediments, bacteria, oil, and other contaminants that are carried by stormwater can degrade stream quality and the Chesapeake Bay.

Nutrients are the principal contributor to poor water quality from non-point sources. The two chemical nutrients that are most frequently associated with pollution in the Bay and its tributaries (such as Fishing Creek) are nitrogen and phosphorus. Excessive concentrations can grow algae and deplete oxygen making the water unsuitable for most aquatic life.

Because non-point water pollution flows from impervious surfaces, the amount of such converge is a general indicator of the natural vitality of a watershed. When impervious coverage within a watershed exceeds 10% the most sensitive stream qualities are lost. When coverage reaches 25 to 30%, stream quality is generally degraded. Only 5.7% of the Fishing Creek watershed is covered by impervious surfaces, such as roads parking lots and roof tops. This explains in part why the water quality remains good, evidenced by the water quality testing conducted by CBOC.

The careful management of stormwater is centrally important to the Plan's vision. The fact is, major land development often changes the grade and natural drainage of the land and adds impervious surfaces like buildings, parking lots, and streets which can negatively impact the quality of area streams if not properly managed. At its heart, stormwater management is about interconnecting community development to the underlying natural systems of an area, ideally in a way that mimics natural processes. If the techniques and systems that manage the rainwater falling onto or flowing over a site are not properly designed and maintained, new development can irreversibly degrade the environment. This happens in part because the stormwater flowing from impervious surfaces (runoff) can carry sediments and pollutants and can even erode stream banks or raise the water temperature of nearby streams.

Fortunately, when land development is proposed in Chesapeake Beach, engineered site plans are provided to the Town and County for review and approval. The Town has adopted the Calvert County Stormwater Management Ordinance, as amended, which complies with State of Maryland laws and regulations. The Ordinance is administrated by Calvert County Department of Public Works for the Town. All major site developments proposals must include SWM and Sediment and Erosion Control plans.

The Town itself administers stormwater management on smaller development projects, such as a single-family lot, when such projects are in the Critical Area. Under State and Town regulations, development and redevelopment activities that require zoning permits must be designed in such a way that the pollutants leaving the site in rainwater are reduced by at least 10% from the pre-development condition. The Town encourages runoff reduction practices that direct stormwater to infiltrate the soil just like it would if the land were in an open space condition, which is what the State's regulation seeks to bring about through techniques called "Best Management Practices".

Best Management Practices include rain gardens, rain barrels, cisterns, green roofs, open vegetated swales, and many types of infiltration systems including large scale systems that can be installed under impervious surfaces like parking areas. The Town may also require the planting of native trees and shrubs on a site to mitigate the impact of added impervious lot coverage.

A Plan for Water Resources

Objectives

- Ensure the long-term safety and quality of the Town's drinking water.
- Bring about ever improving water quality in Fishing Creek and the Chesapeake Bay.
- Continue to facilitate the efforts and interests of Town residents who volunteer time and resources to improving the Town's water resources.

Recommendations

Maryland entered into the 2014 Chesapeake Bay Watershed Agreement committing to achieve targeted reductions in the amount of pollution entering the Bay especially nitrogen and phosphorous by 2025. In Phase II of this Watershed Implementation Plan, the State set nutrient annual caps for wastewater treatment in Calvert County at 32,600 pounds of nitrogen and 6,920 pounds of phosphorous. These were the levels not to be exceeded in 2020.

Through the Town's upgrading of the Chesapeake Beach Wastewater Treatment to a high level of treatment, called Enhanced Nutrient Removal, the County achieved its Phase II target loads. Actual loadings are well below the cap: 21,270 and 4,900 pounds of nitrogen and phosphorous, respectively. The WRTP, with a currently permitted capacity of 1.18 million gallons per day, uses oxidation ditch processes to perform biological nitrogen removal and chemical precipitation processes to remove phosphorous⁴⁰.

Now Maryland is in Phase III of its Plan to achieve the 2025 target reductions in pollutant loadings⁴¹. Because Calvert County is mostly rural, the County's remaining reductions are expected to come about almost entirely through Best Management Practices related to agricultural runoff. Whether the County or Statewide reductions are achieved by 2025, Chesapeake Beach will continue to advance ways to reduce the local impact of urban uses within Town limits as noted in the recommendations that follow. Over the long term, water quality benefits may also be expected when the approximately 220 households with on-site septic systems connect to the public sewerage system.

Ensure Abandoned Wells are Closed

Coordinate with Calvert County Department of Environmental Health, the Town of North Beach, and the State of Maryland in ensuring any abandoned wells are properly and permanently sealed to prevent the potential for pollutants to enter the water supply.

⁴⁰ For information on the oxidation ditch technology for nitrogen removal in wastewater treatment plants see: [Wastewater Technology Fact Sheet, Oxidation Ditches](#), U.S. Environmental Protection Agency, Sept. 2000. In the mentioned chemical precipitation process, aluminum and iron coagulants or lime are used to form chemical flocs that settle out with the removed phosphorous forming sludge that is then disposed of.

⁴¹ [Maryland's Phase III Watershed Implementation Plan to Restore the Chesapeake Bay by 2025](#), Final Document, August 23, 2019, available for review at <http://mde.maryland.gov>.

Modernization of Stormwater Management

Redevelopment practices which are regulated by modern stormwater management regulations and/or Critical Area standards generally improve the quality of runoff from development sites and reduce the overall amount of that runoff too. The Town will continue to enforce stormwater management regulations that reduce water pollution when land is redeveloped.

Protect Remaining Forest Areas and Steep Slopes

Forests left in a natural condition are optimally suited to protect area water quality both surface water (such as Fishing Creek) and groundwater reserves. To the extent possible the Town should work to prevent them from being cleared, graded, and developed to urban uses.

Urban Forestry

Institute an urban forestry program aimed at increasing the amount of tree coverage in Town. Consider adopting a goal for canopy coverage and a plan to expand native trees on public lands and, in cooperation with interested property owners, on private lands. Through public informational programs, the Town and its citizen groups can assist property owners in the proper maintenance of trees and the forest stands on their lots including how to eradicate invasive plants and vines. Suitable plantings on steep slopes such as along B Street, will help maintain and protect them, which is a priority.

Shoreline Buffers

Where redevelopment and the intensification of existing uses of land is proposed along the shoreline of the Bay and Fishing Creek, acknowledge the role that naturalized buffers can play in protecting water quality and to the extent possible, plant buffers in native vegetation.

Reduce Impervious Surfaces

Over the next 20 years bring about a net reduction in impervious surface area in the Town and especially within the existing and future projected floodplains. In this regard, the Town could consider allowing narrower street widths and using or requiring pervious parking lots and sidewalk materials where practical.

Where appropriate and in coordination with property owners and as guided by flood resiliency planning, the Town could also allow tidal wetlands to expand and adjust with the changes in the sea level rise to provide a natural filter for flood waters and a trap for sediments. The most obvious setting for this approach to reducing impervious surfaces is Kellam's Field (See Chapter VIII). But where private property may be concerned state and federal programs (such as the Federal Emergency Management Agency's repetitive loss land acquisition programs) can address the needs of property owners who suffer losses while also building the Town's resiliency to flooding.

Consider and Implement Programs and Regulations to Protect Water Quality

There are voluntary and regulatory programs that towns can set up to protect water quality. These include informational programs about the role of runoff and how homeowners can either reduce it or reduce the sediments and other pollutants that rainwater carries. In administering the Town's Critical Area regulations, especially where redevelopment projects are proposed, the Town fosters continual improvement to water quality and many of the Best Management Practices applicable to projects in the Critical Area which are good practices regardless of where a project may be located.

X. Implementation

Introduction

Plan implementation is about bringing people and resources together so that their interactions produce successful outcomes. The Town of Chesapeake Beach has a record of proven success with implementation. While maintaining a small and efficient government, the Town has successfully directed the energies of interested and concerned citizens to achieve positive results.

Through its citizen volunteers, the Town has cooperated with outside units and agencies of government, most notably the State of Maryland, to address challenges and seize on opportunities. Over the past twenty years, in coordination with citizen groups and governmental agencies, the Town completed the first phase of the Fishing Creek Railway Trail, built and dedicated Veteran's Memorial Park, expanded and upgraded the wastewater treatment plant, realized its goal of replacing the Fishing Creek Bridge, preserved forests and wetlands, protected the water quality of Fishing Creek, prepared and adopted a town wide plan for sidewalks and trails, and recently approved plans for a new Beach Elementary School.

This approach will be essential in the years ahead to address the challenges discussed in this Plan including sea level rise and flooding, building out the network of sidewalks and trails, building an interconnected park system, sustaining the Town's character and heritage as expressed in its architecture and patterns of development, and promoting economic development and the vibrancy of local businesses. Citizen involvement and leadership should continue to be an element of plan implementation, especially with respect to the recommended studies and proposals.

Zoning Ordinance Amendments

Text Amendments

The Town of Chesapeake Beach Zoning Ordinance (Chapter 290 of the Town Code) regulates the use and development of land within the boundaries of Chesapeake Beach. Among other things, it establishes the purposes of each zoning district and the specific standards pertaining thereto such as the maximum allowable building height and lot coverage.

The Chesapeake Beach Zoning Ordinance also incorporates the Town's Critical Area Overlay District, Growth Allocation Floating Zone, including the growth allocation method, the Residential Planned Community (RPC) District, in addition to the forest conservation regulations, and an article establishing the Board of Port Wardens.

A comprehensive review and modernization of the Zoning Ordinance would help implement this Comprehensive Plan. Amendments addressing several issues will require substantial study and collaboration and will take much time. Some amendments are clear cut and flow directly from specific recommendation in this Plan such as, reducing the allowable height of new buildings. These can be recommended for adoption immediately. Here are the main topic areas to be addressed along with the recommended time frames for study and adoption.

Immediate Term Text Amendments

These are the amendments that can and should be evaluated and adopted concurrently with or immediately following adoption of this Comprehensive Plan.

- Reduce the allowable maximum building height to 35 feet.
- Remove all references to the Bonus Density Overlay District in their entirety.
- Divide the Residential Village District into two new zoning districts, RV-1, and RV-2, and create purpose statements for each. Within the new RV-1 District remove multi-family housing and townhouses from the list of permitted uses but continue to allow these uses within the new RV-2 District.
- Divide the Commercial Zoning District into multiple new zoning districts including, Neighborhood Commercial (NC), Town Commercial (TC), Commercial Plaza (CP), and create purpose statements for each.

- Modernize the list of permitted uses by district as may be needed to reflect changing land uses, building types and businesses activities and expressly prohibit uses that are found to be inherently adverse and incompatible with the public health and welfare of the Town.
- Remove multi-family buildings and townhouses as permitted uses in the new NC and CP commercial districts. Within the new TC district, allow residential use above street level commercial and clarify that existing single-family dwellings will be permitted by-right.
- Convert the Maritime District to Maritime Commercial (MC) and remove all new housing types from the list of permitted uses.
- Within the Resource Conservation District (RC), retain all protective easements, overlays, and regulations such as critical area and forest conservation. Do not allow by right residential use in the RC by including it as a listed use in the district description and remove it as a permitted use in the Land Use Table.
- Evaluate the purpose statement of each zoning district and revise as may be needed to ensure each is properly aligned with the recommendations of this Plan.
- Consider removing tourist homes as a permitted use in the proposed new Maritime Commercial district.
- Institute standards for the amount and quality of common open space to be required of new development projects.

Longer Term Text Amendments

These are the amendments that can and should be evaluated and adopted within about three years of adopting this Plan.

- Adjusting regulatory barriers (such as lot area and one size fits all off-site parking requirements) to the provision of compatible and affordable housing options such as duplexes, accessory apartments, and senior care homes, where practical and helpful towards supporting the goals of this plan.
- Adopt architectural, building, and site design guidelines and standards including for landscaping and signage.
- Adopt standards that minimize the impact of housing development / redevelopment to steep slopes, especially on B Street.
- Revise the regulations governing mitigation within the Critical Area buffer to ensure required measures are sustainable where sea level is a factor.
- Evaluate the intensity of potential development in commercial districts and adopt new or revised regulations related permitted uses, conditions, capacity regulations and dimensional requirements.

Map Amendments

Amending a zoning map and ordinance is the main way to implement a new land use plan over time. A zoning map must be consistent with an adopted land use plan so ultimately the Town will need to adopt a new zoning map. We recommend that the Town comprehensively amend the zoning map and adopt an updated map concurrent with or soon following adoption of the Comprehensive Plan. During comprehensive rezoning and update of the Town's Zoning Map, each zoning map change should be accompanied by a statement of its consistency with the objectives of this Comprehensive Plan and property owners should be provided a notice of a proposed rezoning and an opportunity to discuss the impact of the rezoning of their property with the Commission. Here are the recommended ways to amend the zoning map to bring it in concert with the Land Use Plan presented in Chapter V.

- Divide the Residential Village District (RV) into two separate districts, RV-1, and RV-2.
- Divide the Commercial District into separate districts: Neighborhood Commercial (NC) Town Commercial (TC), and Commercial Plaza (CP).
- Rename the Maritime district to Maritime Commercial (MC).
- Remove the bonus density overlay district from the map.
- Reclassify properties and/or redraw district boundaries guided by the recommended Land Use Plan in Chapter V.

Studies and Specific Plans

The Plan has identified challenges and opportunities which require further study before specific recommendations can be made. The most prominent are noted below. As has been the custom in Chesapeake Beach with other projects, these studies and specific plans ought to be prepared with public input and participation.

Master Plan for Flood Risk Reduction

This Comprehensive Plan has identified areas vulnerable to projected sea level. It has not however provided specific recommendations except from land use and zoning strategies to address development in these areas. A flood risk and resiliency study and master plan is needed.

This recommended study and plan would evaluate existing flooding conditions and the extent of projected sea level rise and formulate specific planning and civil engineering approaches to address the problem. The Study has recently been funded by a grant from the Maryland Department of Natural Resources and will be undertaken in general coordination with the Town of North Beach. Initial project scoping has been completed and the technical work will begin in earnest before the end of 2022.

Park and Open Space Plan

This Plan has recommended the expansion of the trail and boardwalk networks, greater public waterfront access, the reimagining of Kellam's Field, the investigation of a future public recreational pier out over the Chesapeake Bay, and the public acquisition of the Randle Cliffs Natural Heritage Area. Noting that Chesapeake Beach is deficient with respect to the number and size of neighborhood parks, this Plan also recommends the development of neighborhood parks as part of a larger interconnected open space network as opportunities arise. The purpose of the recommended Park and Open Space Plan would be to study the feasibility of these ideas and design strategies to achieve them. It is recommended that the Town appoint a citizen committee to lead the project and coordinate with Calvert County and the Town of North Beach. This Plan recommends that the Town coordinate park planning and development with the Calvert County Land Preservation, Parks, and Recreation Plan, which is discussed later in this chapter.

Community Character Study

Chapter V recommends that the Town create architectural and site design guidelines. It further states that it is the Town's position that the essential character defining elements of buildings in Chesapeake Beach must be used as the model for future buildings, site improvement and development. This recommended study is intended to provide a basis for the preparation, adoption, and application of those guidelines and any standards that may be incorporated into Town ordinances.

Inter-generational Housing Taskforce Study

This plan recommends the Town Council form an inter-generational housing taskforce and commission it to recommend approaches to address existing and future housing needs for middle- and lower-income seniors. For example, it can suggest ways the Town might facilitate senior housing and aging in place within existing neighborhoods. Options might include repurposing houses into senior living and care arrangements and co-housing (where seniors share expenses), among other options.

Town Pathways and Vistas Planning

Pathways and Vistas Map, 2002 and 2010 Comprehensive Plans

Promoting walkability has been a strategic goal of the Town for decades. The 2002 Comprehensive Plan first featured a Pathways and Vistas Map which identified key routes; this was reaffirmed in the 2010 Comprehensive Plan update. The Town created the Walkable Community Advisory Group (WCAG) in 2017, which studied these routes in greater depth and prioritized them. The WCAG recommended updating the map to add additional routes, adopting the map as the bicycle / pedestrian master plan, and expanding the Town's Sustainable Communities Areas to encompass planned trail routes. The group then embarked on the Connecting Chesapeake Beach Connectively Study.

Connectivity Study

Over a period of several years, the WCAG conducted walking studies, engaged with residents and business partners, and consulted planning professionals to identify and prioritize needed safety improvements and important connectivity links. The WCAG's efforts culminated with public engagement activities and work sessions, followed by a comprehensive analysis for all projects considered by the group. A complete list of individual projects along with analyses pertaining to each project's popularity, projected cost, potential funding sources, and related considerations or requirements can be found within the Connecting Chesapeake Beach Connectivity Study, February 2021, Appendix C

In addition to studying walkability, the group proposed recreational trail network projects designed to encourage the ethic of walking, biking, and maintaining a healthy lifestyle, and to enhance economic development related to small scale eco-tourism. The foundational basis for the envisioned trail network is the existing Fishing Creek Railway Trail, which was recommended in the 2002 Plan. This is a boardwalk that traverses critical wetlands and is a designated Calvert County Birding Trail and of all 18 projects studied in Connectivity Study, four of the six most popular were expansions of this trail. This Plan recommends that the Town take the following steps to begin implementing additional sections of the Railway Trail.

- Review State and Federal funding programs such as Community Legacy Program, Recreational Trails Program, Program Open Space, and Maryland Bikeways.
- Prioritize, categorize, and group trail sections.
- Name projects and submit them to Calvert County for inclusion in the annual Maryland Department of Transportation (MDOT) priority letter and in MDOT's planning documents
- Complete grant applications for concept design funding or solicit private industry to complete 30% or 60% design plans.
- Prepare to provide matching funds (usually 20% of the total cost) in budget planning.

Other projects in the Connectivity Study are also recommended for implementation in the near-term and are listed in order below as they were prioritized by the group. Together, these projects represent the WCAG's top priorities and details can be found in Appendix C.

- Crosswalks at prominent intersections and along key street sections (Project ID #2).
- Richfield Station Connection of the Railway Trail: extension westward along the forested border of the Fishing Creek wetland sanctuary forming a connection with its northern most end point at Richfield Station to create a loop (Project ID #13).
- Old Bayside Trail: a multi-surface trail and sidewalk accommodation to provide safe travel to Beach Elementary school along Old Bayside Road (Project ID #10).
- Chesapeake Beach Gateway Trail (Project ID #1).
- Railway Trail Neighborhood Connector (Project ID #11).
- Fishing Creek Hiking Loop Trails (Project ID #14).
- Bayview Trail Loop (Project ID #12).
- Kellam's Field Trail (Project ID #3).
- Chesapeake Village off-road Trail (Project ID #6).
- Bayside Boardwalk Overlook (Project ID #15)

Interjurisdictional Coordination

Updating the 1990 Northeast Sector Community Facilities Sector Plan

In 1990, Chesapeake Beach, North Beach and Calvert County jointly adopted the Northeast Sector Community Facilities Plan. Its purpose was to evaluate the need for future roads and community facilities and to make recommendations about their development, including parks. Given the importance of coordination between the units of government and overlapping interests in areas such as flood resiliency, parks, open spaces, trails, traffic, public transit, public water and sewer service extensions, schools, libraries, and community centers, the three parties should formally consider whether a new plan is needed to guide planning over the next several decades.

Calvert County Land Preservation, Parks, and Recreation Plan

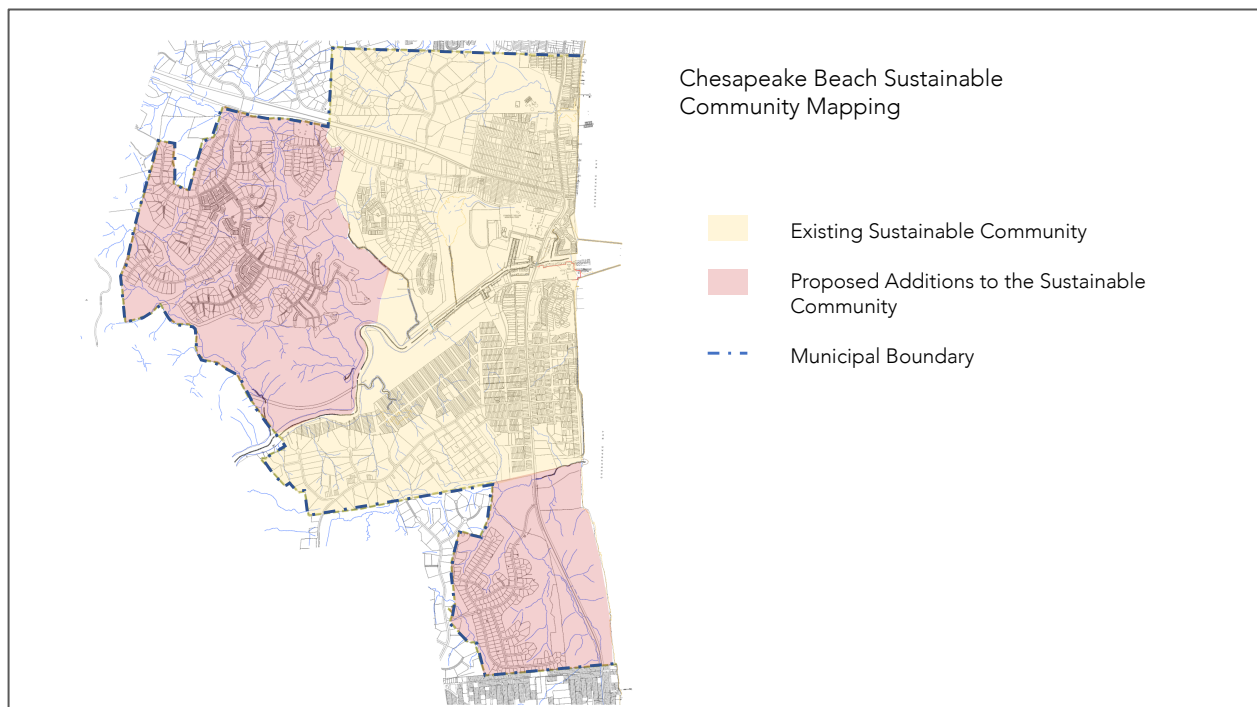
This Plan recommends that the Town participate with Calvert County in the regular five-year updates of the Calvert County Land Preservation, Parks, and Recreation (LPPR) Plan. The Plan is required by the State of Maryland for Calvert County, and the municipalities in the County, to be eligible for local Program Open Space (POS) grants. POS is a statewide program that funds the purchase and development of open spaces. In coordinating with the County, each year the Town can submit land acquisition or development projects for the State's consideration under the Open Space Annual Program which the County submits to the Maryland Departments of Natural Resources and Planning for approval.

Areas of Critical State Concern

The State of Maryland has prepared and adopted a statewide plan, A Better Maryland, which seeks to support a thriving economy and environmental stewardship throughout Maryland. The Plan's highlight is its commitment to collaboration between the State and its local governments by providing resources and tools for implementing long term plans. To facilitate this collaboration, A Better Maryland advances certain "areas of critical state concern". The most prominent areas of synergy between this Comprehensive Plan and A Better Maryland are shown in Table 9 below.

The State classifies several of the relevant programs as “spatially designated”, meaning they are addressed to projects in areas contained within unique geographic areas, such as coastal flood risk areas, or within pre-defined boundaries. For implementation purposes, the most prominent and relevant pre-defined area for the Town is the Sustainable Communities (SC) Program designation. Chesapeake Beach participates in the SC Program along with North Beach through a collaboration with Calvert County. The three jurisdictions jointly prepare, monitor, and update Action Plans in coordination with the Maryland Department of Housing and Community Development and the Department of Planning.

The image below shows the current SC boundary and proposed additions to the SC area. In effect, this Plan recommends that the boundaries be re-drawn to encompass the entire Town. This is important because the SC program defines an area’s eligibility for some State funding and technical assistance programs and allows for better coordination in town planning⁴². It is also recommended that the Town evaluate the current Sustainable Community Action Plan and as needed, update the plan with actions and strategies consistent with this updated Comprehensive Plan.



⁴² Location within a Sustainable Community boundary is a threshold designation for eligibility for the State’s Community Legacy Program which can fund projects aimed at community revitalization and sustainable development.

TABLE 9

Recommendation / Policy Area	Maryland Areas of Critical State Concern		
	Spatially Designated Program	Policy Program	Plan
Planning and adaptation for sea level rise, flood mitigation, habitat and shoreline protections	Coastal Community Flood Risk Program	Chesapeake & Coastal Service Program, Climate Leadership Academy, MD Commission on Climate Change	MD Hazard Mitigation Plan
Updating environmental regulations in flood prone areas	Chesapeake and Atlantic Coastal Bays Critical Areas Program	Chesapeake & Coastal Service Programs	
Protecting water quality and preserving forests	Sustainable Communities Program	Chesapeake & Coastal Service Programs	
Developing neighborhood parks and playgrounds, extending trails		Program Open Space - Local	
Public Acquisition of Randle Cliffs Natural Heritage Area		Program Open Space- Statewide	
Beach Elementary School engagement with Fishing Creek		Project Green Classroom environmental education initiative	
Addressing affordable and senior housing	Community Legacy Program	Home Ownership and Affordable Housing (DHCD)	
Tourism and related business development, programming town center activities	Community Legacy Program	Office of Tourism Development assistance programs	
Promoting economic development, revitalization	Community Legacy Program		A Strategic Plan for Accelerating Economic Development
Building bikeways and sidewalks			MD Bicycle and Pedestrian Master Plan
Great streets program, beautifying and retrofitting MD Routes 260 and 261	Community Legacy Program		MD Transportation Plan
Smart streets technologies, elevating State roads above flood levels		Chesapeake & Coastal Service Programs	MD Transportation Plan

Note: Sustainable Community Program designation is a prerequisite for eligibility in the Community Legacy Program.

Joint Planning Area

As recommended in Chapter III, Municipal Growth, this Plan is an invitation to Calvert County and the Town of North Beach to coordinate with Chesapeake Beach in the planning of community facilities including parks and open spaces. This can be accomplished by preparing a new Northeast Sector Study. This Plan also recommends that within an agreed upon Joint Planning Area beyond Town boundaries, the County inform the Town of any private development plans providing the Town a formal opportunity to comment. Map 4, in Chapter III, proposes a conceptually drawn joint planning area extending three miles from the intersection of Chesapeake Beach and Bayside Roads.

Funding Mechanisms

The Town maintains a five-year Capital Improvement Program (CIP). It is a financial planning tool allowing the Town to schedule infrastructure priorities with available and projected revenues. It identifies capital projects and revenue sources, which may include general obligation bonds, the general fund, and County, State, or federal payments. The Town should continue to use its CIP to schedule the improvements recommended in this Plan and those that flow from the supporting studies described above.

Public sanitary sewer service and water supply in Chesapeake Beach are provided through an enterprise fund, meaning that expansions of capacity are financed by new system users and are not funded through the general fund of Town government. In the case of new development this should remain so. However, as noted in this Plan there are residential areas in Town that are not served by public water and sewerage facilities, and where contributing funds are required as a qualifying factor for receiving grant funding, the Town's CIP should be considered.

The Town should continue to work cooperatively with the funding programs administered by State agencies to implement key priorities. Each of these agencies has a long-term interest in promoting the harmonious and prosperous development of Chesapeake Beach. As discussed above, this value is illuminated in the State's overarching blueprint for economic vitality and environmental stewardship, called A Better Maryland.

The State also maintains a program called Reinvest Maryland which it refers to as “an opportunity for all levels of government to work together, strengthen collaborative efforts to support revitalization and reinvestment⁴³”. The project includes a toolbox designed to encourage and ensure local communities consider redevelopment projects in partnership with the private sector that are supported by public program and resources. The Reinvest Maryland Toolbox includes information on over 100 state and federal funding and technical assistance programs for community development, which will be a vital resource for the Town in the years ahead as it works to implement this Comprehensive Plan.

A Continuing Planning Program

Town planning is a continuous process. The monitoring and review of public and private development projects is an essential task. This Comprehensive Plan provides a guide to the Town as it considers new projects and programs. The Town’s Planning and Zoning Commission should also conduct a yearly assessment of growth and development in conjunction with its Annual Report. The Annual Report should be made available to Town residents, neighboring jurisdictions, and the State of Maryland

Chesapeake Beach should formally re-evaluate and update this Comprehensive Plan as needed no later than 10 years from the date of its adoption as required by the Land Use Article of the Annotated Code of Maryland. As the Town conducts special studies and specific area plans, this Plan can be amended to include their findings and recommendations.

All proposed capital projects in Chesapeake Beach that affect physical growth and development should be referred to the Planning and Zoning Commission for review per the Land Use Article of the Annotated Code of Maryland.

⁴³ Information on Reinvest Maryland and the Toolbox can presently be found at: <https://apps.planning.maryland.gov/reinvestmd>.

Conclusion

This new and updated Comprehensive Plan is a fifth-generation plan, extending the planning horizon to 2040. It represents the latest chapter in the Town's long-range planning program. Chesapeake Beach adopted its previous comprehensive plans in 1971, 1990, 2002, and 2011.

While this latest Plan is focused on present and future issues and opportunities, it reaffirms the basic goal of the 1971 plan: *"A community with a scenic atmosphere and attractive setting for homes, which retains and improves its tourist-oriented economic viability"*. Like the previous plans, this Comprehensive Plan recognizes that unique and vital relationships, between Town residents and the natural environment, will continue.

It is also worth noting that this new Plan acknowledges two factors about the present and the future. First, the largest decades of population growth are likely in the Town's past. Except for the build out of two existing subdivisions, this Plan forecasts little population growth through 2040. Further, it does not provide for expanding municipal boundaries, it specifically seeks to eliminate the possibility of placing future residents and infrastructure at risk by allowing residential development in areas vulnerable to sea level rise, and it recommends that building heights be capped at 35 feet. Therefore, new residential growth will mostly be limited to the construction of new homes on vacant lots in existing neighborhoods.

Second, the benefits supplied by the Town's underlying natural resources will become even more crucial as the Town develops. Chesapeake Beach is a sensitive natural setting with its town center located at the confluence of Fishing Creek and the Chesapeake Bay. Low lying areas will be increasingly vulnerable to rising waters which will require the thoughtful and continuing public planning process recommended in this document. The marshes that dominate the natural landscape and hold back floodwaters are expanding and reclaiming their place in the lowest lying areas. Chesapeake Beach will adapt to these coastal changes and in the process continue to improve and enhance the Town for future generations.

Appendices

- A. Comprehensive Plan, Summary of Progress on Recommended Policies and Actions:
2020-2019

- B. Sea Level Rise Projections, 2100 Mapping

- C. Connectivity Study, February 2021

- D. Forest Interior Dwelling Bird Habitat Covenant and Agreement

**COMPREHENSIVE PLAN
SUMMARY OF PROGRESS ON RECOMMENDED POLICIES AND ACTIONS: 2002-2019**

Recommendation	Status	Comment
Development in Balance with the Pattern of the Town		
Comprehensively amend and revise the Zoning Ordinance to make it conform to and implement the Land Use Plan	Achieved	A new Zoning Map was adopted using the land use guidance in the Plan along with new zoning categories based on the Plan
Revise the Zoning Ordinance to address Infill	Achieved	Zoning revisions encouraged infill, such as the Bonus Density Overlay district, but was focused only on Maritime District
Give preference to residential uses along the bayfront where residential uses have traditional been established	Achieved	Bayfront land is now almost exclusively zoned residential
Within the center of Town, permit a mix of uses	Achieved	A new "Maritime" mixed use district was established
Pursue the economic development of marina areas, promoting flexibility in regulations to bring about both development and environmental protection	Ongoing	Redevelopment projects have reduced impervious surface area, created bufferyards, preserved wetlands, added trees and by 2020 will include a 5-acre water infiltration system
Replace the Fishing Creek Bridge with a new bridge that expands capacity improves pedestrian travel, and adds clearance for larger boats	Achieved	New bridge is open to traffic and nearly completed
Develop a system of sidewalks and bikeways to connect all neighborhoods together and build a trail over Fishing Creek to connect Richfield Station and Bayview Hills to the Town's center	Partially Achieved	The Fishing Creek/ Chesapeake Railway Trail and a walkway along Bayside Road from Harbor Road to 17 th Street were completed
In the design and development of the marina and other locations, locate bus stops and transit shelters.	Not Done	There are four public transit bus stops in Town, but no shelters.

Appendix A continued

<p>Investigate the use of a local shuttle bus service with North Beach during peak seasonal periods.</p> <p>Improve the streetscape of MD 261 through the center of Town to improve pedestrian safety and overall aesthetics.</p> <p>Monitor conditions at key intersections and evaluate options to reduce congestion; develop an approach to minimize seasonal congestion.</p>	<p>Some Progress</p> <p>Some Progress</p>	<p>Trees were planted at the intersection of MD 261 and 260, the new town hall provided landscaping, the crosswalk over MD 261 at MD 260 was realigned; otherwise little else accomplished and no unified vision</p> <p>The new bridge and the Harbor Road intersection improvements will alleviate congestion. No systematic approach.</p>
<p>Development in Balance with Natural Resources</p>		
<p>Use the Town Zoning Ordinance and Subdivision Regulations to ensure that, where possible, new development avoids sensitive areas.</p> <p>Review site plans for proposed developments to ensure that all reasonable measures are taken to protect sensitive areas both during and after development.</p> <p>In redeveloping intensely developed areas, acknowledge the role and functions that buffers play and, to the extent possible, plant buffers in natural and/or landscaped vegetation to improve water quality and scenic beauty... and over time, reduce impervious surface area within the floodplain and 100-foot buffer of Fishing Creek.</p> <p>Protect the Randall Cliffs Natural Heritage Area from development and use the land only for resource conservation activities including low impact recreational, educational, or institutional activities.</p>	<p>Progress Mixed</p> <p>Ongoing</p> <p>Ongoing</p> <p>Achieved Partially</p>	<p>Critical Area and forest conservation regulations have been enforced, wetlands and shorelines preserved, but the pattern of grading steep terrain was continued as evidenced by The Heritage subdivision</p> <p>Developers have been required to plant shoreline buffers, comply with Critical Area and stormwater regulations, plant trees, use pervious surfaces, and comply with floodplain regulations</p> <p>The area is still undeveloped and protected by a Resource Conservation zone adopted by the Town as recommended by the Plan. However, very low-density housing development is possible still</p>

Appendix A continued

<p>On undeveloped lands planned for residential development, cluster new home sites on the least environmentally sensitive areas.</p> <p>Institute an urban forestry program aimed at substantially increasing the number of trees in the developed portion of the floodplain and preserving standing wooded areas throughout Chesapeake Beach, particularly those wooded areas that can connect to other natural areas to form environmental corridors.</p>	<p>Achieved Partially</p> <p>Achieved Partially and Ongoing</p>	<p>The Town did not adopt residential clustering provisions into code, but major subdivisions have preserved much wetland and forested area</p> <p>Town created a forest account funded by the payment of Critical Area fees-in-lieu, preserved over 200 acres of forest in Richfield Station, increased the number of trees in the 100-foot buffer, and required the replacement of any tree removed in the Critical Area</p>
<p>Development in Balance with Community Character</p>		
<p>For those neighborhoods where commercial uses had previously been permitted, redefine the Zoning Ordinance to permit only the low-intensity uses, which are compatible with residential character</p> <p>Insist on excellence in site design and architecture throughout Chesapeake Beach. Minimize automobile-oriented site planning, which includes drive-through service windows and large roadway setbacks</p> <p>Keep the architecture of new buildings consistent in style, materials, size, and scale with neighboring properties</p> <p>Insist on strict enforcement of current appearance and building codes to uphold and improve, as needed, the appearance and quality of existing development and buildings</p> <p>Protect the remaining public vistas of the Chesapeake Bay, shown on the Pathways and Vistas Map</p> <p>Treat landscaping as an integral part of site planning and design</p>	<p>Achieved</p> <p>Partially Achieved</p> <p>Partially Achieved</p> <p>Ongoing</p> <p>Achieved</p> <p>Achieved</p>	<p>Zoning Map and Ordinance were comprehensively amended</p> <p>Town lacks design standards</p> <p>Town’s bonus density overlay provisions require an evaluation of compatibility under certain limited circumstances, Town lacks standards, current Planning Commission has high expectations</p> <p>About five years ago the Town began active enforcement of property maintenance codes and improved coordination with the County building inspections office</p> <p>The designated vistas remain open</p> <p>Zoning regulations were amended and the landscape plans for recent site developments have addressed Plan objectives</p>

Appendix A continued

<p>Use the Land Use Compatibility Table to guide the update of the Zoning Map and text of the Zoning Ordinance.</p>	<p>Achieved</p>	<p>The land use tables were revised, special conditions were placed on certain uses, and compatibility standards were adopted for projects seeking extra density or heights</p>
<p>Development in Balance with Community Services and Facilities</p>		
<p>Locate new and/or redeveloped civic buildings in the Town’s center along pedestrian ways. Renovate and/or expand the Town Hall.</p>	<p>Achieved</p>	<p>Town Hall was renovated and expanded</p>
<p>Develop a signing program that directs pedestrians and motorists to civic and recreational uses in Town.</p>	<p>Not Achieved</p>	<p>A wayfinding sign program has not been established</p>
<p>Begin to identify an acceptable location for the planned expansion of the Twin Beaches branch library in the town’s center</p>	<p>Not Achieved</p>	<p>Over Town objections, the Calvert County Library has planned to relocate the building outside of Chesapeake Beach</p>
<p>Build an indoor swimming facility in Chesapeake Beach</p>	<p>Not Done</p>	<p>No evidence that this recommendation was seriously considered</p>
<p>Continue to improve the Town’s public water and sewer systems and expand public water supply and wastewater treatment capacity and infrastructure to serve anticipated development as warranted by demand</p>	<p>Achieved</p>	<p>The Town expanded and updated the wastewater treatment plant, built two new water towers, and has continued to upgrade the systems as needed over time</p>
<p>Continue to monitor growth and development and work cooperatively with police and fire agencies to ensure that current levels of service are maintained over time</p>	<p>Ongoing</p>	<p>No systematic monitoring and coordination process is in place</p>
<p>Cooperate with the County on school issues to ensure that the schools attended by the Town’s children retain their quality and accessibility</p>	<p>Achieved</p>	<p>Town coordinates with the Board of Ed. on capacity matters and regularly updates data for the school facility master plan; most recently pertaining to a new Bayside Elementary School</p>
<p>Continue to program the maintenance of roads, sidewalks, and storm water management infrastructure</p>	<p>Achieved</p>	<p>However, the Town has not adopted a systematic capital asset maintenance program</p>

Appendix A continued

Development in Balance with Regional Priorities		
Cooperate with the County and Town of North Beach to ensure that public transit services are expanded as needed to serve commercial and residential areas	Achieved	Calvert County Public Transportation provides bus service through Town, the "North Route", four times per weekday and three times on Saturdays, with four stops in Chesapeake Beach and stops in North Beach, and weekday para-transit in the Town. MTA Express bus transit into Washington, DC leaves from the North Beach municipal parking lot
Work with County and State community and economic development officials to promote the development of office space in Chesapeake Beach	Beginning	Until the recent formation of the Town's Economic Development Commission, this coordination does not appear to have happened
Concerning the wastewater treatment plant, continue to work with Calvert County and the other jurisdictional partners to ensure that capacity is available to Chesapeake Beach as it accommodates a larger share of County growth and development	Achieved	Town led the expansion of the WWTP and has capacity to serve growth through foreseeable future.
Continue to cooperate with the State Highway Administration to improve intersection control at key locations	Achieved	On an as needed basis, the Town coordinates with SHA; current examples include the planned stoplight at MD 260 and Harrison Blvd. and the upgrade of MD 261 at Harbor Road.
Cooperate with Calvert County in the review of land development and conservation projects located outside of Chesapeake Beach when such projects may impact Town interests	Achieved	The County and Town coordinate on priorities and plans

Appendix B

Sea Level Rise Projections, 2100 Mapping

Projected sea level rise increases are relative to the level documented in Maryland in the year 2000. So, when this Plan refers to an increase in sea level, it means an increase over the level recorded in Maryland in 2000. The projections by the Maryland Commission on Climate Change for 2050 include a Central Estimate having a 50% probability that sea levels rise 1.2 feet, a Likely Range having a 67% probability that levels rise between 0.8 and 1.6 feet and a 1 in 20 Chance or five percent probability, that levels rise two feet or more. The year 2050 mapping in this Comprehensive Plan correspond to the 1 in 20 chance. The Plan's 2100 mapping is presented in this Appendix. It corresponds also to a 1 in 20 chance and the assumption that carbon emissions continue to grow well into the second half of this century.

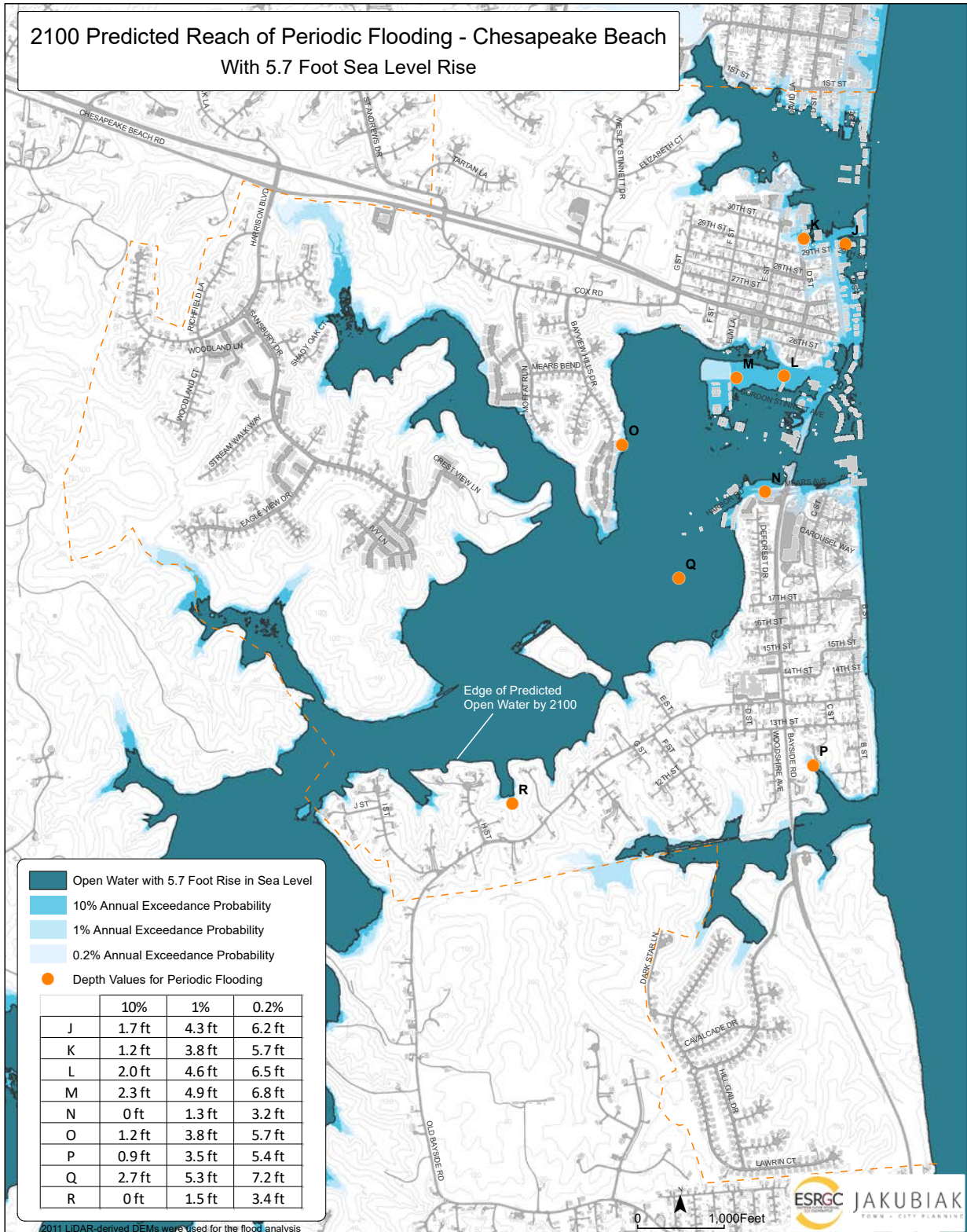
The MCCC's guidance on using sea level rise projections in planning confirms this Plan's decision to use the five percent probability projection through 2050. Beyond 2050, there is variability among projections since they are based on alternative scenarios for global carbon emissions. Given the life expectancy of new buildings and infrastructure, the fundamental and lasting impact of land development on the Town, and the low risk tolerance that communities prudently adopt when life and property are at stake, the 1 in 20 chance is a reasonable one for long term planning too. Beyond 2050, Chesapeake Beach may decide to be either more or less risk averse as scientific consensus forms around a trend for global carbon emissions. In the meantime, the MCCC's 2050 and 2100 projections used in this Plan will inform and shape policy decisions about development and conservation. In summary, the projections mapped in this report are as follows:

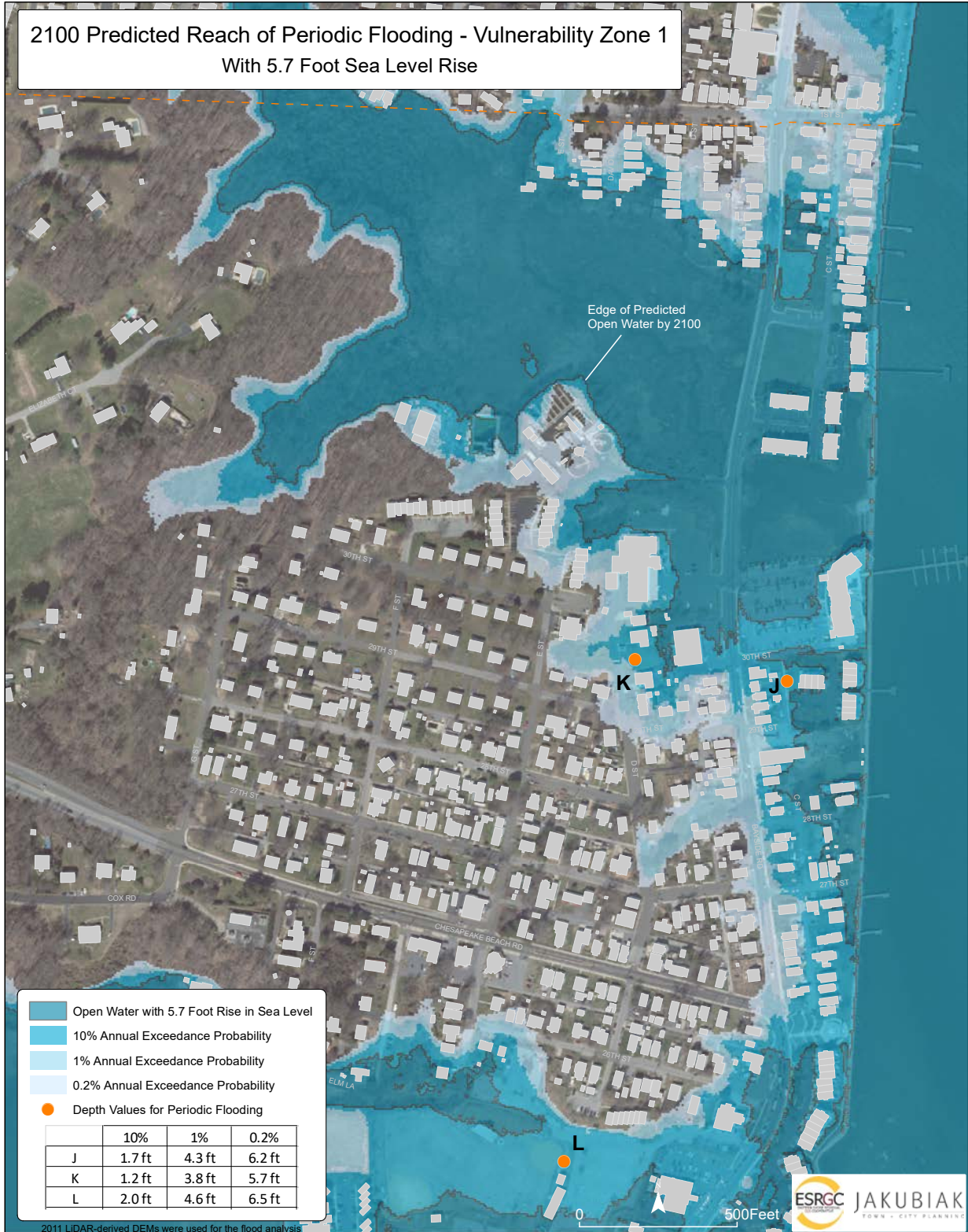
- By 2050 sea levels in Maryland will rise 2.1 feet over the 2000 levels (see mapping in Chapter IV).
- By 2100, sea level in Maryland will rise 5.2 feet over the 2000 levels (see mapping in this Appendix).

To put the 2050 projection into perspective, all land at elevations of about two feet or less above sea level and associated in some way with an inlet to the Bay, is at heightened risk of being permanently submerged over the next two or three decades. These lands are impacted directly by sea level rise and tidal action. However, these are not the only areas at risk. Sea level rise affects ground water making those parts of Chesapeake Beach built on filled wetlands especially vulnerable. While modern construction techniques using deep piles may support buildings, the ground surface and public infrastructure on or under that surface cannot be similarly stabilized. Gordon Stinnett Avenue has sunk an estimated 18 inches since 2006¹.

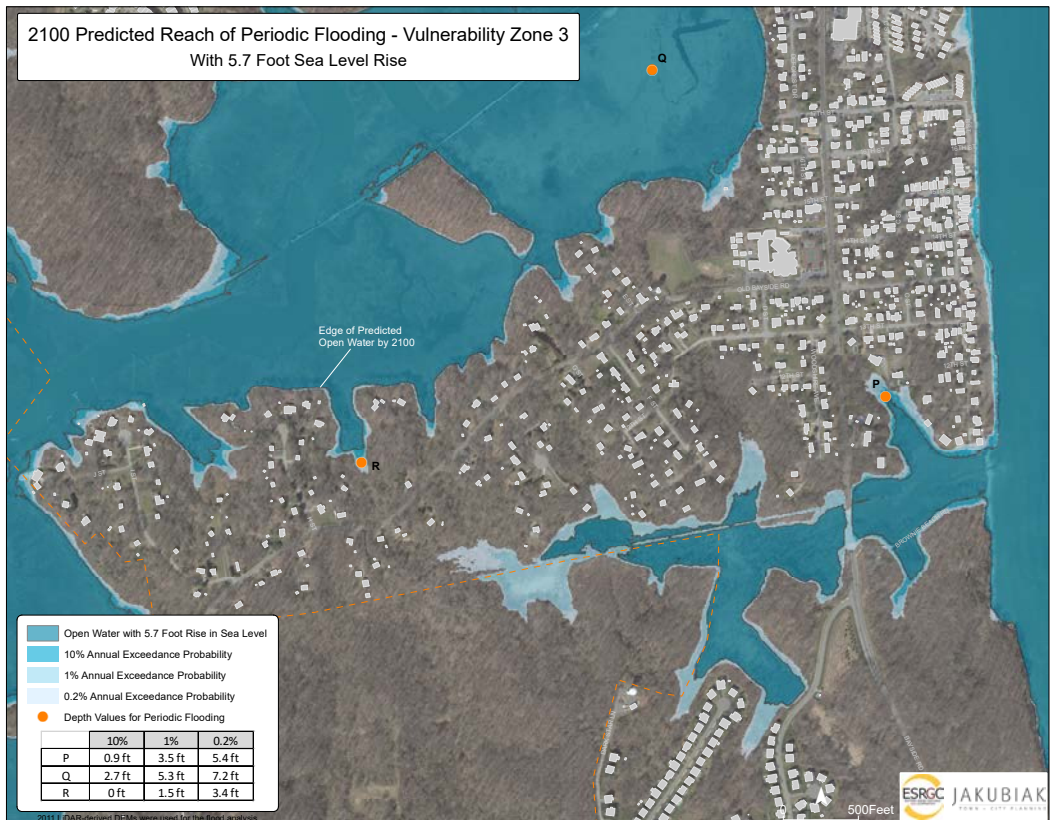
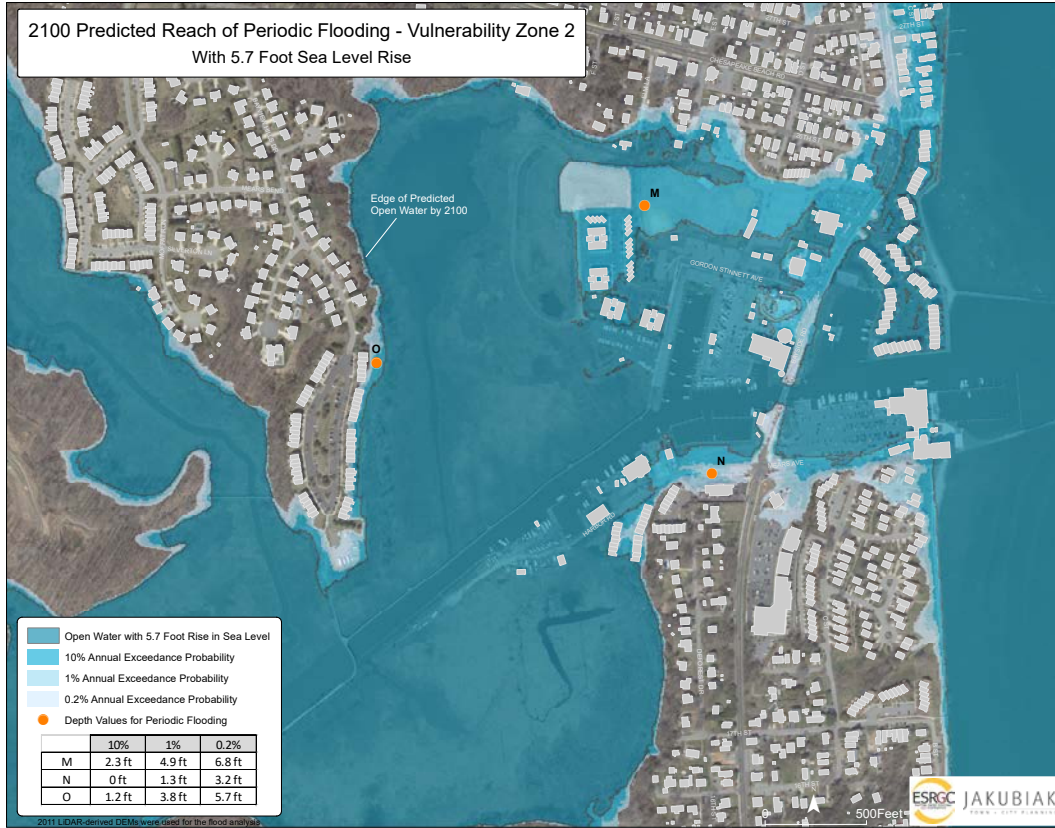
Lastly future hurricanes and storms matching those of the Town's past will have far greater impact on Chesapeake Beach and place more people and a greater area at risk because of sea level rise. The maps in Chapter IV show the extent of future tidal waters (open water) and projected floodplains in 2050 and 2100, respectively. Each map shows areas projected to be open water and areas projected to have a 10% annual chance of flooding, a 1% annual chance of flooding (i.e., the future 100-year floodplain) and a 0.2% annual chance of flooding (i.e., the future 500-year floodplain). The maps also show the projected depth of floodwaters during each of the three storm surge events and various locations. For example, on 2050 Predicted Reach of Periodic Flooding Map, at Point B, located near the North Beach Volunteer Fire Company, the projected depth of water in a flood with a 10% annual probability would be 0.9 feet, the depth of water in a flood with an 1% annual probability would be 3.4 feet, and the depth of the 0.2% annual probability flood (such as Hurricane Isabel in 2003), would be 5.3 feet. The 2100 Predicted Reach of Periodic Flooding Maps for the entire Town and for three vulnerability sub-areas of Town are provided here.

¹ Documented by Town Public Works Director Mr. Jay Barry.





Appendix B continued



Appendix C

Connectivity Study, February 2021

CONNECTING
Chesapeake Beach



CONNECTIVITY STUDY



February 2021



ACKNOWLEDGMENTS

The Town of Chesapeake Beach

- > Holly Wahl
- > Derek Favret

Walkable Community Advisory Group

- > Lori Blackwelder
- > Madeleine Blake
- > Amenda Brown
- > Charlie Fink
- > Jan Ruttkay
- > Theresa York

RK&K TEAM

- > Nathan George, AICP
- > Melissa Miklus, PLA, ASLA
- > Megan Oliver, AICP

The development of the Chesapeake Beach Connectivity Study would not have been possible without the committed participation of the members of the Walkable Community Advisory Group. A special thanks is extended to all the residents, business owners, and members of public who shared their thoughts and ideas with the team and participated in the public engagement activities.

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Chapter 1

Introduction

ACCESS
get around
& see
Do
cycle
CONNECTION
GREENWAY
wander
SKIP
HIKE
WALK
bike
WALK
boulevard
meadows
ROLL



A Destination Primed for Improved Connectivity

The Town of Chesapeake Beach is located on the western shore of Maryland's Chesapeake Bay. One of two municipalities in Calvert County, the 2.7 square mile jurisdiction of Chesapeake Beach is home to approximately 6,000 residents. Initially established as a plan for a grand resort on the shores of the Chesapeake Bay in the late 1890s, the Town became a flourishing coastal community by the early 1900s. Tourists would travel via steam ship from Baltimore or board a train from Washington, DC for weekend visits to the beautiful beaches, thriving boardwalk, and pristine park areas. On the boardwalk visitors found entertainment in casinos, theatres,

restaurants, live entertainment, and games. Development in Chesapeake Beach continued throughout the first half of the 20th century with additional lodging and the construction of Seaside Park, eventually renamed Chesapeake Beach Amusement Park.

Today, Chesapeake Beach continues to attract tourists from the states of Delaware, Maryland, and Virginia. Visitors flock to the boardwalk trails, beaches, and restaurants serving local seafood from the Chesapeake Bay. The Chesapeake Beach Water Park is a major destination for families looking to cool off and relax in the summer heat. The Town is also home to top-quality piers, marinas, and fishing shops that support a wide variety of outdoor recreational activities. In

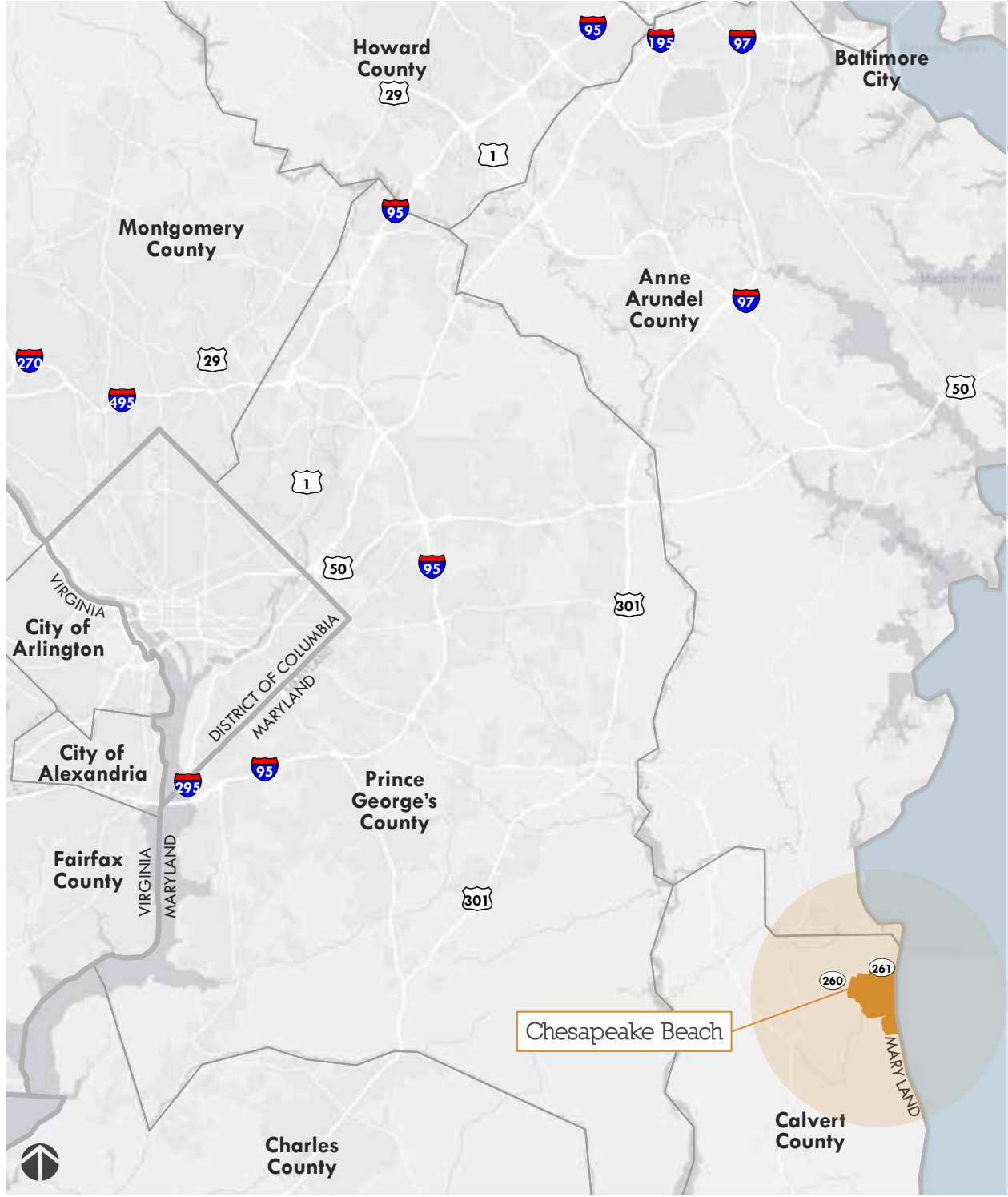


FIGURE 1. Map of Chesapeake Beach and the Surrounding Areas

In addition to the many tourist attractions, just south of the limits of Chesapeake Beach is the home of the United States Naval Research Laboratory Chesapeake Bay Detachment, which tests and analyzes various military radar systems.

The rich history and vibrant community led to the Town being designated on the National Register of Historic Places in 1980. With so much to offer, Chesapeake Beach remains an attractive tourist destination and exceptional community for the 6,000 residents who call the Town home.

THE THEORY OF CONNECTIVITY

Each destination in Chesapeake Beach has a “reach” that connects it to other places. The Town itself is a destination for visitors across the region. Parks, waterfront access, and scenic overlooks “reach” across town and should be connected via safe walking and bicycling routes. Neighborhoods thrive by reaching out into the community via sidewalks, trails, and other facilities that provide a web of connected routes. This diagram illustrates the reach concept with large bubbles around regional destinations and lines connecting neighborhoods, boardwalks, trails, waterfront access, civic resources, dining, and entertainment. Understanding reach provides a foundation for creating a “spine network” and “neighborhood connectors.”

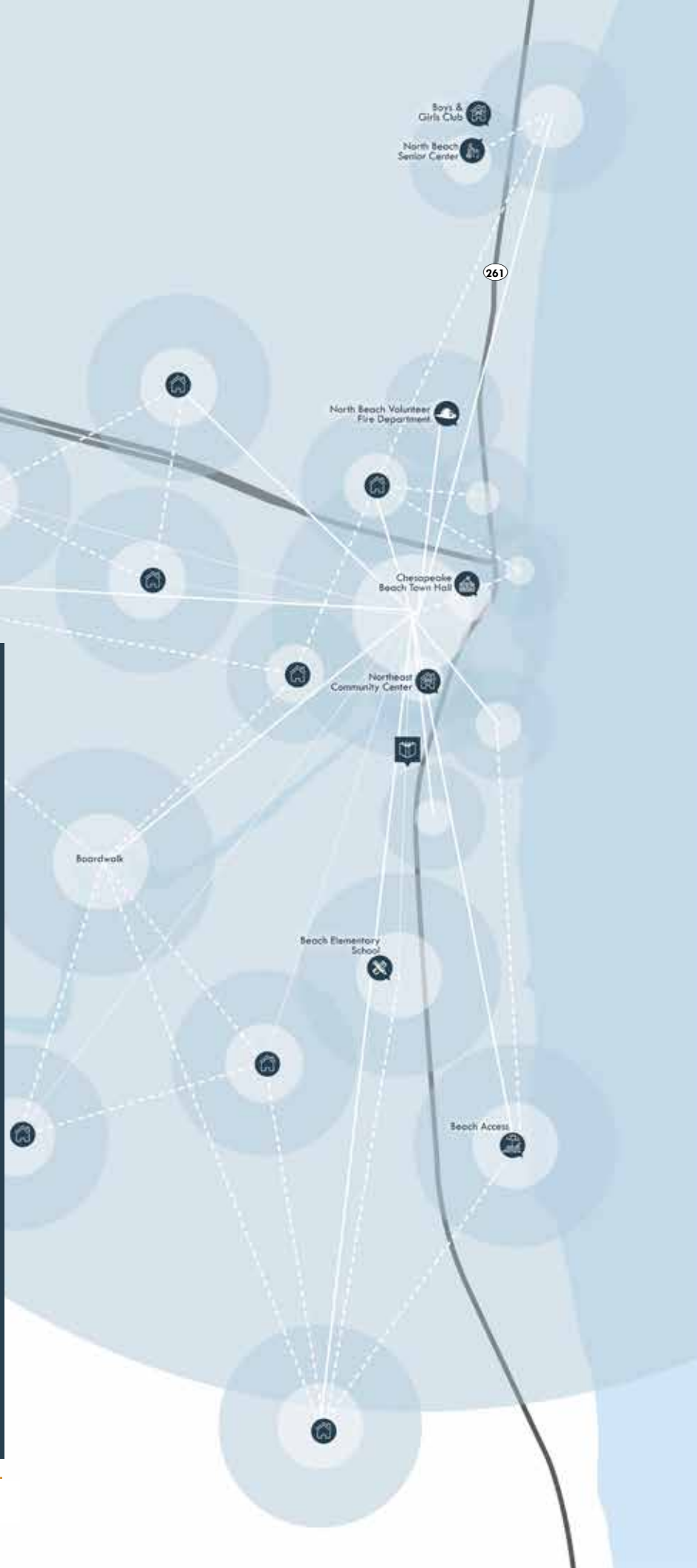


FIGURE 2. Conceptual Connectivity

WALKABLE COMMUNITY ADVISORY GROUP

In 2016, the Town began to envision how businesses, neighborhoods, services, and other destinations in the community could be served by improvements to the area's overall walkability. That is, how well the Town accommodates moving around on foot. In Chesapeake Beach, walkability improvements can contribute to the existing small-town character, improve the health of residents, and alleviate mobility and connectivity challenges. Such challenges include safety at pedestrian crossings, improving access to destinations, and developing an overall network of pedestrian and bicycle facilities.

Under Mayor Patrick J. Mahoney's administration, Chesapeake Beach formed the Town Walkable Community Advisory Group (WCAG) in (2017), with Councilman Derek Favret leading the effort as Chair. The Walkable Community Advisory Group is a public committee made up of residents who volunteer their time to identify opportunities for improved walkability throughout the Town. In collaboration with community members, the WCAG solicited feedback through multiple forums; to include, public meetings, pop up engagement sessions and surveys with the goal of creating a list of priority projects for Town leaders to implement. With the goal of creating a more walkable and bikeable Chesapeake Beach, the WCAG gathered public input and formulated a preliminary plan to provide increased ease of access for pedestrians and cyclists and promote open spaces for events and gatherings of the community members.

In spring 2019 the WCAG prepared "A Vision for a More Walkable Community." This included a package of priority connectivity projects, including two major grant-funded projects and seven additional urban walkability improvement projects.

With WCAG's concepts identified, the Town initiated a planning study to complete the design of ADA compliant improvement plans for pedestrian walkways, sidewalks, bike paths, nature trails, and boardwalks to promote safety and accessibility for residents and visitors. The initial ten projects are illustrated on the map to the right.

THE TEN PRIORITY PROJECTS OF THE WALKABLE COMMUNITY ADVISORY GROUP

1. Multi-purpose path from town center to Beach Elementary School
2. Crosswalk at intersection of MD Rte260/261
3. Safe Routes to School (SRTS) sidewalk phase II
4. Chesapeake Beach to North Beach connection east side MD Rte261
5. Bayfront Park extension with parking and safe crossing
6. Bay viewing sites and connecting wayfaring paths
7. Multi-purpose path, gateway extension along MD Rte260
8. Bayfront Park wayfaring and sidewalk connection from Rod-n-Reel
9. North side wayfaring path to town center
10. Sidewalk along Cox Road



FIGURE 3. WCAG Priority Projects

- | | | | |
|--|--|--|--------------------------|
| | Existing Boardwalk | | Proposed Boardwalk |
| | Existing Sidewalk | | Proposed Sidewalk |
| | Existing Off-Road Trails | | Proposed Off-Road Trails |
| | Unprioritized Proposed Off-Road Trails | | Proposed On-Road Trail |
| | Unprioritized Proposed Road | | |



0 750 1,500 3,000 Feet

A History Of Promenades, A Future of Connectivity

While the packed Boardwalk, lively amusements, and direct train routes are no longer present, the community of Chesapeake Beach continues to celebrate the story of their bayside treasure - past and present. The WCAG's list of future projects pair perfectly with the history of walkable connectivity to key destinations and the enjoyment of waterfront views.

Today, the Town harnesses the draw of the Bay with stories of how people explored, lived, and gathered in the early 1900's. Historic Heritage Trail Maps can be found around Town illustrating historic walking routes and places for visitors, residents, and school children to learn more about how Chesapeake Beach was born, grew, and changed over the years. This map is a programmatic tool that encourages people to walk, instead of drive, to visit cultural and natural resources.

Inspired by the early Boardwalk, the Town constructed new walking routes along the shore of the Chesapeake Bay and along internal waterways that interact with the historic rail alignment. These structures provide a precedent for accomplishing connectivity via a network of future boardwalks and trails in areas that are sensitive habitats and wetlands.

This foundation will propel the Town through a process to explore future connectivity via multiple facility types. Starting with the existing routes and known origins and destinations through Town, a planning process will lead to additional opportunities that will enable residents to connect with friends and family, provide safe routes to school for neighborhood children, expand recreational activity by completing loops, encourage visitors to walk and



This is a copy of a colorized panoramic photograph of the Boardwalk at Chesapeake Beach taken so



bike by providing clear paths and wayfinding signs, and improve livability for current and future residents by creating active transportation options steps from their front doors.

This process began with establishing a vision and goals, and concludes with recommended actions that focus on overlapping stages of project feasibility, funding, and implementation. The end result will enhance safety and circulation for residents and visitors.



...sometime before the Belvedere Hotel (in the background, on the left) burned down on March 30, 1923.



VISION

To implement a connected network of walking and biking facilities, spurring transportation and recreation benefits and fostering a sense of community pride.

GOALS

To enhance ACCESS, SAFETY, and PLACEMAKING.

- Extending or connecting pedestrian walkways to provide access to all town residents
- Extending or connecting existing boardwalks and trails, creating new access points
- Identifying opportunities to create a circuit of wayfaring pathways to connect nature, recreation and commercial points-of-interest within town limits
- Extending or creating a series of interconnecting nature trails

ACCESS

- Vision for a pedestrian friendly “main street” along 260 to foster economic development and create a sense of pride in the community.
- Clear connections between the beach access and key destinations.
- Improved connections to the boardwalk through infrastructure improvements or signing as well as awareness and marketing (ex: walking maps)

SAFETY

- Safe connections from residences to nodes of activity.
- Safe crossings of Bayside Road for pedestrians.
- Traffic calming treatments (ex: modifications to the intersection of 260 and Bayside Rd, and pedestrian crossing signs)

PLACEMAKING

- Community branded signage that celebrates the character of the community while directing residents and visitors along safe biking and walking paths.
- Simple, low cost solutions for biking and walking paths that do not change the character of the community.
- Placemaking and aesthetic elements to enhance the existing parking area near Kellam’s Field.

These identified needs were the first step in a discovery process that began with data collection and previous plan review (including an in-depth exploration of the Advisory Group goal projects). Our team layered available data to create a series of GIS maps, complete desktop level analyses, conduct fieldwork, and, most importantly, engage stakeholders, staff, the Advisory Group, and the public to establish goals, challenges, desires, and needs relative to pedestrian and bicycle connectivity, the creation of green spaces, enhanced Complete Streets, and the celebration of community character.

Furthermore, it is a goal of this plan to serve as a guide for grant applications and feasibility studies, final design, and implementation of the recommendations identified later.

PLANNING PROCESS

The Town used a multifaceted approach to establish a clearly defined network of walking and biking facilities. A field assessment provided a clear picture of the community's existing walking and biking facilities, development and infrastructure constraints, and opportunities based on daily use and special event circulation. Through public engagement opportunities, the team introduced and vetted initial network recommendations with community members and key stakeholders.

Founded in a comprehensive understanding of Chesapeake Beach's landscape and community, the final recommendations outlined in this document represent realistic, implementable actions to propel the community forward and reap the benefits of increased walking and biking.

REPORT STRUCTURE

Guided by the vision and goals of the project, the assessment that follows in chapter 2 summarizes the existing pedestrian, bicycle, and vehicular network in Chesapeake Beach. Layered with public input, the assessment led to the identification of key opportunities, as discussed in detail in the recommendations chapter (chapter 3).

Strategies and resources for implementation (chapter 4) provide the Town of Chesapeake Beach with the tools it needs to create a connected network of walking and biking facilities that will spur benefits beyond transportation and recreation. These new facilities will foster a sense of community pride and contribute to an already thriving and picturesque bayside town.

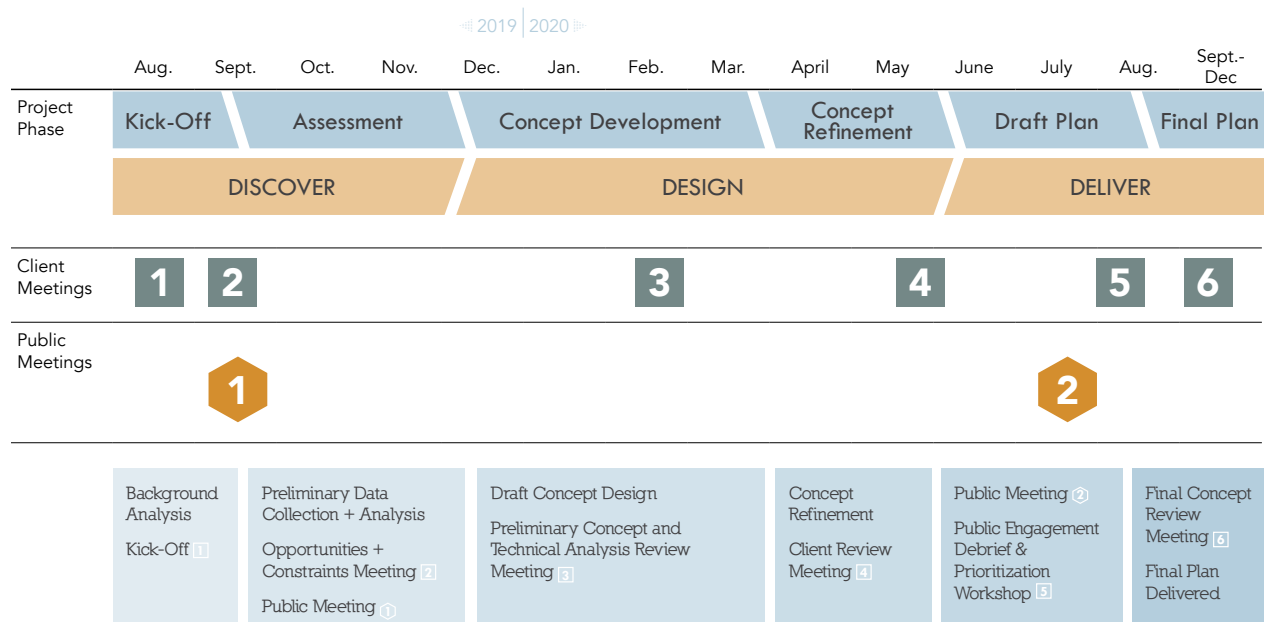


FIGURE 4. Project Schedule



Chapter 2

Assessment



This assessment pairs an analysis of Chesapeake Beach's physical landscape with an inventory of the community's desires and needs gathered through public input. By analyzing the existing landscape relative to these desires, the team sets a foundation for identifying potential solutions to address infrastructure needs and create opportunities to improve the community's quality of life.

Assessment Methods

As a starting point, the team dedicated significant time to reviewing and examining the recommendations of the WCAG published in the "Vision for a More Walkable Community" plan.

Additional steps included documenting existing conditions and soliciting community input and buy-in.

Natural and man-made features can change significantly from year-to-year due to weather patterns, erosion, development, and project implementation. Having an up-to-date understanding of infrastructure, facilities, and conditions through field investigation and GIS-mapping helps illustrate needs and opportunities for improvements. An understanding of existing conditions also informs the design of solutions that are both sustainable in the long-term and effective in improving the connectivity of Chesapeake Beach.

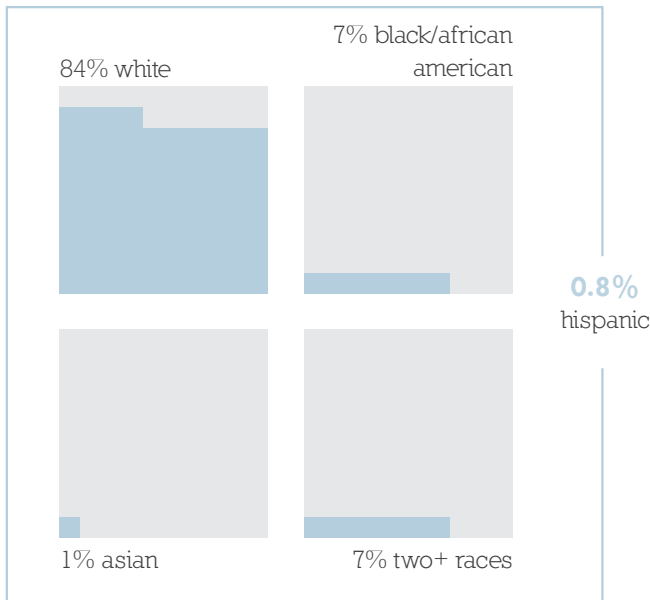


PEOPLE

By understanding the residents of Chesapeake Beach and key aspects of their daily lives, the team can establish relevant goals and objectives, conduct effective outreach, and target areas of need that would benefit from the project's recommendations.

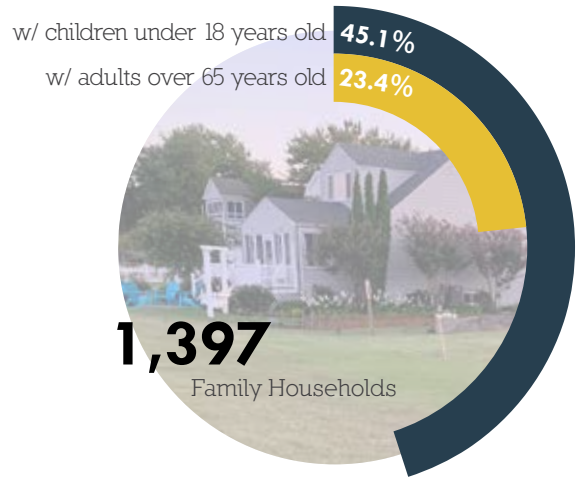
Population Overview

Chesapeake Beach is a Census Designated Place (CDP) with a population of approximately 6,000 living within the 2.7 square mile Town limit. A count from 2018 estimates that residents of Chesapeake Beach are 84% white, 7% African American, 1% Asian, with 7% identifying as two or more races. This data was derived from the American Community Survey (ACS), Table DP05. That same count estimated that 0.8% of residents identify as Hispanic or Latino.



Source: 2018 American Community Survey, DP05

FIGURE 1. Population by Race



Source: 2018 American Community Survey, DP02

FIGURE 2. Children and Seniors in Family Households

Vulnerable Populations

When considering the safety of a transportation network, vulnerable groups warrant special attention. Vulnerable groups include the very young, the elderly, and people with disabilities.

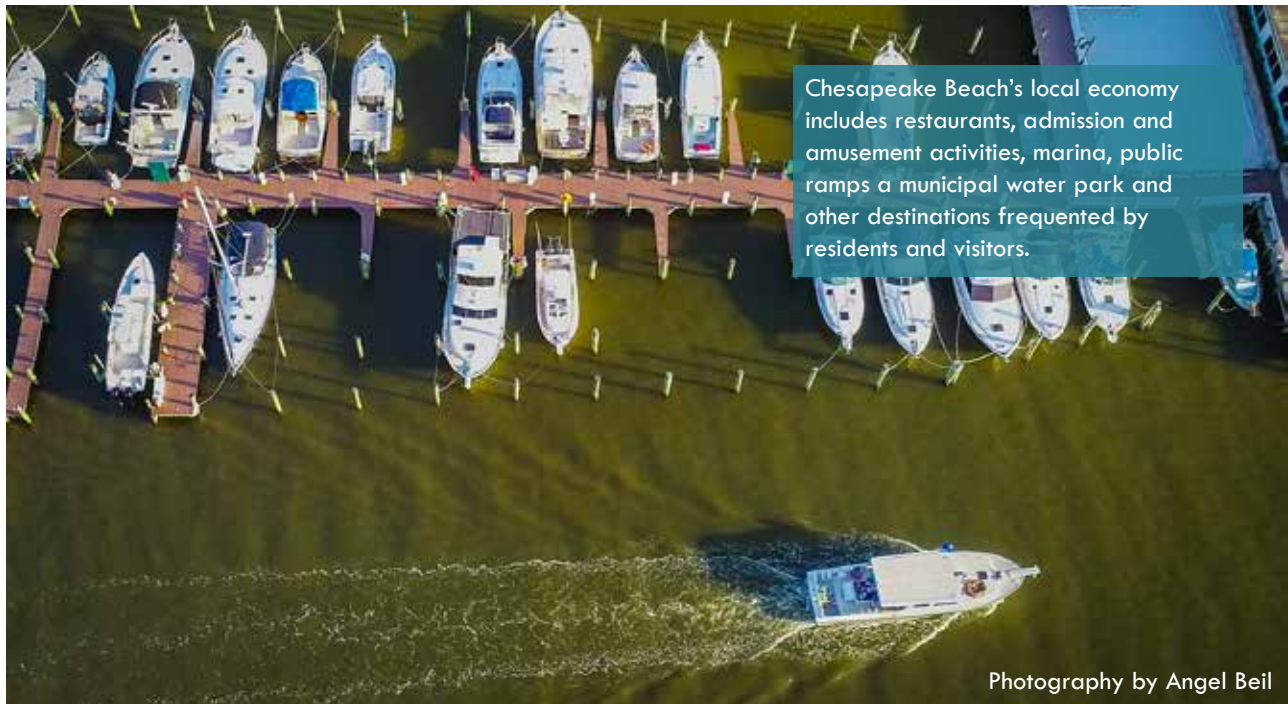
The median age of the population in 2018 was estimated at 38, and an estimated 23% of residents were under the age of 18. Household composition is important when considering very young and elderly residents. Of over 2,000 households, 45% had family members under 18 years of age and 23% had members over 65 years of age (ACS Table DP02). In addition, 30% of residents are enrolled in school and 11% are elementary school students.

In 2018, an estimate of nearly 8% of residents were managing some form of disability (ACS Table DP02). This group is comprised of 5% with ambulatory disabilities, 3% with a hearing disability, 3% with an inability to live independently, 2% with cognitive disabilities, and 1% with a vision disability.



Source: 2018 American Community Survey, DP02

FIGURE 3. Percentages of Residents with a Form of Disability



Socio-Economic Trends

The median household income in 2018 (Table DP03) was estimated at about \$82,500, which is significantly higher than the U.S. median. Evaluating 2017 employment data from the Longitudinal Employer-Household Dynamics (LEHD) “On the Map” tool revealed that significant employment sectors in Chesapeake Beach include Accommodations and Food Service (34%), Retail (24%), and Arts, Service, and Entertainment (13%). Most local job opportunities are found between Chesapeake Beach Road (Maryland Route 260) and 16th Street. While over a quarter of employed residents work within a 10 mile range LEHD commute data revealed that 36% travel between 10-24 miles, 29% travel between 25 and 50 miles, and 8% travel 50 or more miles. At the same time that over 1,000 residents leave the area for work, 558 non-residents commute to Chesapeake Beach from other places.

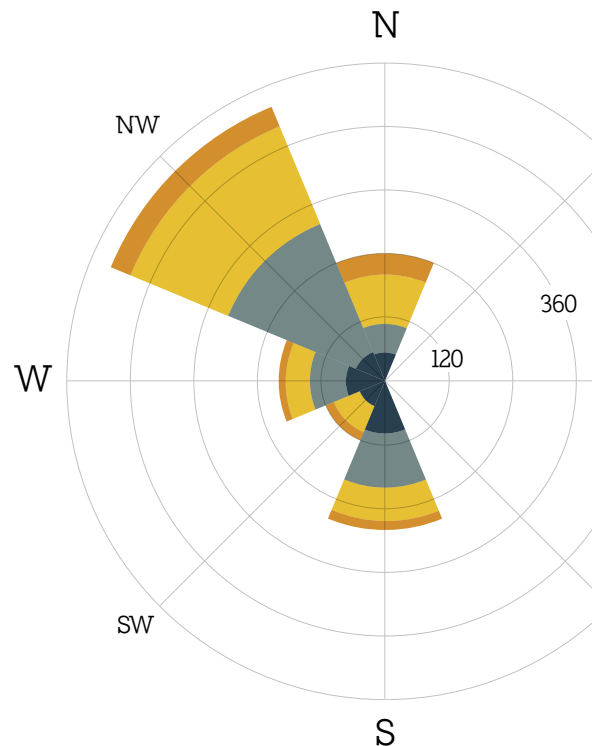
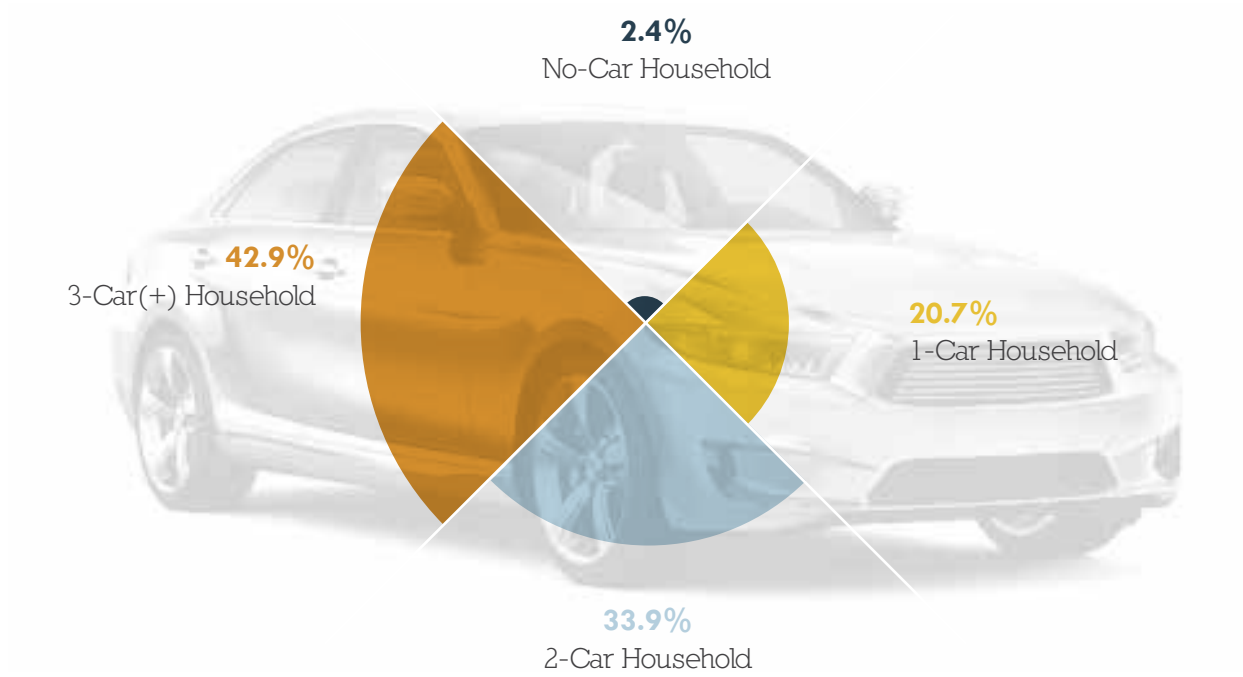


FIGURE 4. Direction and Distance for Work



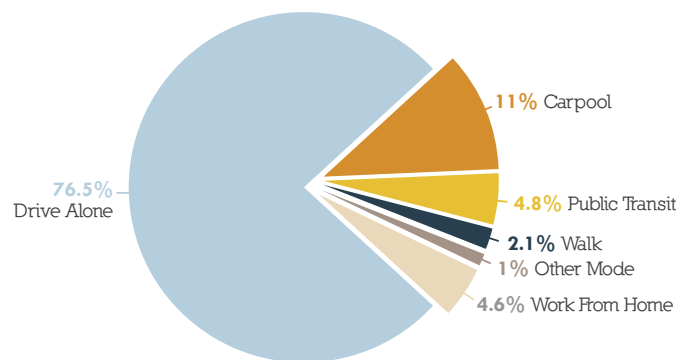
Source: 2018 S2504, Data for Calvert County

FIGURE 5. Car Access by Percent of Households

Commuting and Transportation Trends

Knowing that residents commuting to other places outnumber residents that work within Chesapeake Beach, it is important to consider how those commuters are getting to work. The team used 2018 ACS data to evaluate residents' commuting habits. According to ACS Table DP03, approximately 77% of residents drive alone, 11% carpool, 5% use a form of public transportation, 2% walk, 1% using some other mode (including bikes), and about 5% of residents work from home. Although walking has seen an increase over the past several years, driving remains the dominant form of transportation for work commutes.

The same data showed that the majority of households in Chesapeake Beach have access to at least one car. Only 2% of households do not have a car, while 21% are one-car households,



Source: 2018 American Community Survey, DP03

FIGURE 6. Mode of Travel to Work

This broad-brush portrait of the community and its characteristics provided context for understanding the social landscape. Additional studies would evaluate the cultural and physical landscapes.

EXISTING CONDITIONS

The Town has several excellent resources to enhance connectivity around, including the Boardwalks along Fishing Creek and the waterfront, and good sidewalk connectivity along Bayside Road from the Elementary School to the municipal boundary with North Beach.

While topography and sensitive environmental areas represent challenge to connectivity, they also have provided a network of low volume streets within the town core that afford opportunities for travel, away from busy traffic.



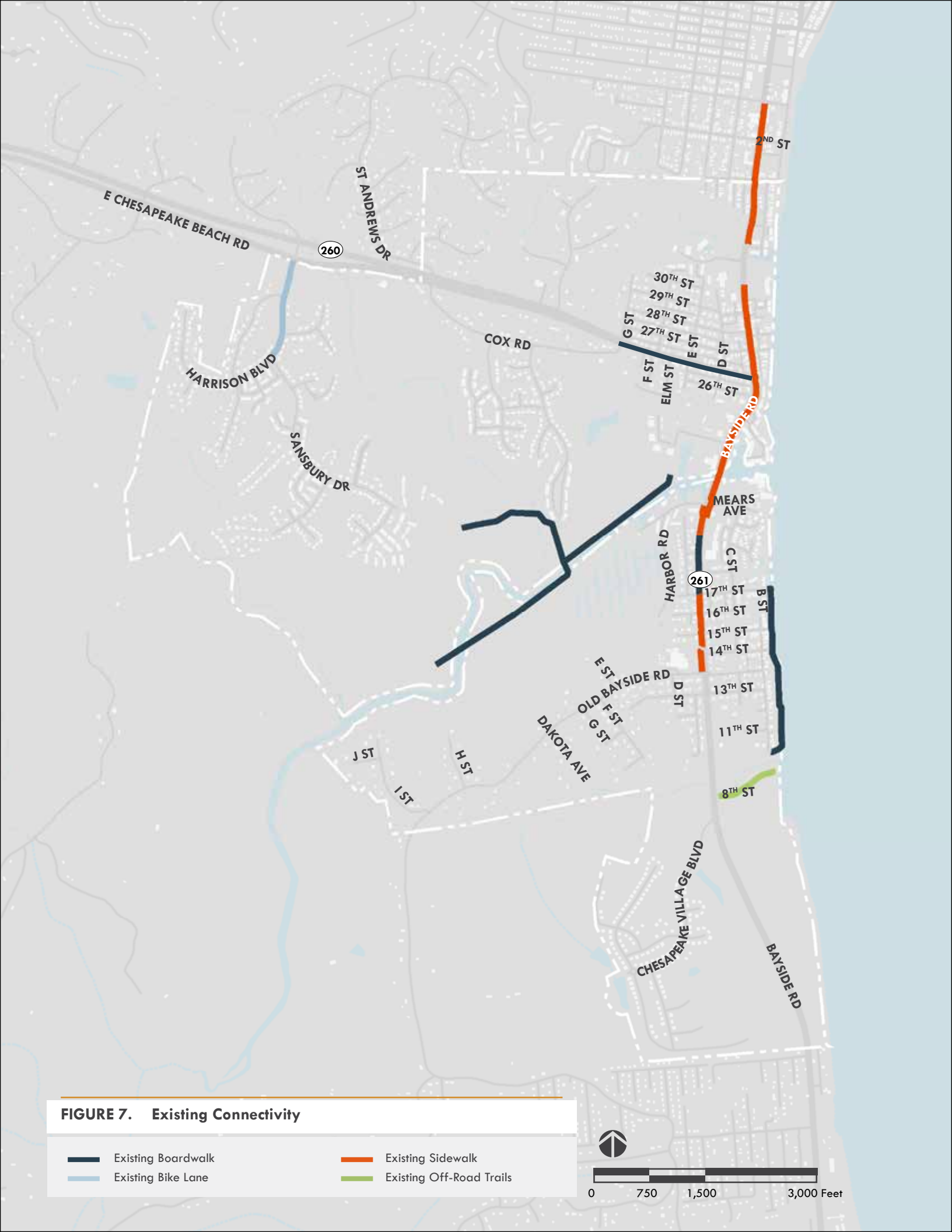
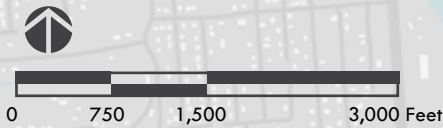


FIGURE 7. Existing Connectivity

- Existing Boardwalk
- Existing Sidewalk
- Existing Bike Lane
- Existing Off-Road Trails



PLACE & CONTEXT

While the desires and needs of Chesapeake Beach's population form the cornerstone of Master Plan Development, any proposed projects included in the Master Plan must be feasible given the physical environment of the community. Understanding the natural characteristics and environmental context that define Chesapeake Beach are critical steps to understanding the types of existing conditions and constraints analysis that will prove most useful in the Master Plan development.

Field Notes

Field investigation provides an opportunity to further vet recommendations and explore feasibility. Natural and man-made features can change significantly from year-to-year due to weather patterns, erosion, and development. Having an up-to-date understanding of infrastructure and facilities helps to better inform

recommendations and their phasing or priority level.

During field visits, the team walked along the existing pathway and pedestrian networks. The team observed gaps in connectivity, for example where existing sidewalks end before reaching key destinations such as Beach Elementary School, or where the Fishing Creek boardwalk ends. The team also observed flooding challenges, such as near Kellam Field and at the north near North Beach, and natural features like crumbling cliffs in Bayside Park or steep slopes that may limit opportunities.

The team also identified a need for traffic calming. This was particularly the case for Bayside Road (Maryland Route 261), and Chesapeake Beach Road (Maryland Route 260) within the town core





east of G Street. Similarly, the team noted areas where crossing as a pedestrian became difficult or potentially unsafe. These areas included crossing Bayside Road near the school.

Additionally, the team visited the sites for all of the WCAG recommendations and noted potential feasibility concerns. For instance, while the WCAG initially proposed a sidewalk on Old Bayside Road, the team noted that the underlying terrain and limited visibility along portions of this roadway present challenges. The team also used these visits to identify new opportunities and ideal locations for making connections in the overall pedestrian and connectivity network.

Physical and Natural Characteristics

The town of Chesapeake Beach is situated in a unique and complex environment, given its proximity to the Chesapeake Bay shoreline. The town has a total area of 2.79 square miles, of which 2.71 square miles is land and 0.08 square miles is water. Originally formed from the intersection of Fishing Creek and the Chesapeake Bay, the creek has been expanded significantly over the past century to support larger boating vessels that include commercial fishing ships, US Navy vessels, and privately-owned recreational boats.



There is major commercial and residential activity along Bayside Road (Maryland Route 261), the main north/south road passing through Chesapeake Beach, and the town also contains several large parks, beaches, and natural areas frequented by residents and visitors. Fishing Creek bisects the town, surrounded by low marsh areas and woodlands on both sides. The creek is bordered by Lynwood T. Kellam Memorial Recreational Park on the north near the shoreline. To the south, Bayfront Park and Bayfront Beach buffer existing residential communities from the coast line. Many areas remain heavily wooded, particularly those further inland from the coast.

FEDERAL LANDS

Federal lands are areas that are owned and maintained by the United States Federal Government. These lands, which cover approximately 640 million acres, are typically managed by one of several federal government agencies including the Bureau of Land Management (BLM), the U.S. Fish & Wildlife Service (FWS), the National Park Service (NPS), and the U.S. Forest Service (FS). When working in areas designed as Federal Lands, it will be critical to coordinate with the relevant agency stakeholders early on in the process. Obtaining input from these agencies early in the process will help secure buy-in at later stages of project development and fully understand specific constraints that may limit infrastructure opportunities in certain areas.

DEFINITIONS OF CRITICAL AREA CATEGORIES

INTENSELY DEVELOPED AREAS (IDA)

Intensely Developed Areas (IDAs) are defined as areas of twenty or more adjacent acres where residential, commercial, institutional or industrial land uses predominate. IDAs are areas of concentrated development where little natural habitat occurs. In IDAs, the main focus of the Critical Area Program is on improving water quality. The Law requires that new development and redevelopment include techniques to reduce pollutant loadings associated with stormwater runoff.

LIMITED DEVELOPMENT AREAS (LDA)

Unlike IDAs, Limited Development Areas (LDAs) are locations characterized by low or moderate intensity development, but that also contain areas of natural plant and animal habitats. Generally, the quality of runoff from these areas has not been substantially altered or impaired. In order for an area to be classified as LDA at the time it was mapped, it had to have housing density between one dwelling unit per five acres and four dwelling units per acre; have public water or public sewer or both; or have IDA characteristics but consist of fewer than 20 acres. [MD DNR]

RESOURCE CONSERVATION AREAS (RCA)

Resource conservation areas have the least amount of development of the three areas and are often classified as wetlands, forests, or other natural resource environments. Some activities still occur in resource conservation areas, such as farming and fishing, but they have limited effect on the runoff to the Chesapeake Bay. RCAs make up approximately 80% of the Critical Area and are characterized by natural environments or areas where resource-utilization activities are taking place. Resource-utilization activities

include agriculture, forestry, fisheries activities, and aquaculture, which are considered "protective" land uses. In order for an area to be classified as RCA at the time it was mapped, the area would have been developed at a residential density less than one dwelling unit per five acres or be dominated by agricultural uses, wetlands, forests, barren land, surface water, or open space. [MD DNR]

When working on any projects within the CBCA, there are several regulations and requirements that will have a direct effect on any proposed projects. The following are a few examples of such regulations:

- » All vegetation removal within the CBCA must be permitted.
- » Mitigation is required for permanent impacts.
- » Approved planting plans and/or buffer management plans are required.
- » A 2-year maintenance agreement and refundable bond are required to ensure success of mitigation plantings.
- » Projects within an IDA need to demonstrate 10% reduction in phosphorous levels post-development.

As the Connectivity Study and associated recommendations developed, it has been critical to remain aware of the CBCA designation and associated requirements to ensure any proposed projects are fully compliant with Maryland's environmental laws.

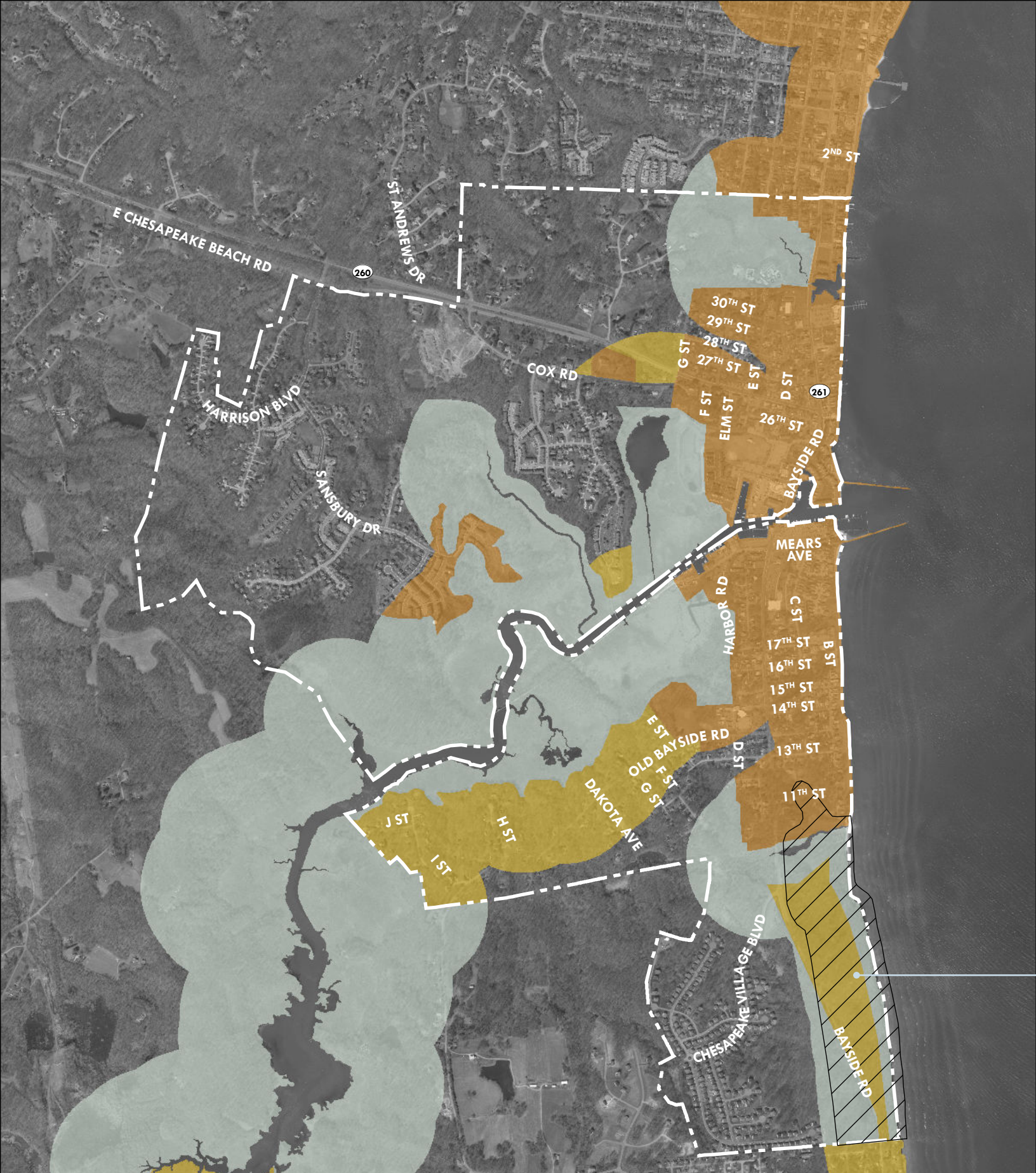


FIGURE 8. Critical Areas

- Intensely Developed Area
- Limited Development Area

- Resource Conservation Area
- Natural Heritage Area



CHESAPEAKE BAY CRITICAL AREAS

The Chesapeake Bay is an incredible resource not only for the town of Chesapeake Beach but for a multitude of states, industries, and wildlife that depend on the health and well-being of the ecosystem for their success. Because the land around the Chesapeake Bay and its tributaries have the largest affect on the water quality and health of the surrounding habitat, the Maryland General Assembly passed the Chesapeake Bay Critical Area Law in 1984 to designate a geographical area around the bay as a “Critical Area”. The law, which aims to improve the water quality and natural resources health of the bay, establishes the Chesapeake Bay Critical Area Boundary (CBCA) and categorizes land in the Critical Area (CA) into one of the three categories described below.

WETLANDS & WETLANDS OF SPECIAL STATE CONCERN

Wetlands, or areas where water covers the soil for a period of time each year, are present throughout the Chesapeake Beach area and are afforded special protection under local, state, and federal laws. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and near shore coastal waters. Similar to the CBCAs, any project work that could directly affect nearby wetlands is subject to requirements and regulations, such as:

- No work can occur within a 100 ft. buffer around a designated wetland.
- Any project near a wetland must demonstrate avoidance and minimization of impacts.
- Ground and surface water quality must be preserved during construction.

In order to ensure proposed recommendations included in the Master Plan are compliant with all wetland requirements, the Maryland Department of Environment and other relevant agencies should be engaged early in the project development process. Input from these agencies will be critical in determining the types and extent of infrastructure that can be included in any Master Plan recommendations.

NATURAL HERITAGE AREAS

In the state of Maryland, natural heritage areas are designated in the state’s Threatened and Endangered Species regulations (COMAR 08.03.08). To be designated a natural heritage area, the location must meet the following criteria:

1. Contain one or more threatened or endangered species or wildlife species in need of conservation.
2. Be a unique blend of geological, hydrological, climatological or biological features.
3. Be considered to be among the best Statewide examples of its kind.

RANDLE CLIFF BEACH NATURAL HERITAGE AREA (CRITICAL AREA SITE CT NHA-13)

The Randle Cliff Beach has been designated a Natural Heritage Area (Critical Area Site CT NHA-13). As a result, Calvert County has established a 100 ft. buffer to remain undisturbed, protecting the cliff face from excessive runoff and erosion. This buffer also helps maintain the cool, mesic microclimate of the associated ravine system. This designation prohibits activities that include development (structures, roads, parking areas, impervious surfaces), clearing of natural vegetation, farming, and commercial tree harvesting.

The Maryland Department of Natural Resources (MDNR) works to conserve and maintain natural heritage areas throughout the state. Coordination with MDNR at an early stage will be critical for any projects around the natural heritage area to ensure they do cause adverse impacts. Working with MDNR may also provide valuable information of how existing wildlife and natural features that could be of interest to Chesapeake Beach residents may be highlighted.

Sea Level Rise and Resilience

As a coastal town on the Chesapeake Bay, the Town of Chesapeake Beach is subject to tidal flooding. With storm events increasing in frequency and the impacts of sea level rise, new public facilities must account for both current and future conditions to minimize the impact of flood events and to ensure that the investment is resilient to climate change.

The Eastern Shore Regional GIS Cooperative developed sea level rise forecasting for 2050 and 2100. The forecast uses US Army Corps of Engineers Sea Level Curve SLC projections, US Geological Survey studies, and National Oceanic and Atmospheric Administration tidal observations. Based on this analysis, it is expected that sea levels will rise by 2.1 feet and 5.7 feet by 2050 and 2100, respectively.

SOUTH CREEK

Located near the northern Town boundary, South Creek passes under Bayside Road between the Firehouse, the Wastewater Treatment Plant, and Bay Creek Subdivision. In this area, the team observed a gap in the sidewalk network along the east side

of Bayside Road. This gap would ideally be closed with a boardwalk to limit impact to sensitive environmental areas and to allow the pathway to be elevated above the floodplain.

FISHING CREEK

Extension of the Chesapeake Beach Railway Trail and connectivity improvements around the Town Core will be influenced by the Fishing Creek floodplain. New boardwalks should be designed at an elevation that accounts for sea level rise to avoid the impacts of nuisance flooding. Sidewalk and trail improvements around the Town Core (including Kellams Field) would occur within the flood prone areas, so they should be designed to accommodate inundation or elevated above the flood plain if possible.

BROWNIES CREEK

Brownies Creek separates the southern neighborhood of Chesapeake Village and Brownies Beach from the central part of the Town. New facilities linking these areas with the Town core would likely include a combination of boardwalks in sensitive environmental areas and sidewalks or pathways above the floodplain elevation.



ENVIRONMENTAL PERMITTING

Because of wetlands present in the Town, wetland-specific permits will be required for projects impacting tidal or non-tidal wetlands. A Joint Permit Application (JPA) will be filed with the Maryland Department of the Environment (MDE), including review and approval by the U.S. Army Corps of Engineers (USACE). Public notice may be required, depending on the impacts and location of the project. Early coordination with these agencies will be critical during project development, especially given the long lead times that may be required to obtain the permit.

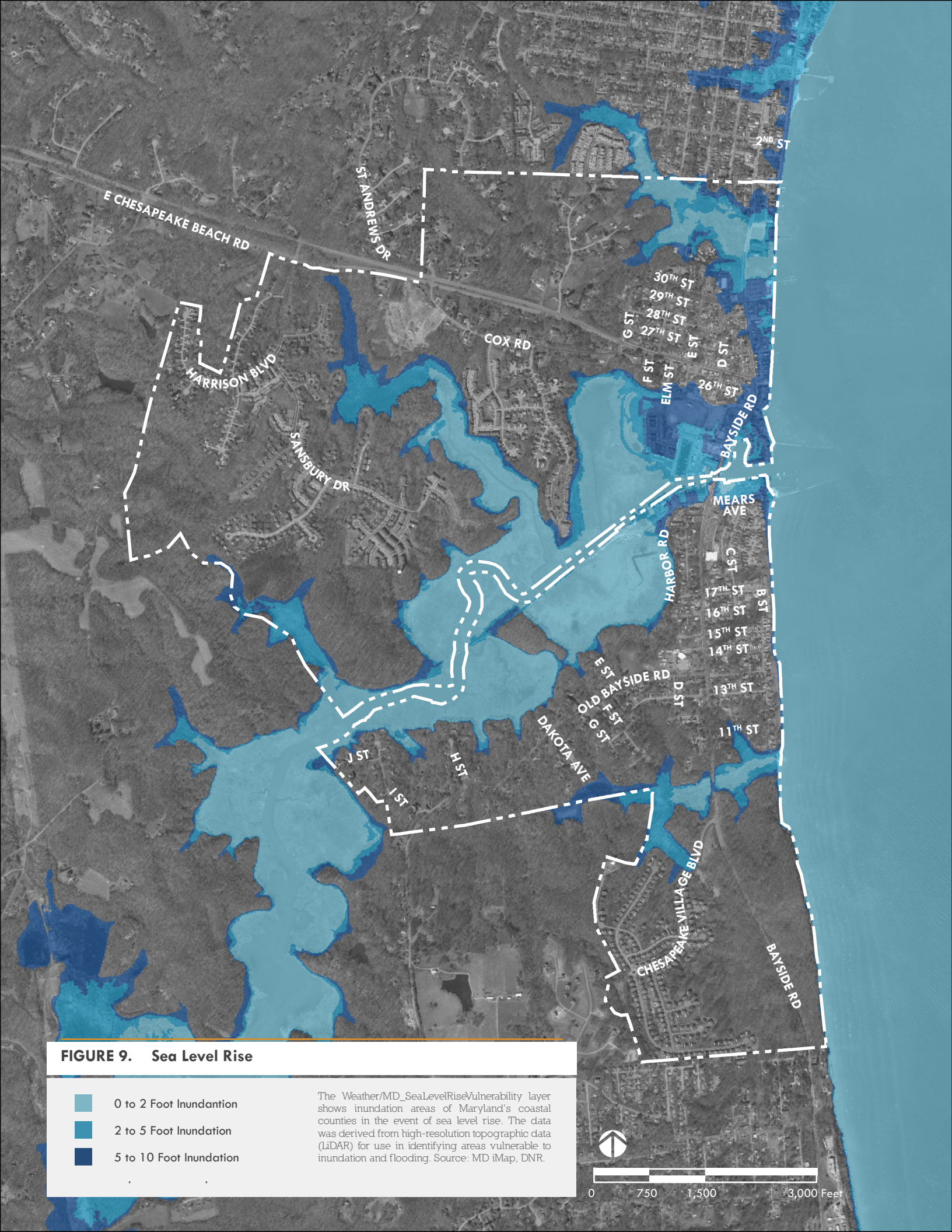
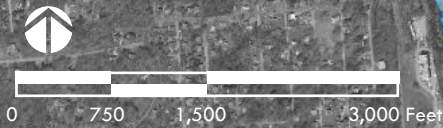


FIGURE 9. Sea Level Rise

- 0 to 2 Foot Inundation
- 2 to 5 Foot Inundation
- 5 to 10 Foot Inundation

The Weather/MD_SeaLevelRiseVulnerability layer shows inundation areas of Maryland's coastal counties in the event of sea level rise. The data was derived from high-resolution topographic data (LiDAR) for use in identifying areas vulnerable to inundation and flooding. Source: MD iMap, DNR.



The Maryland Department of Natural Resources (MDNR) works to conserve and maintain natural heritage areas throughout the state. Coordination with MDNR at an early stage will be critical to ensure that any proposed projects do not negatively affect existing natural heritage areas. Working with MDNR may also provide valuable information in terms of how potential projects could highlight existing wildlife and natural heritage area features that could be of interest to Chesapeake Beach residents.

COMMUNITY INPUT

A connectivity plan for the Town of Chesapeake Beach would be incomplete without input from the community members who move about the area every day. Their local understanding, concerns, and desires inform the recommendations of this

plan, and set the tone for future investment and implementation in the community.

Guiding this process were Town Staff, elected officials and members of the WCAG. As the plan was developed, the public was engaged at two key milestones in the planning process, the first during the needs assessment phase to identify desires and needs, and the second during the recommendations review to aid in plan review and prioritization of the connectivity improvements. Each of the key community input milestones that shaped the recommendations of this connectivity plan are summarized below.

Kickoff Meeting & Walking Tour (August 29, 2019)

Town staff and WCAG members met to discuss aspirations and vision for the plan. Key themes that emerged included maintaining a small



Local Experts

The most knowledgeable experts on the Town of Chesapeake Beach are members of the community who live, work and recreate here. Listening to input received throughout the process directed the attention of the project team, helped refine the network and facility recommendations, and concluded with establishing your priorities for the community.



town character, building on the existing identity of the Town's assets, providing new alternative routes for travel away from heavily trafficked main streets, improving safety, and setting a clear path for implementation. The Town's priority projects were reviewed and discussed, to inform the field investigation by the project team. At conclusion of the meeting, a field walk was conducted to explore opportunities and desires for connectivity improvements within several portions of the study area.

Taste the Beaches (September 14, 2019)

Initial public input was solicited at the Town's popular Taste the Beaches festival to reach a broad audience and secure diverse input. A pop-up informational booth located in the vending space provided information about the

project. There were also several engagement activities, including a map on which community members could suggest specific connectivity recommendations, a voting exercise where they could indicate preferences for different amenities or facility types and identify needs and assets within the community.

WCAG Recommendation Review Meeting (October 5, 2020)

Draft plan recommendations were presented to the WCAG in advance of securing community input, both to confirm agreement with the network recommendations and to screen initial priorities. Key findings from the Existing Conditions review were highlighted with special attention to locations where desirable network connections would be challenging or infeasible. The network recommendations map and cut sheets for each

project were then presented and discussed to answer questions and identify any needs or desires from the perspective of the Committee. The meeting concluded with a prioritization exercise, both for the Committee to become acquainted with the network recommendations map and to identify initial priorities. Projects that attracted the greatest interest included an improved town gateway along Maryland Route 260, safer crossings along Maryland Route 261, and an overlook and boardwalk improvements along the east side Maryland Route 261 at South Creek.

Town Council Presentation (October 15, 2020)

The project team briefed the Town Council to preview the draft plan materials, including design guidelines, the network recommendations map and project cut sheets. Feedback from elected

Flexibility in Times of Covid-19

Following the Taste the Beaches piggyback engagement event, the team planned additional public participation opportunities to introduce the community to emerging recommendations and solicit their feedback. However, growing concerns over the spread of Covid-19 presented a bump in the road. The project team went back to the drawing board.

Concerns about inclusivity and accessibility in virtual engagement often reference the **digital divide**, which is the barrier created when individuals have different levels of access to information due to technological barriers. Those barriers can be due to limited or no access to technology or internet services, or an individual's technological proficiency. This was an important consideration as the team reassessed participation opportunities.

Analyzing 2018 American Community Survey (ACS) estimates, the team knew that 94% of Chesapeake Beach households have access to a computer (Table DP02). Additionally, an estimated 89% of households have access to internet. Online outreach was promising in light of this data. To account for the fact that some may be less comfortable participating online, the team also considered participation via telephone. According to the 2018 ACS, an estimated 99% of households in Chesapeake Beach are estimated to have telephone service (Table S2504).

COMMUNITY PROJECT PRIORITIES			
RANK	NAME	NUMBER OF VOTES	PROJECT ID
1	Safe Crossings	93	#2
2	Richfield Station Connector	91	#13
3	Old Bayside Sidewalk	90	#10
4	Fishing Creek Hiking Loop Trails	74	#14
5	Railway Trail Neighborhood Connector	73	#11
6	Bayview Trail Loop	69	#12
7	Chesapeake Beach Gateway Trail	58	#1
8	Stinnett Trail	44	#16
9	Chesapeake Beach Off-Road Trail	41	#6
10	Bayside Boardwalk & Overlook	40	#15
11	Kellam's Field Trail	39	#3
12	Cox Road Neighborhood Greenway & Sidewalk	34	#7
13	Harbor Road Path	32	#4
14	C Street Neighborhood Greenway	15	#8
15	North Side Residential Greenway	10	#9
16	Richfield Station Neighborhood Greenways	6	#5
17	29th Street Overlook	1	17
18	B Street Overlook	0	18

officials shared during the meeting provided additional input as plan materials were edited and finalized.

Recommendations Review Public Meeting (October 22, 2020)

The second key public input milestone was a recommendations review meeting, which was conducted online via Zoom in response to the Covid-19 pandemic. There was also an extended public comment period. The recommendations review meeting presentation was similar to

the WCAG and Town Council presentations, with more time given to detailed review of each project cut sheet. At the conclusion of the meeting, a voting exercise was conducted so that community members could indicate their top 5 priorities.

A total 3 week review and comment period was provided, with materials available both online at the Town's website and in person at the Library or Rolands. Similar voting exercises were conducted online using Survey Monkey and via in-person display boards. The above table summarizes input received from the meeting and the public comment period.



Chapter 3

Recommendations



As Chesapeake Beach plans for a future that will foster community pride and welcome visitors, the Town is embracing the power of safe, well-connected pedestrian and bicycle facilities. Residents will enjoy new sidepaths that allow their families to leave the car at home and walk or bike to restaurants, friends' homes, and recreation areas. Visitors will enjoy breathing in the bay breezes and meandering around town along bicycle boulevards and new boardwalks. To set the stage for envisioning this new future, the vision and goals of this plan focus on ACCESS, SAFETY, and PLACEMAKING. Achieving this

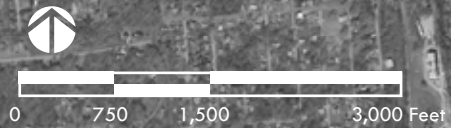
vision will be accomplished through a mix of treatments inspired by community needs and desires. For the purpose of continuing to build a healthy and sustainable future, the recommendations of this plan are accompanied by design guidelines that can be used as new opportunities emerge – even after the completion of this plan. The design guidelines and network recommendations are organized as three key strategies: BUILDING a Connected Core, ENHANCING Neighborhood Mobility, and EXPANDING Recreational Amenities.





FIGURE 1. A Vision For Connectivity

- Connected Core
- Neighborhood Mobility
- Recreational Amenities



BUILDING A CONNECTED CORE

will establish a “spine” of connectivity. This main line of circulation will branch out across the Town to establish routes suitable for users of all ages and abilities. As the route suitable for users who desire separation and protection, these facilities will likely be high investment projects that, in some cases, will require coordination with MDOT SHA. Some of these recommendations will be suitable for immediate feasibility studies and further exploration with MDOT SHA and the new State guidelines for building a context sensitive roadway. This new and inspiring strategy at the state level focuses on pairing suitable facilities with the anticipated access and mobility of users. Given the number of destinations and nature of Chesapeake Beach, pedestrians are likely to be circulating in the area and therefore, their mobility and safety is critical while vehicular movement can be calmed. Therefore, within the Connected Core will be enhanced Pedestrian Safety Zones. These zones signify additional pedestrian trip density due to the presence of a school, cluster of commercial land uses, or critical crossings. Connected Core routes may also overlap with those identified as Recreation Amenities to accomplish connectivity to key destinations in this coastal and topographically challenging setting.

This diagram provides a quick glance of how the Connected Core will support the branches of Neighborhood Mobility and Recreational Amenities. The Design Guideline section will illustrate which typical treatments can be used in each area to improve safety and circulation.

ENHANCING NEIGHBORHOOD MOBILITY

provides the arms from the circulation spine that reach out into residential areas and provide spurs to key destinations. These treatments vary in capital cost and utilize low vehicular volume routes to direct bicyclists and pedestrians along calm roads that are enhanced with signage and traffic calming to signify the presence of all users and pedestrian safety priority. While the majority of these networks will have small treatments, the links between Connected Core and Neighborhood Mobility areas may include higher capital cost treatments to delicately transition from one environment to the next.

EXPANDING RECREATIONAL AMENITIES

is key to livability and tourism for Chesapeake Beach. The addition of boardwalks and trails will close gaps in daily use trails that support the health of the community. Scenic boardwalks are also a draw for tourists and provide an opportunity to educate the public about the sensitive habitats, natural resources, and changing coastal setting of Maryland's shoreline. In some cases, these recreational amenities will also become critical in the spine network as some users will prefer a trail or boardwalk to less separated facilities.

Exploring further into this chapter, the strategic map expands into facility types that employ the Design Guidelines to foster design development. As the Town uses this tool to explore funding, feasibility, and design, the facilities depicted on the network map will be further refined based on site discoveries, opportunities, and constraints. To jump-start this feasibility process, cut sheets for 16 projects are included as a deeper dive into facility recommendations that can be used in immediate grant applications, or to support design development and move quickly toward implementation.

261 TRAFFIC CALMING

E CHESAPEAKE BEACH RD

260

ST ANDREWS DR

HARRISON BLVD

SANSBURY DR

COX RD

TOWN CENTER PEDESTRIAN PRIORITY AREA

CONSERVATION AND INTERPRETATION AREA

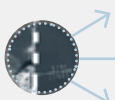
SCHOOL PEDESTRIAN PRIORITY AREA



FIGURE 2. Specialized Treatment Areas + Design Guidance



Intersection Improvements



Overlooks



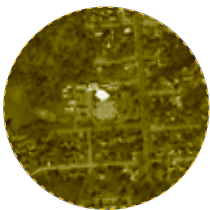
0 750 1,500 3,000 Feet



SUPPORTING THE NETWORK - CREATING HEALTHY PLACES

To realize this new environment of connectivity, several treatments, amenities, and design elements will be combined to create a safer, more walkable Chesapeake Beach. As the Town creates new retail spaces, connects key destinations, and works with residents to enhance safety on neighborhood streets, design guidelines provide a host of options that can be implemented by the Town's staff or used in the design development process as projects emerge in the next few years.

The map on the left illustrates priority areas for Pedestrian Accommodations, End of Trip Bicycle Facilities, Intersection Improvements, Traffic Calming, and Placemaking. Pages 44 - 57 provide a host of design treatments that should be considered in future roadway projects, site development, and enhancements to growth areas.



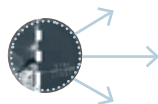
- Within the **School Pedestrian Priority Area**, safe pedestrian connections are paramount. Any future projects should include sidewalks (p.36), on- and off-road trails (p.42), safe crossings (p.43), traffic calming (p.47), and placemaking elements (p.48), particularly lighting and shade trees.



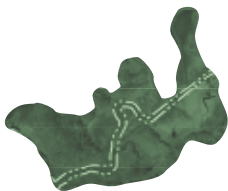
- In the **Town Center Pedestrian Priority Area** and **261 Traffic Calming**, access to areas of civic use and economic development are key. Wide sidewalks (p.36), safe crossings (p.43), traffic calming (p.47), wayfinding (p. 48), plazas, benches, trees, and bicycle parking (p. 79) are key to connecting people with places to dine, shop, and recreate.



- **Safe Intersections and Crossings** (p.43) are integral to a connected and safe network of pedestrian and bicycle facilities. A variety of treatments should be explored and coordinated with SHA to improve visibility and organization.



- **Overlooks** (p.73) connect residents and visitors with the scenic view of the Chesapeake and present an opportunity for interpretive signage and environmental education.



- **Conservation and Environmental Awareness** should be incorporated into every improvement given the coastal environment. In particular, boardwalks and trails in this area are opportunities to bring awareness to sea level rise, endangered species, and sensitive habitats.

Following the Design Guidelines are more specific network recommendations by treatment type with nine key catalyst projects that are ripe for seeking grant funding, rolling into the design process, or initiating conversation with project partners, including SHA.

DESIGN GUIDELINES

Each recommendation within this plan, and any design in the future, should consider the land use, context, and users prior to selecting facility types and completing design. The guidelines below are organized categorically as: Designing for Pedestrians, Designing for Bicyclists, Designing Shared-use Facilities, Creating Safe Crossings and Intersections, Calming Traffic, and Placemaking. Since many of the treatments and facilities are applicable for use in the Connected Core, Pedestrian Safety Zones, Neighborhood Mobility Zones, and as Recreational Amenities, icons will signify where each is typically used. As always, through engineering exploration and design development, additional facilities, experimental treatments, and modifications are expected.



Designing For Pedestrians

> Treatments Suitable For

**PEDESTRIAN
PRIORITY ZONES**

**TOWN CENTER
PEDESTRIAN
PRIORITY AREAS**



A safe and well-connected network should accommodate pedestrians of all ages and abilities. This affects pedestrians' physical ability, walking speed, and environmental perception. Children have lower eye height and walk at slower speeds than adults. They also perceive the environment differently at various stages of their cognitive development. Older adults walk more slowly and may require assistive devices for walking stability, sight, and hearing.

The Manual of Uniform Traffic Control Devices (MUTCD) recommends a normal walking speed of three and a half feet per second when calculating the pedestrian clearance interval at traffic signals. Typical walking speeds can drop to three feet per second in areas with older populations and persons with mobility challenges. While the type and degree of mobility challenges varies greatly across the population, the transportation system should accommodate these users to the greatest reasonable extent.

SIDEWALKS

As the most fundamental element of the walking network, sidewalks provide a zone for pedestrian travel that is separated from vehicle traffic, typically by a curb and gutter as the most basic element of division. Attributes of well-designed sidewalks include the following:

Accessibility: A network of sidewalks should be accessible to all users. Roadway crossing distances and distances between crossings



should be minimized to integrate and encourage pedestrian travel. Features that are compliant with the *Americans with Disabilities Act (ADA)*, such as curb ramps, are necessary to improve accessibility.

Safety: Design features of the sidewalk should allow pedestrians to have a sense of security and predictability. Sidewalk users should not feel at risk of harm due to the presence of adjacent traffic. Edge conditions play a large role in either contributing to or detracting from an overall sense of safety.

Continuity: Walking routes should be obvious and should not require pedestrians to travel out of their way unnecessarily.

Landscaping: Plantings and street trees contribute to the overall psychological and visual comfort of sidewalk users and should be

designed in a manner that contributes to the safety of pedestrians.

Drainage: Sidewalks and curb ramps should be designed so that standing water is eliminated or minimized.

Social space: There should be places for standing, walking, and sitting. The sidewalk area should be a place where adults and children can safely participate in public life.

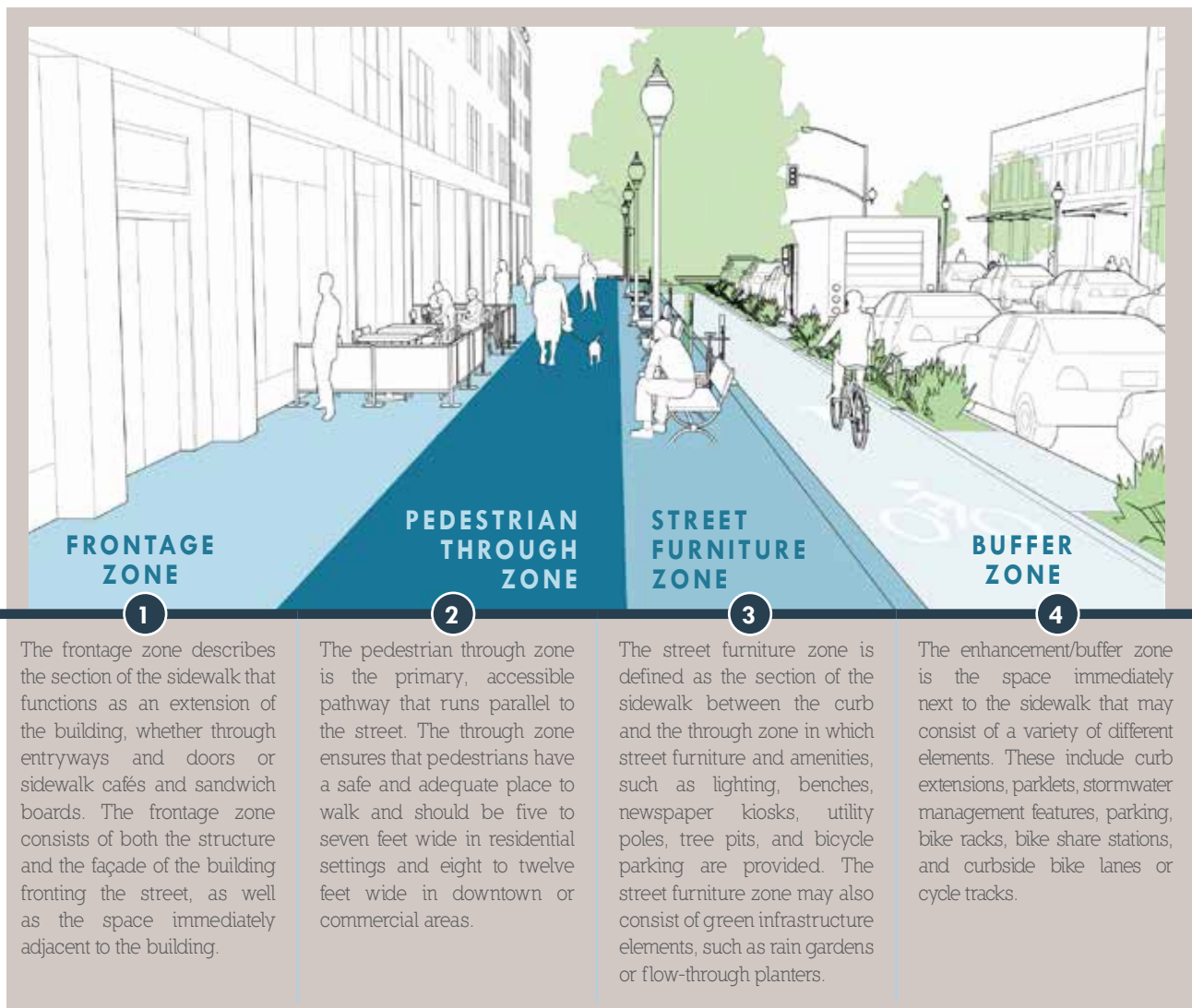
Quality of place: Sidewalks should contribute to the character of neighborhoods and business districts.

Width: Two people should be able to walk side-by-side along a sidewalk—either as a pair walking together or as one person passing another. In areas of high pedestrian use, sidewalks should accommodate the larger volume of walkers.

TOWN CENTER SIDEWALK ZONES

The sidewalk area can be segmented into four distinct zones. The concept of sidewalk zones should be followed for a sidewalk to function properly and provide safe passage for all users. Other important considerations include sidewalk obstructions, driveways, roadway width, and access through construction zones.

In the Town Center, streetscape elements are key to providing safe and comfortable spaces for people to walk, gather, and enter places of business. Frontage zones are the welcome mats for businesses and can be populated with planters, special paving, café tables, and benches. The through zone should be clear and follow general sidewalk guidelines. The street furniture zone is a place where lighting, wayfinding, kiosks, benches, trash and waste receptacles, and bicycle amenities may be located. Buffer zones can include the pedestrian through zone or may be small separations between the sidewalk area and vehicular movement or parking. (See Placemaking for sidewalk amenities.)



1 The frontage zone describes the section of the sidewalk that functions as an extension of the building, whether through entryways and doors or sidewalk cafés and sandwich boards. The frontage zone consists of both the structure and the façade of the building fronting the street, as well as the space immediately adjacent to the building.

2 The pedestrian through zone is the primary, accessible pathway that runs parallel to the street. The through zone ensures that pedestrians have a safe and adequate place to walk and should be five to seven feet wide in residential settings and eight to twelve feet wide in downtown or commercial areas.

3 The street furniture zone is defined as the section of the sidewalk between the curb and the through zone in which street furniture and amenities, such as lighting, benches, newspaper kiosks, utility poles, tree pits, and bicycle parking are provided. The street furniture zone may also consist of green infrastructure elements, such as rain gardens or flow-through planters.

4 The enhancement/buffer zone is the space immediately next to the sidewalk that may consist of a variety of different elements. These include curb extensions, parklets, stormwater management features, parking, bike racks, bike share stations, and curbside bike lanes or cycle tracks.

Designing For Bicyclists

> Treatments Suitable For

**PEDESTRIAN
PRIORITY ZONES**



**TOWN CENTER
PEDESTRIAN
PRIORITY AREAS**



Bicyclists are much more affected by poor facility design, construction, and maintenance practices than motor vehicle drivers. By understanding the unique characteristics and needs of bicyclists, a design can provide high-quality facilities and reduce threats to bicyclists.

It is important to consider bicyclists of all skill levels. A bicyclist's skill level greatly influences expected speeds and behavior—both in separated and shared facilities. Bicycle infrastructure should accommodate a range of users, making decisions for facilities with the goal of providing a comfortable experience for people of various abilities.

In Chesapeake Beach, the Connected Core should include low-stress facilities, where possible, or alternative “one-off” routes should be provided to connect the same key destinations. These “one-off” routes of the neighborhood mobility network consist of facilities like neighborhood greenways that are in-road and located on very low volume, low-speed streets that act as more of a shared roadway environment for all users. Traffic calming measures and wayfinding help enhance the sense of place while alerting motorists that these routes are for pedestrians, bicyclists, and non-motorized transportation choices, as well as vehicles.

Areas adjacent to existing or future schools, community centers, retail establishments, and cultural destinations should also accommodate residents and visitors who pedal for daily



FIGURE 3. Nearby Bicycle Facilities in North Beach

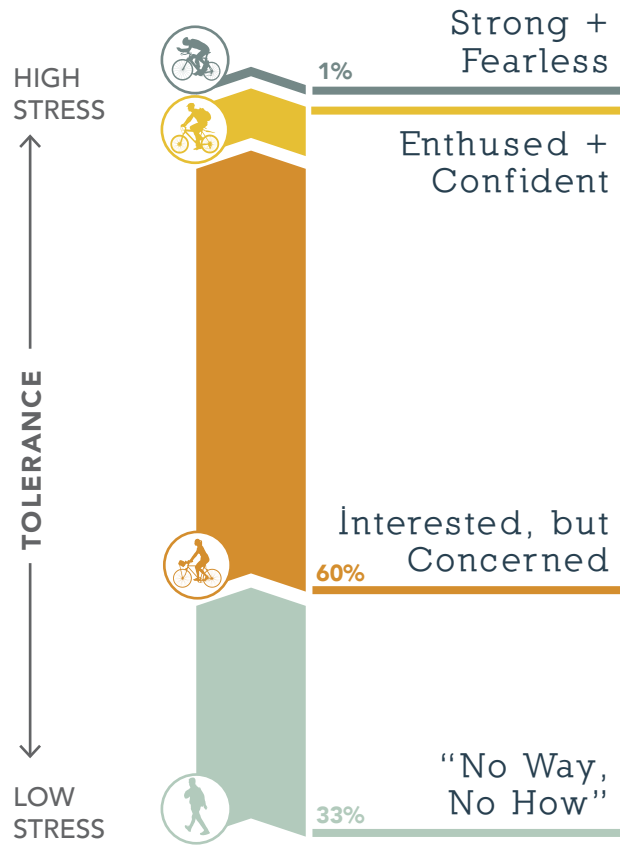
transportation or as a recreational activity. When planning for and designing bicycle facilities, it is important to understand the types of bicyclists in the area, where they will be interested in traveling to, and the level of comfort they require in a facility.

The bicycle planning and engineering industry uses several systems to classify bicyclists and assist in understanding their needs and infrastructure preferences. The conventional framework classifies riding levels of a “design cyclist” as *Advanced*, *Basic*, or *Children*. However, a more nuanced understanding of the bicycling population was developed by Roger Geller in Portland, Oregon, and is supported by data collected nationally since 2005. This classification provides the following alternative categories for understanding varying attitudes towards bicycling in the United States:

Strong and Fearless (about 1%): Characterized by bicyclists that will typically ride anywhere, regardless of roadway conditions or weather. These bicyclists can ride faster than other user types, prefer direct routes, and will typically choose roadway connections—even if shared with vehicles—over separate bicycle facilities such as shared-use paths.

Enthusied and Confident (about 7%): This user group encompasses bicyclists who are comfortable riding on all types of bikeways but usually choose low-traffic streets or shared-use paths, when available. These bicyclists may deviate from a more direct route in favor of a preferred facility type. This group includes all kinds of bicyclists such as commuters, recreationalists, racers, and utilitarian bicyclists.

Interested, But Concerned (about 60%): This user type comprises the bulk of the cycling population and represents bicyclists who typically only ride a bicycle on low-traffic streets or multi-use trails under favorable weather



Source: Adapted from Roger Geller.

FIGURE 4. Bicyclist Level of Comfort

conditions. These bicyclists perceive significant barriers to their increased use of cycling, specifically traffic and other safety issues. These people may become “Enthusied & Confident” with encouragement, education and experience, and higher-level facilities, such as buffered and protected bike lanes.

No Way, No How (about 30%): Persons in this category are not bicyclists and perceive severe safety issues with riding in traffic. Some people in this group may eventually become regular cyclists with time and education. A significant portion of these people will not ride a bicycle under any circumstances.

END OF TRIP FACILITIES

No matter the type of facility or level of experience, end of trip facilities are critical in completing the bicycle network. End of trip facilities include safe access, bicycle parking or lockers, toilets, showers, repair stations, drinking water, and home delivery services. In Chesapeake Beach, the key end of trip facilities are bicycle parking and, as the tourism industry grows, home delivery service to enable visitors to ship packages home. Parking may include racks, or bicycle corrals—multiple racks in a marked space within the street.

BICYCLE FACILITIES

Consistent with bicycle facility classifications throughout the nation, the facility types presented in these images identify classes of facilities by degree of separation from motor vehicle traffic.

In general, the wider the roadway, the higher the traffic volume, and the greater the traffic speed, the more separation is necessary to provide safe and comfortable riding conditions for bicyclists. In Chesapeake Beach, along roadways that are not in low-volume neighborhoods, the maximum level of separation possible should be explored to accommodate young, retired, and visiting bicyclists.

The following section provides a sample photograph and short description of facilities. Not every facility is recommended in Chesapeake Beach in the short-, mid-, and long-term, however, as the area grows, those facilities included below that do not appear in the recommended network can be explored for feasibility and design. It should be noted that the least separated facilities do not necessarily indicate a trade-off in safety. On low-volume, low-speed roadways with residential land use, shared spaces and neighborhood greenways are suitable for accommodating all levels of bicyclists.



Neighborhood Greenways

■ ■ ■ Recommended In This Plan

Neighborhood Greenways are a type of shared roadway designated with pavement markings, signage, and other treatments (e.g., directional signage, traffic diverters, chicanes, chokers) that effectively reduce vehicle speeds or volumes. These facilities are easy to implement with signage and pavement markings and low cost, and are applicable to many residential streets. A branded wayfinding sign package should be developed to guide users along a safe route with slopes that are manageable for a variety of fitness levels. A variety of these “quick-win” projects are illustrated in the recommendation cut sheets within this chapter.



Bike Lanes and Separated Bikeways

While not recommended in this current plan, a variety of in-road facilities may be appropriate one day. Providing dedicated space for bicyclists in a lane, buffered lane, or separated facility enables predictable movements by both bicyclists and motorists when operating in the same space.



On-Road Trails, Shared Use Paths, and Sidepaths

■ ■ ■ Recommended In This Plan

These minimum 10' wide paths can take shape in many ways, but typically are separated from the roadway with a vegetated buffer. Striping may or may not be present to separate direction of travel or modes of transportation. Often these on-road trails connect to other bicycle facilities, sidewalks, or off-road trails and may be asphalt or concrete.



Off-Road Trails

■ ■ ■ Recommended In This Plan

These dedicated pedestrian and bicycle travelways are similar to on-road trails in width and surface type. Off-road trails may also be crushed stone, mulch, permeable pavers, permeable concrete, or permeable rubber composite. The surface type should be selected based on soil condition, maintenance, and potential for inundation.



Boardwalks

■ ■ ■ Recommended In This Plan

Boardwalks are useful extensions of on- and off-road trail systems or sidewalk networks. In conditions where sensitive environments, challenging topography, or water levels prohibit surface trails, these systems can be built to preserve light for subaquatic vegetation and construction methods can reduce impacts to sensitive environments.

Creating Safe Crossings and Intersections

CORNERS AND CROSSINGS

The point where a person comes to cross a roadway is a critical moment for ensuring pedestrian safety. Attributes of pedestrian-friendly corner and crossing design include:

Clear Space: Roadway corners should be clear of obstructions. They should have enough room for ADA-compliant curb ramps, for transit stops (where appropriate), and for street conversations where pedestrians might congregate.

Accessibility: All corner features, such as curb ramps, landings, call buttons, signs, symbols, markings, and textures should meet accessibility standards.

Visibility: It is critical that pedestrians on the corner have a clear view of vehicle travel lanes and that motorists in the travel lanes can easily see waiting pedestrians.

Legibility: Symbols, markings, and signs used at corners should clearly indicate what actions the pedestrian should take.

Separation from Traffic: Corner design should effectively discourage turning vehicles from driving over the pedestrian area. Crossing distances should be minimized.

Lighting: Good lighting contributes significantly to overall visibility, legibility, and accessibility.

These attributes will vary with context but should be considered in all design processes.





MD 260 and MD 261 must accommodate truck turning movements and safe crossings. See recommendations cut sheets for improvement options.

INTERSECTION IMPROVEMENTS

The quality of treatments at an intersection can significantly affect the efficiency, comfort, and safety of all modes as they pass through the area. The treatments needed to improve an intersection will depend on factors such as vehicle traffic, the importance of the connection, and the age and abilities of users. Special attention should be paid to the design and material treatments to provide comfortable and safe bicycle and pedestrian crossings. Intersection improvements include:

Minimize Curb Radius: The size of a curb's radius can have a significant impact on pedestrian comfort and safety. A smaller curb radius provides more pedestrian area at the corner, allows more flexibility in the placement of curb ramps, results in a shorter crossing distance, and requires vehicles to slow down more on the intersection approach. During the design phase, the chosen radius should be the

smallest possible for the circumstances. One effective way of minimizing the curb ramp radius is by adding curb extensions.

Continental Crosswalks: A marked crosswalk signals to motorists that they must stop for pedestrians. It also encourages pedestrians to cross at designated locations. Installing crosswalks, alone, will not necessarily make crossings safer, especially on multi-lane roadways. However, continental crosswalks make crossings more visible to motorists and add a sense of security for pedestrians. Continental crosswalks should be combined with advanced stop bars and other tools to increase safety. At mid-block locations, crosswalks can be marked where there is a demand for crossing and there are no nearby marked crosswalks.

Median Pedestrian Refuge: Median pedestrian refuges at intersections provide pedestrians with a secure place to stand in case they are

unable to walk the entire distance of the crossing in one movement. This is especially important for young, elderly, and disabled users in areas where crossing distances are great. Refuge islands allow pedestrians to cross one direction of traffic at a time, minimizing pedestrian exposure by shortening the crossing distance.

Curb Extension/Bulb-Outs: Curb extensions minimize pedestrian exposure during crossing by shortening crossing distance and giving pedestrians a better chance to see and be seen before committing to crossing. They are appropriate for any crosswalk where it is desirable to shorten the crossing distance and there is a parking lane adjacent to the curb.

Intersection Parking Control: Parking control involves restricting or reducing on-street parking near intersections with high pedestrian activity. Locating parking away from the intersection improves motorists' visibility on the approach to the intersection and crosswalk. Improved sight lines at intersections reduces conflicts between motorists and pedestrians. This can be accomplished, in part, through the use of bulb-outs.

ADA-Compliant Curb Ramps: Curb ramps are design elements that allow all users to make the transition from the street to the sidewalk. There are several factors to be considered in the design and placement of curb ramps at corners. Properly designed curb ramps ensure that the sidewalk is accessible from the roadway. A sidewalk without a curb ramp can be useless to someone in a wheelchair, forcing them back to a driveway and out into the street for access.

MID-BLOCK CROSSING TREATMENTS



Active Warning Beacons: Active warning beacons are pedestrian or bicyclist-actuated illuminated devices designed to increase motor vehicle yielding compliance at crossings of multi-lane or high-volume roadways. Types of active warning beacons include conventional circular yellow flashing beacons, in-roadway warning lights, or Rectangular Rapid Flash Beacons (RRFB).



Example of bulbout reducing pedestrian crossing distance.



Example of Rapid Flashing Beacon.
Photo credit Stacy Barefoot.

In-Street Pedestrian Crossing Signs: In-street pedestrian crossing signs reinforce the presence of crosswalks and remind motorists of their legal obligation to yield for pedestrians in marked or unmarked crosswalks. This signage is often placed at high-volume pedestrian crossings that are not signalized. This is a low-cost treatment that has shown significant improvements to driver slowing and yielding rates at crosswalks.

BICYCLE AND PEDESTRIAN SIGNALIZED CROSSINGS

Countdown Pedestrian Signals: Pedestrian signal indicators demonstrate to pedestrians when to cross at a signalized crosswalk. Ideally, all traffic signals should be equipped with pedestrian signal indications except where pedestrian crossing is prohibited by signage.

Countdown pedestrian signals are particularly valuable for pedestrians, as they indicate whether a pedestrian has time to cross the street before the signal phase ends. Countdown signals should be used at all signalized intersections. Designers should allow greater signal timing for crossing along large roadways, areas with a high frequency of pedestrian crossing, and areas where seniors or disabled persons are expected.

Accessible pedestrian signals should be used in locations where visual or hearing-impaired individuals can be expected. A leading pedestrian interval can be used where pedestrians are allowed in the intersection three seconds in advance of vehicles in areas with frequent motor vehicles and pedestrian traffic.

Calming Traffic

Traffic calming measures should be used in all pedestrian priority zones, such as where traffic may be traveling faster than the indicated speed limit, where there is an abundance of bicycle and pedestrian movements, at crossings, and along neighborhood greenways. Below is a mix of treatments that can be used as needed and as appropriate for the context.

Motor vehicle speeds affect the frequency and severity of bicycle and pedestrian crashes that can occur on a roadway. Slower vehicular speeds improve a motorist's ability to see and react to non-motorized users, minimize conflicts at driveways and other turning locations, and, in many cases, improve vehicular throughput. Maintaining slower motor vehicle speeds and reducing traffic in areas where pedestrian and bicycle traffic are typically high can greatly improve comfort and safety for non-motorized users on a street.

Traffic calming treatments can be segmented into two categories. "Hard" traffic calming refers to engineered measures taken with the sole intent of slowing traffic and reducing conflict. "Soft" traffic calming includes educational and enforcement measures, as well as placemaking design measures that have the added effect of traffic calming.

HARD TRAFFIC CALMING TREATMENTS

- **Lane narrowing:** Lane narrowing is when roadway lane width is reduced through the striping of a shoulder or the addition of bike lanes. This helps reduce traffic speed and adds dedicated space for bicyclists.
- **Pinchpoints/neckdowns:** These are curb extensions placed on both sides of the street, narrowing the travel lane and encouraging all road users to slow down.

When placed at intersections, pinchpoints are known as chokers or neckdowns. They reduce curb radii and further reduce motor vehicle speeds.

- **Bicycle-friendly speed humps:** these raised, in-road bumps are used in primarily residential areas. When bicycle-friendly (or school bus-friendly) speed humps are provided, a street-level cut out is provided to allow bicycles or buses to pass through at street grade, but passenger vehicles would encounter the vertical bump in the street.

SOFT TRAFFIC CALMING TREATMENTS

- **Street trees, landscaping, and beautification:** Street trees, landscaping, and other aesthetic elements such as art or banners produce a feeling of enclosure and add visual stimuli along a roadway corridor. Green elements often have added environmental benefits.
- **Street surface material:** Textured street materials, such as pavers, create visual stimuli and a feeling of a special district or pedestrian-oriented area which can help to calm traffic.
- **Appropriately-scaled street lighting:** Appropriately-scaled street lighting can provide a safer, more inviting and more visible environment for all roadway users. Pedestrian-scaled street lighting, along with other improvements such as street trees, can alert motorists to a potential presence of pedestrians and bicycles, slowing down traffic in these areas.
- **Enforcement and awareness measures:** Enforcement and awareness measures—such as signage, speed traps, and educational programs—can help to reduce speeding in problem areas. However, the

effectiveness of these programs depends on adequate frequency and duration.

Placemaking

The elements below should be incorporated into every trail, pedestrian priority zone, and roadway improvement. Each connectivity project will have varying levels of opportunity and feasibility for adding these elements that contribute to resident pride, user comfort, safety for all modes of travel, community identity, and economic vitality.

STREET TREES

A robust tree canopy is one of the great contributors to a healthy and livable small town landscape. Trees provide many ecological benefits in terms of stormwater flow regulation and water quality treatment. Mechanisms for these benefits include interception, transpiration, and increased infiltration. Additional benefits provided by trees include enhancing the visual and spatial character of a place; improving air quality; reducing noise and light pollution; traffic-calming; reducing the heat island effect; and encouraging foot traffic in commercial areas. Trees provide numerous habitat benefits, including refuge from predators, habitat patches, and food and nesting resources. Trees enhance the quality of open space and provide visual relief within the urban environment, leading to stress reduction and other health benefits. A healthy urban forest also increases property values. Because trees can take many years to develop a full canopy, preserving healthy existing trees wherever practicable is a cost effective and efficient way to obtain the most value from trees.

LIGHTING

Pedestrian-scale lighting improves visibility for both pedestrians and motorists, particularly at intersections. Light poles and banners should

be selected to enhance the surrounding context and complement existing architecture or natural surroundings. It is appropriate to use pedestrian-scale lighting in all areas of high pedestrian activity unless the area is a trail or facility located in a sensitive habitat where lighting would disturb migration, mating, or other patterns of activity for wildlife.

Pedestrian-scale lighting should be in the Street Furniture Zone so as not to impede pedestrian traffic in the through area. Lamp fixtures should be at a height of about 12-14 feet, and poles should be spaced approximately 25-50 feet apart depending on the intensity of lights. Lamp fixtures should be shaded so as to project light downward and provide sufficient illumination of the sidewalk while limiting excess light pollution. Illumination should be warm and moderate, rather than dim or glaring, and provide a balanced coverage of the corridor and surrounding area for comfort and security.

SITE FURNISHINGS

Site furnishings are critical components of a socially and economically vibrant streetscape, accommodating a wide range of needs and activities. Providing benches at key rest areas and viewpoints encourages people of all ages to use the walkways by ensuring that they have a place to rest along the way. Bike racks accommodate bicyclists traveling to their destinations. Trash and recycle receptacles promote cleanliness and sustainability. Landscaped planters and movable furniture also offer aesthetic and placemaking benefits to the sidewalk. Site furnishing packages should be standardized depending on the context (trails and boardwalks may use different styles from areas that are “in town”.)

WAYFINDING

The ability to navigate through a place is informed by landmarks, natural features, and

other visual cues. Signs along a corridor exist to raise awareness for key destinations and to assist out-of-town users in building confidence in their travel choices. Wayfinding should be designed as a family of sign types for motorists, bicyclists, and pedestrians. On-road and off-road signs can be designed differently, but should have a unifying symbol, color palette, or style. Trail wayfinding signage should indicate the location of destinations, the travel distance/time to those destinations, and the location of travel. Wayfinding signage can also improve the safety and awareness of bicyclists and pedestrians by alerting motorists that they are driving along a bicycle route or pedestrian emphasis area.

Wayfinding signs are typically placed at key locations leading to and along important transportation routes. It is recommended that these signs be posted at a level where the intended users may best view the information. As such, pedestrian, bicyclists, and motor vehicle wayfinding signs should be posted at various reading heights.

Gateway signage is also an important component to a wayfinding system. A gateway sign reflects the City's brand and should be designed to reflect the historical roots and vibrant future.

BIORETENTION

Bioretention facilities use amended soils and vegetation to collect, convey, and clean polluted runoff from the streets. By reducing the peak rate and the total runoff volume, these facilities decrease the negative downstream or downslope impacts of storm events. With the right underlying geologic conditions, bioretention systems can be designed to clean stormwater then allow it to infiltrate, thus decreasing transport of some pollutants and recharging groundwater supply. In the right-of-way, bioretention systems can be integrated into site design as linear features (e.g., bioretention

swales) or as cells (e.g., rain gardens and stormwater planters). Additional community benefits from bioretention facilities can include improved property values, increased habitat, a better environment for walking, and traffic calming.

Opportunity areas for using bioretention systems in streets include areas within traffic calming curb bulb-outs, in roadside bioswales, and in place of standard landscape plantings on streets. The ground water level will dictate if bioretention facilities are appropriate in Chesapeake Beach.

BIORETENTION PLANTERS

Bioretention planters have a defined shape and vertical sides, and may employ an impermeable bottom layer or enclosure. The planters are often constructed of concrete, making them well-suited for in-town applications where water needs to be directed away from building foundations. Stormwater planters consist of a planter box made of sturdy material, amended soils, a gravel drainage layer, and plants. An overflow is incorporated to manage higher flows and convey runoff to the public storm drain system, either via a perforated pipe or via surface flow. They are particularly effective at handling low-intensity storms.

In the right-of-way, stormwater planters are recommended adjacent to buildings, sidewalks, and pedestrian plazas where flow control is a significant concern and space is at a premium. Planters can also be designed to serve a conveyance function in the right-of-way where there is insufficient width to provide sloped sides (i.e., a swale) or the grade would be too steep. Stormwater planters provide aesthetic benefits and, depending on plant selection and design, can provide water, food, and nesting materials for birds.

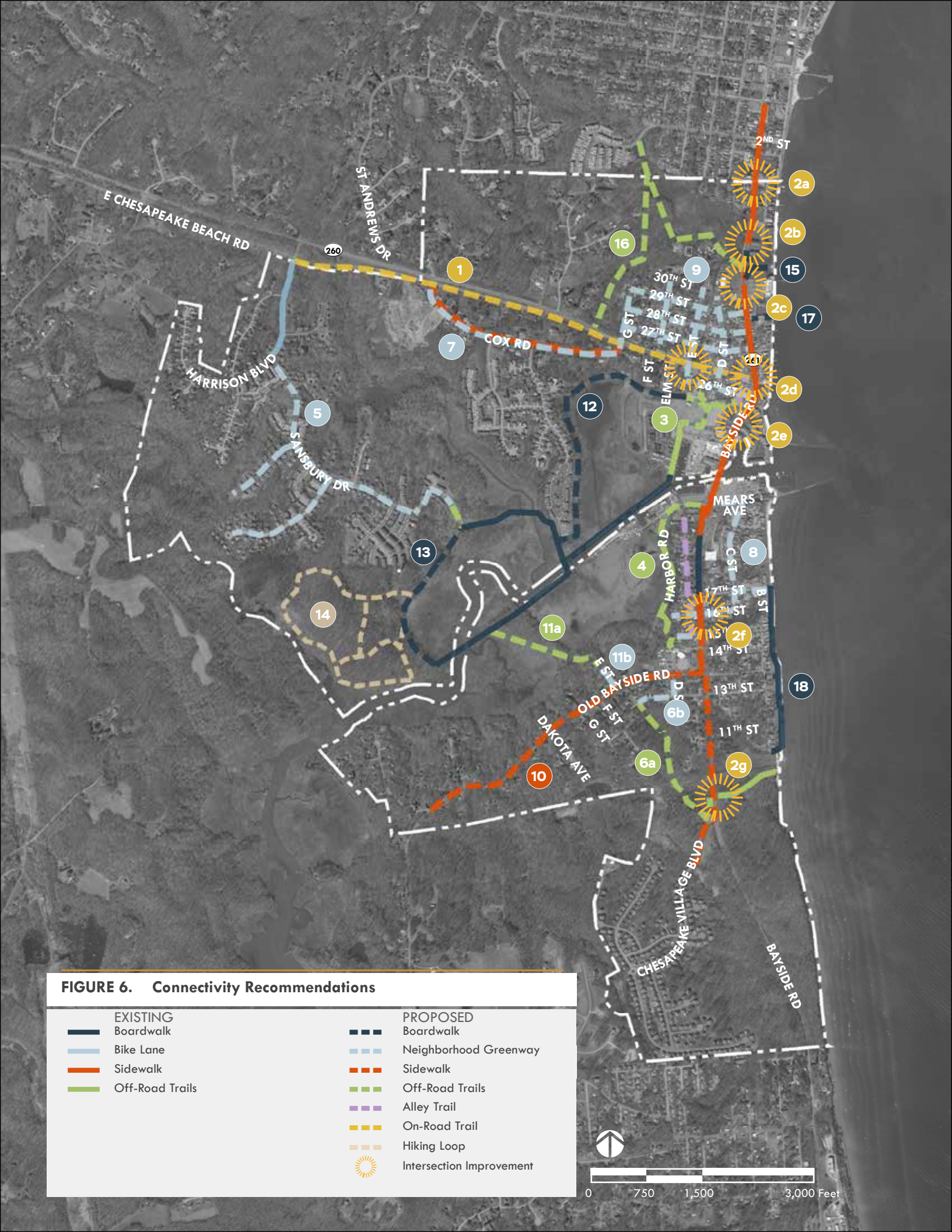


FIGURE 6. Connectivity Recommendations

	EXISTING Boardwalk		PROPOSED Boardwalk
	Bike Lane		Neighborhood Greenway
	Sidewalk		Sidewalk
	Off-Road Trails		Off-Road Trails
			Alley Trail
			On-Road Trail
			Hiking Loop
			Intersection Improvement



0 750 1,500 3,000 Feet

IMPLEMENTING DESIGN GUIDELINES

Planning for a safe and well connected network begins with understanding key destinations, evaluating space available, creatively working around natural features and environmental challenges, identifying opportunities for using space differently, and collaborating with the community to understand their vision for the future of Chesapeake Beach.

Expanding upon the theoretical network of Connected Core, Neighborhood Mobility, and Recreational Amenities, the map to the left (Connectivity Recommendations) illustrates network recommendations for walking and bicycling. Facilities vary from on-road neighborhood greenways along slow, low-volume residential streets to fully separated on- and off-road trails that provide the highest level of perceived comfort for users of all ages and abilities - and are particularly attractive for tourists.

A variety of design resources are available to guide the Town through the design process for each facility, including Federal Highway Administration’s Small Town and Rural Multimodal Network guide. Standard manuals including the Association of State Highway and Transportation Officials (AASHTO) and MUTCD should also be referenced by design professionals to provide a design that is safe and follows industry best practices for engineering.

Implementing groups of projects can be efficient and is budget conscious - creating economies of scale for labor, mobilization, and material transport. The following table illustrates project groupings; a phasing chart is located in the Implementation Chapter. In addition to the facility map and project table, nine catalyst projects (illustrated on the following pages) were selected for further exploration of opportunities, constraints, and community impacts.

FROM	TO	IMPROVEMENT	TOTAL COST	
			LOW	HIGH
1 - CHESAPEAKE BEACH GATEWAY TRAIL				
Harrison Blvd.	G St.	Asphalt Trail (12'), Wayfinding, Amenities	\$\$\$	\$\$\$\$\$
2 - SAFE CROSSINGS				
MD 261 @ Chesapeake Village Blvd.	MD 261 @ First St.	Intersection Improvements	\$\$\$	\$\$\$
3 - KELLAM'S FIELD TRAIL				
Gordon Stinnett Ave.	MD 261 @ 26th St.	Asphalt Trail (12'), Wayfinding, Amenities	\$\$\$	\$\$\$\$\$
4 - HARBOR ROAD PATH				
Harbor Rd.	15th St. @ 16th St.	Asphalt Trail (12')	\$\$\$	\$\$\$
5 - RICHFIELD STATION NEIGHBORHOOD GREENWAYS				
Harrison Blvd.	Railway Trail	Wayfinding, Traffic Calming	\$	\$
6 - CHESAPEAKE VILLAGE OFF-ROAD TRAIL				
Chesapeake Village Blvd.	Old Bayside Rd.	Asphalt Trail (12'), Wayfinding, Traffic Calming, Amenities	\$\$\$	\$\$\$

FROM	TO	IMPROVEMENT	TOTAL COST	
			LOW	HIGH
7 - COX ROAD NEIGHBORHOOD GREENWAY AND SIDEWALK				
St Andrews Dr.	G St.	Sidewalk, Wayfinding, Traffic Calming	\$\$\$	\$\$\$
8 - C STREET NEIGHBORHOOD GREENWAY				
Boardwalk	Mears Ave.	Wayfinding, Traffic Calming	\$	\$
9 - NORTH SIDE RESIDENTIAL GREENWAY				
MD 260 @ Cox Rd.	MD 261 @ 29th St.	Wayfinding, Traffic Calming	\$\$	\$\$
10 - OLD BAYSIDE TRAIL				
I St.	MD 261	Asphalt Trail (12'), Amenities	\$\$\$\$\$	\$\$\$\$\$
11 - RAILWAY TRAIL NEIGHBORHOOD CONNECTOR				
Bayside Rd.	Railway Trail	Asphalt Trail (12'), Wayfinding, Traffic Calming, Amenities	\$\$\$	\$\$\$
12 - BAYVIEW TRAIL LOOP				
Railway Trail	Kellam's Field	Boardwalk, Amenities	\$\$\$\$	\$\$\$\$\$
13 - RICHFIELD STATION CONNECTOR				
Railway Trail	Neighborhood Connector Trail (Crest View Ln.)	Boardwalk, Amenities	\$\$\$\$	\$\$\$\$\$
14 - FISHING CREEK HIKING LOOP TRAILS				
Railway Trail	Fishing Creek Area	Natural Surface Trails, Trailblazing	\$	\$
15 - BAYSIDE BOARDWALK & OVERLOOK				
Bay Crest Ct.	Seagate Sq.	Boardwalk, Overlook, Wayfinding, Amenities	\$\$\$	\$\$\$\$
16 - STINNETT TRAIL				
MD 260 & MD 261	Glouster Dr.	Asphalt Trail (12'), Wayfinding, Traffic Calming	\$\$\$	\$\$\$
17 - 29TH STREET OVERLOOK				
29th St.at Waterfront	N/A	Asphalt Trail (12'), Wayfinding, Traffic Calming	\$\$	\$\$\$
18 - B STREET OVERLOOK				
Between Old Bayside Road and 13th Street	N/A	Asphalt Trail (12'), Wayfinding, Traffic Calming	\$\$	\$\$\$

Notes

- At the time of this Plan's adoption, the Maryland Department of Natural Resources (DNR) had not provided an official opinion on the addition of a boardwalk from the existing bayside boardwalk to Brownies Beach. Currently, the regulations do not support this addition. Further official documentation with DNR can be explored, however, initial coordination was not favorable.
- Project 1 is a conceptual design intended to connect all neighborhoods along MD 260 (see cut sheet on following pages). Depending on the selected design, crossings and connections should be included for neighborhoods north and south of MD 260. It is recommended that the Town begin coordination with MDOT SHA in the immediate term.

TOWN GATEWAY



LOCATION:

South Side of MD 260, West of the Town Center

TIMEFRAME:

long-term

PROJECT COSTS:

\$\$\$

DESCRIPTION:

Three alternatives for an on-road trail along south side of MD 260 between Harrison Boulevard and Town Center. Cost estimate includes trail and roadway improvements, lighting, vegetation and trail amenities.

NOTED CHALLENGES: FLOODPLAIN, TRAFFIC, COST

PARTNERS: MDOT SHA, NEIGHBORS, BUSINESS OWNERS



A PATHWAY TO MAIN STREET

MD Route 260 (Chesapeake Beach Road) is a state highway that welcomes residents and visitors to the Town of Chesapeake Beach by car, but currently lacks a dedicated space for residents to walk or bike into the Town Center. A new pathway linking Richfield Station, Highlands, Heritage Woods, Bayview Hills and surrounding neighborhoods will offer a safe and comfortable environment for residents of the western neighborhoods to recreate and travel along the Town's western gateway.

Within the Town Center, a pedestrian priority area will be created by narrowing the street, and by repurposing existing median space to provide a wide sidepath with grass buffers. Attention to pedestrian crossing locations will be highlighted using horizontal alignment shifts at intersections that discourage speeding, supplemented by high-visibility crosswalks, signs, and rapid flashing beacons.

West of the Town Center, MD Route 260 is a divided highway, offering more potential opportunities to construct a sidepath, but with varying degrees of complexity and cost. Three alignment options are presented on the following pages, highlighting the benefits and challenges of each.



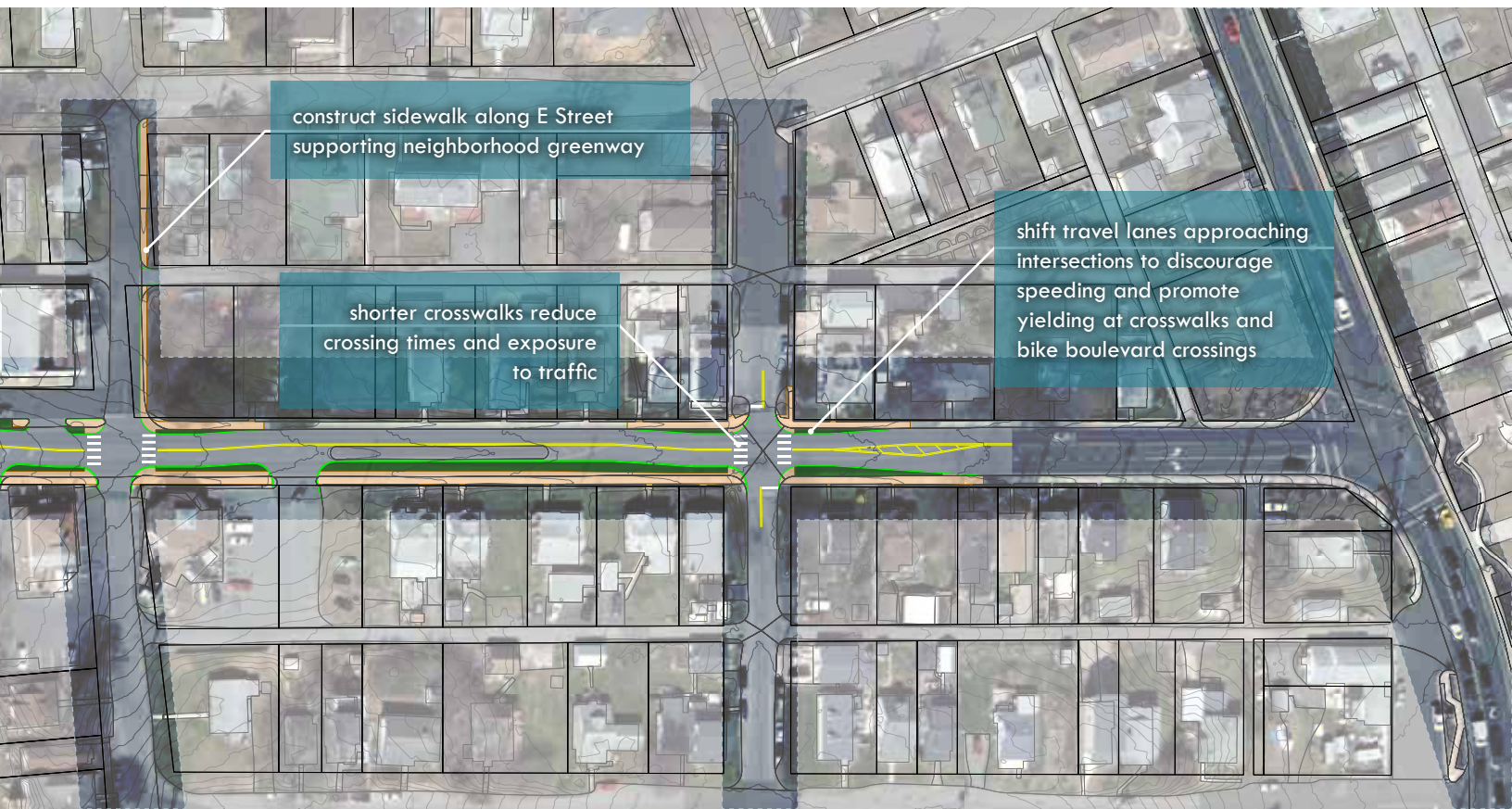
BENEFITS

- Repurposes existing road space to introduce a sidepath
- Visually informs a transition from highway to main street entering the town center, calming traffic
- Provides opportunities for safe recreation and travel on foot or by bicycle



CONSIDERATIONS

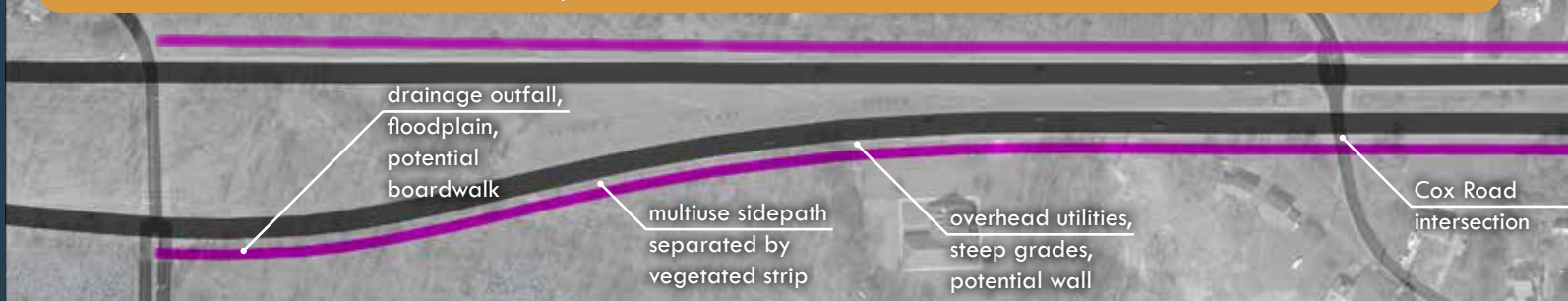
- Vegetated medians and left-turn lanes would be eliminated. Landscaping opportunities should be explored.
- Design to accommodate drainage and stormwater
- Maintain utilities and avoid impacts where possible



TOWN GATEWAY

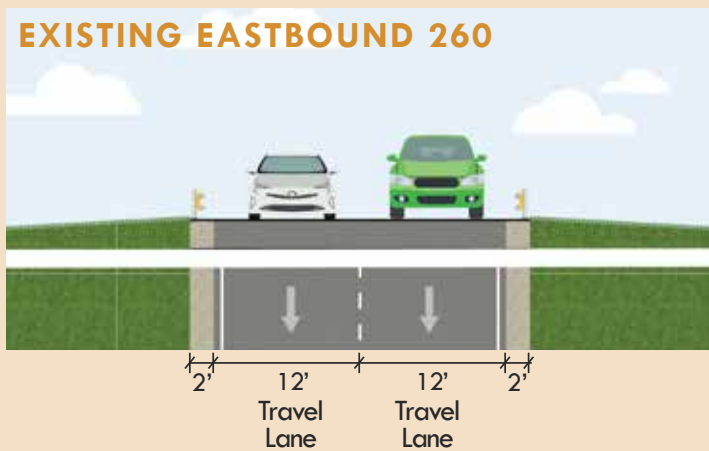
OPTION A: On-Road Trail

Vehicular flow remains the same. A sidepath is added to the eastbound side of MD 260 to provide separate circulation for pedestrians and bicyclists.

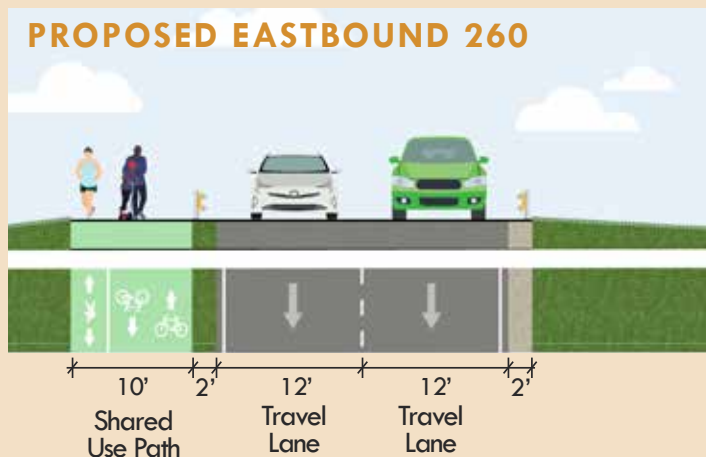


TYPICAL SECTION DIMENSION AND CONDITIONS WILL VARY

EXISTING EASTBOUND 260



PROPOSED EASTBOUND 260



BENEFITS



- > No impacts to existing traffic
- > Comfortable facility, with opportunities for wide buffer and sidepath

CONSIDERATIONS



- > Impacts natural resource areas
- > May require right-of-way
- > Higher capital cost

OPTION B: Reclaim One Lane

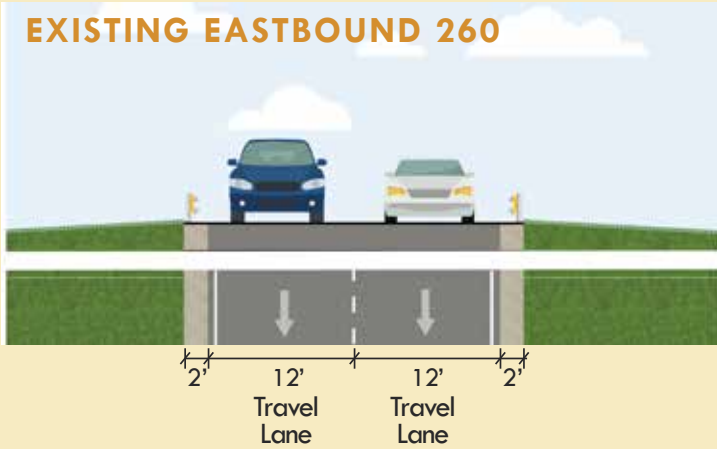
Eastbound vehicular circulation reduces to one lane to adaptively reuse the second eastbound lane of MD 260 for bicycle and pedestrian circulation.



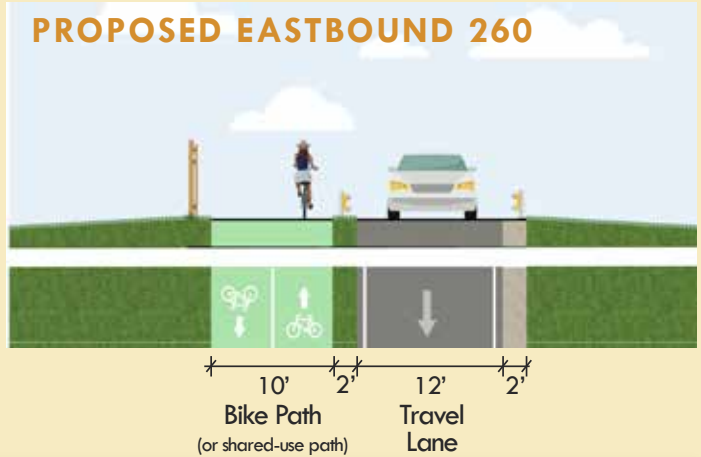


TYPICAL SECTION DIMENSION AND CONDITIONS WILL VARY

EXISTING EASTBOUND 260



PROPOSED EASTBOUND 260



BENEFITS



- > Reduces impervious surface
- > Environmental impacts limited
- > Low capital cost
- > Temporary "Pilot Project"
use jersey barriers or construction barrels to test idea and observe circulation

CONSIDERATIONS



- > Traffic impacts need to be explored
- > Coordination required with SHA
- > Vertical separation options
jersey barrier, guardrail, fence, etc.



TOWN GATEWAY

OPTION C: Reclaim Entire Eastbound Side

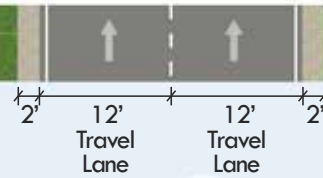
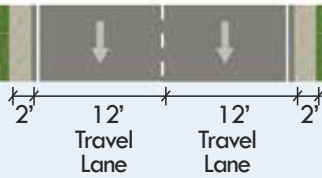
Walkable and bikable transformation providing maximum separation and comfort.



TYPICAL SECTION DIMENSION AND CONDITIONS WILL VARY

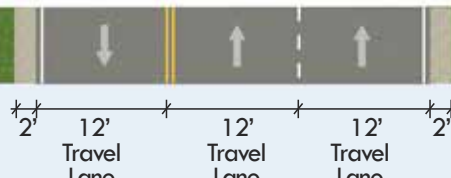
EXISTING EASTBOUND 260

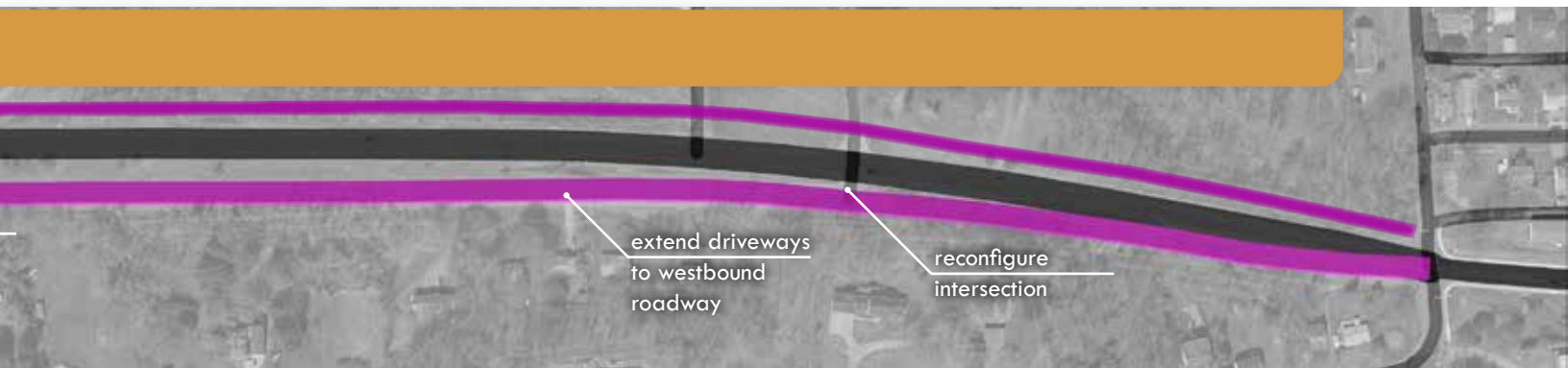
EXISTING WESTBOUND 260



PROPOSED EASTBOUND 260

PROPOSED WESTBOUND 260





SIDEPATH OPTIONS

A range of options are available to install an on-road trail between Harrison Boulevard and the Town Center. Determining a preferred approach will require further study and coordination with SHA.

OPTION 1

A new trail would be constructed adjacent to the existing roadway. Due to grading and natural resources, it is anticipated that some portions of the trail may need to be constructed as boardwalk, and retaining walls may be required in some locations. Some utility relocations may be required.

OPTION 2

The on-road trail would be constructed by repurposing one of the two eastbound travel lanes, maintaining a shoulder and right-turn lanes where currently provided. The reduction to one eastbound travel lane would require agreement by SHA, who owns and maintains the road.

OPTION 3

The on-road trail would be provided within the existing eastbound roadway. Based on feasibility and project goals, unused portions of the existing roadway would be removed, reducing the existing impervious area to provide a stormwater benefit (not shown in section to left). The westbound roadway would be widened to accommodate eastbound travel. The reduction to one travel lane would require agreement by SHA, who owns and maintains the road. The reduction to one eastbound travel lane and determination of the transition between the existing eastbound roadway and westbound roadway would require agreement by SHA, who owns and maintains the road.



BENEFITS

- Significant reduction in impervious surface
- Greatest separation between trail users and the road



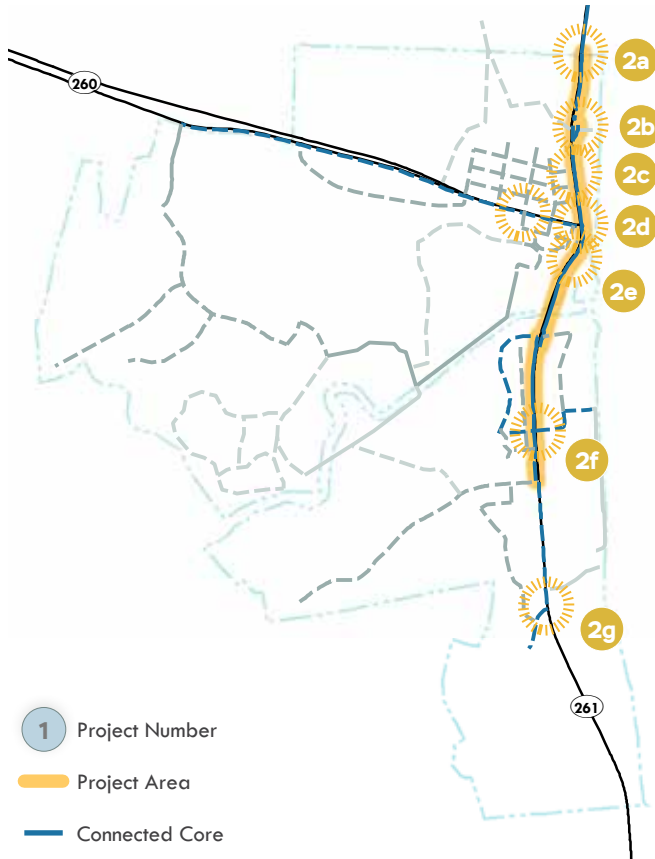
CONSIDERATIONS

- Traffic impacts need to be explored
- Coordination required with SHA
- Higher capital cost

Note

- Options A through C should consider safe crossings and connections to north- and south-side neighborhoods.

TRAFFIC CALMING



LOCATION:

MD 260 and MD 261

TIMEFRAME:

Varies

PROJECT COSTS:

\$\$

DESCRIPTION:

Narrow roadway and intersections to provide shorter crossings and calm traffic along the main roads through Town.

NOTED CHALLENGES: DESIGN, TRAFFIC, COST

PARTNERS: MDOT SHA

Encouraging appropriate speeds and providing safe crossings is accomplished through a combination of lane narrowing and visibility enhancements. At Town Hall, a pedestrian refuge island, high-visibility crosswalks and rectangular flashing beacons will provide safe crossing opportunities, while also encouraging reduced travel speeds.





IMPROVE INTERSECTION at 1st Street

- > Remove right-turn lane
- > Construct curb bulb-out
- > Improve pathway access
- > Add high-visibility crosswalks
- > Add rapid flashing beacons

IMPROVE INTERSECTION at Seagate Square

- > Remove right turn lane
- > Construct curb bulb-out
- > Explore adding sidewalk connections into neighborhood

IMPROVE CROSSWALK at Firehouse

- > Construct curb bulb-out in southbound shoulder

ADD CURB BULBOUTS between 27th and MD 260

- > Narrow travel lanes
- > Add vegetation

IMPROVE CROSSING at E Street

- > Improve crossing
 - > Add high-visibility crosswalk
- *Included in Project 1

IMPROVE CROSSING at MD 260

- > Add high-visibility crosswalks

INSTALL CROSSWALK at Town Hall

- > Construct curb refuge island
- > Provide high-visibility crosswalk with rapid flashing beacons

INSTALL CROSSWALK at 16th Street

- > Install in-street pedestrian crossing sign
- > Provide high-visibility crosswalk with rapid flashing beacons
- > Evaluate sight lines

IMPROVE INTERSECTION at Chesapeake Village

- > Construct curb refuge island
- > Provide high-visibility crosswalk with rapid flashing beacons
- > Construct sidewalk connection to Brownies Beach

KELLAM'S FIELD TRAIL



LOCATION:

Kellam's Field, 26th Street, and Gordon Stinnett Ave.

TIMEFRAME:

Short

PROJECT COSTS:

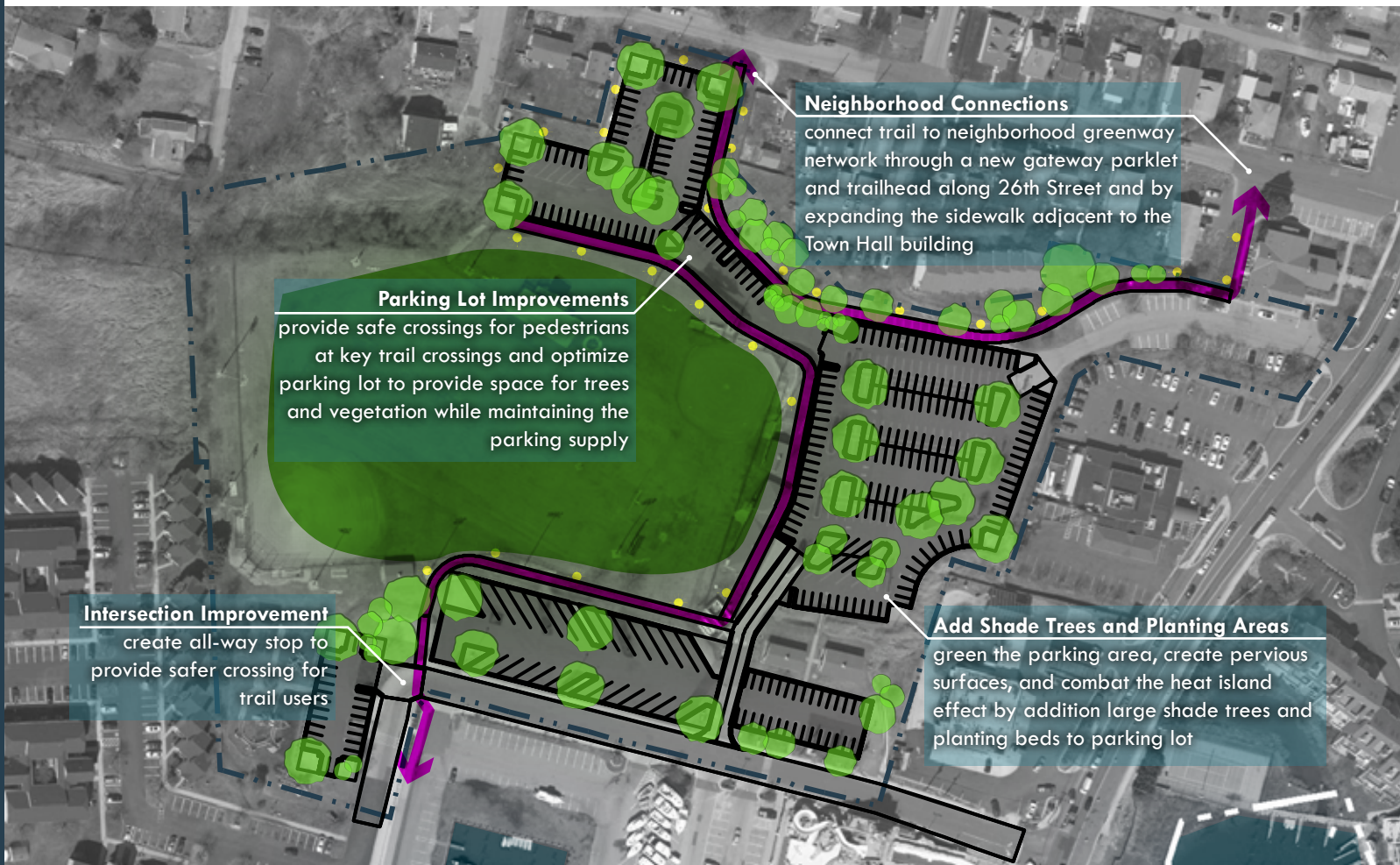
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DESCRIPTION:

12' asphalt trail around Kellam's Field with additional park/plaza space at the intersection of the trail and neighborhood greenway, lighting, parking lot optimizing, addition of shade trees, and controlled stop at Gordon Stinnett Ave.

NOTED CHALLENGES: ENVIRONMENTAL CHALLENGES WITH DRAINAGE, SEA-LEVEL RISE AND SINKING FIELD

PARTNERS: SPECIAL USE ORGANIZERS



CONNECTING RECREATION AND MOBILITY

Kellam's Field is a key destination for both residents and visitors of Chesapeake Beach. As a connected network is implemented, this new path will tie the Neighborhood Greenway system to the recreational boardwalk loops with safe crossings, an ADA-accessible path, lighting to enhance visibility and improve safety, shade trees to provide user comfort, and a controlled stop at Gordon Stinnett Avenue. A small green space/plaza between the parking area and 26th Street creates a transition from the Neighborhood Greenway with lighting, benches, and bicycle parking.

Responding to a request for additional shade in the parking area, optimizing striping and layout provides the same amount of parking spaces while creating opportunities to add space for trees and other vegetation. This will reduce the heat island effect in the lot and add pervious surfaces for stormwater infiltration.

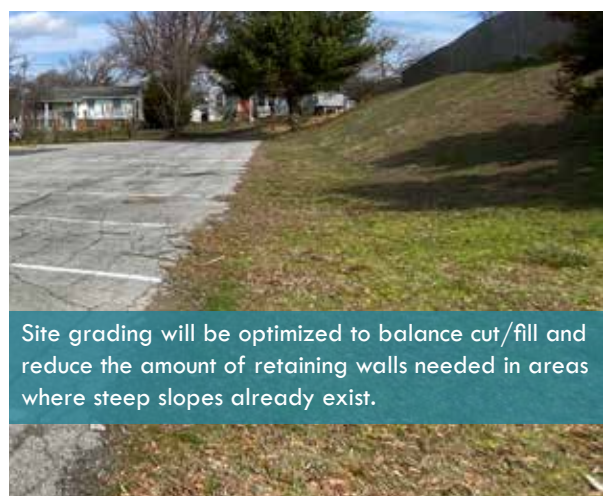
The southern section of the Kellam's Field Trail draws users toward the boardwalk system. As trail users tend to include small children and senior adults, an enhanced crossing and all-way stop alerts drivers of the presence of people walking and biking across the street.



Expand sidewalk adjacent to Town Hall and connect through to 26th Street and the Neighborhood Greenway system.



A small park area along 26th Street will provide a place to gather, sit, and park bicycles.



Site grading will be optimized to balance cut/fill and reduce the amount of retaining walls needed in areas where steep slopes already exist.

HARBOR ROAD PATH



LOCATION:

Harbor Road and extension to Beach Elementary, 15th Street and 16th Street

TIMEFRAME:

Mid

PROJECT COSTS:

\$\$\$

DESCRIPTION:

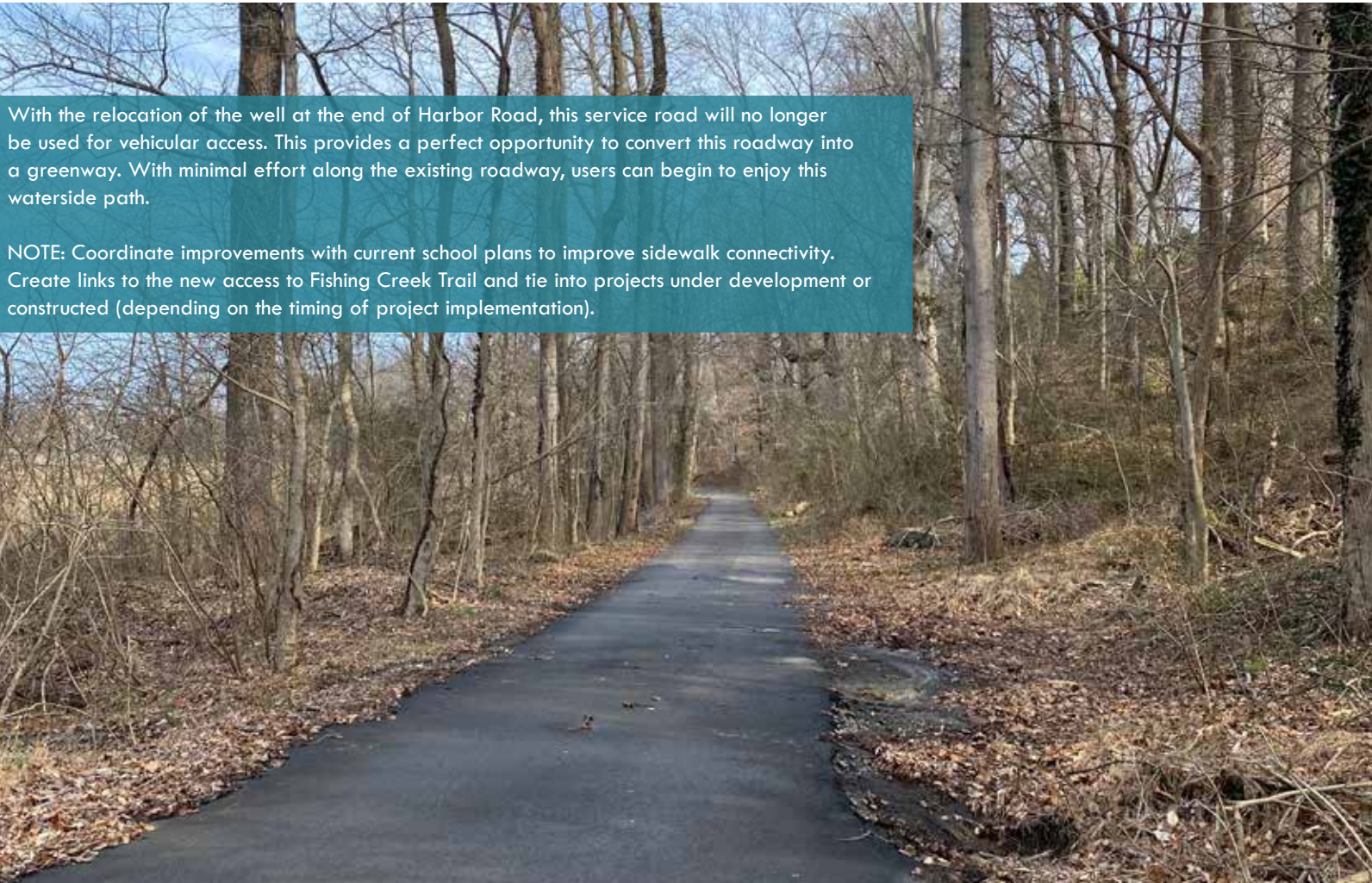
Conversion of Harbor Road to a shared-use path to coincide with the utility relocation. New trail connections to the school and 15th Street or 16th Street provide opportunities to connect with the Neighborhood Greenway and Boardwalk along the Chesapeake Bay.

NOTED CHALLENGES: TOPOGRAPHY, ADA ACCESS

PARTNERS: SCHOOL AND NEIGHBORS

With the relocation of the well at the end of Harbor Road, this service road will no longer be used for vehicular access. This provides a perfect opportunity to convert this roadway into a greenway. With minimal effort along the existing roadway, users can begin to enjoy this waterside path.

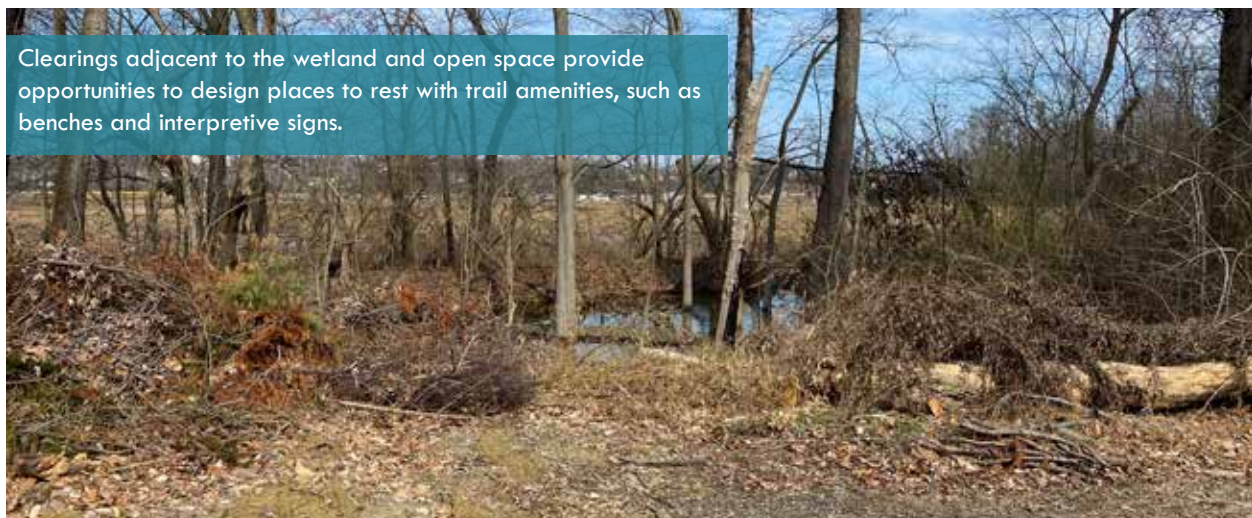
NOTE: Coordinate improvements with current school plans to improve sidewalk connectivity. Create links to the new access to Fishing Creek Trail and tie into projects under development or constructed (depending on the timing of project implementation).



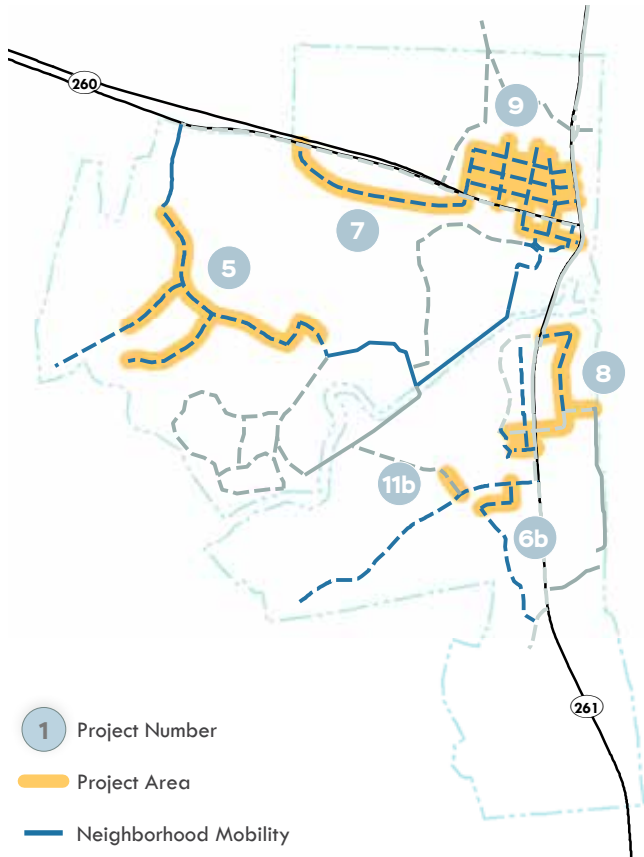
A QUICK WIN OPPORTUNITY

This service road, at quick glance, could be identified as a greenway. Today, this road provides access to an active well that the Town anticipates retiring in exchange for a more suitable location. With the utility relocation, the roadway can easily be converted to a place for bicyclists and pedestrians to enjoy water and wildlife views with little to no capital cost. This also provides an alternate alignment for north/south circulation off the main vehicular path - providing a sense of safety and comfort.

To complete this connection, a new path will be required to ascend the slope from the existing roadway to Beach Elementary and 15th Street or 16th Street. A survey of the existing topography and further feasibility should be explored to determine the following: an appropriate alignment, if the path can ascent the slope with earthwork, or if a structure will be required to enable the change in elevation. ADA access is paramount to the success of this transition and can be accomplished with a run of approximately 1,100 linear feet (to be further explored in a feasibility study).



NEIGHBORHOOD GREENWAYS



LOCATION:

Neighborhood Streets (as shown on map)

TIMEFRAME:

Varies

PROJECT COSTS:

\$

DESCRIPTION:

Calm traffic using bicycle-friendly speed bumps and all-way stop control at intersections. Provide directional wayfinding signing to direct bicyclists and pedestrians to safe intersection crossings of MD 260 and MD 261. Plant street trees to shade greenways and enhance natural character.

NOTED CHALLENGES: ON-STREET PARKING, DRIVEWAYS

PARTNERS: RESIDENTS, BUSINESS OWNERS, RICHFIELD STATION (PROJECT 5)








Neighborhood Greenways employ a variety of tools to remind vehicles to slow their speed, watch for bicyclists and pedestrians, and provide direction to bicyclists and pedestrians for remaining on optimal routes or guiding them toward key destinations.



ELEMENTS OF A NEIGHBORHOOD GREENWAY

Low-speed / low-volume roads can be great places to walk and bike with small enhancements to let motorists know to keep an eye out “greenway” activity.

	Bicycle-Friendly Speed Hump		Wayfinding Sign
	Sidewalk		Street Trees
	All way STOP		



ADD SIDEWALK
to connect with pedestrian priority area
*cost included in Project 1

Note

> During neighborhood-wide improvement projects - like this neighborhood greenway - additional community needs can be addressed. Consider incorporating green infrastructure, placemaking, and stormwater improvements that will solve existing challenges. Seeking funding sources through multiple lenses can be beneficial by achieving multiple objectives through one project.



OLD BAYSIDE

LOCATION:

Old Bayside Road from Beach Elementary to I Street

TIMEFRAME:

Future

PROJECT COSTS:

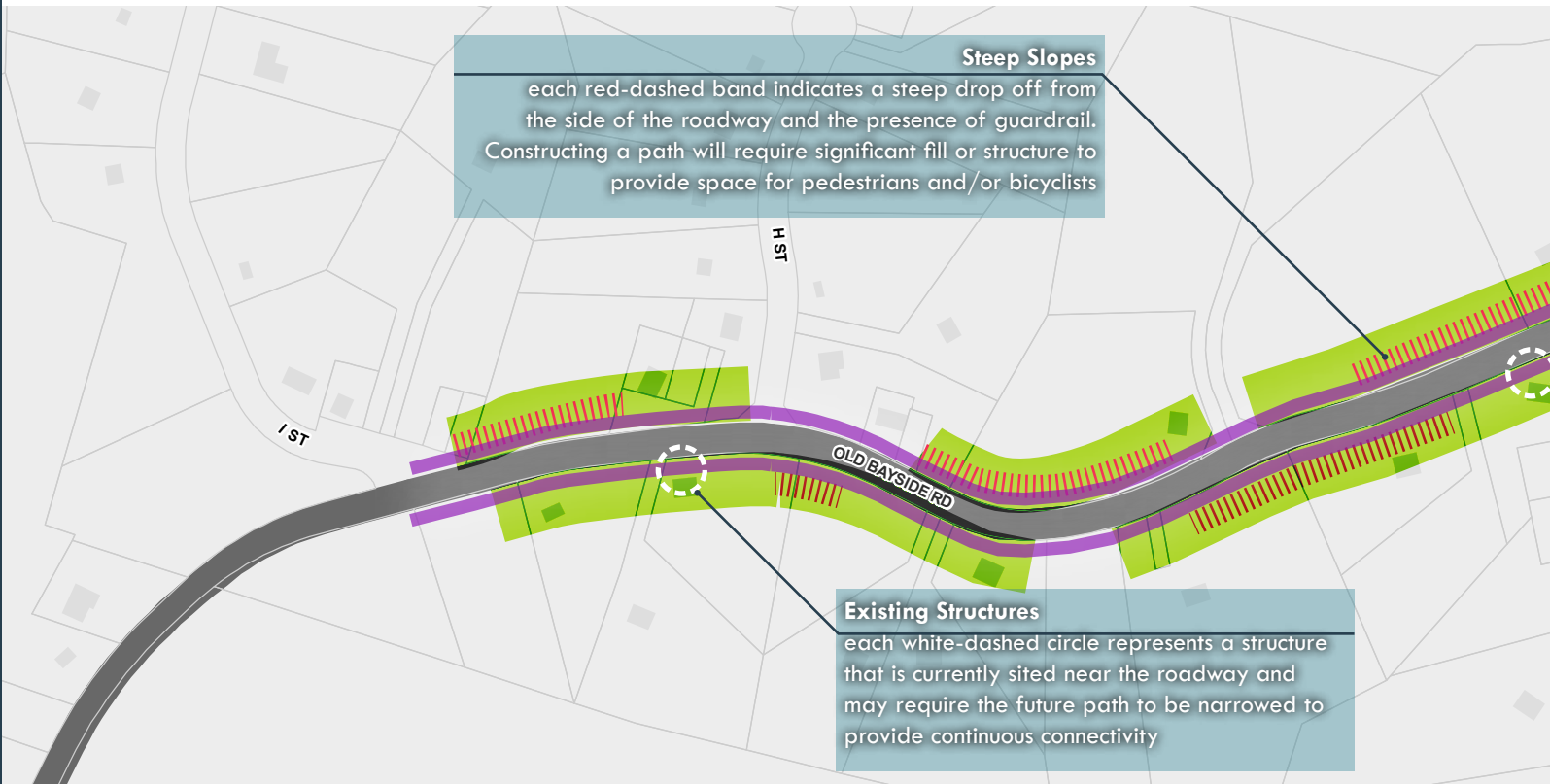
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DESCRIPTION:

Sidewalk (or if space allows, off-road trail) to connect residents to Beach Elementary.

NOTED CHALLENGES: TOPOGRAPHY, EXISTING TREES, RIGHT-OF-WAY, SIGHTLINES

PARTNERS: NEIGHBORS, BEACH ELEMENTARY

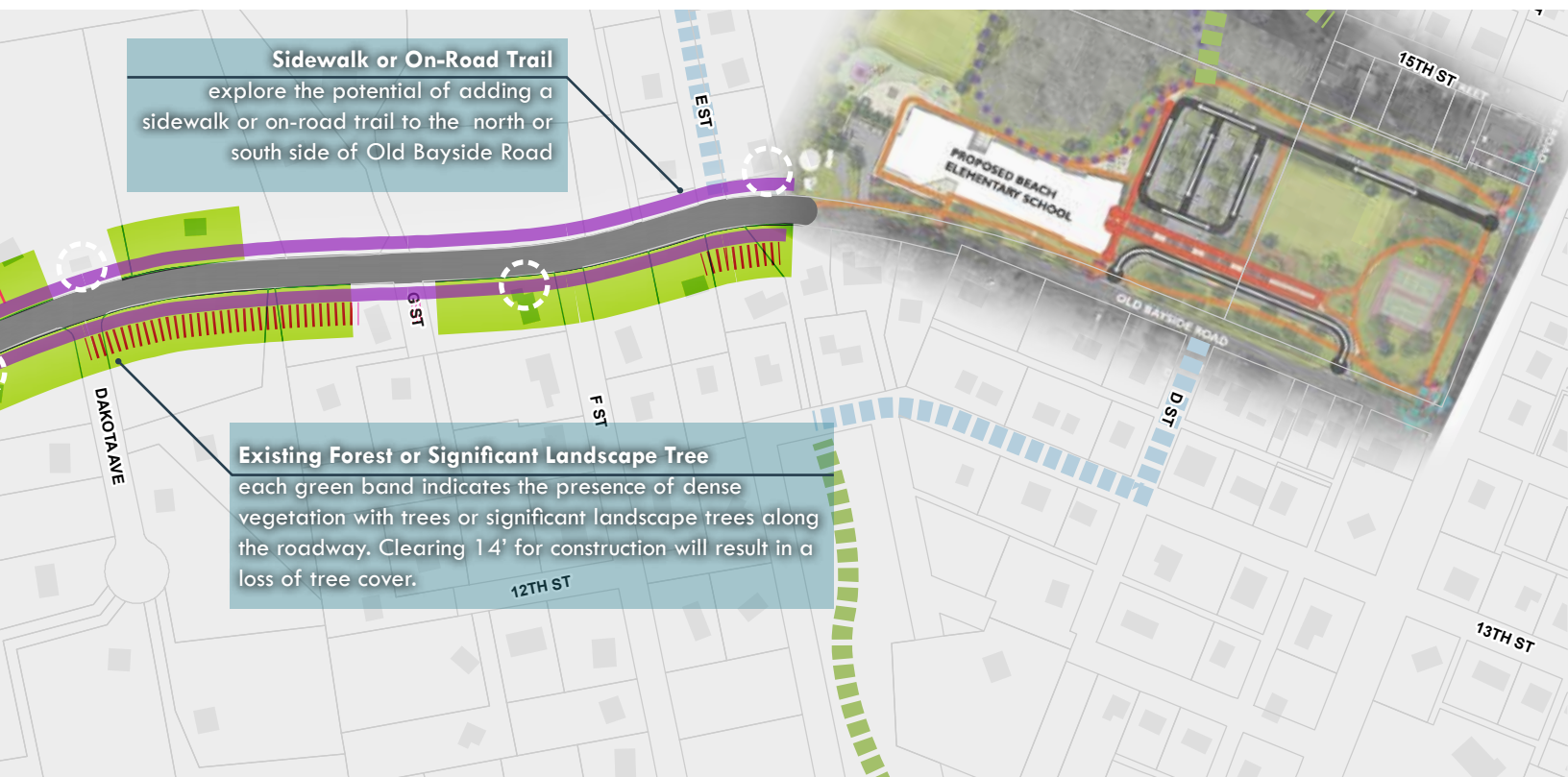


PLANNING FOR FUTURE CONNECTIVITY

A sidewalk or trail along Old Bayside Road would close a gap in the walking and or bicycling system for residents along E Street, F Street, G Street, Dakota Avenue, H Street, and I Street. This path would provide access to Beach Elementary and connect to Chesapeake Village via the future off-road path from 13th Street to Chesapeake Village Boulevard. Building this alignment supports Safe Routes to School efforts and completes a key connection to Kellam's Field and the core of Town after the Harbor Road Trail and school connector are complete.

This project is projected as long-term to enable the Town to continue public engagement relative to the design of this path and step through an in-depth feasibility process. Key challenges to constructing this path include steep slopes and drop-offs immediately adjacent to the roadway (where guardrail is present today - illustrated below as red-orange dashed lines); existing vegetation (drawn in green below); and the presence of existing structures close to the existing roadway, which may preclude the path from remaining the same width throughout the corridor. Exploring feasibility will include a topographic survey of the area, assessment of methods to compensate for steep slopes (including the construction of boardwalks), and understanding the needs, concerns, and wishes of the residents along Old Bayside Road.

As the project evolves, site development progress and new connections around the school should be the tie-in point for any facility along Old Bayside Road.



TRAILS + GREENWAYS



LOCATION:

Throughout Chesapeake Beach

TIMEFRAME:

Varies

PROJECT COSTS:

\$\$\$\$

DESCRIPTION:

6a is a 12' asphalt trail with boardwalk as needed (pairs with 6b - neighborhood greenway)

11a is a 12' asphalt trail with boardwalk as needed (pairs with 11b - neighborhood greenway)

14 is a network of soft-surface hiking trails

NOTED CHALLENGES: TOPOGRAPHY, WETLANDS, ENVIRONMENTAL IMPACTS, ACCESS

PARTNERS: NEIGHBORS, CHESAPEAKE VILLAGE HOA

The existing Railway Trail is a series of asphalt, stamped concrete, and boardwalk that celebrate the history of train service to Chesapeake Beach and connect people with the coastal environment, education, wildlife observation, and health benefits of a trail system. Completing additional loops and spurs to neighborhoods will encourage the community to walk and bike to local destinations and provide fitness loops for residents and visitors of all ages and abilities. Future design should involve consultation with public works and Town leadership to complete final design for each trail with standards commensurate to the existing trail network, and should be based on lessons learned from maintaining each pathway. *Additional design considerations are found on the pages following the Boardwalk cut sheet.*



BOARDWALKS + OVERLOOKS

LOCATION:

West of Kellam's Field (12) and Completing the Railway Trail Loops (13)

Across from the Fire House (15), 29th Street (17), B Street between Old Bayside Road and 13th Street (18)

TIMEFRAME:

Varies

PROJECT COSTS:

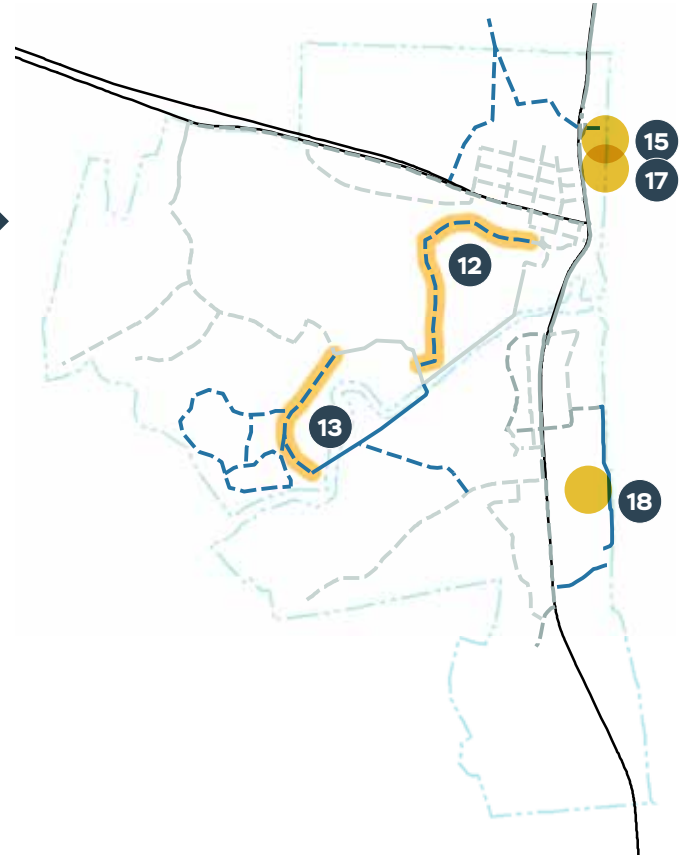
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DESCRIPTION:

12'-14' Boardwalk with overlooks, benches, lighting, and security cameras to align with design standards for existing boardwalks

NOTED CHALLENGES: WETLANDS, ENVIRONMENTAL IMPACTS, FUTURE SEA LEVEL RISE

PARTNERS: NEIGHBORS, RICHFIELD STATION, HORIZON ON THE BAY, RITORI LLC



The existing boardwalk system is an incredible asset to the community providing recreational amenities for residents and becoming a draw for visitors. Completing the loops will satisfy requests from the community to provide better circulation and alleviate the monotony of current "out and back" recreational routes. As conceptual and final designs move forward, attention to sea level rise, species disturbance, safety, and maintenance should be discussed with the Town. Design should be based on lessons learned in boardwalk development and maintenance. *Additional design considerations are found on the following pages.*

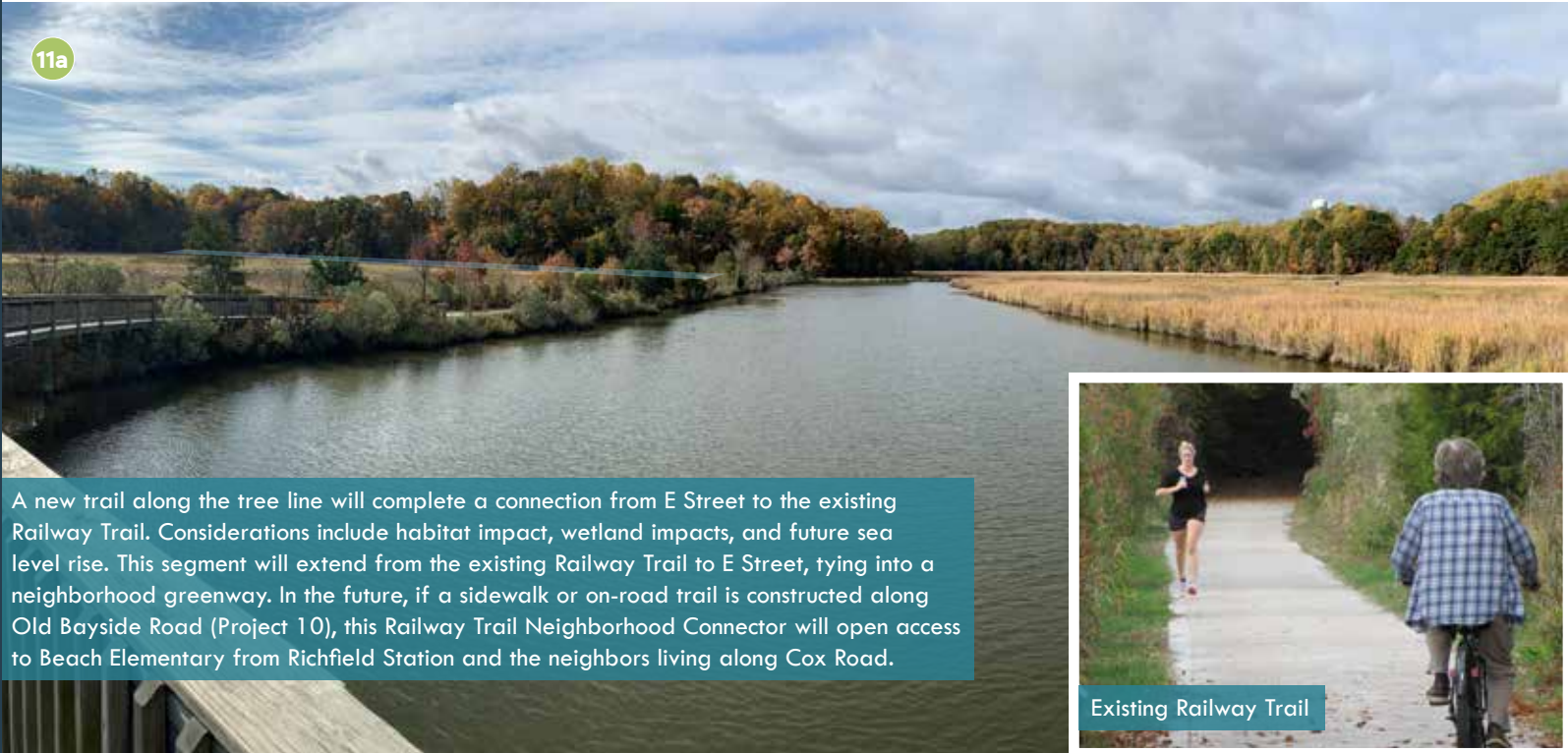


The existing boardwalk can easily be extended at this point to lead to future hiking trails and a new boardwalk loop.



TRAILS + GREENWAYS

11a



A new trail along the tree line will complete a connection from E Street to the existing Railway Trail. Considerations include habitat impact, wetland impacts, and future sea level rise. This segment will extend from the existing Railway Trail to E Street, tying into a neighborhood greenway. In the future, if a sidewalk or on-road trail is constructed along Old Bayside Road (Project 10), this Railway Trail Neighborhood Connector will open access to Beach Elementary from Richfield Station and the neighbors living along Cox Road.



Existing Railway Trail

6a



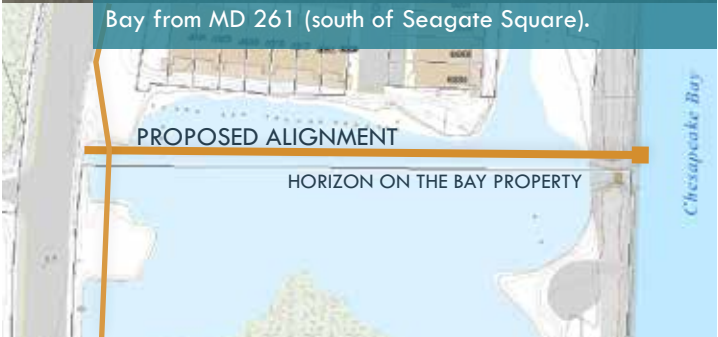
Once constructed, the Chesapeake Village Off-Road Trail will carry residents from the south side of Chesapeake Beach to all points within the Town Center (via the Harbor Road Trail). This game changing path will allow citizens to enjoy car-free circulation to events at Kellam's Field and gain access to the recreational boardwalk system. Dense vegetation, wetlands, and sensitive habitats should be explored during the feasibility stage to determine how to build a sustainable trail with boardwalk variations to traverse the wetland areas.

BOARDWALKS + OVERLOOKS



15

Create a boardwalk that connects to the Chesapeake Bay from MD 261 (south of Seagate Square).



16

29th Street, adjacent to Momma Lucia's, is already an activated space and is most suitable for a new, publicly accessible overlook. Coordination with the restaurant owners would be paramount to discuss patron use, public parking for non patrons, and alcoholic beverage consumption on the overlook.



17

This site provides an opportunity to create a neighborhood amenity. With the raising of the structure, the potential of an overlook is revealed. Prior to designing the space, the Town should explore the structural integrity of the site and provide any necessary improvements. Future site amenities include gardens, seating areas, picnic spaces, and access to the boardwalk below.

DESIGN GUIDELINES FOR TRAILS, GREENWAYS + BOARDWALKS

With the Chesapeake Bay as a front porch amenity of the Town, residents will enjoy the respite of their homes and visitors will continue to flock to this Bayside Town for years to come. Increasingly, residents and visitors seek meaningful ways to interact with nature and marvel at shoreside natural resources. The wetlands, rocky cliffs, wildlife, and bay breezes are a draw for many who wish to live and recreate within this climate. Greenways, trails, and boardwalks provide human access while providing sensitive integration into the existing environment. While amenities, best practices, and guidelines exist, context-sensitive design is paramount to weaving through and along wetlands and shorelines. Boardwalks should

be selected to traverse wetlands with special attention to minimize impacts by using methods, such as helical piles and spacing deck boards, to allow light to reach vegetation. Sensitivity paired with a consistent user experience will be key to establish a sense of safety and comfort. Maintenance of existing surface types - from stamped concrete to asphalt - and lumber choices for boardwalks should be considered prior to executing design. Learning from the last implementation is key to building successful new facilities that suit the capability of the Town's maintenance crews. Design will also be influenced by funding sources. Federal and state money are typically tied to state and national guidelines, as well as compliance with the ADA.



Educational programs conducted along the boardwalk balance human interaction with preservation by educating various age groups about the sensitive habitats, water quality, and ever changing climate within the Chesapeake Bay area.

During feasibility exploration, a survey of the proposed alignment area should be completed to provide an accurate base of topography and potential natural resource impacts. In addition to these considerations, the below items illustrate technical considerations, access, and amenities that will enhance the current trail experience.

STATE & NATIONAL DESIGN GUIDELINES & STANDARDS

At the state and national levels, there are existing guidelines that apply to shared-use paths, pedestrian facilities, and bicycle facilities. Guidelines indicate minimum conditions for key dimensions including slope, horizontal and vertical clearances, surface condition, signage, and pavement markings. Additional local design and construction standards are also applicable. Key standards and organizational guidelines

for consideration include AASHTO, the U.S. Department of Transportation (USDOT), and the MUTCD.

UNIVERSAL DESIGN/ADA ACCESS

Universal design and ADA guidelines ensure access for users of all abilities. In addition, all greenway paths and other trails that receive funding from state or federal sources must conform to the ADA guidelines, and Public Rights of Way Accessibility Guidelines (PROWAG). The Federal Highway Administration published a guidebook entitled, *Designing Sidewalks and Trails for Access*.



Ramps, handrails, and smooth transitions from parking areas to the boardwalk (as seen here) are critical for creating an equitable experience.



Security cameras installed along the existing Railway Trail have provided a sense of security for residents who may be enjoying the boardwalk system alone or near the dawn and dusk hours of the day. As the boardwalk system is expanded, this element should be included to provide a sense of security, and to deter inappropriate behavior.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

Personal safety, both real and perceived, heavily influences a trail user's decision to use a trail and a community's decision to embrace a trail system. Proper design must address both the perceived safety issues (i.e., personal security and fear of crime) and actual safety threats (i.e., infrastructure failure and criminal acts). Creating a safe trail environment goes beyond design and law enforcement and should involve the entire community. The concept of "eyes on the trail" enhances safety by the presence of people and activity as well as the ownership a community takes of a trail and its condition. Crime Prevention Through Environmental Design (CPTED) is defined as "the proper design and effective use of the built environment that can lead to a reduction in the fear and incidence of crime and an improvement in the quality of life." When all spaces have a defined use and the use is clearly legible in the landscape, it is easier to identify undesired behavior. The following 4 principals guide CPTED: Natural Surveillance, Natural Access Control, Territorial Reinforcement, and Maintenance.

LANDSCAPE

Landscape is often used to enhance user experience, provide screening buffers, and create or maintain nearby habitats. Vegetation that obstructs natural surveillance and allows entrapment areas or "hiding" places should be avoided.

- Groundcover and shrubs to be trimmed to a max. of 36" above ground-level height.
- Trees should be trimmed up to provide a minimum of 8' of vertical clearance within the trail corridor.
- Hostile landscaping material (e.g., vegetation with thorns) can be used in

strategic areas to discourage off-path use and eliminate entrapment areas.

- Invasive species should be avoided - the Town should educate any volunteer groups or adjacent communities about the importance of maintaining a healthy growing environment for native species that support habitat.
- Maintenance should be considered prior to selecting species and planting areas along trails - coordinate with the public works staff to understand maintenance capabilities and resources.
- Tree species that drop seeds or fruits that could cause a tripping hazard should be avoided.
- Trees with excessive leaf drop should be avoided to prevent slipping hazards in wet conditions.
- Pollinator gardens, rain gardens, and native specimen plantings are preferred over ornamental planting areas.
- Seasonal color and interest should be considered to enhance user experience.
- Consider adding species tags or signs along greenways, boardwalks, and trails to educate the community about native species, habitat, and food supply for wildlife.

LIGHTING

Adequate pedestrian-scaled lighting helps trail users observe their surroundings and respond to potential threats. Lighting should be used at access points to trails and boardwalk but should not be overused along the trails in a manner that will interfere with migration patterns, habitat, and other wildlife behaviors. Where lighting is installed the illumination should:

- Be adequate to identify a face up to 20 yards away.



The new trail around Kellam's Field and parking area is an example of a place that is appropriate for pedestrian-scale lighting. Neighbors should be consulted and sensors for dimming and motion detection should be considered.

- Have full cut-off fixtures to reduce light pollution.
- Provide uniform coverage and eliminate dark pockets.
- Provide good color rendition (the measure of light quality to replicate colors as viewed on a typical sunny day).
- Not be obstructed by tree canopies or other elements, like signage or shade.

WASTE AND RECYCLING RECEPTACLES

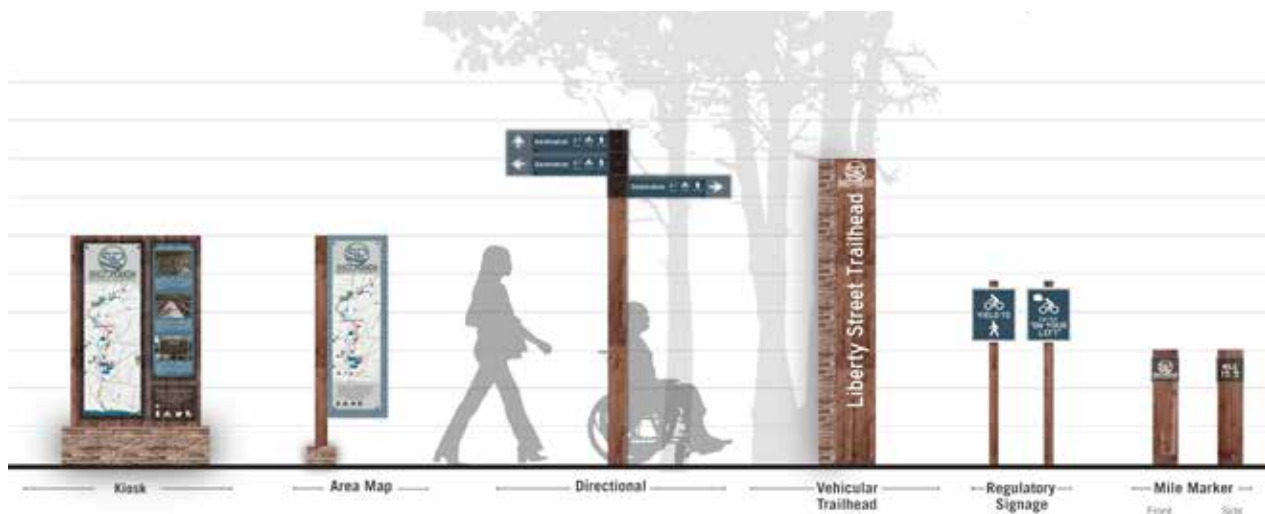
Litter along a trail can lead to a perception of the space not safe or well maintained. Volunteer groups can help monitor the entire alignment during programmed clean-up days. Waste and recycling receptacles should be placed at access points such as trailheads and intersections with other access points. Prior to installation, there should be a maintenance agreement with adjacent neighborhoods and maintenance schedule for the Town to plan for removal of trash and recycling as overflowing containers

can contribute to a sense of perceived unsafe environments.

- Locate receptacles at each trailhead and each seating area (one per every picnic table, one per every two benches).
- In areas with adequate sunlight, consider compacting receptacles for trash and recyclables that use smart technology.
- Receptacles need to be accessible to maintenance personnel and trail users.
- Receptacles should be vandal- and animal-proof.
- Receptacles should be set back a minimum of 3 feet from the edge of the trail.

WAYFINDING, DIRECTIONAL SIGNAGE, KIOSKS, AND INTERPRETIVE SIGNS

The goal of a signage program is to provide a sense of identity and utility for the existing trail network. Signage types include informational, directional, regulatory, confidence markers, access identification, and interpretive panels.



Chesapeake Beach should establish a brand and logo for the trail system, including boardwalks, off-road trails, and on-road trails. A comprehensive wayfinding package with a variety of sign types will help orient users, instill confidence in their path choice, and enable fitness users to track mileage.

The program should adhere to a consistent, selective, and strategic implementation plan so as not to clutter or dominate the visual character of the trails. Signage may inform users of locations to access water and restroom facilities, provide interpretive information for visitors and local school children, and provide a sense of security for new users.

BICYCLE REPAIR STATIONS

Bicycle repair stations are small kiosks designed to offer a complete set of tools necessary for routine bicycle maintenance. Popular locations for placement include major or minor trailheads and rest stops along trails. Repair stations should be placed in areas of high activity to prevent vandalism.

BICYCLE PARKING

Bicycle parking should be placed to avoid user conflict. Securing bicycle parking on hardscape surfaces provides adequate installation contact points. Placement should not interfere with emergency or maintenance vehicle access to the trail. Potential locations include restrooms, trailheads, points of interest, and rest stops. Guidance for bicycle parking includes:

- The bicycle rack should support the bicycle in at least two places, preventing it from falling over.
- The bicycle rack should allow locking of the frame and one or both wheels with a U-lock.



Bicycle repair station (above) come in a variety of styles with a stand and tools that trail users can rely on if they need to perform a repair while on the trail. They should be placed in highly visible locations.

Bicycle parking can be whimsical or branded to complement the logo and wayfinding sign package.



- When installing racks on concrete surfaces, use 3/8-inch anchors to plate mount. Shim as necessary to ensure vertical placement.
- When installing racks on pavers or other non-stable surfaces, embed into base. Core holes should be no less than 3 inches in diameter and 10 inches deep.
- Ensure the rack is securely anchored to ground.
- Consider bicycle racks that resist cutting, rusting, bending, and deformation.

SEATING

Benches should be placed along the trail to provide resting places and at strategic locations with views or interpretive opportunities. Seating along the trail should include backs to provide the opportunity for users of all ages and abilities to fully take a break, if exerted. Picnic tables at trailheads and in adjacent parks provide places

for trail users to congregate for meals or relax. Benches should:

- Be securely anchored to the ground.
- Be placed in areas offering shade and/or shelter.
- Be located every ½ mile to enable families and aging populations to rest frequently.
- Be located a minimum of 3 feet from the edge of the trail.
- Be located a minimum of 4 feet from restrooms and drinking fountains and a minimum of 2 feet from trash and recycling receptacles, lighting poles, and sign posts.
- Enable wheelchair access. Provide access with a hardened surface such as concrete or asphalt at both benches and picnic tables.
- Include drainage that slopes away from the bench and the trail.

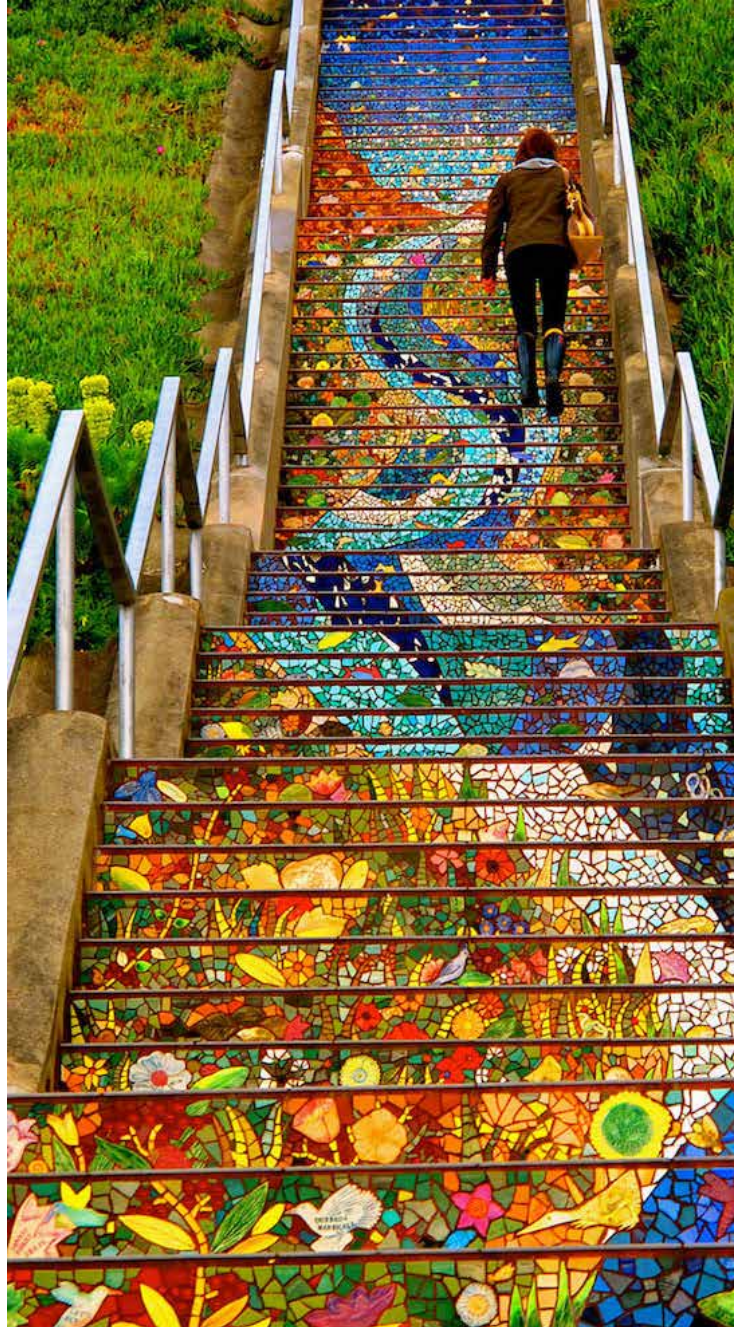
The Town should select a furnishing package that is suitable for the Town Center, on-road trails, boardwalks, and natural / riparian trails. The character may vary slightly for each and all materials and maintenance requirements should be reviewed by the Town to ensure care and longevity comply with the needs of the community and environmental conditions.



PUBLIC ART AND SCULPTURE

Public art engages the community through artists' work and creates a memorable experience for trail users. Art and sculpture can create an identity for the trail and strengthen the emotional connection between the

neighborhood and trail users. Public art can be aesthetic and/or functional, while doubling as sitting or congregational areas. Installation may be permanent or rotational depending on the budget available and involvement from the community.





This plan is a framework to guide growth and enhancements in the Town of Chesapeake Beach over the next ten years and beyond. Implementation of the recommendations will occur incrementally through a partnership of public and private entities and individuals, as outlined throughout the report and below. It is important to note that the master plan is intended to be a flexible guiding document. Many of the concepts illustrated will be further refined and vetted as they evolve from planning to design. Additionally, it is important to view the master plan as a “menu” of projects. As a complement to the Comprehensive Plan, as public and private development occurs, the

projects within this Plan may be reshaped or accelerated through the implementation process. Critical to the implementation of any project is the time needed for additional feasibility (8-16 months), design (8-24 months), funding and grant deadlines, permitting, and construction. Setting realistic expectations for project timelines with community members is an important role the Council, Mayor, and Town staff will play. Education, transparency, and continued engagement create a sense of collaboration and partnership with community members that will maintain momentum for project support and implementation.

COLLABORATION + CHAMPIONS: ROLES AND RESPONSIBILITIES OF PARTNERS

The potential implementation partners vary by project. Most projects will require a partnership among several partners, with one partner having primary implementation responsibility. Implementation partners for the Chesapeake Beach Connectivity Study include:

- Walkable Community Advisory Group (WCAG)
- The Town of Chesapeake Beach
- Chesapeake Beach Planning and Zoning Committee
- Calvert County, Maryland
- Maryland Department of Transportation State Highway Association (MDOT SHA)
- The Town of North Beach
- North Beach Volunteer Fire Department
- Beach Elementary School
- Residents
- Community Groups
- Business Owners

Projects along MD 260 and MD 261 will require coordinate with MDOT SHA. This coordination with MDOT SHA should be immediately to inform MDOT SHA of the desires of the community and gain an understanding of how the Town can partner with MDOT SHA to move projects forward. Sharing this plan with the Office of Planning and Preliminary Engineering and scheduling a meeting to discuss the improvements will be one of the first steps. Depending on the priorities of State, funding availability, and contribution by Chesapeake Beach the timing of projects will vary.

FUNDING NEEDS AND OPPORTUNITIES

When implementing bicycle and pedestrian networks, it is common to pursue funding from multiple sources for design and construction. Bicycle and pedestrian funding can be awarded by federal, state, local, and private sources. The following table identifies a variety of grant programs that may provide funding for portions of the network.

Opinion of Probable Cost

A planning-level cost estimate is included with the recommendations in this report as a magnitude of potential cost illustrated by dollar signs - one dollar sign being the most economical projects and multiple dollar signs indicating higher capital costs. Planning for implementation includes segmenting project costs into categories to create more manageable yearly budget allocation. The funding sources used should be explored to determine if funds require a match, may be used for planning, are only for design, or if they source is appropriate for construction.

PHASING

Prioritizing and phasing projects allows the various agencies and community champions involved to plan for grant writing, budget funds for implementation, and plan future maintenance activities. A workbook follows the funding chart that will allow the Town to plan for and track process. Yearly summits are recommended to reevaluate progress. The workbook can be printed and revised as project phasing changes with the progress of the Comprehensive Plan, collaboration with MDOT SHA, and private development.

HOW TO USE THE IMPLEMENTATION WORKBOOK

Each numbered project (refer to the maps in chapter 3) has a row within the Implementation Workbook. Each year, the Council, Town Staff, and other leaders should evaluate the progress of each project and determine how to advance toward construction. Available funding is key to initial planning and the first meeting should begin with an understanding of the existing budget for the current year, budget projections for subsequent years, and potential funding awarded through grant applications. Some projects may require further feasibility studies (including project 10 - Old Bayside Trail) while others may advance into final design immediately.

The table is organized by Immediate, Short, Mid, Long, and Future term. The Town will decide the time frame for each. Immediate is recommended as the first two years, short is recommended to be complete in year five. Within each timeframe for each project is a table as seen below. The workbook is designed to track progress and plan, therefore, the suggested method for tracking is to fill in the current term, indicated planned progress with circles, and when complete, shade in the boxes.

KEY

GRANT	This row is for tracking planning grant applications or progress. "W" indicates when to write a grant, "D" indicates that it is due in the current timeframe.	W	D			
PLAN	Use this space to indicate progress on feasibility studies or other planning efforts.					
DESIGN	Circle or shade the progress of design, 30%, 60%, etc. through to when the Town plans or has complete the Bidding (BID) process for construction.	30	60	90	100	BID
BUILD	During construction, indicate if the project is Starting (S), In Progress (IP), or Complete (C).	S	IP	C		
\$	This row provides space to indicate the budget for the CURRENT stage of planning or design. This may include planning or design fees as well as the construction budget. Also, note if funds are Town funds or from another source.					

SAMPLE OF WORKBOOK IN SHORT TERM

	IMMEDIATE	SHORT-TERM										
SAMPLE PROJECT	GRANT	W	 	GRANT	W	D	2023					
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$	\$5,000					\$	\$40,000				
	NOTES	Grant due 10/31! Budget 20% match for next year (2022). \$5k for grant writer.					NOTES	Grant Awarded! Complete 100% Design this year (2022) and work on new grant for construction next year.				

TYPE	GRANT PROGRAM NAME	TYPE OF WORK FUNDED					AWARDS				PROGRAM DESCRIPTION
		BICYCLE	PEDESTRIAN	TRAILS	STREET IMPROVE.	OTHER	AVAIL. FUNDING	LUMP SUM	REIMBURS.	FUNDING - MATCH	
Federal	Transportation Alternatives Program	x	x	x	x		\$\$ - \$\$\$\$\$		x	80 - 20	Funds transportation-related community projects that strengthen the intermodal transportation system.
	Safe Routes to School	x	x		x		\$\$ - \$\$\$\$\$		x	80 - 20	Supports projects that enable and encourage children to safely walk, roll, or bicycle to school.
	Recreational Trails Program	x	x	x			\$ - \$\$\$		x	80 - 20	Funds community-based motorized and non-motorized recreational trail projects.
	Federal Lands Access Program	x	x	x	x		\$\$\$ - \$\$\$\$\$		x	80 - 20	Improves transportation facilities that provide access to, are adjacent to, or are located within Federal lands.
	Community Development Block Grants	x	x		x		\$ - \$\$\$\$\$	x	x	N/A	Funds housing, public facility, or economic development projects that either benefits persons of low- and moderate-income, eliminates slum and blight, or meets an urgent need of recent origin that threatens public health and safety.
	Surface Transportation Block Grant Program	x	x		x		\$\$\$ - \$\$\$\$\$		x	80 - 20; 83 - 17; 90 - 10; 100 - 0	Provides flexible funding for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge, and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects.
	BUILD Discretionary Grants	x	x	x	x	x	\$\$\$\$\$		x	80 - 20	Provides investments in surface transportation infrastructure and can support roads, bridges, transit, rail, ports, or intermodal transportation.
	INFRA Grants (Infrastructure for Rebuilding America)	x	x	x	x	x	\$\$\$\$\$		x	60 - 40	Provides dedicated, discretionary funding for projects that address critical issues facing our nation's highways and bridges.
	Congestion Mitigation and Air Quality Improvement (CMAQ) Program	x	x	x	x	x	\$\$\$ - \$\$\$\$\$			80 - 20; 83 - 17; 90 - 10; 100 - 0	Supports surface transportation projects and other related efforts that contribute air quality improvements and provide congestion relief. Funding is available for nonattainment areas and maintenance areas.
National Highway Performance Program (NHPP)					x	\$\$\$ - \$\$\$\$\$		x	80 - 20; 83 - 17; 90 - 10; 100 - 0	Provides support for the condition and performance of the National Highway System (NHS); provides support for the construction of new facilities on the NHS; and ensures that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS.	
State	Maryland Bikeways Program	x		x	x		\$\$ - \$\$\$\$\$		x	80 - 20	Funds projects within a Priority Funding Area, within 3 miles of a rail station or major bus hub, in the State Trails Plan, or included in the annual transportation priority letter submitted to MDOT.
	Bicycle and Pedestrian System Preservation Funds	x	x		x					75 - 25	Constructs and upgrades bicycle and pedestrian facilities to provide accessible facilities and a connected network. Comprised of Sidewalk Reconstruction for Pedestrian Access (Fund 33), New Sidewalk Construction for Pedestrian Access (Fund 79), and Bicycle Retrofit (Fund 88).
	Community Legacy Program	x	x		x		\$ - \$\$\$		x	50 - 50	Provides local governments and community development organizations with funding for essential projects aimed at strengthening communities through activities such as business retention and attraction, encouraging homeownership, and commercial revitalization. Forest Heights is eligible as a designated Sustainable Community.

TYPE	GRANT PROGRAM NAME	TYPE OF WORK FUNDED					AWARDS				PROGRAM DESCRIPTION
		BICYCLE	PEDESTRIAN	TRAILS	STREET IMPROVE.	OTHER	AVAIL. FUNDING	LUMP SUM	REIMBURS.	FUNDING - MATCH	
Private	Wal-mart Local Community Grants					X	\$	X		N/A	Provides funding directly from Wal-mart facilities to local organizations in the U.S.
	Home Depot Community Impact Grants					X	\$	X		N/A	Awards grants to entities using the power of volunteers to improve the community. Grants are given in the form of The Home Depot gift cards for the purchase of tools, materials, or services.
	National Fish and Wildlife Foundation Five Star and Urban Waters Restoration Grant Program					X	\$ - \$\$	X		1:1 match ratio	Seeks to develop nation-wide community stewardship of local natural resources, preserving these resources for future generations and enhancing habitat for local wildlife. Projects seek to address water quality issues in priority watersheds, such as erosion, pollution from stormwater runoff, and degraded shorelines.
	Abell Foundation - Community Development Grants					X	\$ - \$\$\$	X			Encourages initiatives that attract resident investment in neighborhoods, promote sustainability, increase economic development opportunities, and further entrepreneurial talent to increase the livability of neighborhoods, the number of residents, the number of jobs, and the size of the tax base.
	Million Mile Greenway			X			\$	X		\$1,500	Awards micro-grants to young nonprofits at the early stages of planning, promoting, and building greenways and trails. Provides \$1,500 in funding and up to \$10,000 in pro bono marketing and technology consulting services.
	Partners for Places (The Funders' Network for Smart Growth and Livable Communities)					X	\$\$	X		1:1 match ratio	Creates opportunities for cities and counties to improve communities by building partnerships between local government sustainability offices and place-based foundations.
	Bank of America Charitable Foundation					X	\$ - \$\$	X		N/A	Focuses on building pathways to economic mobility by addressing the issues of workforce development, education, basic needs, and community development. Committed to advancing a more diverse and inclusive society by expanding opportunities and supporting equitable solutions that will enable low-income communities to grow and prosper.
	PeopleForBikes Community Grant Program	X		X	X		\$	X		49 - 51	Provides funding for projects that build momentum for bicycling in communities across the US.

FUNDING KEY	
\$	less than \$25k
\$\$	\$25k-\$100k
\$\$\$	\$100k-\$500k
\$\$\$\$	\$500k - \$1,000,000

TABLE 1. Implementation Workbook

	IMMEDIATE					SHORT-TERM						
1 - CHESAPEAKE BEACH GATEWAY TRAIL	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
2 - SAFE CROSSINGS	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
3 - KELLAM'S FIELD TRAIL	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					

MID-TERM	LONG-TERM	FUTURE
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GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					



	IMMEDIATE					SHORT-TERM						
4 - HARBOR ROAD PATH	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
5 - RICHFIELD STATION NEIGHBORHOOD GREENWAYS	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
6 (A + B) - CHESAPEAKE VILLAGE OFF-ROAD TRAIL	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					

MID-TERM	LONG-TERM	FUTURE
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GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					



	IMMEDIATE					SHORT-TERM						
7 - COX ROAD NEIGHBORHOOD GREENWAY AND SIDEWALK	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
8 - C STREET NEIGHBORHOOD GREENWAY	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
9 - NORTH SIDE RESIDENTIAL GREENWAY	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					

MID-TERM	LONG-TERM	FUTURE
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GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					



	IMMEDIATE					SHORT-TERM						
10 - OLD BAYSIDE TRAIL	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
11 (A + B) - RAILWAY TRAIL NEIGHBORHOOD CONNECTOR	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
12 - BAYVIEW TRAIL LOOP	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					

MID-TERM	LONG-TERM	FUTURE
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GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					



	IMMEDIATE					SHORT-TERM						
13 - RICHFIELD STATION CONNECTOR	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
14 - FISHING CREEK HIKING TRAILS	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
15 - BAYSIDE BOARDWALK & OVERLOOK	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					

MID-TERM	LONG-TERM	FUTURE
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GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

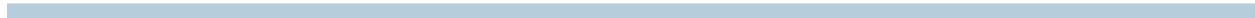
GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					

GRANT	W	D			
PLAN					
DESIGN	30	60	90	100	BID
BUILD	S	IP	C		
\$					
NOTES					



	IMMEDIATE					SHORT-TERM						
16 - STINNETT TRAIL	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
17 - 29TH STREET OVERLOOK	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					
18 - B STREET OVERLOOK	GRANT	W	D				GRANT	W	D			
	PLAN						PLAN					
	DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID
	BUILD	S	IP	C			BUILD	S	IP	C		
	\$						\$					
	NOTES						NOTES					

MID-TERM						LONG-TERM						FUTURE							
GRANT	W	D				GRANT	W	D											
PLAN						PLAN													
DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID								
BUILD	S	IP	C			BUILD	S	IP	C										
\$						\$													
NOTES						NOTES													
GRANT	W	D				GRANT	W	D											
PLAN						PLAN													
DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID								
BUILD	S	IP	C			BUILD	S	IP	C										
\$						\$													
NOTES						NOTES													
GRANT	W	D				GRANT	W	D											
PLAN						PLAN													
DESIGN	30	60	90	100	BID	DESIGN	30	60	90	100	BID								
BUILD	S	IP	C			BUILD	S	IP	C										
\$						\$													
NOTES						NOTES													

Appendix D

Forest Interior Dwelling Bird Habitat Covenant and Agreement

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**FOREST INTERIOR DWELLING BIRD HABITAT
PROTECTIVE COVENANT AND AGREEMENT**

This Forest Interior Dwelling Bird Habitat Protective Covenant and Agreement (hereinafter this Agreement), entered into this 12 day of July, 2006 by and between Richfield Station II Joint Venture, LLP a Maryland limited liability partnership (hereinafter the Grantor) and Chesapeake Beach, Maryland, a municipal corporation and body politic of the State of Maryland (hereinafter the Grantee).

WHEREAS, Richfield Station holds title, in fee simple, to all that piece or parcel of land situate in Calvert County, Maryland, and more particularly described on Exhibit A attached hereto and incorporated herein (the Property).

LR IMPROVE SU 20.00
RECORDING FEE 75.00
TOTAL 95.00

WHEREAS, that portion of the Property described on the series of Exhibits identified as B-1, consisting of approximately 202.78 acres, shall be preserved as a forest interior dwelling bird habitat protection area (hereinafter the FIDS Protection Area).

Rcpt # 58771
Blk # 742

WHEREAS, Grantor has agreed to allow the use of the FIDS Protection Area by Grantee as an area dedicated for meeting mitigation requirements for Grantor's development of other areas of the Property under the Grantee's Local Critical Area Protection Program.

Jul 13, 2006 12:47 PM

WHEREAS, Grantee acknowledges that Grantor is required to convey the property upon which this covenant shall run to the Richfield Station Homeowners Association or similar entity in conjunction with subdivision of further areas of Richfield Station. Grantee acknowledges and agrees that execution of this Protective Covenant and subsequent transfer of the underlying property to the Association or similar entity as encumbered complies with the applicable transfer requirements for subdivision.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and the premises and mutual covenants contained herein, Grantor, does hereby establish the covenants, conditions and restrictions hereinafter set forth and creates a servitude on the FIDS Protection Area, which estate, interest, property and servitude will result from the restrictions hereby imposed upon the use of the FIDS Protection Area of the Grantor, Grantor covenants on behalf of itself, its legal representatives, successors and assigns, as applicable, to do so and refrain from doing upon the FIDS Protection Area, the various acts hereinafter mentioned.

The restrictions hereby imposed upon the FIDS Protection Area and the acts which the Grantor so covenants to do and refrain from doing upon the FIDS Protection Area in connection therewith are as follows:

1. Except as provided in paragraph 3, no development activities, including construction or alteration of residential, commercial, industrial or other accessory structures of any kind may be placed or erected upon the FIDS Protection Area, nor any use in connection therewith shall be made of the FIDS Protection Area. Nothing in this Agreement prohibits the RCA density generated by the acreage of land within the FIDS

CALVERT COUNTY CIRCUIT COURT (Land Records) KPS 2798, p. 0108, MSA_CE4_2917. Date available 07/18/2006. Printed 09/03/2021.

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**FOREST INTERIOR DWELLING BIRD HABITAT
PROTECTIVE COVENANT AND AGREEMENT**

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LR IMPROVE SU 20.00
RECORDING FEE 75.00
TOTAL 95.00

WHEREAS, that portion of the Property described on the series of Exhibits identified as B-1, consisting of approximately 202.78 acres, shall be preserved as a forest interior dwelling bird habitat protection area (hereinafter the FIDS Protection Area).

Rcpt # 58771
Blk # 742

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Jul 13, 2006 12:47 PM

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The restrictions hereby imposed upon the FIDS Protection Area and the acts which the Grantor so covenants to do and refrain from doing upon the FIDS Protection Area in connection therewith are as follows:

1. Except as provided in paragraph 3, no development activities, including construction or alteration of residential, commercial, industrial or other accessory structures of any kind may be placed or erected upon the FIDS Protection Area, nor any use in connection therewith shall be made of the FIDS Protection Area. Nothing in this Agreement prohibits the RCA density generated by the acreage of land within the FIDS

Protection Area from being used by Grantor to support development (i.e. required acreage in support of residential dwelling units at a 1 unit per 20 acre density) upon land not subject to this Agreement.

2. Agricultural activities and the harvesting of timber are prohibited in the FIDS Protection Area.

3. Recreational activities may be allowed in the FIDS Protection Area if those activities are consistent with the Critical Area statute, Natural Resources Article 8-1801 et seq., COMAR 27.01 and 27.02, and the Town's Critical Area Program. A fitness trail associated with the adjacent subdivision, or a walking trail constructed by the Town for recreational use, may be constructed in the FIDS Protection Area only after review and approval by the Critical Area Commission.

TO HAVE AND TO HOLD unto the Grantee, its successors, legal representatives, and assigns, forever, the covenants contained herein to bind and run with the land, in perpetuity; subject however to the right of the Grantee to modify or terminate such estate, interest, property and servitude hereby granted only upon prior written notice to the Grantor, its successors, legal representatives and assigns, prior written approval by the Critical Area Commission for the Chesapeake and Atlantic Coastal Bays, and the execution of an instrument and recordation thereof among the Land Records of Calvert County, Maryland declaring that the estate, interest easements and servitude created under this Covenant and Agreement is modified or is terminated and no longer is in force and effect.

The Grantee is hereby granted the right to enforce this Covenant and Agreement and the covenants, conditions and restrictions set forth herein. Grantee agrees that it shall use the FIDS Protection Area for mitigation purposes only and that its use shall be consistent with the restrictions and covenants imposed on the FIDS Protection Area herein.

IN WITNESS WHEREOF, this instrument has been executed by Richfield Station II Joint Venture, LLP, Grantor and Chesapeake Beach, Maryland, Grantee, on the day and year hereinbefore written, under their respective seals.

ATTEST:

RICHFIELD STATION II JOINT VENTURE,
LLP, GRANTOR

By: Austin Spicknall Calvert L.P.,
General Partner

By: Austin Chesapeake L.P., General Partner

By: The Austin Group, Ltd., General Partner

Susan Martroy

Michael L. Roepcke, President (SEAL)
By: Michael L. Roepcke, President

CHESAPEAKE BEACH, MARYLAND, GRANTEE

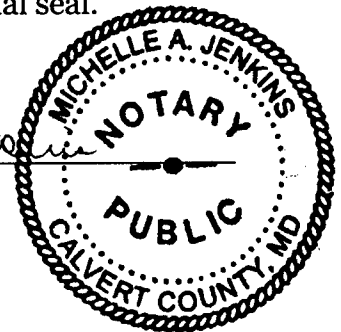
M Jenkins _____ Gerald W. Donovan (SEAL)
By: Gerald W. Donovan, Mayor

STATE OF MARYLAND, CALVERT COUNTY, to wit:

I HEREBY CERTIFY, that on this 12 day of July, 2006, before me, the subscriber, a Notary Public of the State of Maryland aforesaid, personally appeared Gerald W. Donovan, Mayor of Chesapeake Beach, Maryland, known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument and acknowledged the foregoing to be his act and deed and in my presence signed and sealed the same and did further acknowledge that he had the authority to execute the foregoing instrument on behalf of the party named therein.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Michelle A. Jenkins
NOTARY PUBLIC



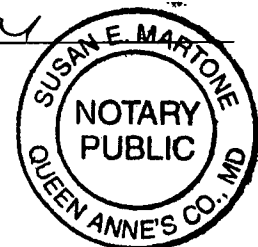
My Commission Expires:
12/1/06

STATE OF MARYLAND, Anne Arundel COUNTY, to wit:

I HEREBY CERTIFY, that on this 28 day of June, 2006, before me, the subscriber, a Notary Public of the State of Maryland aforesaid, personally appeared Michael L. Roepcke, known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument and acknowledged the foregoing to be his act and deed and in my presence signed and sealed the same and did further acknowledge that he had the authority to execute the foregoing instrument on behalf of the party named therein.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

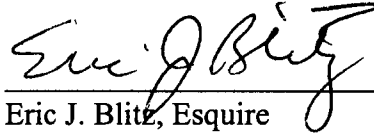
Susan E. Martone
NOTARY PUBLIC



My Commission Expires:
12/1/06

Certification

I certify that this instrument has been prepared by an attorney admitted to practice before the Court of Appeals of Maryland.



Eric J. Blitz, Esquire