



CAPE COD
COMMISSION

2025 Regional Policy Plan

DRAFT

JUNE 2025

Draft 2025 Regional Policy Plan

CONTENTS

Introduction	5
1. The Cape Cod Region	6
Cape Cod Commission Responsibilities	7
2. Evolution of the Regional Policy Plan	10
Previous Versions of the RPP	10
RPP Update Process	11
Public Comment and Feedback on Draft	14
3. A Regional Vision for Cape Cod	15
Growth Policy for Barnstable County	15
4. Cape Cod Systems	16
Natural Systems	16
Built Systems	21
Community Systems	30
5. Key Regional Priorities	39
Protecting Open Space and Natural Resources	39
Restoring and Protecting Coastal and Fresh Water Quality	40
Mitigating Climate Change and Adapting to its Impacts	42
Preserving Historic and Cultural Resources	43
Increasing Housing Attainability	43
Planning and Providing for Necessary Infrastructure	44

CAPE COD COMMISSION

3225 Main Street • P.O. Box 226 • Barnstable, MA 02630

508-362-3828 • Fax: 508-362-3136 • Email: frontdesk@capecodcommission.org

www.capecodcommission.org

Strengthening the Economy	45
6. Goals and Objectives.....	46
Natural Systems.....	46
Water Resources.....	46
Ocean Resources.....	46
Wetlands Resources.....	47
Wildlife and Plant Habitat.....	47
Open Space.....	47
Built Systems	47
Community Design	48
Coastal Resiliency.....	48
Capital Facilities and Infrastructure	48
Transportation.....	48
Energy.....	49
Waste Management	49
Climate Change	49
Community Systems	50
Cultural Heritage.....	50
Economy	50
Housing	50
7. Coordinated Regional and Local Planning.....	51
Targeted Regional and Local Planning Efforts	51
Cape Cod Section 208 Area Wide Water Quality Management Plan.....	51
Freshwater Strategy	52
Comprehensive Economic Development Strategy	52
Regional Transportation Plan.....	53
Regional Housing Strategy.....	54
Cape Cod Climate Action Plan	54
Cape Cod Ocean Management Plan	55
Local Comprehensive Planning	55

8. Cape Cod Placetypes	56
Natural Areas.....	56
Rural Development Areas.....	56
Suburban Development Areas.....	57
Historic Areas	58
Maritime Areas.....	58
Community Activity Centers.....	59
Industrial Activity Centers	60
Military and Transportation Areas.....	60
9. Regional Regulatory Review	61
The Role of the Goals and Objectives of the RPP	61
The Role of Technical Guidance in Regulatory Review	62
The Role of the Cape Cod Placetypes in Regulatory Review	62
The Role of Sensitive Resources in Regulatory Review.....	62
RPP Consistency and Probable Benefit/Detriment Determinations	63
Waiver and Flexibility	63
Review Goals and Objectives of the Regional Policy Plan	64
Planning Tools Available through the Act	69
10. Recommended Actions	70
Natural Systems	70
Built Systems.....	71
Community Systems	73
Measuring Progress.....	74

Introduction

Since the development of the last Regional Policy Plan, Cape Cod, and the world, experienced an unprecedented global pandemic that created lasting changes in the way we live and work, with acute impacts to the region. People flocked to Cape Cod, where cherished natural spaces and outdoor recreational assets allowed for safer havens of activity, increasing the already high desirability of the region as a place to visit and live, and emphasizing the importance of balancing the needs of the region's natural, built, and community systems. Together, these systems comprise Cape Cod and their many functions can both work together and, at times, present competing interests. Finding and maintaining a balance in protecting the region's sensitive resources while advancing initiatives to provide essential services for those who live, work, and visit Cape Cod is imperative for the region's future.

While the region has faced both well-known and exceptional challenges since the last Regional Policy Plan, it has also made significant strides in addressing its vulnerabilities and establishing frameworks for sustaining a thriving Cape Cod. We've invested hundreds of millions of dollars in wastewater infrastructure, critical to remediating and protecting coastal water quality, through local commitment to project implementation and with financial support from the Cape Cod and Islands Water Protection Fund. We now have the region's first Climate Action Plan, completed in 2021, to guide action for mitigating climate change while also improving the region's resilience to its impacts. We have completed the first Regional Housing Strategy, to help address our housing availability and affordability challenges. We've committed to longer-term and consistent monitoring of freshwater ponds and lakes so we can most effectively protect these essential freshwater resources. We've also continued to maintain and update our transportation and economic development plans to best suit the needs of an ever evolving region. While these initiatives are focused on specific issues the region must plan for, they work in concert with one another guided by the Regional Policy Plan to ensure the region's natural, built, and community systems all prosper.

The actions we take over the next several years will impact the region for decades to come. We must ensure development is focused in areas with supportive infrastructure, safeguard our sensitive natural lands, protect our coastal and fresh water resources, preserve and elevate our cultural heritage, provide housing that is attainable for residents from diverse backgrounds, promote access to high quality employment opportunities, and develop and implement the plans, initiatives, and tools that will allow the region to continually adapt and recover from predicted and unforeseen disruptions that may come our way. The 2025 Cape Cod Regional Policy Plan serves as a guide for how to keep this special place special.

1. The Cape Cod Region

Cape Cod is an iconic peninsula of 15 towns extending 60 miles into the Atlantic Ocean, and currently home to approximately 230,000 year-round residents. The peninsula now called Cape Cod was home to the Wampanoag for thousands of years before the arrival of European colonists. The Wampanoag are also known as “People of the First Light,” reflecting the eastern position of the peninsula. Many of the familiar names used for landforms and places testify to their long presence in the region. Acknowledging the Wampanoag’s long stewardship of this land aims to provide a more comprehensive history of the people who played an important role in shaping and defining this area. Their history is full of hardship brought by Europeans, including disease, slavery, and loss of their land. Today, the Wampanoag live throughout southeastern Massachusetts, including in the Wampanoag communities of Mashpee, Herring Pond, and Aquinnah. Their careful stewardship of these lands and their efforts to maintain their cultural traditions and accurately tell their history should be respected and supported.

With over 500 miles of coastline and beaches, almost 900 freshwater ponds covering approximately 17 square miles of the region, and more than 100,000 acres of habitat, wetlands, and protected open space, the natural beauty, environmental resources, and historic character of the region have made Cape Cod a globally-recognized destination. Though each Cape town is unique, the Cape is often described as four sub-regions of towns with more similar characteristics—Upper, Mid, Lower, and Outer.

The Upper Cape sub-region consists of four towns: Bourne, Sandwich, Falmouth, and Mashpee. This sub-region of the Cape is closest to Boston and the rest of Massachusetts and contains the Cape Cod Canal and the Bourne and Sagamore bridges. Although seasonality permeates the entire Cape region, the Upper Cape communities tend to be less seasonal than the Lower and Outer Cape towns, with Bourne and Sandwich having the lowest proportions of seasonal housing in the region and some of the region’s youngest populations. The Upper Cape tends to have higher median incomes than the other Cape towns, lower median home prices than the Lower and Outer Cape towns, and economies that are somewhat less seasonal and focused on tourism. Woods Hole Oceanographic Institution, Marine Biological Laboratory, the National Oceanic and Atmospheric Administration, and associated businesses and institutions in Falmouth and Bourne make the Upper Cape a key area for oceanographic research and related industries. Also unique to this sub-region is Joint Base Cape Cod, which is approximately 22,000 acres in size, and includes land in parts of Bourne, Mashpee, and Sandwich and abuts the Town of Falmouth. The Upper Cape is relatively densely developed outside of Joint Base Cape Cod but does contain significant natural resources and open spaces.

Though the Mid Cape sub-region is comprised of only three towns—Barnstable, Yarmouth, and Dennis—it is home to almost 40% of the region’s year-round population. In addition to the historic Cape villages and downtowns, the Mid Cape also has large areas of suburban development, particularly in Barnstable and along Route 28 in Yarmouth. Route 132 in Barnstable is the Cape’s regional retail and commercial center, with a regional mall as well as several other larger, national retailers. The Town of Barnstable is the largest town on the Cape and has the largest population. Education and Health Services make up almost 40% of all employment in Barnstable, but moving west to east within the Mid Cape, the towns generally become more seasonal and tourism-oriented both in terms of housing units and employment opportunities.

The Lower Cape, consisting of the towns of Brewster, Harwich, Orleans, and Chatham, is where the typical development patterns of the region start to transition from denser suburban to somewhat more rural and include large tracts of open space such as Nickerson State Park and the Punkhorn Parklands. Year-round populations and the number of housing units in this region are a fraction of the Upper and Mid Cape towns, though still higher than the Outer Cape towns. The Lower Cape communities tend to have older populations and higher median incomes than the Mid Cape towns. This sub-region is much more seasonal than the Upper and Mid Cape, though not as seasonal as the Outer Cape. Though this sub-region tends to have higher median incomes than the Mid Cape, housing is also more expensive, with Chatham and Orleans regularly having the highest median home prices on Cape Cod.

The four towns of Eastham, Wellfleet, Truro, and Provincetown make up the Outer Cape. These towns have significantly smaller year-round populations than the rest of the region—Truro’s estimated year-round population is only about 1,700 people. These towns are much more rural in nature than the rest of the Cape. Part of what makes this sub-region unique and contributes to the rural and natural development patterns that typify these towns is the presence of the Cape Cod National Seashore. This National Park contains more than 44,000 acres in the Outer Cape (as well as in portions of Orleans and Chatham) and provides critical and stunning wildlife habitat, open space, and recreational opportunities, with limited development within its borders. In all towns within this sub-region, housing units outnumber the year-round population with more than half of the housing stock being used seasonally. This sub-region of the Cape experiences the most significant seasonal changes in population, housing, and the economy, and is very heavily focused on the tourism industry.

CAPE COD COMMISSION RESPONSIBILITIES

Unprecedented growth on Cape Cod in the 1980s prompted the Massachusetts General Court (the state legislature) to pass the Cape Cod Commission Act (Act) in 1989. The Act was signed into law by the Governor in January 1990 and ratified by a majority of Barnstable County voters in March 1990.

The Act established the Cape Cod Commission (Commission) as Barnstable County's regional planning and regulatory agency. Through the Act, the Commission is responsible for balancing the protection of the region's resources with appropriate development and economic progress. Simply put, the mission of the Cape Cod Commission is to keep a special place special.

Section 1 of the Act identifies the values, purposes, and goals of the Commission as follows:

Section 1(a): The region commonly known as Cape Cod, comprised of Barnstable County, including all geographic areas to the jurisdictional limit of the Commonwealth, possesses unique natural, coastal, scientific, historical, cultural, architectural, archaeological, recreational, and other values; there is a regional, state and national interest in protecting, preserving and enhancing these values; and these values are being threatened and may be irreparably damaged by uncoordinated or inappropriate uses of the region's land and other resources.

Section 1(c) of the Act identifies the purposes of the Cape Cod Commission, which are to further:

- The conservation and preservation of natural undeveloped areas, wildlife, flora and habitats for endangered species;
- The preservation of coastal resources including aquaculture;
- The protection of groundwater, surface water and ocean water quality, as well as the other natural resources of Cape Cod;
- Balanced economic growth;
- Provision of adequate capital facilities, including transportation, water supply, and solid, sanitary and hazardous waste disposal facilities;
- The coordination of the provision of adequate capital facilities with the achievement of other goals;
- The development of an adequate supply of fair affordable housing;
- And the preservation of historical, cultural, archaeological, architectural, and recreational values.

Section 1(d) of the Act states that the Commission shall:

- Anticipate, guide and coordinate the rate and location of development with the capital facilities necessary to support such development;
- Review developments which will have impacts beyond their local community and determine the comparative benefits and detriments of those projects and their consistency with the regional policy plan and local comprehensive plans and goals;
- Identify and protect areas whose characteristics make them particularly vulnerable to adverse effects of development;
- Preserve the social diversity of Cape Cod by promoting fair affordable housing for low-income and moderate-income persons;

- Promote the expansion of employment opportunities; and,
- Implement a balanced and sustainable economic development strategy for Cape Cod capable of absorbing the effects of seasonal fluctuations in economic activity.

To carry out these broad purposes and goals, promote the public health, safety and general welfare, to maintain and enhance sound local and regional economies, and to ensure balanced economic development, Section 1(b) of the Act gives the Commission the authority to:

- Review and regulate Developments of Regional Impact (i.e., developments that will have impacts beyond their local community)
- Recommend for designation specific areas of Cape Cod as Districts of Critical Planning Concern
- Prepare and oversee the implementation of a regional land-use policy plan for all of Cape Cod.

Under the Act, the Regional Policy Plan is required to:

- Propose a growth policy for the region, contained in Section 3 of the plan
- Identify Barnstable County's critical resources and management needs, covered in Sections 4 and 5
- Develop regional goals for the next five years and beyond, covered in Section 6 of this plan
- Develop a policy for coordinating regional and local planning efforts, contained in Section 7 of this plan.

2. Evolution of the Regional Policy Plan

PREVIOUS VERSIONS OF THE RPP

The region's first Regional Policy Plan was adopted on September 6, 1991, just over one year after adoption of the Cape Cod Commission Act. The 1991 RPP adopted a Vision Statement that supported "protect[ing] the best of Cape Cod and repair[ing] the mistakes of the past." The plan contained goals, policies, and implementation strategies. These strategies consisted of Commission actions and recommended town actions and regulatory standards for 13 different issue areas. The 1991 RPP also included mapped and identified resources of regional importance, such as the Water Resources Classification Maps, and a strategy for coordination with other state, federal, and local partners. The 1991 plan proposed to map areas for designation as village, regional, and industrial growth centers for adoption through local comprehensive plans (LCPs). The 1991 RPP also mapped regulated and planning areas and adopted goals, minimum performance standards, and other development review policies for each issue area.

The 1996 and 2002 RPP updates followed a similar format to the 1991 plan. The 1996 update placed considerable emphasis on growth management tools and recommended analyzing the carrying capacity of Cape Cod's resources. Designation of growth centers remained in the plan for adoption in LCPs. The Outer Cape and Monomoy Capacity Studies, which analyzed transportation, water supply, and wastewater capacity in these two regions were a direct result of the 1996 plan and were prepared within the next few years. The 2002 plan placed more emphasis on designation of Districts of Critical Planning Concern (DCPCs) for growth management purposes and to protect regional resources, resulting in several DCPC designations for those purposes.

In Spring 2006, the Barnstable County Commissioners appointed the 21st Century Task Force (Task Force) to evaluate the Commission's operations and make recommendations to improve the agency's effectiveness and relationships with towns. The 21st Century Task Force report included over 35 recommendations for improvements to the Commission's regulations. This effort resulted in a restructuring of the RPP to develop a more focused map-based approach to planning and regulation and included the adoption of the first Regional Land Use Vision Map (RLUVM). The RLUVM included five general categories of land use: Economic Centers, Industrial/Service Trade Areas, Villages, Resource Protection Areas, and Other. The Task Force also recommended the Commission place more emphasis on planning and technical services for towns and to make the regulatory process more clear, predictable, flexible, and effective.

As a direct result of the Task Force recommendations, the Commission engaged in a collaborative process with Cape towns to adopt local Land Use Vision Maps (LUVMs) to incorporate into the RLUVM. As a result of this process, eight of 15 towns adopted LUVMs that were incorporated into the 2009 RPP.

The 2009 RPP divided the plan into separate planning and regulatory sections and grouped issue areas into three categories: Growth Management Systems, Natural Systems, and Human/Built Systems. The 2009 RPP also expanded the practice of applying different standards in different geographic locations to issue areas in addition to water resources and reduced Development of Regional Impact (DRI) mitigation requirements in mapped Economic Centers for transportation, open space, and affordable housing to create incentives for development to locate in these areas.

The 2018 RPP represented a significant shift from the 2009 RPP. The grouping of issue areas into categories continued from the 2009 RPP but evolved into Natural, Built, and Community Systems. The goals and objectives for each issue area served to direct both planning and regulatory actions.

Additionally, the 2018 RPP was the first to introduce the concept of Placetypes, identifying eight Placetypes found and desired on Cape Cod: Natural Areas, Rural Development Areas, Suburban Development Areas, Historic Areas, Maritime Areas, Community Activity Centers, Industrial Activity Centers, and Military and Transportation Areas. The framework of these Placetypes allows regional land use policies and regulations to better respond to and enhance local form and context and support development that complements its surroundings. The regulatory component of the 2018 RPP included applying the goals and objectives for each issue area through the lens and vision of the Cape Cod Placetype in which a project is located. This RPP was amended in 2021 to greater emphasize climate mitigation including adding a specific climate mitigation goal and objectives.

RPP UPDATE PROCESS

In October 2024, the Commission held three sub-regional hearings to officially commence the RPP update process. These initial hearings provided an opportunity to obtain feedback from community members on the greatest challenges facing the region and ideas for better aligning the RPP with today's needs. The update was guided by the Regional Policy Plan Subcommittee of the Cape Cod Commission, which met throughout the update process to provide input on both the RPP content and the public engagement process.

Focus Groups

Over the course of winter 2024 – 2025, the Commission held seven focus groups to gain initial feedback from a range of stakeholders and practitioners from across the region and Commonwealth in the specific issue areas of housing, transportation, economy, climate change, and open space. The focus group discussions identified potential changes and edits to some of the goals and objectives of the RPP, as well as possible recommended actions to pursue in implementation of the RPP. Participants also identified changes to some of the Technical Bulletins that help guide regulatory review. Some of the key changes identified include:

- Emphasizing the importance of agricultural lands

- Providing greater clarity around recreational lands in the context of open space
- Developing a regional open space plan
- Initiating and supporting post-disaster planning
- Considering more holistically the vulnerabilities the region faces in light of climate change (not only focusing on flooding and erosion)
- Clarifications to some of the transportation objectives to better articulate the need for multi-modal transportation systems, trip reduction strategies, and congestion management
- Increasing references to Complete Streets and incorporating Vision Zero
- Better integrating and building off of the recently completed 2024 Comprehensive Economic Development Strategy for the economy sections
- Acknowledging a thriving workforce and economy requires not only livable wages and access to training but other supportive elements including affordable childcare and attainable housing

Residents Survey

Also during the winter of 2025 the Commission worked with the Donahue Institute at UMass Amherst (UMDI) to conduct a resident survey to understand resident perspectives on challenges and planning issues for their town and the region. Several questions in the 2025 survey share similar themes or are directly repeated from the previous Cape Cod Homeowner Survey conducted by UMDI in 2014. The 2025 survey includes statistically significant responses from full-time and part-time residents, homeowners, and renters.

More than 1,200 people completed the survey. Slightly more than half of respondents identified as male, with 44% identifying as female, and 3% selecting other responses. Respondents were also relatively older, with 63% aged 65 years or older, and 95% identified as white. More than half (56%) reported an annual household income of \$100,000 or more and more than half (57%) also reported being retired. People responded from all Cape towns, with a few responding whose primary residence is Off-Cape. The results from the responses were weighted to be representative of the Cape Cod population as a whole.

Environmental quality, access to the coast, and outdoor recreational opportunities continue to be important factors for individuals in deciding to live or maintain a residence on the Cape. Eighty-five percent of respondents identified outdoor recreational opportunities as important or very important, and environmental quality and access to the coast were both identified as important or very important by 91% of respondents in first deciding to live or maintain a residence on the Cape.

Residents were asked to consider several factors and indicate the extent to which they think it is a problem for their town now or in the next five years. The top factors identified as either a moderate or serious problem were availability of affordable housing (84%), coastal erosion (83%), traffic

congestion (81%), sea level rise (76%), and pond water quality (74%). Notably, residents living in the Outer Cape region disproportionately identified healthcare facilities as an issue, with 82% rating adequacy of healthcare facilities as a moderate or serious problem in their town now or in the next five years compared to 66% across all Cape regions.

In terms of regulatory actions, most residents (72%) supported making development or redevelopment easier in already developed areas and making development harder in less developed areas. Few wanted to make development easier everywhere (20%) or make development harder everywhere (30%).

Similar to past surveys, this survey asked residents which infrastructure development they would support. Eight of the ten options received overwhelming support with more than 80% of residents indicating they would either support or strongly support them. Overall, support was greatest for drinking water infrastructure (88%) and bike paths (85%) and there was the lowest amount of support for the potential development of public parking garages (24%). Eighty-four percent support replacement of the Canal Bridges.

In terms of support for projects in their town if funded by a tax increase, most residents indicated support for the purchase of open space for an assortment of reasons, including for water supply protection (82%), so it will remain open (76%), and for a variety of recreational uses such as walking paths (71%). Residents also generally supported the construction of sidewalks or bike paths (77%) and the construction of wastewater treatment facilities (74%). There were some sub-regional differences in terms of support for the purchase of land for Affordable housing with 74% of Outer Cape residents showing support compared to just over half of Mid Cape residents. More detail on the survey and its responses is available here: <https://www.capecodcommission.org/our-work/cape-cod-residents-survey/>.

Public and Stakeholder Meetings

In March of 2025, the Commission held two public meetings, one in-person and one virtually, to provide an overview of the process to date and get feedback and input from attendees. Commission staff provided a summary of the 2018 Cape Cod Regional Policy Plan and the process to update the RPP. As part of this, staff identified areas of focus for the RPP update, including encouraging housing in the right places, promoting reuse and redevelopment, preserving natural areas, economic resiliency, climate action, and infrastructure. Staff then reviewed recent public engagement and stakeholder outreach efforts to inform the update. This included sharing preliminary results from the residents survey, as well as input received during the issue area-specific focus groups and potential changes identified thus far.

Based on input from these meetings, the focus groups, the survey, and other comments received to date, Commission staff articulated proposed changes to the RPP. In May, three in-person

subregional stakeholder meetings were held, along with one virtual meeting, during which Commission staff provided a brief overview of the process to update the RPP and shared potential changes to the RPP, particularly related to goals, objectives, and recommended actions, and solicited feedback from attendees. Attendees also had an opportunity to ask questions and provide input on other areas of the RPP.

PUBLIC COMMENT AND FEEDBACK ON DRAFT

A draft of this plan was released for a 60-day public comment period on TBD. [Insert more once completed.]

DRAFT

3. A Regional Vision for Cape Cod

The region's intrinsic wealth stems from its natural beauty, historic community character, and healthy coastal and freshwater environments. The features that make Cape Cod attractive are also the cause of the forces that threaten to overwhelm the environment and erode its character. The challenge Cape Cod continues to face is balancing the protection of the environment with supporting the residents, workers, and visitors with the necessary services and infrastructure to thrive over the long term. Where that balance lies may be a point of discussion, but the choices made must consider the threat of losing those unique Cape assets that cannot be replaced.

The vision for the future of Cape Cod is a region of vibrant, sustainable, and healthy communities, and protected natural and cultural resources. To advance this regional vision, the RPP includes a description of eight Placetypes that range from the least developed Natural Areas to Community Activity Centers, or areas with existing business and community activity and compact form. The Commission will focus efforts to support vibrant downtowns and village centers by helping to plan for housing and economic opportunities to meet regional needs in the Community Activity Centers, and the Industrial Activity Centers will be targeted areas for future growth in existing and emerging industries. The Natural Areas will be the focus of the Commission's efforts to protect and preserve vulnerable natural resources and improve the Cape's resiliency to the effects of the changing climate.

GROWTH POLICY FOR BARNSTABLE COUNTY

Growth should be focused in centers of activity and areas supported by adequate infrastructure and guided away from areas that must be protected for ecological, historical or other reasons. Development should be responsive to context allowing for the restoration, preservation and protection of the Cape's unique and finite resources while promoting economic, environmental, and community resilience.

4. Cape Cod Systems

The Cape Cod Commission Act requires that the Regional Policy Plan identify Barnstable County's critical resources and management needs. Cape Cod is comprised of a suite of interrelated and interdependent systems: natural, built, and community. Natural systems are an integral part of life on Cape Cod, providing drinking water and supporting the habitats and landscapes that draw people to the region, guiding development patterns, and driving the region's economy. Built systems—the human-made physical elements of the region—allow for people to live, visit, and work on the Cape. Community systems are the social activities and qualities of the region, including the economy and the region's cultural heritage, which depend on the health of both the natural and built systems. While maintaining a healthy balance among these systems has been an ongoing effort, climate change is anticipated to impact how each system functions, creating new challenges. The Growth Policy recognizes the importance and interdependence of these systems and the need to balance the impacts and functions of each to sustain the Cape over the long term. These natural, built, and community systems are described in this section.

NATURAL SYSTEMS

The region's natural systems are vital to its economy and way of life. The natural environment of Cape Cod includes the aquatic and terrestrial ecosystems upon which life depends and is prioritized by this plan for protection and restoration. The natural systems of the Cape center around water, water-dependent resources, and habitat. High quality natural systems are part of Cape Cod's attraction for residents and visitors, but they are also finite resources susceptible to contamination and degradation from various land uses and activities and are increasingly vulnerable to changes in climate. The natural functions of these systems are affected by increases in storm severity, intensity, and rainfall, as well as changes in temperature and periods of drought. Protection and restoration are critical needs.

Groundwater

Cape Cod groundwater is derived solely from precipitation and is stored in sandy glacial deposits that comprise Cape Cod's aquifer as the groundwater flows to the coast. The aquifer deposits are generally very permeable, making them ideal for development of high-yielding water supplies, but simultaneously vulnerable to contamination from land uses in their watersheds.

The Cape Cod Aquifer is one of the most productive groundwater systems in New England and provides 100% of the Cape's drinking water. The aquifer is designated a Sole Source Aquifer under the Safe Drinking Water Act by the Environmental Protection Agency (EPA), a designation that requires Federally funded projects to assess project impacts to the aquifer.

Cape Cod's aquifer is bound by the water table, by a transition zone between fresh and salt water, and by bedrock beneath portions of the upper Cape. The water table fluctuates in response to precipitation and the seasonal loss of recharge due to evaporation and transpiration. About 10% of the total recharge to the aquifer is pumped for water supply. The amount of groundwater available for drinking water is limited by regulation to maintain the hydraulic balance of the aquifer's saltwater boundaries and sustain flow to the region's fresh waters and estuaries. During periods of drought, measures including limitations on pumping and water use restrictions may be employed to avoid negatively impacting freshwater ponds, wetlands, and vernal pools which are fed by groundwater.

The Cape Cod Aquifer is comprised of six lenses of groundwater. The four Outer Cape lenses are buoyed above saline groundwater due to differences in fresh and salt water density. Lenses are separated from one another by inter-lens discharge areas (e.g., streams and estuaries). A lens is further divided into watersheds determined from the water table contours (rather than topography) that are defined by the surface waters or wells that each flow into. These watershed areas contribute to municipal drinking water wells, estuaries and embayments, freshwater ponds and lakes, or open ocean.

Marine Water

Ocean waters support rich marine life and complex ecosystems. Marine systems include open ocean, smaller segments such as Nantucket and Vineyard Sound, and estuaries and coastal embayments. Marine waters support essential shellfish habitat and spawning grounds for fish, as well as key recreational areas for Cape Cod residents and visitors.

COASTAL WATERS

Nearly 80% of the region's land area drains to coastal embayments and estuaries. The remaining land discharges directly to open water such as the Cape Cod Canal, Nantucket Sound, Cape Cod Bay, and the Atlantic Ocean. Of the Cape's 101 watersheds, 53 watersheds drain to coastal embayments and estuaries. Development contributes nitrogen to groundwater, either through wastewater or other sources such as fertilizer and stormwater runoff, and ultimately the nitrogen reaches the embayments. The increased availability of this nutrient results in excess algae and degradation of water quality, posing a primary threat to coastal habitat. The ability of most Cape Cod coastal embayments and estuaries to assimilate nitrogen has already been exceeded.

OFFSHORE MARINE WATERS

The oceanographic conditions around Cape Cod are varied. Vast quantities of sediments deposited during the late Pleistocene glaciation form the underpinnings of Cape Cod and the seafloor beneath its surrounding waters. Currents from the Gulf of Maine and the Gulf Stream affect sea temperature, with resulting biological differences around the region. The unique ocean environments support a

host of species, including many rare or threatened fish, birds, sea turtles, and marine mammals. Much of the marine waters around Cape Cod sustain the last population of the federally endangered North Atlantic Right whale. Cape Cod ocean waters continue to support fisheries that maintain recreational and commercial shellfishing and finfishing.

In addition to development on dry land, land under the ocean, seawater, and the space above the ocean surface are increasingly in demand for new marine uses. Changes to the Massachusetts Ocean Sanctuary Act in 2008 made renewable energy development, sand mining, and cable and pipeline installations possible in offshore locations, and other changes in state policies have created incentives for these development activities. The federal government's creation of offshore wind leasing areas in federal waters south of Martha's Vineyard and Nantucket and east of Cape Cod and the nascent offshore wind industry means interconnection cables have been installed or are planned to cross through state and regional jurisdictional areas, making landfall on Cape Cod. To date, Massachusetts has permitted very limited ocean-based sand mining; with erosion rates and sea level rise increasing, demand for offshore sediments to nourish area beaches may also increase. While these water-dependent uses are important economically and for the region's energy and climate future, it is important to balance these interests with preservation of the critical marine ecosystems in these areas.

Freshwater Ponds and Lakes

The Cape's nearly 900 freshwater ponds are essentially "Windows on the Aquifer," manifestations of the water table where topographically low-lying ground extends below water level. Covering nearly 11,000 acres, Cape Cod's ponds are highly variable in size, ranging from less than an acre to 735 acres. The 21 largest ponds make up nearly half of the total Cape-wide pond acreage. Approximately 40% of the ponds are less than an acre, while 166 are designated as great ponds of 10 acres or more. As part of the regional aquifer system, ponds are directly linked to drinking water and coastal estuaries.

Freshwater ponds are particularly sensitive to additions of phosphorus, which is naturally occurring but also associated with development and land uses close to a pond (such as wastewater, fertilizer, and stormwater runoff). Buffering pond shorelines from development is an effective strategy for protecting freshwater ponds and lakes by taking advantage of plants' and soil's ability to adsorb and store phosphorus, thereby capturing and delaying this nutrient from entering the pond.

Since 2001, many of Cape Cod's freshwater ponds and lakes have been monitored through the Ponds and Lakes Stewardship Program. More recently, a group of representative ponds have been monitored on a more frequent and consistent basis through the Cape Cod Regional Pond Monitoring Program. In 2003, the Cape Cod Pond and Lake Atlas (2003 Atlas) was published,

documenting the water quality for over 190 ponds and determining many were impacted by development and land uses in their watersheds and accumulated organic matter at their bottoms.

The 2018 RPP identified the health of Cape Cod's freshwater ponds and lakes as a key challenge facing the region and called for an update to the 2003 Atlas (an action that was completed in 2021) and expansion of the region's understanding of freshwater resources data. Recognizing the importance of Cape Cod's ponds and lakes and the critical threats they face, the Commission launched the Cape Cod Freshwater Initiative in 2022 – a science-based, information-driven planning process to engage stakeholders and enable action to protect and restore Cape Cod's freshwater ponds and lakes. The resulting Cape Cod Freshwater Strategy provides impactful recommendations and new tools and resources to enable Cape Cod to support healthy, functioning freshwater ecosystems.

Wetlands

The Cape's groundwater and stormwater runoff discharge to surface water in ponds, lakes, rivers and streams, coastal waters, and wetlands. These wetland resources support much of the plant and wildlife that makes the Cape such an environmentally rich and interesting place. In addition, wetlands play a vital role in regulating the environment by absorbing and filtering storm and flood waters, providing natural removal of nitrogen and phosphorus, recharging the aquifer, and storing carbon in wetland peat and vegetation.

Critical to protecting the nearly 30,000 acres of wetlands and their natural functions are healthy, naturally vegetated buffers. Buffers provide important habitat as well as assist in the management of pollutants, trapping or arresting nutrients and sediment before they can flow into wetlands and clog or impair them. Increasingly, wetland buffers preserved from development will help to store, treat, and infiltrate increased stormwater runoff as the climate changes and will allow wetlands to migrate as changes in sea level, groundwater height, and increased precipitation events occur.

Lands subject to flooding during storm events provide important flood storage capacity and other services, and will comprise larger areas beyond the current FEMA floodplain as climate change brings higher intensity storms with increased precipitation and wind driven waves. Areas vulnerable to flooding include any land which is subject to inundation caused by coastal storms and sea level rise, including V and A Zones as defined by FEMA, and those areas predicted to be inundated by the 1% annual storm for 2070.¹

¹ 1% annual storm for 2070 as defined by the Massachusetts Coast Flood Risk Model. A Zones include the Coastal A (MoWA) and A Zone (MiWA) identified in the draft DEP Floodplain regulations.

Open Space

Cape Cod's open spaces and natural landscapes ensure the continued health of the region's natural systems, economy, and population. Open space provides essential habitat for the region's diverse species and protection of the region's drinking water supply. Naturally vegetated open space provides a carbon sink for mitigating the impacts of climate change, both through the storage of carbon that would otherwise be lost to the atmosphere through development, and through the carbon-absorbing capacity of trees, wetlands, and soils. Open space contributes significantly to the natural and rural character of the region and supports key industries. The beaches, woodlands, and marshes of the Cape provide recreational outdoor activities that attract visitors and residents to the region and provide the necessary land and resources for the Cape's resource-based activities. And while active farmland is limited on Cape Cod, farms and prime agricultural soils also serve an essential function that must continue to be supported.

Approximately 40% of the Cape's more than 230,000 assessed acres are protected open space. The protected land includes federal, state, and local holdings, which vary widely in their amounts by town. In total, Cape towns hold more than 30,000 acres of protected open space. In addition to government entities, private land trusts have been critical in protecting open space as well.

Nearly a third of the region's protected open space lies within the Cape Cod National Seashore. This area, established through the visionary efforts of citizens and the federal government in 1961, contains more than 27,000 acres of outstanding natural, scenic, and recreational resources across six Lower and Outer Cape towns. Three federally designated national wildlife refuges (NWR) also grace the Cape: Monomoy NWR in Chatham, and the Mashpee NWR and Great Thicket NWR, both of which identify undeveloped lands in Falmouth and Mashpee for acquisition.

At approximately 22,000 acres, Joint Base Cape Cod (JBCC), formerly known as the Massachusetts Military Reservation (MMR), is one of the largest contiguous properties in state or federal ownership on Cape Cod. Camp Edwards is comprised of approximately 15,000 acres in the northern portion of the base. The cantonment area, which is substantially more developed with structures, roads and other infrastructure, is comprised of approximately 7,000 acres in the southern portion of the base. JBCC includes parts of the towns of Bourne, Mashpee, and Sandwich, and abuts the town of Falmouth. The northern 15,000 acres of Joint Base Cape Cod are protected by the Upper Cape Water Supply Reserve, established through a Memorandum of Agreement (MOA) and an Executive Order in 2001 and codified into law in 2002 for the purposes of water supply protection, wildlife habitat, and open space consistent with compatible military training activities.

The Commonwealth of Massachusetts holds large areas of protected open space on Cape Cod as well, including Nickerson State Park in Brewster, Hawksnest State Park in Harwich, Crane Wildlife Management Area in Falmouth, the Hyannis Ponds in Barnstable, and numerous other smaller parks and preserves.

Habitat

The entire Cape Cod peninsula is located within the southeastern Massachusetts pine barrens eco-region. Pine barrens are a globally rare habitat type comprised of a unique assemblage of plants and animals that thrive on the nutrient-poor soils and variable climate found on Cape Cod. Within the pine barrens eco-region, there are many and varied habitat types, including pitch pine-oak woodlands, transitional hardwood-pine forests, streams and rivers, ponds and lakes, vernal pools, shrub and forested swamps, estuaries, salt marshes, dunes, beaches, grasslands, and others. This rich mosaic of habitat types supports 148 state listed rare plant and animal species, including Important Bird Areas, as well as hundreds more species that rely on Cape Cod habitats year-round or seasonally when migrating through or for breeding. When healthy naturally functioning habitats are protected from the impacts of development, humans benefit from the many ecosystem services that these habitats provide. Ecosystem services are functions that are intrinsic to a natural community, and which benefit humans through the services they provide, such as recreational access, filtering of air and water, provision of food and other needed resources, and mitigating the impacts of climate hazards.

For many years habitat loss due to development has been the primary threat to the region's habitats. While habitat fragmentation and loss through clearing or removal continues to be a significant threat, new threats such as climate change, invasive species, and the reduction of natural disturbances increasingly challenge the continued long-term health of native natural communities. Disturbances, such as wildfire or severe storms, are necessary to maintain the diversity of vegetation groupings that define the region's woodlands, heathlands, and coastal plain pond shores. Fire suppression, invasive species, and a changing climate threaten the integrity of these habitats. The region's challenge is to find ways to protect remaining undeveloped lands, manage habitat to support diverse vegetation, and target invasive species incursions.

BUILT SYSTEMS

The built environment—human-made infrastructure and resources—accommodates the people who choose to live and visit Cape Cod. Protecting and enhancing the built environment, including providing infrastructure that supports the region and vibrant activity centers, is vital to supporting the Cape's population. In many cases, infrastructure, such as wastewater treatment, is needed to improve and maintain the integrity of the region's natural environment. Built systems rely heavily on fossil fuels. Changes in climate require the region to evaluate past development and consider changes needed to mitigate and accommodate the potential effects. The built environment must complement the regional character and be protective of the natural systems.

Development

Through most of the 1800s, development on Cape Cod concentrated around small village centers with little or no residential or commercial development in outlying areas. During the mid-1800s, much of the development occurred close to harbors and waterways in support of the regional maritime industries, defining the historic character and development pattern for villages still seen today. From the late 1800s through the early 1900s the Cape underwent a slow transformation from a subsistence farming and fishing way of life to a seaside resort destination attracting summer visitors and outside wealth.

The advent of rail travel, automobiles, and the adoption of the interstate highway system added to the accessibility and the popularity of Cape Cod. For the first half of the 1900s, the inland areas of Cape Cod remained largely undeveloped with most residential development concentrated near the coastline. Starting in the 1950s, the population began to rise more rapidly, and continued to grow even faster from the 1970s through the 2000s, as Cape Cod became a desired location for retirees and second-home, “seasonal use” buyers. With this population increase, development increased and began to occupy much of the interior of the Cape as well. Most towns invested in road improvements, schools, and public water to accommodate growth but fewer invested in wastewater treatment systems. Growth, due to post-war zoning, took a suburban form, consuming much of the Cape’s land. This development pattern undermines much of the historic character that made the region such an appealing place to live and visit and catalyzed many of the environmental and social challenges the region now faces.

Regulations, as well as market demand, influence the region’s past and present development patterns. Aspects of zoning regulation adopted on Cape Cod—such as large required minimum lot sizes and yard setbacks, and the rigid separation of residential and commercial uses—have had the effect of prohibiting the type of compact, mixed-use, and frequently desirable development representative of villages developed prior to the adoption of zoning. Though such zoning regulation resulted in less overall density of development on Cape Cod, the intensity of development has increased throughout the region, consuming more land on a per unit basis and replacing what was once undeveloped forest land. Though deforestation has happened on the Cape for centuries, early deforestation was for agrarian purposes that often left the land vacant with potential for forest regrowth. More recently, permanent structural development, such as houses and roads, is replacing forest land.

Drinking Water Supplies

Clean and reliable drinking water is essential to support the population of Cape Cod. Throughout the Cape, this need is met through a combination of public and private water supply infrastructure. Approximately 85% of Cape Cod is serviced with public water. The remaining 15% rely on private or

privately owned small volume wells that serve the public in portions of East Sandwich, West Barnstable, Eastham, Wellfleet, and Truro. There are 18 separate water districts, municipal divisions and departments across Cape Cod. All together, there are 160 gravel packed municipal water supply wells (some capable of producing over 3 million gallons per day), one surface reservoir, and hundreds of private wells. Municipal wells receive their water from recharge to distinct land areas referred to as wellhead protection areas and Zone IIs through the DEP Drinking Water Program. The wellhead protection areas have been adopted through local zoning and the Regional Policy Plan as groundwater protection overlays. The total land area of the Zone IIs on Cape Cod is 106 square miles (67,840 acres).

Since 2000, public drinking water suppliers have pumped, on average, about 10.7 billion gallons of groundwater per year from Cape Cod's Sole Source Aquifer. Over the last decade, pumping has been fairly consistent, showing only slight variations. Temporal variations are more apparent at the local scale.

The quality of the Cape's drinking water is generally good. A maximum contaminant limit of 10 parts per million nitrogen is established for drinking water by the EPA and the Commonwealth of Massachusetts to protect public health. A 5 parts per million nitrogen loading goal was established as part of the 1978 Cape Cod Area Wide Water Quality Management Plan to ensure water supply wells on Cape Cod would not exceed the 10 parts per million public health standard. Cape Cod towns and the Massachusetts Department of Environmental Protection have adopted the regional goal of 5 parts per million as a planning and regulatory limit. While only a handful of public water supply wells have tested near 5 parts per million, a slight upward trend in nitrogen concentrations in the region's public water supplies is the result of development in wellhead protection areas.

Nitrogen can serve as an indicator of other contaminants, such as petroleum compounds, pharmaceuticals, and personal care products, and other contaminants of emerging concern (CECs). Emerging contaminants are not commonly monitored or regulated in the environment but may have negative impacts on ecological or human health. The EPA required testing for a select subset of emerging contaminants in public water supplies with over 10,000 connections. Several Cape Cod water suppliers participate voluntarily. Contaminants of emerging concern are being found in public and private water supplies under both the EPA's one-time Unregulated Contaminant Monitoring Rule program (UCMR) and sampling being conducted by the Silent Spring Institute. Septic systems are included as likely CEC sources. The UCMR Program reported occurrences of CECs in water samples collected from at least one withdrawal point for all 12 participating water suppliers. Subsequent sampling has detected 1-4 dioxane and perfluoroalkyl substances above Massachusetts Drinking Water Guideline concentrations in four wellfields in the Hyannis and Mashpee supply districts. On October 2, 2020, MassDEP published its PFAS public drinking water maximum contamination level (MCL) standard of 20 nanograms per liter (ng/L) or parts per trillion (ppt), for the sum of the concentration of six specific PFAS, which MassDEP abbreviates to PFAS6. The MCL is an

enforceable standard, set at a level that is safe to drink for an entire lifetime. Under the Massachusetts MCL, public water supplies are required to monitor drinking water sources and distribution systems for PFAS. MassDEP is currently developing amendments to the PFAS MCL to bring it into compliance with the federal MCL that was established by EPA in April 2024.

The Silent Spring Institute tested for CECs in 20 private wells, 20 untreated public wells, and two public distribution systems. Of the 20 public wells, 15 wells and two distribution systems had detectable levels of at least one measured CEC. Of the 20 private wells, 17 had detectable levels of at least one measured CEC. Other private wells impacted by CECs have been identified by other investigators. For example, perfluoroalkyl-substances have been detected in private wells down-gradient of the Joint Base Cape Cod fire-training facility and areas used to discharge treated groundwater; and 1,4-dioxane was detected in private wells down-gradient of Eastham's capped landfill – an impetus for Eastham's public water supply system. Cleanup actions at Joint Base Cape Cod have addressed contamination of private wells and a public water supply in Mashpee, which was attributed to use of firefighting foam at the base.

Wastewater Management

Ensuring that development does not significantly degrade water quality on the Cape requires effective wastewater management. The Massachusetts Estuaries Project (MEP) identified wastewater as the primary source of nitrogen to the Cape's coastal embayments, with septic systems contributing 94% of wastewater nitrogen with the remainder from municipal or smaller private wastewater treatment facilities (WWTF). Ensuring the continued health and enjoyment of the Cape's water resources will require wastewater management to reduce nitrogen and restore water quality.

MassDEP implemented changes to Title 5 regulations in 2023 that resulted in designated Nitrogen Sensitive Areas (NSAs) on Cape Cod. All watersheds to coastal water bodies subject to the Cape Cod 208 Plan and with a nitrogen TMDL have been designated natural resource area NSAs. Existing development and new construction in NSAs must utilize best available nitrogen reducing technology within 5 years of the date of designation. If a town obtains a Watershed Permit outlining a plan to mitigate nitrogen impacts, or files a Notice of Intent to apply for a Watershed Permit, the 5-year timeframe for upgrades of individual systems is paused.

Several factors have led to the current distribution of wastewater infrastructure, where Title 5 septic systems are the predominant type of wastewater management on Cape Cod. The generally permeable soils throughout the Cape region make on-site Title 5 systems highly effective for wastewater disposal, and the relatively low density of development can make the cost of collecting and conveying wastewater to centralized treatment facilities expensive. However, standard Title 5 systems, even when functioning correctly, are not designed to remove nitrogen and provide minimal

nitrogen removal. The wide use of standard septic systems discharging high-concentration nitrogen wastewater accounts for nearly 80% of the controllable nitrogen load on Cape Cod.

Higher levels of nitrogen removal can be achieved with specialized technology, including nitrogen removing septic systems on individual properties, cluster or satellite systems at the neighborhood or village level, and centralized wastewater treatment facilities that serve larger areas. There are more than 169,000 standard Title 5 septic systems and more than 2,800 denitrifying septic systems installed on Cape Cod. The Massachusetts Alternative Septic System Technology Center (MASSTC) tests dozens of technologies for industry standard certifications and provides space for technology vendors to do research and development at their facility in Sandwich.

Barnstable, Bourne, Chatham, Falmouth, Orleans, and Provincetown are the five Cape Cod communities with municipally owned and operated centralized wastewater treatment facilities; additionally, voter-approved wastewater infrastructure is in design or construction in Dennis, Harwich, Mashpee, and Yarmouth. Across Cape Cod there are 60 smaller, typically privately owned, wastewater treatment facilities. Portions of the Buzzards Bay section of Bourne utilize the Wareham Wastewater Treatment Facility.

On Cape Cod, wastewater at WWTFs is generally required to be treated to 10 mg/L total effluent nitrogen, though most municipal treatment plants are reaching effluent nitrogen concentrations of 5 mg/L or lower through treatment process improvements. Historically, towns and their wastewater consultants have prioritized siting effluent discharges outside of Zone II wellhead protection areas. As wastewater treatment efficiency improves and the need for additional locations to discharge treated wastewater increases, Zone II areas may be considered for discharge with specific designs to protect the drinking water resource.

Centralized wastewater collection, treatment, and disposal systems can achieve high levels of nitrogen removal but require significant capital investment. Wastewater treatment facilities must be designed and sized for a peak flow which occurs four weeks a year—the last two weeks of July and the first two weeks of August. The need to accommodate that short-term peak flow drives up the costs of a system that otherwise could be designed to handle typical wastewater flows from the year-round population. Their high cost, and the ability or willingness of taxpayers to bear such cost impeded planning and implementation of more widespread centralized wastewater management systems on Cape Cod for decades. Municipal and voter perspectives have changed following completion of the 208 Plan and, today, there is improved understanding of the importance of sound wastewater management in protecting the environment.

A community's capacity to accommodate new growth often depends on whether there is sufficient shared or centralized wastewater infrastructure in place to handle such new growth. Though these systems are expensive, there are also direct and indirect costs (often unrecognized) to property owners and the region at large associated with owning and maintaining or replacing individual Title

5 septic systems. Continued growth and development on Cape Cod must be contingent upon the development of shared or centralized wastewater treatment. Additionally, centralized treatment systems may be better positioned to address removal of additional contaminants should thresholds for removal be established in the future.

With its establishment by the Massachusetts Legislature in 2018, the Cape Cod and Islands Water Protection Fund (CCIWPF) provides a mechanism for towns to access additional funding to support municipal wastewater treatment and water quality projects. The CCIWPF is a dedicated fund within the state's Clean Water Trust set up to solely benefit communities on Cape Cod, Martha's Vineyard, and Nantucket. Its source of revenue is a 2.75% excise tax on traditional lodging and short-term rentals. The fund is administered by the Massachusetts Clean Water Trust and overseen by a Management Board comprised of representation from every member town. Currently, the 15 Cape Cod communities are members of the fund.

The fund provides subsidies to towns financing wastewater and water quality projects through the Clean Water State Revolving Fund (SRF) and to towns that have qualified wastewater-related debt that pre-dates the establishment of the fund. Projects in excess of \$1 million receive subsidies equal to 25% of the project costs. Projects of \$1 million or less receive 50% subsidies. These subsidies are in addition to financing through the Clean Water Trust.

In the three years preceding the CCIWPF's creation, one project on Cape Cod was listed on the Intended Use Plan; since 2018, 66 projects have been listed, demonstrating the great ability of this tool to advance needed water quality improvement projects across the region. To date, the Management Board has awarded over \$309M in subsidies to 13 Cape Cod towns.

Stormwater Management

Although much of the emphasis on controlling nitrogen loading to coastal embayments focuses on wastewater, stormwater runoff also contributes approximately 8% of the total controllable nitrogen load. For other water resources like Cape Cod's freshwater ponds, stormwater can be a much larger contributor of nutrients, and a significant source of non-nutrient pollutants. The same highly permeable soils that allow precipitation to recharge the Cape Cod aquifer also readily allow infiltration of runoff from roofs, parking lots, and roadways. Stormwater flowing from these surfaces also recharges the aquifer but can contain toxic substances (such as petroleum products, pesticides, and heavy metals) as well as nutrients (nitrogen and phosphorus from fertilizers and animal waste). Management of stormwater should include managing its quantity (storing or infiltrating runoff to prevent ponding or flooding) and its quality (treating the runoff to remove suspended solids, nutrients, and toxic substances).

Throughout Cape Cod varying levels of stormwater infrastructure exist; from gray infrastructure (systems of curbs, gutters, and conveyances to divert the flow of stormwater from buildings, streets,

and parking areas) to green infrastructure or Low Impact Development (LID) structures that have been designed to mimic natural hydrologic processes and improve the quality of stormwater runoff while still allowing for aquifer recharge. Most towns on Cape Cod are now required under the EPA's Massachusetts Small Municipal Separate Storm Sewer System (MS4) permit to manage their own sewer and stormwater systems. This permit most directly impacts town-owned infrastructure like buildings, roads, and parking lots. Since it was signed in 2016 and became effective in 2018 towns have completed inventories of existing infrastructure, identified illicit discharges, and implemented LID, among other requirements. The 2016 MA MS4 has been administratively continued, discharges authorized under this permit will remain in effect until they can be authorized under a reissued general permit. Many opportunities to improve stormwater management exist outside of MS4 regulated areas, particularly around ponds, streams, and coastal waters; and cumulative benefits of many small stormwater management efforts can be significant.

Transportation Network

Numerous subsystems make up Cape Cod's transportation network including vehicular roadways, railways, public transportation, air travel, marine transportation, and pedestrian and bicyclist accommodations and networks. These systems are responsible for safely and effectively moving the people of the region and the goods they rely on. Additionally, these systems must serve not only the year-round population but must also effectively handle the movements of more than twice that with the peak seasonal population, which requires building and maintaining a transportation system that functions under the strain of the peak season, without negatively impacting the character that defines this unique place.

Central to Cape Cod's transportation system is its over 3,800 miles of roadways, 80% of which are smaller, local roads. Route 6, Route 28, and Route 6A—the three major arteries of the Cape—only account for 6% of the region's roadways. The roadways meet in 136 signalized intersections and 31 roundabouts and rotaries. Cape Cod has over 100 vehicular crossings over roadways, railways, and water bodies including the Bourne and Sagamore Bridges over the Cape Cod Canal. As the only vehicular connection to Cape Cod, the Bourne and Sagamore Bridges are critical to the long-term viability of the region.

Rail service and infrastructure ultimately extended the entire length of Cape Cod, from Bourne to Provincetown, and points between, beginning in the mid-1800s through the first half of the 1900s. Today the extent and usage of rail is reduced to a single rail line, the Cape Cod Line, which travels through Bourne before branching off to termini in Hyannis, Yarmouth, and Joint Base Cape Cod. Together, these branches and the single line form a network of rail infrastructure for freight services, scenic rail excursions, and CapeFlyer seasonal, weekend passenger service.

While personal vehicle travel is the predominant transportation mode on Cape Cod, the Cape also hosts a number of transit-dependent residents who do not have access to a private automobile. Data from the U.S. Census Bureau, 2018-2023 American Community Survey (ACS) 5-year Estimates, indicates that 4.9% of Cape households do not have access to a vehicle. These residents are dependent on public transport, bicycle, or other modes of transportation. The Cape Cod Regional Transit Authority (CCRTA) provides public transit throughout the region and connects Cape Cod to neighboring communities and regions. The CCRTA offers several types of services, including fixed route service, flexible route service, and demand-response or paratransit service. Six of the CCRTA's fixed routes run year-round, primarily through the Upper, Mid, and Lower Cape regions. Demand-response service includes Dial-A-Ride Transportation (DART), ADA Paratransit Service, and Smart DART. There are also several private bus companies connecting Cape Cod to other regional destinations such as Boston and Providence. Six airfields and airports also link Cape Cod residents and visitors to Boston, New York, and the islands of Martha's Vineyard and Nantucket.

Water also plays a large role in the transportation network of Cape Cod. Harbors and channels provide connections between marine transportation and land transportation routes and nine ferry routes connect Cape Cod to Martha's Vineyard, Nantucket, Boston, and Plymouth.

Destinations and pathways for bicyclists and pedestrians to use in the region are abundant, however, bicyclists and pedestrians face numerous challenges on Cape Cod roadways. Cape Cod has over 110 miles of multi-use paths, including the Cape Cod Rail Trail and Extension, Cape Cod Canal Bike Paths, Shining Sea Bike Path and Extension, and numerous paths in the Cape Cod National Seashore and Nickerson State Park. These pathways provide safe, separate accommodations for bicyclists and pedestrians, but frequently do not connect to one another, inhibiting bicyclists' and pedestrians' abilities to use them to travel throughout the region—a more comprehensive regional path network is envisioned. Vision 88 is a plan for a continuous 88-mile shared-use path stretching from Woods Hole to Bourne to Provincetown. The concept includes connections to villages and key destinations in each community, supported by context-sensitive improvements along major corridors to promote equitable access to local routes, essential services, community hubs, and neighboring regions.

Sidewalks provide not only pedestrian accommodations but encourage travelers to walk instead of drive, thereby supporting activity in village centers and local businesses. However, significant gaps in the regional sidewalk network exist in many communities across Cape Cod. Furthermore, auto-oriented site design, including large parking lots without appropriate pedestrian accommodation, can make travel as a pedestrian challenging.

The mixture of narrow roadways, high seasonal and locational traffic volumes, and inconsistent pedestrian and bicyclist accommodations creates a great deal of conflict between vehicles and people walking and biking. Completed in 2025, the Cape Cod Vision Zero Action Plan presents a

coordinated approach to enhancing roadway safety across Cape Cod, grounded in data and tailored to local context. The plan identifies strategic countermeasures, systemic safety strategies, and non-engineering initiatives aimed at eliminating roadway fatalities and serious injuries by 2050, with an interim goal of a 50% reduction in fatalities and serious injuries by 2035.

Utilities

The Cape's population and economic and social activities depend on reliable and affordable access to electricity, natural gas, and telecommunications.

Eversource is the local distribution company and is responsible for distributing electricity to the region. The Cape Light Compact Joint Powers Entity (JPE) is the largest single energy supplier for residents and businesses on the Cape; however, electric customers may choose their competitive supplier. Electricity is primarily distributed through overhead wires.

The electricity that powers Cape Cod is generated from a mixture of renewable and non-renewable sources. The electricity generation fuel mix for the region is defined by all of the contributions to the ISO New England Grid. For 2024, ISO-NE reports 55% of electricity was generated from gas, 24% from nuclear sources, 12% from renewables, 8% from hydroelectric generation, and the remaining 1% from oil, coal, and other sources.²

Approximately 100,000 customers get natural gas from National Grid—the sole natural gas service provider on Cape Cod. Natural gas service is not provided everywhere on Cape Cod, and there are no lines north of Eastham.

Education, government, healthcare, and other service and innovation sectors of the economy rely on effective and reliable access to broadband and telecommunications. As more people work from their homes, and more services such as doctor visits are conducted virtually, fast and reliable internet service will become even more important.

Broadband internet service is available to nearly all residential and business addresses in the region and should, by the end of 2026, be available to 100% of residential and business addresses as a result of state-guided, federally funded infrastructure investments. These efforts may also introduce greater broadband service competition to what has been primarily a single-provider market which has resulted in relatively high cost for service compared to other regions of the Commonwealth. Comcast continues to serve as the dominant broadband provider on Cape Cod; however, by 2024, roughly one-quarter of locations have alternative options due to the incremental deployment of Verizon Fios on the Upper Cape and emerging fixed wireless offerings. In addition, the non-profit provider OpenCape, which has focused on providing middle mile and institutional-grade fiber

² ISO New England, Resource Mix, preliminary 2024 data: <https://www.iso-ne.com/about/key-stats/resource-mix>

connections, has moved toward smaller scale business and residential services in some activity centers.

Most of the region is served by multiple wireless communications providers, but there remain some places without service. Maintaining and enhancing the wireless communications infrastructure is increasingly critical to the region's need for emergency and non-emergency communications.

COMMUNITY SYSTEMS

The Cape's community systems, which include the culture, people, and economic activity of the area, are critical for fostering and maintaining vibrant communities and social networks that serve and support the people who live, work, and play in the region. The community systems are intricately tied to the environment. Impacts on natural systems, such as those related to climate change or water quality, will present challenges with respect to protecting cultural heritage, providing safe and attainable housing, and fostering a stable economy.

Cultural Heritage

The Cape's rich cultural heritage and historic character stem from its Native American beginnings to its maritime industrial growth and success as a resort destination. The Cape Cod Commission Act recognizes the importance of the region's significant historical, cultural, archaeological, and architectural resources and charges the Commission with protecting them.

Many of the region's historic buildings have been protected with special designations. Thousands of the Cape's buildings are listed on the National Register of Historic Places, either individually or in one of the region's 45 National Register Historic Districts, and many more are within the Cape's 20 Local Historic Districts. These resources, including Cape Cod's rural areas and historic villages, are tangible connections to the region's agricultural heritage, maritime history, artist colonies, and unique past and play a key role in attracting and retaining residents and visitors to Cape Cod. Responses to the 2025 residents survey highlighted the importance of these resources, with 75% of residents rating the historic character of the Cape as important or very important in their decision to live or maintain a home on the Cape.

Efforts to expand the breadth of Cape Cod's historic narrative and to include that information in its historic inventories led the Cape Cod Commission to create the Underrepresented Histories StoryMap with five themes to highlight the role of lesser known groups in the region's history. The StoryMap brings together often overlooked stories of Native Americans, Cape Verdeans, Blacks, LGBTQ individuals, and Women in the region, elevating information compiled by local researchers and historical organizations. Seen together, these stories convey a more comprehensive picture of the Cape's past.

People

The peninsula now called Cape Cod was home to the Wampanoag for thousands of years before the arrival of European colonists. Though the region has been inhabited for over 12,000 years by the Mashpee Wampanoag people, rapid population growth on Cape Cod began in the 1950s.

YEAR-ROUND RESIDENTS

By the 2000 Decennial Census, Cape Cod had grown over 400% since 1950, adding just over 175,000 year-round residents in five decades. After a slight decline from 2000 to 2010, population rose again during the COVID-19 pandemic as new residents came to the region seeking more space and access to the outdoors, reaching a new high in 2020 of nearly 229,000.³ The most recent estimates show Cape Cod's year-round population at about 230,000.⁴ Population projections vary, but a recent study of housing supply and demand suggests that the resident population could grow to about 236,000 by 2030; other population projections indicate a return to pre-pandemic trends and a continued slow loss of year-round population in the region.⁵

Data from the US Census Bureau indicate the diversity of Cape Cod's population, including its minority populations, is increasing. While the region is still predominantly white and much less diverse than Massachusetts or the nation, between the 2010 and 2020 Censuses the percent of Cape Cod's population not identifying as solely white nearly doubled from 7.3% to 14.2%.⁶ Almost 90% of residents speak only English. A majority of the roughly 11% of residents who speak a language other than English at home (65%) reported also speaking English "very well," while approximately 35% reported speaking English less than "very well."⁷ Nearly 90% of County residents report being born in the United States, while 10% were born in another country and immigrated to Cape Cod. Roughly two-thirds of immigrants in the region entered the United States prior to 2010.⁸

Migration has played a key role in the region's population changes. Cape Cod became popular for both retirees and younger families as it became more accessible and—at the time—affordable in the mid- to late-1900s. Migration to the Cape continues today, but at a much slower rate than the 1980s and 1990s, except for the influx during the COVID-19 pandemic. The rise of remote work with the pandemic, allowing some workers to live on Cape Cod regardless of where their employer was located, facilitated more people relocating to the region, at least temporarily if not permanently. Approximately 44% of second homeowners reported spending more time at their Cape Cod house

³ US Census Bureau Decennial Censuses

⁴ US Census Bureau, 2023 American Community Survey 5-year Estimates, [Table DP05](#)

⁵ *Cape Cod Regional Housing Needs Assessment*, prepared by the Donahue Institute at UMass Amherst for the Cape Cod Commission, 2023

⁶ US Census Bureau, 2010 and 2020 Decennial Censuses, [Table P1](#)

⁷ US Census Bureau, 2023 American Community Survey 5-year Estimates, [Table S1601](#)

⁸ US Census Bureau, 2023 American Community Survey 5-year Estimates, [Table DP02](#)

during the pandemic, and some may have taken the opportunity to move into that second home full-time during the pandemic.⁹

Meanwhile, the natural growth rate (births minus deaths) is currently negative and the resident population continues to age and skew older than the Commonwealth as a whole. The median age of the Cape is 55.1 years, significantly higher than the state's median age of 40.¹⁰ The population of those 65 and older on the Cape has been increasing over the past several decades, now comprising nearly 1/3 of the population (compared to just about 18% for the Commonwealth as a whole). Conversely, the percent of the population under 18 has declined from about 18% in 2010 to about 14% in 2023.¹¹

These trends are expected to continue in the near- and long-term. The 2023 Cape Cod Housing Needs Assessment provides two different population projection scenarios. One based on pre-pandemic trends shows a decline in year-round population for the next couple of decades. The other projection, which takes into account the trends from the pandemic, shows a slight increase in year-round population. Both scenarios, however, show an increase in the older population and estimate the percent of the population aged 65 years and older to be nearly 40% of the population by 2035.

These age and growth trends are important elements for understanding the region's past and how best to plan for its future, but the region's year-round resident population is only one element of the Cape Cod community.

SEASONAL HOMEOWNERS

Second and seasonal homeowners have long been major players in the region's economy and housing market; this fact is unlikely to change in the future. About 34% of all homes on Cape Cod are used seasonally, a sharp contrast to 4% statewide.¹² The proportion varies from town to town, typically with larger proportions of housing units being used seasonally in the Lower and Outer Cape towns, where seasonal or second homes can account for over 50% of all the housing units.¹³

According to the 2021 Second Homeowners Survey carried out by the University of Massachusetts Donahue Institute (UMDI), the average Cape Cod second-home owner's age is over 66, 91% have at least a bachelor's degree, and 83% have an annual pre-tax household income over \$100,000. These characteristics have changed only slightly from when the previous survey was conducted in 2017

⁹ *Cape Cod Second Homeowners Survey – 2021*, prepared by the Donahue Institute at UMass Amherst for the Cape Cod Commission, 2022

¹⁰ US Census Bureau, 2023 American Community Survey 5-year Estimates, [Table DP05](#)

¹¹ US Census Bureau, 2023 and 2010 American Community Survey 5-year Estimates, [Table DP05](#)

¹² US Census Bureau, 2023 American Community Survey, 5-year Estimates, Tables B25001 and B25004

¹³ US Census Bureau, 2023 American Community Survey, 5-year Estimates, Tables [B25001](#) and [B25004](#)

when the average age of the second-home owner was 65, those with at least a bachelor's degree was 80%, and those reporting an annual pre-tax household income over \$100,000 was 70%. Most recently, most of the respondents have their primary residence in Massachusetts (57%), and 84% reported living in the Northeast. Notably, 10% of second homeowners also list their primary residences in Barnstable County.

According to the survey, a minority of second homeowners (27%) report ever renting their homes. July and August are when second homes are used the most, being occupied an average of 20 days each month. Usage drops significantly in the winter; however, off-season stays have been increasing, up to 5.4 days in 2021 from 2.9 days in 2017.¹⁴ Less than one-third of second homeowners reported plans to ever make their Cape Cod home their primary residence with only 8% indicating they would make it their primary residence in the next 20 years. Looking toward the future of the region, accommodating second and seasonal homeowners while also supporting year-round residents will be vital.

VISITORS

Visitors are also an important segment of the Cape community, with more than 5 million people visiting the region annually, coming mostly in the summer but also on weekends throughout the fall and spring. Data on rooms tax distributions, one indicator of visitor activity, show that Cape towns collected almost \$47 million in local option rooms taxes in 2024.¹⁵ Like the seasonal population, visitors bring new resources to the region that stimulate the economy and support jobs. They support local arts and culture and value the region's beaches and natural areas. Visitor patterns will change with national and international economic and political changes; typically, though, the Cape has weathered recessions well and been successful at attracting both international visitors and those from the larger northeast region to maintain steady levels across the decades.

Economy

The economy of Cape Cod has evolved from a subsistence-based economy to one focused on maritime industries, and ultimately to one centered around tourism and retirees. The economy today reflects the region's mix of visitors and full-time and seasonal residents, as well as the age of the population, which tends to be older than communities off-Cape. The dominant industries in the region by share of employment are Accommodations & Food Service (16%), Retail Trade (15%), and Health Care (15%).¹⁶ However, the top five industries in the region do not provide the highest

¹⁴ *Cape Cod Second Homeowners Survey – 2021*, prepared by the Donahue Institute at UMass Amherst for the Cape Cod Commission, 2022

¹⁵ Massachusetts Department of Revenue Data Analytics and Resources Bureau. *Local Option Meals, Rooms & Community Impact Fee Data*, FY2024 March and June Data and FY2025 September and December Data. Retrieved from the [Databank Report](#).

¹⁶ Massachusetts Department of Economic Research, [2023 Annual ES-202 Data for Barnstable County](#), not seasonally adjusted

wages and only account for about 30% of the region's GDP. The single largest contributor to the region's GDP is real estate and rental and leasing, which accounts for more than one-fourth of the GDP but less than 2% of employment.¹⁷ The average wages in the region are consistently below state averages. In 2023, average weekly wages for the Cape were about \$1,200 compared to over \$1,760 for the Commonwealth. This wage gap is in part due to the region's largest industries – tourism, retail, and food services – being relatively low-wage sectors.¹⁸

The highest paying industries are Finance and Insurance, Utilities, and Mining, Quarrying, and Oil and Gas Extraction, which together only amount to 3% of all employment in the region.¹⁹ Although lower-wage industries dominate the local workforce, higher-paying industries like Utilities, Professional and Technical Services, and Construction, have seen increases in employment between 2018 and 2023.²⁰ These growing high-paying industries suggest opportunities for economic diversification and development in the region. Additionally, Cape Cod Community College, Bridgewater State University, the Massachusetts Maritime Academy, and good K-12 schools provide educational opportunities that contribute to the region's economy and potential for growth of new and existing industries.

Wage data only account for those actively in the civilian labor force and do not reflect the high percentage of the region's population that is not participating in the labor force. As a retirement community, the region has a lower labor force participation rate than the Commonwealth (59% compared to 67%).²¹ Also indicative of the retiree and aging population on Cape Cod, nearly 46% of households receive Social Security income and almost 38% receive retirement income, both higher than the state at 30% and 23% respectively.²² These trends underscore the challenges Cape Cod faces in its labor force as the working population continues to decline and age.

The Cape Cod economy is aptly characterized as a "Blue Economy" driven by the region's extensive shoreline and direct access to open water. Historically, the Cape's blue economy was based on extracting resources from the sea, such as fish, whales, salt, or shellfish. Some of these activities continue today along with new ventures being established around enjoying and understanding the region's blue resources. Tourism is a blue sector focused on bringing people here to directly enjoy the Cape's blue resources. Marine sciences is a blue sector focused on understanding marine

¹⁷ US Bureau of Economic Analysis [Table CAGDP2](#) Gross domestic product (GDP) by county and metropolitan area for Barnstable County for 2023 and Massachusetts Department of Economic Research, [2023 Annual ES-202 Data for Barnstable County](#), not seasonally adjusted

¹⁸ Massachusetts Department of Economic Research, 2023 Annual ES-202 Data for [Barnstable County](#) and [Massachusetts](#), not seasonally adjusted

¹⁹ Massachusetts Department of Economic Research, 2023 Annual ES-202 Data for [Barnstable County](#), not seasonally adjusted

²⁰ Massachusetts Department of Economic Research, [2018](#) and [2023](#) Annual ES-202 Data for Barnstable County, not seasonally adjusted

²¹ US Census Bureau, 2023 American Community Survey 5-year Estimates, [Table S2301](#)

²² US Census Bureau, 2023 American Community Survey 5-year Estimates, [Table S1902](#)

resources, making new discoveries to help improve human wellbeing and protecting marine ecosystems. The region's marine assets, location, and the presence of Woods Hole Oceanographic Institution, the Marine Biological Laboratory, and the National Oceanic and Atmospheric Administration provide unique employment opportunities in the marine sciences and technology sector. New economic sectors will continue to emerge that are directly dependent on marine resources and Cape Cod is in a strong position to embrace these new endeavors and enhance its economy. Seeing the region's economy through this Blue Economy lens reinforces the understanding of the interdependencies of the economy and environment.

Most of the businesses on the Cape are small, independent, and well-established, with more than 80% of business establishments on the Cape having fewer than 10 employees.²³ Less than 1% of the business establishments on Cape Cod have more than 100 employees and the majority of establishments have been in business for more than 10 years.²⁴ Due to the seasonal nature of the tourism industry, many businesses close for the winter, which leads to significant fluctuations in unemployment, especially in Lower and Outer Cape towns. In the summer and fall, businesses typically import labor to fill seasonal jobs. In the winter, unemployment more than doubles compared to the summer (increasing on average from about 3.5% to over 7%) when the number of jobs in the region increases by roughly 33% compared to winter months.²⁵ In the 2025 residents survey, only 15% of residents rated well-paying jobs and year-round job opportunities as good or excellent in their town, compared to 74% for seasonal job opportunities.

Cape Cod second-home owners actively support the Cape Cod community and economy. Nearly all respondents to the 2021 second homeowner survey report purchasing groceries, hardware/building supplies, and garden supplies on Cape Cod for their second home. However, fewer respondents noted using local financial or medical services and specialists while on the Cape.

One of the key risks to the economic resiliency and stability of the region is the increasingly expensive cost of housing. Finding local employees can be difficult as they cannot find a place to live in the region.

²³ US Census Bureau, 2021 County Business Patterns Survey, [Table CB2100CBP](#)

²⁴ US Census Bureau, 2021 County Business Patterns Survey, [Table CB2100CBP](#) and 2022 Annual Business Survey, [Table ABSCS2022.AB2200CSA02](#)

²⁵ Massachusetts Department of Economic Research, 2019 – 2024 [Labor Force and Unemployment Data](#) and 2018 – 2023 Annual ES-202 Data and for [Barnstable County](#), not seasonally adjusted and not including 2020 data

Housing

Housing access and affordability is an existential crisis facing the region. While not new, housing affordability challenges have reached unprecedented levels over the last several years, particularly in the wake of the COVID-19 pandemic.

Part of the difficulty is that Cape Cod's housing supply lacks diversity. Today, detached, single-family homes comprise about 80% of the region's housing stock, compared with just over 50% for Massachusetts as a whole and 61% nationwide.²⁶ The lack of diverse housing options on the Cape, such as duplexes, townhouses, apartments, and condos, also contributes significantly to the high cost of housing. Given the high land value in the region, detached single-family homes are typically the most expensive housing option, driving up the cost of living in the region. This means there are few housing options for those who either cannot afford or do not want a detached single-family home.

Younger families starting out lack housing options that are often a building block to long-term financial stability. Similarly, older individuals looking to downsize struggle to find suitable options and often stay in single-family homes that are larger than what they need, further constraining the housing market. Further compounding the problem is the high demand for housing by both year-round residents and second-home owners, coupled with the low average wages on Cape Cod. The result is a housing market that is unaffordable for most year-round residents. In 2023, the estimated income needed to be able to affordably purchase a single-family home was more than \$230,000, more than double the actual median household income of almost \$94,500.²⁷ While the numbers vary from town to town, they all tell a similar story: housing is too expensive for Cape Cod residents.

Renters are also particularly challenged when seeking housing in the region with more than half of existing renters reportedly housing cost burdened (paying more than 30% of their income on housing costs).²⁸ Year-round rentals are also limited in supply due in part to the fact that the economic incentive for someone to rent out a home as a short-term rental rather than a longer-term rental is significant. It takes about two months for rental income from an average short-term rental to exceed the yearly rental income from a year-round rental and in some towns it is closer to one month.²⁹

The region needs both Affordable and attainable housing. Affordable housing includes housing for households earning up to 80% of the area median income (AMI). Attainable housing, as described in

²⁶ US Census Bureau, 2023 American Community Survey 5-year Estimates, [Table DP04](#)

²⁷ Cape Cod Commission Calculations, see this webpage for more details: <https://datacapecod.org/pf/housing-affordability/>

²⁸ US Census Bureau, 2023 American Community Survey 5-year Estimates, [Table DP04](#)

²⁹ *Cape Cod Regional Housing Needs Assessment*, prepared by the Donahue Institute at UMass Amherst for the Cape Cod Commission, 2023

the Regional Housing Strategy, is housing that is affordable to a range of income levels (including those earning more than 80% AMI) for whom current year-round market-rate housing is out of reach. Attainable housing also allows for entry into and mobility within the market – among sizes and tenure – signifying a healthy supply and vacancy rate in the region.

The 2025 Cape Cod Residents survey asked residents whether they thought more of certain kinds of housing were needed in their town. More than 60% of residents believe that more affordable ownership and rental housing are needed in their town, and more than half believe that seasonal worker/dormitory housing is needed. Housing priorities vary significantly from region to region, with over 70% of residents supporting affordable and worker housing in the Outer Cape, compared to 53% of residents in the Mid-Cape and under 40% in the Upper Cape. Support for all types of housing has grown over the past decade, with most categories at least doubling their support from 2014. The biggest increases were in affordable ownership housing, which went from 29% in 2014 to 62% in 2025; affordable rental housing, which went from 21% to 60%; and auxiliary dwellings/ADUs, which went from 6% to 39%.

Additionally, according to the 2023 Cape Cod Housing Needs Assessment, housing demand will outpace supply by 11,000 to nearly 22,000 units by 2035. However, building housing other than single-family homes is not easy on Cape Cod. Only about 2% of the region is zoned to allow more than two housing units to be built by-right. “Research and interviews with housing development organizations working on Cape Cod confirmed that restrictive zoning is a major barrier to building affordable, attainable, and multifamily housing. The region’s existing zoning restricts multi-family housing to limited areas and increases project risk and expense through discretionary (special permit) review processes that can be lengthy and unpredictable, and ultimately may not result in project approvals.”³⁰

Chapter 40B, also known as the Comprehensive Permit Law in Massachusetts, was enacted in 1969 to help address the shortage of affordable housing statewide by reducing unnecessary barriers created by local approval processes, local zoning, and other restrictions. The goal of Chapter 40B is to encourage the production of Affordable housing in all cities and towns throughout the Commonwealth. The standard is for communities to provide a minimum of 10% of their housing inventory as deed-restricted Affordable for low- and moderate-income households. Despite the enactment of Chapter 40B, as of January 2025, only about 6% of the region’s year-round housing inventory is Affordable.

³⁰ *Housing Cape Cod: The Regional Housing Strategy*, Cape Cod Commission, 2024, and *Cape Cod Regional Housing Entity Research*, Utile and Outwith Studio for the Cape Cod Commission, 2024. www.ccom.link/rhs-entities

Ensuring the region can and does support its natural, built, and community systems and their various elements is vital for a thriving Cape Cod.

DRAFT

5. Key Regional Priorities

As illustrated in the previous section, Cape Cod is a special place, but one that also faces significant challenges. Though in many cases the natural, built, and community systems augment one another and contribute to what makes the Cape a special place, they can also have conflicting needs or functions. More than 90% of Cape Cod residents cite the environmental quality and outdoor recreational opportunities of the region as either important or very important considerations when they first decided to live or maintain a residence on Cape Cod. At the regional scale, ensuring that the environment is protected will have positive effects on sustaining the region's community and economy since these areas of interest are so closely linked.

Indicative of the breadth of issues and concerns for the region and criticality of all its systems, the top factors identified by Cape residents as either a moderate or serious problem in the 2025 Residents Survey were availability of affordable housing (84.0%), coastal erosion (83.3%), traffic congestion (81.1%), sea level rise (75.9%), and pond water quality (73.9%). As the region moves forward it must both protect and build on the region's assets while also addressing its key challenges. Protecting natural areas, restoring and protecting coastal and fresh water quality, adapting to and mitigating climate change and its impacts, preserving historic resources, increasing housing attainability, providing adequate infrastructure, and fostering economic stability must all be prioritized to secure the region's future.

PROTECTING OPEN SPACE AND NATURAL RESOURCES

The natural areas in the region are its most sensitive and critical places, not only for the habitats and ecological benefits they provide, but also for their contribution to the region's character, its draw as a destination, and its economy. While many of these areas are protected, the remaining undeveloped woodlands and connecting landscapes are vulnerable to the harmful effects of development and fragmentation. Loss of forest cover, and related forest fragmentation, negatively affects regional character, as well as the natural functions tree cover provides, such as wildlife habitat, carbon sequestration, nutrient uptake, and stormwater and flood water management and filtration. At the same time, with the increase in impervious surfaces occasioned by forest loss, stormwater runoff has increased and with it the need for natural systems to recharge such runoff.

Land use policy and regulation in the region, though intended to better protect the natural environment by reducing the overall density of development, has resulted in larger minimum required building lot sizes. Larger lots, together with other development requirements under prevailing policies and regulations, have contributed to more impervious cover and habitat fragmentation across Cape Cod. Protecting natural areas is a key priority for the region and will involve focusing growth in those areas that are suited for development or redevelopment and away

from, or even removing development from, sensitive areas, while securing permanent protections for vital natural areas.

The Cape should strive to protect as much of the remaining unprotected critical habitats and sensitive resource areas as possible, while continuing to also focus on protecting those key properties that help define the natural character of the region or ensure equitable access to open space. Current accounting of developed and protected lands indicates that about 14% of the Cape remains both unprotected and undeveloped and, of that, approximately 80% includes sensitive natural resources which should be prioritized for protection.

RESTORING AND PROTECTING COASTAL AND FRESH WATER QUALITY

The region's fresh and coastal water resources are essential to its identity, its natural functions, and in supporting life throughout the peninsula. However, human activity and development has led to excessive inputs of nutrients (nitrogen and phosphorus) and other contaminants into the region's water bodies.

Most development on Cape Cod continues to utilize on-site septic systems that release nitrogen to groundwater, which eventually travels to coastal embayments and results in degraded water quality. Cape Cod is home to 53 embayment watersheds with physical characteristics that make them susceptible to nitrogen impacts. Thirty-two of these watersheds cross town boundaries and 34 have been found to be impaired and require nitrogen reduction to meet water quality goals.

There have been significant efforts towards implementing solutions aimed at restoring the health of bays and estuaries since the approval of the Section 208 Area Wide Water Quality Management Plan Update in 2015. Communities are working across town boundaries to solve watershed-based problems and exploring the use of non-traditional technologies in areas where traditional collection and treatment is too expensive or not feasible.

To support housing and other needed development in more compact, walkable, active areas, and to remediate the region's water quality impairments, local and regional leaders must continue to secure funding for water quality and wastewater infrastructure projects on Cape Cod. Funds, including but not limited to state and federal funds and those available through the Cape Cod and Islands Water Protection Fund, must support expeditious investments in infrastructure consistent with the requirements of the Commonwealth's amended Title 5 and new Watershed Permitting regulations. Zoning and regulations for areas that are targeted for wastewater infrastructure and would be suitable for increased housing density should be amended to allow for more housing opportunity while also protecting the region's water quality.

The freshwater ponds of Cape Cod provide a significant benefit in removing nitrogen as it moves through the watershed. Ponds provide natural attenuation of nitrogen in groundwater and are an important consideration in watershed planning, as they act as “nitrogen filters.” However, in ponds, the buildup of excess nutrients, including phosphorus and nitrogen, has led to a proliferation of algae that thrives in nutrient-rich and warm waters, leading to a depletion of oxygen and damage to freshwater ecosystems. Excess nutrients also enable the growth of toxic algae that can pose a risk to humans, pets, wildlife, and aquatic life. Healthy pond ecology is also at risk from erosion, increasing sediment runoff, invasive and nuisance species, and climate change which can exacerbate other threats to ponds. Additionally, as most Cape Cod ponds and lakes are directly connected to groundwater, poor pond water quality can impact groundwater, drinking water, and downstream coastal bays and estuaries.

Each pond in the region is unique and understanding the status of water quality, the individual challenges each of the ponds face, and the potential management approaches for addressing pond health is hampered by a lack of high-quality data. The Cape Cod Freshwater Initiative was a dedicated planning process to better understand the challenges ponds face and identify potential solutions. The Cape Cod Freshwater Strategy equips local and regional stakeholders with the data and resources necessary to take action. Individuals, towns, agencies and organizations must partner to elevate pond protection efforts and garner broad community support to reduce and eliminate pollutant inputs to ponds, protect pond buffers and watersheds, and secure funding to plan for and implement pond restoration strategies.

Stormwater impacts both fresh and coastal water resources. Recent history indicates that storm frequency and intensity are increasing. The expected quantity and quality of stormwater is changing, and there is need for appropriate management strategies both now and into the future. Hydrologic response units (HRU), which represent areas of common physical characteristics that are expected to respond to precipitation and weather events in a similar way, have been determined and mapped across Cape Cod. HRUs can be used to quickly and visually identify hotspot areas that generate large amounts of runoff, nutrients, and suspended solids, and to prioritize these areas for management. HRUs also serve as the core modeling inputs to planning tools such as EPA’s Opti-Tool and the Commission’s Stormwater Calculator, which can further assist with local stormwater planning.

Where drinking water quality has been impaired by land uses, restoration is nearly impossible. Many public water supply wells are now treated for removal of natural elements, such as iron and manganese, or to neutralize bacteria in the special case of Long Pond in Falmouth, the Cape’s only surface-water supply. Several municipal drinking water supply wells on Cape Cod are treated for a range of contaminants, including PFAS and other CECs, as well as petroleum-based and other legacy contaminants from industrial uses. Several historic wells subject to contamination have been abandoned and replaced. Water supplies require continued vigilance and protection from upgradient development pressure to avoid the need for expensive treatment or replacement from a

finite source. The ongoing generation of hazardous wastes, and the transport, storage, and use of hazardous materials continues to be a concern. In addition, there continues to be a need to identify and protect suitable undeveloped land with potential for future water supply development.

MITIGATING CLIMATE CHANGE AND ADAPTING TO ITS IMPACTS

Climate change is an unprecedented challenge that is transforming Cape Cod. Rising seas and changes to the coastline are the most dramatic evidence of climate change, but it is impacting every facet of Cape Cod's natural, built, and community systems. By the end of the century, damage to Cape Cod's buildings and land lost to inundation could alone total over \$30 billion. Our land use patterns and way of living dictate our greenhouse gas (GHG) emissions, the leading cause of the climate crisis. While the problems posed by climate change appear unstoppable, there are actions the Cape community can take to reduce emissions and participate in the effort to slow the rate of change. Increasing the region's resilience to climatic changes and a rising sea means thinking into the future and adjusting behaviors that put people and property at risk. Mitigating the causes of climate change and adapting to its effects on Cape Cod requires considering the environmental and economic implications of public policy decisions.

The region's vulnerability is expected to increase in the future as sea levels continue to rise, climate change intensifies, and the region experiences an increase in storm activity and severity. Scientists anticipate that climate change will bring stronger storms with more precipitation and the threat of more frequent and extensive flooding to the region. Increasing storm activity has resulted in flooded roads and power outages, limiting access to necessary services and power resources. In addition, temperatures are anticipated to rise, with related degradation of air quality, strain and displacement of local indigenous flora and fauna, increases in foreign pest incursions, more health-related problems, and, of particular significance for Cape Cod, changes in sea surface temperature and the viability of coastal environments for the region's native wildlife.

Sea level rise poses a major and severe threat to Cape Cod, which has 586 miles of vulnerable, tidal shoreline. Projected sea level rise will increase flooding, both elevating the height of storm and non-storm surges and flood levels, and exacerbating inundation and storm surge by sending flood waters further inland, resulting in potential inoperable first response facilities and substantial negative impacts to infrastructure, property, economic prosperity, and habitat. By 2050 more than \$38 billion worth of properties could be at risk from flooding based on the Massachusetts Coast Flood Risk Model. Even today, without the increased risk of climate change and sea level rise, the assessed value of all properties located within the FEMA Special Flood Hazard Area exceeds \$35 billion.

Cape Cod's response to these threats must consider the region's vulnerabilities, priorities and opportunities. Individuals, local organizations, and regional entities must all work together to reduce greenhouse gas emissions and increase the region's resiliency to current and future hazards through both planning and regulatory initiatives.

PRESERVING HISTORIC AND CULTURAL RESOURCES

The historic nature of the Cape is a key facet of its identity. Yet, even with the many National Register and Local Historic Districts, thousands of historically significant buildings on the Cape are not protected. More than 46% of the region's inventoried properties that are at least 100 years old have no protection from demolition or alteration of their character-defining features. While several town demolition delay bylaws have been strengthened in recent years, historic buildings continue to be demolished outside historic districts, with important examples from the Cape's earliest development periods lost every year. Archaeological sites and historically open landscapes are similarly unprotected. Development pressures in waterfront areas and historic neighborhoods continue to threaten these resources that embody the region's history and character. Demolition of these irreplaceable resources not only destroys the physical elements of the region's cultural heritage, but also negatively impacts community character and the economy, which are strongly tied to Cape Cod's unique architectural heritage.

Improving and updating historic inventories, better integrating cultural resource concerns into development reviews, and expanding local historic districts are steps that each town and the region should pursue. Working with conservation organizations to protect archaeological sites and creating new zoning that establishes incentives to re-use historic buildings will also help protect these important resources and the region's distinctive character and culture.

INCREASING HOUSING ATTAINABILITY

The Cape Cod housing market does not meet the region's diverse needs. Low wages, high costs, a lack of choice and mobility within the market, limited supply of both homeownership units and year-round rentals, increasing demand for seasonal and retiree housing, and restrictive zoning have led to a housing crisis that severely impacts the ability of the region to create and maintain thriving year-round communities. The region must take a multi-faceted approach to improving housing affordability and accessibility.

Zoning changes to allow for multi-family housing are necessary, but must be done deliberately, in appropriate areas, with thought and consideration given to the existing built form and context to ensure new housing development or redevelopment does not exacerbate other regional issues. Such changes should be aligned with wastewater infrastructure initiatives (existing or planned). Additionally, the region must look to develop and utilize tools to provide support for its year-round

residents and make housing more affordable and attainable to those working and living in the region.

Just as important as developing housing units is preserving the housing that currently exists and more efficiently using the built environment in ways that meet the needs of the region. The region must look to better utilize its existing housing stock, whether by converting homes used seasonally or for short-term rentals to year-round residences or turning larger single-family homes or other buildings into multiple, more affordable units.

Advancing any housing initiatives in a meaningful way will require identifying and adopting new funding tools and mechanisms. New funding mechanisms are particularly needed to support attainable housing for those households earning more than the area median income but not enough to affordably purchase a home. Additionally, expanding funding for existing affordable housing initiatives will also be necessary to change the housing landscape to make it more accessible and attainable for current and future Cape Cod residents.

Planning for and developing housing and implementing strategies to promote more year-round affordable and attainable housing opportunities must be done in a way that also addresses regional challenges related to climate change, protecting sensitive natural and cultural resources, and in concert with wastewater and other infrastructure needs and investments.

PLANNING AND PROVIDING FOR NECESSARY INFRASTRUCTURE

The existing infrastructure fundamentally limits the region's ability to balance economic and social wellbeing with the protection of natural and cultural resources. The region's rural and suburban development patterns make providing adequate infrastructure more expensive on a per-unit or per-user basis as networks are typically more spread out, with fewer users able to utilize and pay for the same systems or materials. These development patterns also require greater development and disturbances of natural resources. However, targeted, improved, and expanded transportation, water, wastewater, electric, and broadband infrastructure that mitigates and adapts to climate change will be necessary to support long-term regional economic stability. These regional networks must be resilient and provide last-mile connectivity, bringing the benefits of the regional investments to the people, businesses, and institutions that are the backbone of the economy.

Of particular necessity is replacement of the Canal Bridges. Built in 1935, the Bourne and Sagamore bridges span the Cape Cod Canal and connect residents, businesses, and visitors on the Cape and Islands to the mainland. They are essential for general transportation, freight, and tourism, and in an emergency are critical routes for evacuation. The bridges are the only connection to and from Cape Cod for vehicular traffic and are vital to the region's day-to-day operations, the economy at

large, and the provision of essential goods and services. Continuing to work toward their replacement is crucial for the region's viability.

Implementing these large-scale infrastructure improvements requires significant community dialogue to determine the most effective, efficient solutions that are consistent with community values including planning for growth, equity, cost sharing, climate change response, and environmental benefit. These investments, and means for funding these investments, must also be sensitive to the inequities that exist in our communities. The environmental and public health imperatives requiring timely investment in infrastructure across Cape Cod offer this region an opportunity to reset, change the paradigm, and to develop a coordinated plan to direct growth to areas that can support it.

STRENGTHENING THE ECONOMY

Cape Cod's environment is its economy. The region's character and amenities attract a wide range of people who want to visit, live, or work on the Cape, including tourists, retirees, second-home owners, scientists, entrepreneurs, and artists.

However, the seasonal nature of the economy and the region's relatively lower wages can prove challenging for people trying to live and work year-round in the region. Additionally, with an older and aging population, healthcare and social services and employees who fill critical jobs in this industry are increasingly important, but those workers also struggle to afford to live in the region.

Economic development on Cape Cod depends on a healthy natural environment, continued development of infrastructure to support the population and remediating the impact of 20th century growth patterns, resources to support an appropriately skilled labor pool, and effective and fair regulatory and land use policies.

The region needs to work to support more year-round job opportunities through workforce education and training as well as employee and business attraction to help provide residents with greater economic opportunities and stability. Opportunities in industries that provide more year-round employment and can also work to address other challenges facing the region – housing affordability, water quality, and climate change, for example – should be especially supported and leveraged.

As the region looks to the future and addresses the challenges of today, it must work to advance these multiple priorities in concert with one another.

6. Goals and Objectives

This RPP adopts goals to guide and plan for the future of the region in a manner consistent with the vision and growth policy of this RPP. The goals and objectives derive from the values and purposes of the Cape Cod Commission Act, preserving and enhancing the region's assets.

Organized around the region's natural, built, and community systems, these goals and objectives form the structure upon which the region's planning work relies, serve as touchstones to guide implementation actions, and set the measures by which the regulatory review process takes place.

NATURAL SYSTEMS

To protect and restore the quality and function of the region's natural environment that provides clean water and healthy ecosystems upon which life depends.

Water Resources

Goal: To maintain a sustainable supply of high quality drinking water and protect, preserve, or restore the ecological integrity of Cape Cod's fresh and marine surface water resources.

Objectives:

- Protect and preserve groundwater quality
- Protect, preserve or restore fresh water resources
- Protect, preserve or restore marine water resources
- Manage and treat stormwater to protect and preserve water quality
- Manage groundwater withdrawals and discharges to maintain hydrologic balance and protect surface and groundwater resources

Ocean Resources

Goal: To protect, preserve, or restore the quality and natural values and functions of ocean resources.

Objectives:

- Locate development away from sensitive resource areas and habitats
- Preserve and protect ocean habitat and the species it supports
- Protect significant human use areas and vistas

Wetlands Resources

Goal: To protect, preserve, or restore the quality and natural values and functions of inland and coastal wetlands and their buffers.

Objectives:

- Protect wetlands and their buffers from vegetation and grade changes
- Protect wetlands from changes in hydrology, including those associated with stormwater discharges
- Promote the restoration of degraded wetland resource areas

Wildlife and Plant Habitat

Goal: To protect, preserve, or restore wildlife and plant habitat to maintain the region's natural diversity.

Objectives:

- Maintain existing plant and wildlife populations and species diversity
- Restore degraded habitats through use of native plant communities
- Protect and preserve rare species habitat, vernal pools, 350-foot buffers to vernal pools
- Manage invasive species
- Promote best management practices to protect wildlife and plant habitat from the adverse impacts of development

Open Space

Goal: To conserve, preserve, or enhance a network of open space that contributes to the region's natural and community resources and systems.

Objectives:

- Protect and preserve natural, cultural, agricultural, and passive recreational resources
- Maintain or increase the connectivity of open space
- Provide protected open space appropriate to context

BUILT SYSTEMS

To protect and enhance the built environment and infrastructure necessary to support the region and healthy activity centers.

Community Design

Goal: To protect and enhance the unique character of the region's built and natural environment based on the local context.

Objectives:

- Promote context-sensitive building and site design
- Minimize the amount of newly disturbed land and impervious surfaces
- Avoid adverse visual impacts from infrastructure to scenic resources

Coastal Resiliency

Goal: To prevent or minimize human suffering and loss of life and property or environmental damage resulting from storms, flooding, erosion, and relative sea level rise, including but not limited to that associated with climate change.

Objectives:

- Minimize development and risk within areas vulnerable to flooding
- Plan for erosion and accretion
- Restore coastal resource areas to promote their natural beneficial functions

Capital Facilities and Infrastructure

Goal: To guide the development of capital facilities and infrastructure necessary to meet the region's current and demonstrated future needs.

Objectives:

- Ensure capital facilities and infrastructure promote efficiency, sustainability, and resiliency
- Enhance the coordinated provision of services and facilities that respond to the needs of the region

Transportation

Goal: To provide and promote a safe, reliable, and multi-modal transportation system.

Objectives:

- Improve safety and eliminate hazards for all users of Cape Cod's transportation system
- Provide and promote healthy transportation options and appropriate connections for all users
- Implement and promote vehicle trip reduction strategies

- Provide and promote an efficient and reliable transportation system by reducing congestion

Energy

Goal: To provide an adequate, reliable, and diverse supply of energy to serve the communities and economies of Cape Cod.

Objectives:

- Support renewable energy development that is context-sensitive
- Increase resiliency of energy generation and delivery
- Promote energy efficiency and conservation measures by minimizing energy consumption through planning and design

Waste Management

Goal: To promote a sustainable solid waste management system for the region that prioritizes reuse and diversion and protects public health, safety, and the environment.

Objectives:

- Reduce waste and waste disposal by promoting waste diversion, reuse, beneficial reuse, deconstruction, and other Zero Waste initiatives
- Support an integrated solid waste management system

Climate Change

Goal: To increase the region's resiliency to climate change impacts and mitigate climate change by supporting and contributing as a region to the Commonwealth's greenhouse gas reduction goals and initiatives, including a state-wide net zero carbon target by 2050.

Objectives:

- Promote low or no carbon transportation alternatives and technologies
- Promote electrification and low or no carbon technologies for building energy use, including appliances, lighting, and heating, ventilation and cooling (HVAC) systems
- Promote carbon sequestration and other emissions removal practices as appropriate to context
- Promote low or no carbon energy generation as appropriate to context
- Promote strategies to address climate change induced impacts such as wildfire and extreme temperatures and changes in precipitation

COMMUNITY SYSTEMS

To protect and enhance the linkages between society, the natural environment, and history vital to the way of life on Cape Cod by supporting development of amenities and life opportunities necessary to support vibrant and diverse communities.

Cultural Heritage

Goal: To protect and preserve the significant cultural, historic, and archaeological values and resources of Cape Cod.

Objectives:

- Protect and preserve forms, layouts, scale, massing, and key character defining features of historic resources, including traditional development patterns of villages and neighborhoods
- Protect and preserve archaeological resources and assets from alteration or relocation
- Preserve and enhance public access and rights to and along the shore
- Protect and preserve traditional agricultural and maritime development and uses

Economy

Goal: To promote a resilient, inclusive, and diverse regional economy that protects and builds on the Cape's competitive advantages.

Objectives:

- Support traditional and emerging businesses and industries
- Support local workforce, economic activity, and entrepreneurship

Housing

Goal: To promote the production of an adequate supply of ownership and rental housing that is safe, healthy, and attainable for people with different income levels and diverse needs.

Objectives:

- Promote an increase in housing diversity and choice
- Promote an increase in year-round housing supply
- Protect and improve existing housing stock
- Increase affordable and attainable housing

7. Coordinated Regional and Local Planning

Coordinated regional planning is at the core of the Cape Cod Commission's mission. The Commission's regional planning activities address resources and needs that transcend municipal or individual site boundaries. To achieve regional planning goals, the Commission and its staff identify special areas and resources that are particularly sensitive to development pressures and provide technical assistance on a wide range of topics to Cape communities. Additionally, the Commission provides resources to prepare and implement local plans in coordination with neighboring and oftentimes overlapping jurisdictions. While the Regional Policy Plan is comprehensive in its vision and growth policy for the region and serves as an overarching policy framework for the Commission's planning efforts, there are certain resources or issues facing the region, such as water quality, transportation, housing, economic development, and climate resilience, that require more focused planning efforts beyond that provided through the Regional Policy Plan. These more specialized regional plans and programs work in conjunction with the RPP to accomplish local and regional goals.

TARGETED REGIONAL AND LOCAL PLANNING EFFORTS

Since the 2018 RPP, Commission staff have been actively engaged with Cape communities on a wide range of issue-specific regional planning topics, including but not limited to implementation of the Cape Cod Section 208 Area Wide Water Quality Management Plan, developing a new Comprehensive Economic Development Strategy and Regional Transportation Plan, and creating the first ever Cape Cod Climate Action Plan, Regional Housing Strategy, and Freshwater Strategy. Following are brief descriptions of these planning activities and links to more information.

Cape Cod Section 208 Area Wide Water Quality Management Plan

The Cape Cod Section 208 Area Wide Water Quality Management Plan (208 Plan), certified and approved by the Governor of the Commonwealth of Massachusetts and the US Environmental Protection Agency (US EPA) in 2015, provides a path forward to define watershed-based solutions for the restoration of the waters that define Cape Cod. It recognizes septic systems—primarily serving single-family residential development—are the primary source of nitrogen impairing coastal water quality on Cape Cod. It established a framework to restore coastal water quality that local, regional, state, and federal partners continue to use to advance wastewater management efforts and regulatory reforms. The 208 Plan identifies challenges and limitations of providing wastewater infrastructure on Cape Cod, not the least of which is the increased cost of collecting and conveying wastewater given the dispersed patterns of development across the region. The plan encourages land use policies that focus future growth in existing centers of activity—areas that can be most

cost-effectively served by wastewater infrastructure and that are appropriate for mixed-use and more diverse housing opportunities.

In recent years, recommendations of the 208 Plan have been implemented through the Regional Water Quality Database, Cape Cod and Islands Water Protection Fund, amendments to Massachusetts state regulations governing septic systems and watershed permitting, and significant local wastewater planning and implementation.

The full plan is available here: <http://ccc-plans.org/208>

Freshwater Strategy

In 2025, the Cape Cod Commission completed the region's first freshwater strategy. For decades, the Commission, along with stakeholders from across the region, has recognized the health of freshwater resources as a regional priority. The 208 Plan identified that nutrient loading not only impacts coastal water quality, but pond water quality as well, and identified the need to take action to address freshwater quality impairments.

The Freshwater Strategy is an output of the Freshwater Initiative, a science-based, information-driven planning process to engage stakeholders and enable action to protect and restore Cape Cod's freshwater ponds and lakes and builds upon the data compiled for the 2021 Cape Cod Pond and Lake Atlas. The Freshwater Strategy provides an overview of the work performed under the Freshwater Initiative and defines a path forward for Cape Cod to support healthy, functioning freshwater ecosystems. It contains key recommendations to improve the region's understanding of ponds and lakes and support improved freshwater habitats and water quality, through local and regional action.

The full plan is available here: <https://ccc-plans.org/freshwater>

Comprehensive Economic Development Strategy

In 2013, Cape Cod was designated an Economic Development District by the federal Economic Development Administration (EDA), creating new regional opportunity for federal economic development funding for projects and programs consistent with the Cape Cod Comprehensive Economic Development Strategy (CEDS). This important and valued designation followed an intense stakeholder driven regional planning effort to adopt a CEDS, an economic blueprint for the region. The CEDS is an operational plan typically built on the policies and goals of the Regional Policy Plan thereby ensuring that the priorities, programs, and projects supported by the plan make advancements economically without undermining the region's most valuable and sensitive resources.

The CEDS is developed by the Commission in collaboration with the Barnstable County Economic Development Council (BCEDC). The planning process and plan are informed by a comprehensive analysis of the region's economy, its strengths, challenges, and opportunities. The result is an action plan and an evaluation process specifically designed to address priority issues through achievable projects and programs.

The CEDS was most recently completed in 2024 and includes the following economic vision for Cape Cod: A region that supports a resilient, inclusive, and diverse year-round community with access to housing options, high quality business, education, and employment opportunities, and thriving natural resources, building upon the historic and unique characteristics that have drawn people to the region for centuries. To support this vision, the CEDS contains six goals in the issue areas of housing attainability, community, infrastructure, natural resources, workforce development, and economic diversity and resiliency, as well as a targeted action plan to advance the vision and goals over the next five years.

The full plan is available here: <https://ccc-plans.org/CEDS>

Regional Transportation Plan

Another example of an area where the Commission can effectively bring together towns to address more detailed planning across municipal boundaries to further regional goals is transportation. The region's transportation infrastructure has both shaped, and been shaped by, the development patterns of the region. It must continue to evolve to meet the needs of current and future generations. The 2024 Regional Transportation Plan (RTP) was completed and adopted in 2023 by the Cape Cod Metropolitan Planning Organization (the regional governing body established by law to oversee regional transportation planning and recommend the distribution of transportation funds locally).

The 2024 Regional Transportation Plan (RTP) is a community-driven, performance-based plan that considers the unique challenges and opportunities of the region and establishes spending priorities to allocate available surface transportation funding towards transportation infrastructure projects for Cape Cod through 2044. The 2024 RTP envisions a multi-modal transportation system that supports the environmental and economic vitality of the region through infrastructure investment that focuses on safety, livability, sustainability, resiliency, equity, and preservation of the character that makes Cape Cod special.

The RTP includes goals for seven areas of emphasis: safety, environmental and sustainability, livability and economic vitality, multimodal options/healthy transportation, congestion reduction, system preservation, and freight mobility. The performance measures and targets established in the RTP are quantifiable targets that the region will work to achieve over the coming years through implementation of a series of strategies and policies.

The full plan is available here: <http://ccc-plans.org/rtp>

Regional Housing Strategy

Housing Cape Cod: The Regional Strategy is the first regional housing strategy for Barnstable County. Completed in 2024, it addresses the decades-long challenge of providing affordable and diverse housing choices for year-round residents, which has only become more acute in recent years. The COVID-19 pandemic pushed the region's housing challenges into a crisis. With the onset of the pandemic, housing prices increased rapidly, inventory became significantly limited, and the gap between housing prices and wages widened.

The Regional Housing Strategy provides the data and information necessary to target key short- and long-term actions to improve housing access and affordability. It outlines a path forward for each of the key regional recommendations and identifies local zoning opportunities to better facilitate development and redevelopment of more diverse housing opportunities. It empowers local and regional stakeholders to take action to sustain and enhance Cape Cod's year-round community and provide a stable foundation for the region's economy.

The full plan is available here: <https://ccc-plans.org/housing>

Cape Cod Climate Action Plan

Since the 2018 RPP, the Commission developed the region's first Climate Action Plan. Finalized in 2021, the Climate Action Plan recognizes that dedicated and immediate action is necessary to slow the effects of climate change and improve the region's resiliency to its impacts. It provides a framework for action to support a climate resilient region and its purpose is twofold - to improve the region's resiliency to climate hazards; and mitigate climate change on Cape Cod through reducing net regional greenhouse gas emissions in support of the framework and targets established by the Commonwealth.³¹

Together, transportation and stationary energy account for nearly 95% of the region's greenhouse gas emissions and residential buildings are one of Cape Cod's largest greenhouse gas emitters. The Climate Action Plan includes strategies for the built environment that not only reduce greenhouse gas emissions, mitigating the cause of climate change, but also promote resilience of the built form by adapting to the effects of climate change.

The full plan is available here: <https://ccc-plans.org/climate>

³¹ *Cape Cod Climate Action Plan*, p. I, Cape Cod Commission, 2021. <https://www.capecodcommission.org/our-work/climate-action-plan/>

Cape Cod Ocean Management Plan

The 2011 Cape Cod Ocean Management Plan (CCOMP) provides guidance on the use and protection of Cape Cod's ocean resources and establishes policy and provides technical support for review of the development activities allowed in the state's ocean waters. To ensure that ocean-based development is balanced with resource protection, the Commission led a District of Critical Planning Concern (DCPC) process to identify significant marine resources and engage the community in establishing appropriate policies for managing offshore development. This process led to recommendations incorporated into the CCOMP which, in turn, led to revisions and additions to the RPP to address development in marine and coastal resource areas.

The full plan is available here: <https://ccc-plans.org/OMP>

Local Comprehensive Planning

In addition to coordinating issue-specific plans across the region, the Commission works to coordinate local comprehensive plans with the goals and vision of the RPP. The Act identifies the minimum criteria required for a local comprehensive plan (LCP) to be consistent with the Act and the LCP regulations identify six components necessary for an LCP to be certified by the Commission:

- A **vision statement** that expresses the shared values of the community for future growth, development, and resources protection
- An **existing conditions** inventory that guides the LCP's discussion about the future
- Planning and land use **goals** that are consistent with those contained in the RPP
- A **capital facilities plan** that outlines key capital facilities and infrastructure needed to achieve the vision of the LCP
- A **housing plan** that provides an assessment of the housing demand, constraints, and goals and actions
- A **targeted action plan** with implementation schedules and timeframes for completion of the actions and responsible parties

Towns must adopt their LCP by Town Meeting or Town Council before submitting it to the Commission for certification. LCPs remain certified until revoked by the Commission. Commission staff are available to assist and review elements and drafts throughout the LCP development process.

8. Cape Cod Placetypes

While the RPP goals apply across the region, the region is comprised of many different and unique places. To recognize and support these unique areas, this RPP identifies areas with similar natural and built characteristics as distinct "Placetypes," which serve as a conceptual framework for regional planning and regulation. A character description for each Placetype is provided along with a vision for each area consistent with the region's growth policy. Additionally, each character description lists strategies for creating and enhancing the unique characteristics of these Placetypes.

NATURAL AREAS

Natural Areas are generally the region's least developed and most sensitive areas. These areas comprise BioMap habitats and landscapes, coastal and inland wetlands and vernal pools (both certified and those which have the qualities for certification) and the buffers to these resources, protected open space, and potential public water supply areas. The vision for Natural Areas is to minimize adverse development impacts to sensitive resource areas, to preserve lands that define Cape Cod's natural landscape and contribute to its scenic character, and improve the Cape's resilience through the preservation of naturally vegetated areas that buffer and absorb the effects of the changing climate. Natural Areas are lands with the highest significance for resource protection or conservation and are appropriate for permanent protection through acquisition and conservation restriction or for transfer of development rights to less vulnerable areas.

Natural Areas Placetype Strategies:

- 1) Provide natural areas for plant and wildlife habitat
- 2) Retain natural cover and restore habitats
- 3) Provide areas for passive recreation such as walking and hiking
- 4) Limit development to protect natural resource functions and allow for future water supply development
- 5) Encourage removal of structures and restoration, where appropriate

RURAL DEVELOPMENT AREAS

Rural Development Areas are defined by a high percentage of open lands and sparse building development patterns that contribute to the unique rural and scenic character of the region. Rural Development Areas may include rural historic areas of the Outer Cape including the Cape Cod National Seashore and large agricultural areas, larger lot residential development, lands in active agricultural production, significant tracts of wooded areas without identified special habitat, and cultural landscapes that help define the region's history. The vision for Rural Development Areas is

to ensure that development is located, sited, and scaled appropriately to avoid impacts on scenic and/or cultural resources, and to help maintain the economic diversity that agriculture can provide for the region including opportunities for the continuation of traditional agricultural occupations, and for the availability of locally-grown food.

Rural Development Areas Placetype Strategies:

- 1) Preserve lands in agricultural production to encourage locally-grown food
- 2) Protect agricultural lands and natural cover to preserve existing natural functions
- 3) Ensure development respects the surrounding landscape by using existing topography to guide the development layout, cluster the development on the site, and preserve wooded buffers
- 4) Protect scenic and cultural landscapes and historic structures within these landscapes that contribute to the Cape's unique character and history
- 5) Provide connections to adjacent open space lands to create an open space network with opportunities for passive recreation such as walking and hiking

SUBURBAN DEVELOPMENT AREAS

Suburban Development Areas include residential neighborhoods built primarily between the 1950s and 1990s as well as automobile-oriented commercial and light industrial development established during the same time period. These areas are more densely developed than Rural Development Areas and may include curvilinear streets and cul-de-sacs, but generally lack an interconnected street network. Suburban Development Areas also have a patchwork of fragmented open space consisting of buffer strips or landscaped areas. Parking in commercial and industrial Suburban Development Areas is typically located in front of the site with buildings that are highly visible from the roadway. The vision for these areas is to redevelop commercial and industrial Suburban Development Areas consistent with the community's vision to create more concentrated nodes of development, and to improve their design and function so that they are better integrated into surrounding neighborhoods. The vision for residential Suburban Development Areas is to cluster residential development to reduce the development footprint and provide high-quality open space.

Suburban Development Areas Placetype Strategies:

- 1) Encourage redevelopment of existing commercial suburban development with denser clusters of buildings surrounded by less developed areas
- 2) Integrate existing commercial development into surrounding areas with mixed-use and/or residential development providing greater housing opportunities and employment diversity
- 3) Create pedestrian and bicycle amenities within and between developments to improve safety for all users and reduce auto dependence

- 4) Improve the design and function of commercial and industrial areas through landscaping, stormwater treatment, and building layout/design
- 5) Encourage infill and cluster residential development to limit further suburban sprawl

HISTORIC AREAS

Historic Areas consist of concentrations of historic structures, including local and/or National Register districts located in a small-scale village setting. These areas are an important component of the region's history and Cape Cod character. The vision for Historic Areas is to protect historic resources and to support infill development that respects the form, scale, and character of existing historic areas.

Historic Areas Placetype Strategies:

- 1) Support infill development at appropriate scale and density to retain the vitality of these areas
- 2) Preserve the character and traditional function of historic areas
- 3) Encourage the re-use of historic structures to accommodate small businesses and/or greater diversity of residential opportunities

MARITIME AREAS

Maritime Areas are clusters of commercial and mixed-use development that contribute to Cape Cod's working waterfronts and harbors. These areas help to define Cape Cod's unique maritime history, are an important component of the Cape's economy, and provide recreational opportunities for both residents and visitors. Maritime areas will include both public and private harbors, marinas, and mooring fields and may extend to nearby commercial activity and historic maritime villages that contribute to the traditional character and economic success of the working waterfronts.

The vision for Maritime Areas is to support the fin- and shell-fishing industry as well as other commercial, recreational, educational, and research activities associated with the marine environment and to protect water dependent trades. Storm events and climate change, along with the use, scale and form of adjacent development pose challenges to maintaining valuable maritime infrastructure and activities, as well as their character.

Maritime Areas Placetype Strategies:

- 1) Encourage towns to develop and regularly update Harbor Plans
- 2) Identify harbor use policies that support traditional maritime activities while also accommodating other users, such as tourism, transportation, energy, and marine science focused operations
- 3) Preserve and/or expand public access to water/beaches

- 4) Preserve historic structures and overall scale and character

COMMUNITY ACTIVITY CENTERS

Community Activity Centers are areas with a concentration of business activity, community activity, and a compact built environment. Buildings are generally smaller in scale and connected by a network of streets, ways or alleys. Community Activity Centers are more walkable and densely developed than other Placetypes and often contain concentrations of historic buildings that contribute to the Cape's unique character. Mixed commercial and residential uses make it possible to live and work within the same walking distance. Smaller parks provide greenspace and recreation within Community Activity Centers, with ample access to transit, bike connections and sidewalks.

The vision for these areas is to accommodate mixed-use and multifamily residential development in a walkable, vibrant area, preserve historic buildings, and to provide diverse services, shopping, recreation, civic spaces, housing, and job opportunities at a scale of growth and development desired by the community, with adequate infrastructure and pedestrian amenities to support development.

While Community Activity Centers have been determined based on the presence of similar characteristics, there are different scales, sizes, and intensity of development within each. A Community Activity Center located in one town will share characteristics with a Community Activity Center in another town, however, the character of two Community Activity Centers may be very different: one may be a historic village while another may feel more like a downtown area. While this plan identifies centers of activity at the regional scale based on existing characteristics, centers of activity also exist or could be envisioned at a neighborhood or local scale.

Additionally, the identification of the Community Activity Centers can help serve as an element or foundation for a community to plan for the area, but the identification of Community Activity Centers does not determine what the vision for the area is or should be. Specific visioning for these and other areas should be conducted by the communities, with help from the Commission if desired.

Community Activity Centers Placetype Strategies:

- 1) Encourage mixed-use commercial and residential development in a compact form to support a vibrant downtown area
- 2) Encourage development at a human scale that facilitates interaction and a sense of community
- 3) Develop infrastructure necessary to support greater density and mix of uses, including access to transit
- 4) Integrate pocket parks and create streetscapes that enhance the built environment and provide community gathering places

INDUSTRIAL ACTIVITY CENTERS

Industrial Activity Centers are lands containing industrial uses that are suitable for future industrial activity as well as emerging industries. Industrial Activity Centers are lands without significant resource constraints, are areas with access to major highway corridors, and are of an adequate size to support industrial uses. Industrial Activity Centers include some larger industrially-zoned areas, as well as existing areas designated under Chapter H of the Commission's regulations. These areas have a well-developed internal street network at a scale to accommodate larger vehicles and uses. The vision for Industrial Activity Centers is to support their development as significant employment centers with adequate infrastructure. Industrial land uses such as manufacturing, assembly, storage, processing and/or contracting in these areas is generally incompatible with residential development and should be appropriately separated and buffered from other uses.

Industrial Activity Centers Placetype Strategies:

- 1) Maintain adequate buffers between industrial development and surrounding uses
- 2) Provide employee services and facilities and access to transit
- 3) Develop incubator spaces for emerging industry clusters and entrepreneurs
- 4) Plan for renewable energy generation facilities

MILITARY AND TRANSPORTATION AREAS

Military and Transportation Areas consist of large land areas developed with and devoted to infrastructure such as airports, transfer stations, waste disposal facilities, and Joint Base Cape Cod. These areas have unique considerations such as access control, noise impacts, and flight path restrictions. The vision for these areas is to support comprehensive master planning with community input, encourage growth of industries appropriate to the diversification of the regional economy, and encourage partnerships for use of shared infrastructure.

Military and Transportation Areas Placetype Strategies:

- 1) Ensure transportation routes provide safe and adequate access to and from these facilities
- 2) Support opportunities for shared infrastructure
- 3) Support development of renewable energy generation where appropriate

9. Regional Regulatory Review

The Cape Cod Commission Act (Act) charges the Cape Cod Commission (Commission) with reviewing certain proposed developments which, because of their size or other characteristics, are presumed to have development effects beyond their local communities. These proposed developments are called Developments of Regional Impact (DRI). The DRI review requirements are set forth in Section 13(d) of the Act.

An important component of the Act's DRI review requirements is a review for consistency with the Regional Policy Plan (RPP) in effect at the time a DRI is reviewed. The Commission regularly updates the RPP to establish a current and coherent set of regional planning policies, goals, and objectives to guide development throughout Barnstable County. The RPP is implemented in large part through the Commission's regulatory program.

This RPP focuses on the review of developments in relation to their surroundings, which are determined based on the Cape Cod Placetype within which the proposed project is located. Employing a context-sensitive review process ensures that new development is harmonious with and enhances the unique character of the region and protects its natural and cultural resources, which are critical to the regional economy and way of life.

THE ROLE OF THE GOALS AND OBJECTIVES OF THE RPP

This RPP has been drafted to align directly with the goals and purposes of the Act. Specifically, this RPP adopts goals and corresponding objectives under each goal to guide and plan for the future of the region in a manner consistent with the vision and growth policy of the Commission.

Organized around the region's natural, built, and community systems, these goals and objectives form the structure upon which the region's planning work relies, guide implementation actions, and provide a framework by which the regulatory review process takes place.

The goals and objectives set forth in Section 6 of this plan are the measures by which the Commission will make its determination of whether a DRI is consistent with the RPP; for purposes of DRI and other regulatory reviews undertaken by the Commission, consistency with applicable goals and objectives constitutes consistency with the RPP.

The Commission determines the applicability and materiality of the RPP's goals and objectives to a project on a case-by-case basis. As the RPP has broad, general application to DRIs and other regulatory matters of regional significance, not every goal or objective may apply, be material, relevant or regionally significant, or apply in the same way or with the same focus or extent to every project or designation, given the specific facts and circumstances present in any given project.

THE ROLE OF TECHNICAL GUIDANCE IN REGULATORY REVIEW

In support of this RPP, the Commission has developed Technical Guidance. The Technical Guidance contains Placetype Maps, Technical Bulletins and references to resource areas mapped by federal and state agencies. The primary application of the Technical Guidance is during DRI Review, and its primary purpose is to assist the Commission in its determination of whether a project is consistent with applicable RPP goals and objectives.

As complement to the RPP, the Commission has adopted Technical Bulletins, which are incorporated herein by reference. There is a Technical Bulletin for each of the goals of the RPP. The Technical Bulletins detail methods by which the goals and objectives of the RPP may be met. Except where otherwise specified in the Technical Bulletin, the methods by which goals and objectives of the RPP are met are not prescriptive, but rather are examples of methods that further the goals and objectives of the RPP and assist in evidencing consistency with the RPP. Applicants may work with the Commission to develop alternative methods of evidencing RPP consistency; provided, however, that there may be methods that, if determined applicable, are considered essential to achieving a particular goal and objective, and therefore required to be implemented; these are noted within the text of the applicable Technical Bulletin.

THE ROLE OF THE CAPE COD PLACETYPES IN REGULATORY REVIEW

The Cape Cod Placetypes is an organizing principle that informs the Commission's regulatory review. The applicability of goals and objectives may vary based on a project's Placetype, and the means for achieving consistency with applicable goals and objectives may vary from site to site and project to project, depending on the relevant Placetype.

The Placetypes are determined in two ways: some are depicted on a map adopted by the Commission as part of the Technical Guidance for review of DRIs, and the remainder are determined using the character descriptions set forth in Section 8 of this plan and the Technical Guidance. The Placetype for a given project is established by Commission staff prior to the first substantive public hearing on the project and provides the lens through which the Commission will review the project under the RPP. Placetype maps may be amended from time to time, as new information becomes available.

THE ROLE OF SENSITIVE RESOURCES IN REGULATORY REVIEW

The presence of identified sensitive resources on a particular project site will determine the applicability of certain goals and objectives during regulatory review. Identified sensitive resources

include mapped areas such as BioMap habitats and landscapes, state listed endangered species habitat, vernal pools and their buffers, wetlands and their buffers, protected open space, and potential public water supply areas. The presence of identified sensitive resources on a particular project site is established by Commission staff prior to the first substantive hearing on a project. These sensitive resources and any corresponding guidance or requirements are referenced throughout the Technical Guidance. The means for achieving consistency with the goals and objectives of the RPP may vary from site to site and project to project, depending on whether certain sensitive resources are present on a given project site and whether they are likely to be impacted by the project.

RPP CONSISTENCY AND PROBABLE BENEFIT/DETRIMENT DETERMINATIONS

In order to grant DRI approval, the Act requires that the Commission find that the probable benefit of a proposed development is greater than its probable detriment. The Commission must also find that a proposed development is consistent with the RPP (among other stated requirements). This RPP update provides a goal-oriented approach to DRI regulatory review which provides the Commission with flexibility in determining whether proposed development is consistent with the RPP when considering the particular location, use, and impacts associated with that development.

The Commission's review and analysis of a DRI under the RPP goals and objectives inform its benefits/detriment analysis and determination. Consistency with the RPP is one factor in the Commission's benefit and detriment analysis, but is not dispositive. This framework is intended to align local and regional planning and regulatory efforts to maximize the region's ability to achieve common planning and development goals.

WAIVER AND FLEXIBILITY

When special circumstances warrant, and upon the request of the project applicant, the Commission may after a public hearing waive full and literal compliance or consistency with any specific RPP goal or objective, or required method, applicable to a project, and otherwise allow a project to meet such goal or objective to the maximum extent feasible, provided the applicant demonstrates that:

- such waiver will not result in substantial detriment to or substantial derogation from the purposes and values intended to be protected or promoted by such goal or objective, and
- that the intent of the goal or objective will be met through some alternate approach; and
- that the waiver is necessary to fulfill, protect or promote another compelling regional purpose, goal, objective or value from the Act or RPP that could not be achieved without such waiver.

In considering the grant of such waiver, the Commission may factor into its decision-making any hardship claimed and demonstrated by an applicant that would render such full and literal compliance or consistency impracticable. In determining such hardship, the Commission will consider, among other things:

- 1) whether that without the desired relief, full and literal enforcement would result in substantial hardship, financial or otherwise, to the project applicant;
- 2) the extent to which the claimed hardship is specific to the project, not generalized in nature, and the extent to which the hardship might be self-created; and
- 3) whether the requested waiver relates directly to, and is the minimum relief necessary to address, the stated hardship.

REVIEW GOALS AND OBJECTIVES OF THE REGIONAL POLICY PLAN

Water Resources

Goal: To maintain a sustainable supply of high quality drinking water and protect, preserve, or restore the ecological integrity of Cape Cod's fresh and marine surface water resources.

Objectives:

- Protect and preserve groundwater quality
- Protect, preserve or restore fresh water resources
- Protect, preserve or restore marine water resources
- Manage and treat stormwater to protect and preserve water quality
- Manage groundwater withdrawals and discharges to maintain hydrologic balance and protect surface and groundwater resources

Ocean Resources

Goal: To protect, preserve, or restore the quality and natural values and functions of ocean resources.

Objectives:

- Locate development away from sensitive resource areas and habitats
- Preserve and protect ocean habitat and the species it supports
- Protect significant human use areas and vistas

Wetlands Resources

Goal: To protect, preserve, or restore the quality and natural values and functions of inland and coastal wetlands and their buffers.

Objectives:

- Protect wetlands and their buffers from vegetation and grade changes
- Protect wetlands from changes in hydrology, including those associated with stormwater discharges
- Promote the restoration of degraded wetland resource areas

Wildlife and Plant Habitat

Goal: To protect, preserve, or restore wildlife and plant habitat to maintain the region's natural diversity.

Objectives:

- Maintain existing plant and wildlife populations and species diversity
- Restore degraded habitats through use of native plant communities
- Protect and preserve rare species habitat, vernal pools, 350-foot buffers to vernal pools
- Manage invasive species
- Promote best management practices to protect wildlife and plant habitat from the adverse impacts of development

Open Space

Goal: To conserve, preserve, or enhance a network of open space that contributes to the region's natural and community resources and systems.

Objectives:

- Protect and preserve natural, cultural, agricultural, and passive recreational resources
- Maintain or increase the connectivity of open space
- Provide protected open space appropriate to context

Community Design

Goal: To protect and enhance the unique character of the region's built and natural environment based on the local context.

Objectives:

- Promote context-sensitive building and site design
- Minimize the amount of newly disturbed land and impervious surfaces
- Avoid adverse visual impacts from infrastructure to scenic resources

Coastal Resiliency

Goal: To prevent or minimize human suffering and loss of life and property or environmental damage resulting from storms, flooding, erosion, and relative sea level rise, including but not limited to that associated with climate change.

Objectives:

- Minimize development and risk within areas vulnerable to flooding
- Plan for erosion and accretion
- Restore coastal resource areas to promote their natural beneficial functions

Capital Facilities and Infrastructure

Goal: To guide the development of capital facilities and infrastructure necessary to meet the region's current and demonstrated future needs.

Objectives:

- Ensure capital facilities and infrastructure promote efficiency, sustainability, and resiliency
- Enhance the coordinated provision of services and facilities that respond to the needs of the region

Transportation

Goal: To provide and promote a safe, reliable, and multi-modal transportation system.

Objectives:

- Improve safety and eliminate hazards for all users of Cape Cod's transportation system
- Provide and promote healthy transportation options and appropriate connections for all users
- Implement and promote vehicle trip reduction strategies
- Provide and promote an efficient and reliable transportation system by reducing congestion

Energy

Goal: To provide an adequate, reliable, and diverse supply of energy to serve the communities and economies of Cape Cod.

Objectives:

- Support renewable energy development that is context-sensitive
- Increase resiliency of energy generation and delivery
- Promote energy efficiency and conservation measures by minimizing energy consumption through planning and design

Waste Management

Goal: To promote a sustainable solid waste management system for the region that prioritizes reuse and diversion and protects public health, safety, and the environment.

Objectives:

- Reduce waste and waste disposal by promoting waste diversion, reuse, beneficial reuse, deconstruction, and other Zero Waste initiatives
- Support an integrated solid waste management system

Climate Change

Goal: To increase the region's resiliency to climate change impacts and mitigate climate change by supporting and contributing as a region to the Commonwealth's greenhouse gas reduction goals and initiatives, including a state-wide net zero carbon target by 2050.

Objectives:

- Promote low or no carbon transportation alternatives and technologies
- Promote electrification and low or no carbon technologies for building energy use, including appliances, lighting, and heating, ventilation and cooling (HVAC) systems
- Promote carbon sequestration and other emissions removal practices as appropriate to context
- Promote low or no carbon energy generation as appropriate to context
- Promote strategies to address climate change induced impacts such as wildfire and extreme temperatures and changes in precipitation

Cultural Heritage

Goal: To protect and preserve the significant cultural, historic, and archaeological values and resources of Cape Cod.

Objectives:

- Protect and preserve forms, layouts, scale, massing, and key character defining features of historic resources, including traditional development patterns of villages and neighborhoods
- Protect and preserve archaeological resources and assets from alteration or relocation
- Preserve and enhance public access and rights to and along the shore
- Protect and preserve traditional agricultural and maritime development and uses

Economy

Goal: To promote a resilient, inclusive, and diverse regional economy that protects and builds on the Cape's competitive advantages.

Objectives:

- Support traditional and emerging businesses and industries
- Support local workforce, economic activity, and entrepreneurship

Housing

Goal: To promote the production of an adequate supply of ownership and rental housing that is safe, healthy, and attainable for people with different income levels and diverse needs.

Objectives:

- Promote an increase in housing diversity and choice
- Promote an increase in year-round housing supply
- Protect and improve existing housing stock
- Increase affordable and attainable housing

PLANNING TOOLS AVAILABLE THROUGH THE ACT

Districts of Critical Planning Concern

Section 10 of the Cape Cod Commission Act authorizes the Commission to propose the designation of certain areas which are of critical value to Barnstable County as Districts of Critical Planning Concern (DCPC). The DCPC is a planning tool that allows a town or a group of towns, as well as the Commission, to adopt special regulations designed to protect important resources and foster sustainable development without the pressure of pending development permits.

Development Agreements

A development agreement is a voluntary, contract entered into between the Commission, an applicant, and other state or local governmental bodies (as applicable) wherein the applicant agrees to provide certain benefits that contribute to one or more of the following: infrastructure/public capital facilities; land dedication or preservation for open-space; community facilities or recreational use; fair, affordable housing either on-site or off-site; or other benefits to serve the proposed development, municipality, and county in exchange for certain development rights. A development agreement is an alternative review and approval pathway for DRI projects and only available for development projects that meet the DRI standards and criteria.

Growth Incentive Zones

To encourage concentrated growth in desirable and well-suited areas, a town may apply for designation of a Growth Incentive Zone (GIZ) as outlined in Chapter G of the Cape Cod Commission's regulations. The designation of a GIZ can revise the applicability and extent of certain mandatory DRI review thresholds so that fewer development projects in the area require Cape Cod Commission review.

Municipal Revisions to Development of Regional Impact Thresholds

Chapter H of the Code of Cape Cod Commission Regulations of General Application establishes a procedure for the Commission or a town to propose revisions to certain mandatory DRI review thresholds within discrete geographic areas to guide growth toward areas that are adequately supported by infrastructure and away from areas that must be protected for ecological, historical, or other reasons consistent with the purposes of the Act.

10. Recommended Actions

Recommended actions in the 2025 RPP that the Commission commits to undertake include planning efforts to advance the key priorities identified in Section 5 of the Plan. These actions are organized around the Natural Systems, Built Systems, and Community Systems identified in Section 4. Many of these actions will require collaboration and partnerships at various levels of government and with non-governmental organizations, participation by committees and stakeholders that currently support the Commission's efforts, communication and coordination with private sector industries and businesses, and substantial public input in order to be achieved. In addition to these planning actions, the Commission should continue to regularly review its Development of Regional Impact thresholds to ensure they are encouraging appropriate and sensitive development patterns.

Natural Systems

DEVELOP A REGIONAL OPEN SPACE PLAN

With limited land left that isn't developed or protected, developing a regional open space plan is needed to prioritize resource protection, improve connectivity, and identify lands of community significance. Previous prioritization efforts, including local open space and recreation plans, land trust prioritization tools, and other regional efforts may be used to inform the development of a regional open space plan.

DEVELOP AN ADVANCED DYNAMIC GROUNDWATER MODEL

A more advanced groundwater model will support local and regional efforts to better understand groundwater flow and the impacts of water withdrawals and inputs, including from climate change, on freshwater and coastal water resources, with broad application for informing community planning and policy decisions.

SUPPORT IMPLEMENTATION OF THE MASSACHUSETTS FARMLAND ACTION PLAN

Massachusetts has prioritized implementation of the Farmland Action Plan and while the Cape has a lower concentration of agriculture than other locations in the Commonwealth, ensuring protection and continued productive use of farmland and prime agricultural soils is essential for maintaining access to local foods. Supporting implementation of the plan, through partnerships with state agencies, municipalities, non-profits, and others, will help farmers maintain and access farmlands for agriculture and co-benefits such as meadow and edge habitats, aquifer recharge, and community character.

ADVANCE AQUIFER PROTECTION PLANNING

As precipitation changes and there is an increased understanding of the impacts of contaminants of emerging concern, particularly PFAS compounds, there is a heightened need to examine the health of the Cape's sole source aquifer and identify strategies for protection and sustainable use.

DEVELOP MODEL WETLAND BYLAWS FOR POND AND BUFFER PROTECTION

Development pressures around ponds and lakes can have significant impacts on the vegetated buffers that help protect pond water quality and habitats. The Commission will research best management practices and develop a set of model bylaws and regulations to better manage development activity within pond buffers.

UPDATE THE OCEAN MANAGEMENT PLAN

The Cape Cod Ocean Management Plan was developed in 2011 following release of the first statewide Ocean Management Plan and an effort to establish an Ocean Management Planning District of Critical Planning Concern in 2009. The Massachusetts Ocean Management Plan is due for revision in 2025. The Commission will initiate an update to the Cape Cod Ocean Management Plan in light of the new state plan, once it is completed.

Built Systems

DEVELOP A REGIONAL CAPITAL PLAN

The Commission should continue to advance development of a Regional Capital Plan to promote coordination on maintenance of existing infrastructure and the development of new infrastructure to support present and anticipated future needs. Such plan should consider the vulnerability and sustainability of infrastructure needs, identify locations for future investments, highlight opportunities for intermunicipal and/or state agency coordination, and present recommendations to forward regional infrastructure needs.

ADVANCE ACTIONS THAT REDUCE RISK IN THE COASTAL FLOOD ZONE

With thousands of buildings at risk in areas vulnerable to flooding, the Commission should continue to work with towns and consider regional approaches for implementation of the model resiliency bylaw and regulations, model floodplain zoning bylaw, and floodplain design guidelines to protect both the built and natural environment in areas prone to flooding. Furthermore, as the Commonwealth implements the Resilient Coasts plan, the Commission should work collaboratively with state and local government entities, non-profit partners, and others to advance actions that will improve the region's resiliency, consistent with this comprehensive plan for Massachusetts' coastal communities.

SUPPORT LOCAL CLIMATE ACTION PLANNING AND IMPLEMENTATION

The Commission should continue to work with towns on local climate planning initiatives. This includes providing technical assistance, data, and other support in developing local climate action plans. It also entails supporting implementation of completed planning projects, such as advancing designs and seeking funding to implement identified adaptation projects from the [Low Lying Roads Project](#).

SUPPORT POST-DISASTER PLANNING INITIATIVES

Notwithstanding intensive planning efforts, the region remains significantly vulnerable to climate change and potential storm damage. The region must be prepared and coordinated in its response to such disasters and plan proactively for what to do in their wake. This is particularly important as it relates to redevelopment and identifying where the region should rebuild in the aftermath of a climate change-induced disaster.

SUPPORT EFFORTS FOR COLLABORATION ON WASTE DIVERSION AND DISPOSAL OPTIONS

To advance the creation of multi-entity diversion and disposal options – including multi-town partnerships, public-private partnerships, and public-military partnerships – the Commission should work with the County to provide demographic and other data and information to support analyses of benefits and impacts of such options. The Cape Cod Commission should also continue to convey the results of the solid waste studies the Commission partnered with the County to conduct in 2021. Additionally, the Commission should continue to provide support to the County in coordinating with municipalities across the region and on the islands to enhance collection and disposal efficiencies, economic opportunities, and environmental outcomes, as well as advance public education initiatives related to waste disposal and diversion.

SUPPORT IMPLEMENTATION OF THE CAPE COD VISION ZERO ACTION PLAN

Achieving the goal set forth in the Cape Cod Vision Zero Action Plan to eliminate roadway fatalities and serious injuries by 2050 will require coordination and action by many parties. The Commission can support implementation efforts by monitoring key performance metrics like the annual number of fatalities and serious injuries, convening periodic meetings to discuss progress, partnering with municipalities and community groups on public outreach and education campaigns, and supporting municipalities and other eligible entities in pursuing funding for safety initiatives and projects.

CONTINUE TO SUPPORT REPLACEMENT OF THE BOURNE AND SAGAMORE BRIDGES

The Commission should continue to support efforts to replace the Bourne and Sagamore Bridges with designs that accommodate all users, including pedestrians, cyclists, and transit. In addition, the Commission should continue to collaborate with partner agencies on efforts to minimize the impacts of construction-related disruptions and explore sustainable, non-automobile transportation

options such as rail, ferry, and expanded public transit both around the Cape Cod Canal and region-wide.

Community Systems

MAINTAIN A COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY (CEDS)

The Comprehensive Economic Development Strategy (CEDS) for the region was last completed in 2024. It is a five-year, actionable, and targeted strategic plan developed in accordance with US Economic Development Administration (EDA) guidelines. Maintaining a current CEDS, which requires an update every five years, is key to maintaining the region's Economic Development District designation, which makes the entire region eligible for funding opportunities and support from the EDA, rather than only certain Census tracts that meet specific distress criteria. The CEDS should be maintained and updated as needed.

CONTINUE TO EXPAND UNDERSTANDING OF UNDERREPRESENTED HISTORIES

Telling the broader story of Cape Cod's history is important for advancing equity and protecting the region's less commonly recognized cultural resources. Commission staff will continue to add narratives to the Elevating Underrepresented Histories storymap and work cooperatively with historical organizations and local historians to highlight their research and local archives. Bringing these stories together in one place supports educational programming, as well as efforts to expand and update historic inventories in the region. The Commission should consider other ways to highlight these narratives, such as partnerships to provide greater access to the information on underrepresented histories or to perform additional research.

SUPPORT NEW AND UPDATED HISTORIC INVENTORIES

The Commission should continue to support the work of local historical commissions to complete and/or update inventories of historic and cultural resources through GIS mapping and technical assistance. Many Cape towns have outdated historic inventory forms that are over 30 years old and do not have adequate information about a property's architectural or historic significance. As such, they provide little guidance to planners and regulatory boards when these buildings are affected by a proposed development. Updating old inventory forms and expanding existing inventories to areas that have not been well documented will provide a better basis for decisions. Inventorying a property or location is the first step in developing or enabling protections against development pressures.

ENCOURAGE LOCAL REGULATIONS THAT PROTECT HISTORIC AND ARCHAEOLOGICAL RESOURCES

Despite the region's numerous historic districts, significant historic buildings are still threatened and lost to demolition every year. Roughly half of the region's inventoried historic resources are not protected by any historic designation. The Commission will continue to provide technical assistance

to help towns develop additional cultural resource protections such as zoning incentives to reuse historic buildings, design standards, expanded local historic districts, strengthened demolition delay bylaws, and conservation restrictions to protect archaeological sites.

SUPPORT ZONING CHANGES FOR GREATER HOUSING OPPORTUNITIES

Adopting zoning in appropriate locations to allow for the creation of more types of housing in the region is a key recommendation of the Regional Housing Strategy and is critical in laying the foundation for the development of new and varied housing. The Commission will continue to work with and support towns in amending and adopting zoning to allow for greater housing opportunities, including continuing to develop model bylaws and providing technical assistance.

SUPPORT IMPLEMENTATION OF THE AFFORDABLE HOMES ACT

The Affordable Homes Act, passed by the Massachusetts legislature in August 2024, provides funding and policy initiatives to tackle the housing challenges facing the Commonwealth. The Commission will work with Cape Cod communities to support implementation of the Affordable Homes Act, including but not limited to developing model zoning bylaws and providing data, information, and other technical assistance to towns as they utilize the tools now available through this legislation. This also includes assisting those towns designated as seasonal communities in employing the new tools and initiatives available specifically for them and providing data and information necessary to support designation of the entire region as a seasonal community.

CONVENE A FUNDING AND FINANCING WORKING GROUP FOR HOUSING INITIATIVES

Several of the key recommendations and actions of the Regional Housing Strategy will require new and novel financing tools and mechanisms to meaningfully implement. While the Commission cannot itself develop and implement new funding and financing streams, it can bring together the necessary stakeholders in a working group to identify and advance funding and financing tools to substantively address the housing challenges facing the region.

MEASURING PROGRESS

The tracking of long-term regional performance measures and shorter-term actions will help illustrate whether the region is moving toward the RPP's vision for the future as a region of vibrant, sustainable, and healthy communities, and protected natural and cultural resources.

Metrics tracked across the Cape Cod systems will help illustrate progress toward meeting the goals and the vision of this plan. Through the series of regional plans detailed in Chapter 5, the Commission has and should continue to track these metrics. The Commission should work to develop a comprehensive online viewer to track progress across major regional plans.

CAPE COD COMMISSION

3225 MAIN STREET • P.O. BOX 226 • BARNSTABLE, MASSACHUSETTS 02630
(508) 362-3828 • Fax (508) 362-3136 • www.capecodcommission.org

