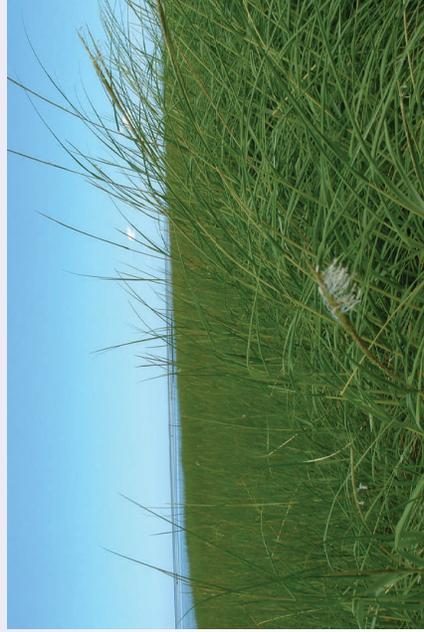
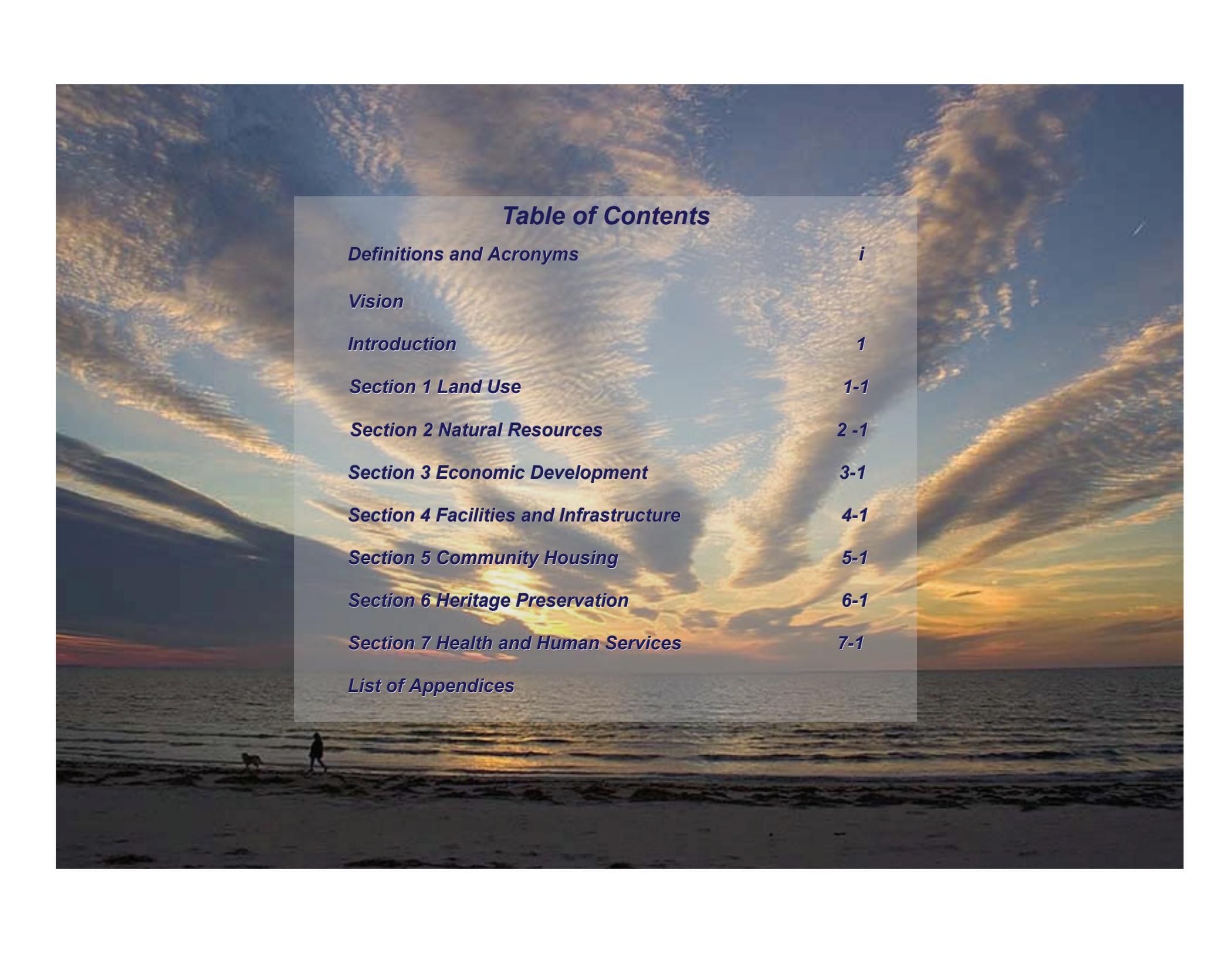


**TOWN OF BARNSTABLE COMPREHENSIVE PLAN 2010**  
**SEVEN VILLAGES - ONE COMMUNITY**



*Balancing growth, infrastructure and natural systems*



## **Table of Contents**

<b><i>Definitions and Acronyms</i></b>	<b><i>i</i></b>
<b><i>Vision</i></b>	
<b><i>Introduction</i></b>	<b><i>1</i></b>
<b><i>Section 1 Land Use</i></b>	<b><i>1-1</i></b>
<b><i>Section 2 Natural Resources</i></b>	<b><i>2 -1</i></b>
<b><i>Section 3 Economic Development</i></b>	<b><i>3-1</i></b>
<b><i>Section 4 Facilities and Infrastructure</i></b>	<b><i>4-1</i></b>
<b><i>Section 5 Community Housing</i></b>	<b><i>5-1</i></b>
<b><i>Section 6 Heritage Preservation</i></b>	<b><i>6-1</i></b>
<b><i>Section 7 Health and Human Services</i></b>	<b><i>7-1</i></b>
<b><i>List of Appendices</i></b>	



<b>Adaptive Reuse</b>	Substantial improvement of a building or buildings for the purpose of incorporating a new type of development.
<b>Affordable Housing</b>	Dwellings available at a cost of no more than 30% of gross household income to households at or below 80% of the County median income as reported by the U.S. Department of Housing and Urban Development (HUD), including units listed under MGL c. 40B and the Commonwealth's Local Initiative Program.
<b>Archaeological Site</b>	Any area where artifacts, remains or any other evidence of a historical or prehistorical nature of 100 years old or more are found below or on the surface of the earth. These artifacts must have archaeological significance as determined by the Massachusetts Historical Commission or other knowledgeable persons or agencies. Artifacts may include, but are not limited to: objects of antiquity, Native American, colonial or industrial relics, or fossils.
<b>Best Management Practices</b>	A practice or combination of practices that is determined to be the most effective, practicable means of preventing or reducing the amount of pollution generated by non-point sources to a level compatible with water quality goals.
<b>Bus Rapid Transit</b>	Express bus service characterized by the use of a dedicated roadway or restricted use lanes and a limited number of stops.
<b>Chapter 91</b>	Chapter 91 is the Commonwealth's primary tool for protection and promotion of public use of its coasts and waterways. It regulates activities on coastal and inland waterways, including construction, dredging and filling in tidelands, great ponds, rivers and streams. Chapter 91 helps to protect traditional maritime industries from displacement by commercial or residential development.
<b>Cluster Development</b>	A form of development that permits a reduction in lot area requirements, frontage and setbacks to allow development on the most appropriate portions of a parcel of land in return for provision of a compensatory amount of permanently protected open space within the property subject to a development application.
<b>Compact Development</b>	A dense concentration of development located where infrastructure can be efficiently provided and access to transportation is more readily available. Compact development reduces the environmental footprint of development.
<b>Coastal Bank</b>	The seaward face or side of any elevated land form, other than a coastal dune, which lies at the landward edge of a coastal beach, floodplain, or other wetland. Any minor discontinuity of the slope notwithstanding, the top of the bank shall be the top of the face of the bank or break in slope above the relevant 100-year floodplain elevation.
<b>Conservancy District</b>	A conservancy district conserves and protects the beauty and heritage and improves the quality of its environment through conservation and maintenance of neighborhoods that constitute or reflect distinctive features of the architectural, cultural, political, economic, or social history of the town.

**Context Sensitive Design**

Context Sensitive Design uses a collaborative, interdisciplinary approach that includes early involvement of key stakeholders to ensure that transportation projects are safe and efficient, but are also in harmony with the natural, social, economic, and cultural environment. Context Sensitive Design incorporates these principles:

- Balance safety, mobility, community, and environmental goals in all projects.
- Involve the public and affected agencies early and continuously.
- Use an interdisciplinary team tailored to project needs.
- Address all modes of travel.
- Apply flexibility inherent in design standards.
- Incorporate aesthetics as an integral part of good design.

**Core Habitat**

The largest and least fragmented habitat areas containing the most viable habitat for plants, animals and natural communities.

**Corporate Branding**

Buildings, colors, signage, architectural features, text, symbols, graphics, other attention getting devices and landscape elements that are trademarked, branded or designed to identify with a particular formula business chain or corporation are prohibited. All structures and sites shall be designed to include architectural and design elements that are consistent with the architectural composition, character and historic context of the proposed location. Interior corporate branding elements shall not be visible to the street through windows, doors or any other means.

**Creative Economy**

A culture-based economy includes businesses, individual artists and not-for-profits. The creative economy includes economic development that results from strengthening arts and culture in a community. The presence of a rich creative culture enhances the ability of a community to attract high-end businesses. The existence of a rich, cultural life aids businesses in employee recruitment and retention. In addition to individual artists, business entities that comprise the creative economy include: advertising, antiques, architecture, crafts, design, film, “new” media and graphic arts, literary arts, performing arts, publishing and television and radio. The presence of a well-developed creative economy is beneficial to the town in the long term, as it attracts “out of the box” thinkers, whose participation benefits our businesses and organizations.

**Down-Zoning**

Rezoning of a tract of land to less dense or intensified uses. Down-zoning is used to curb sprawl and direct growth to designated areas.

**Development**

Any of the following under-taken by any person: any building, construction, mining, extraction, dredging, filling, excavation, or drilling activity or operation; the division of land into parcels; the clearing of land as an adjunct of construction; or the deposit of refuse, solid or liquid waste or fill on a parcel of land or in any water area.

**Energy Star**

A program of the federal government that uses third party inspectors to verify and certify energy efficiency.

**Fixed Route**

Fixed route service is provided on a repetitive, fixed-schedule basis along a specific route with vehicles stopping to pick up and discharge passengers to specific locations; each fixed route trip serves the same origins and destinations.

<b>Formula Business</b>	A formula business is a type of retail establishment, restaurant, tavern or bar or take out food franchise that is one of more than fourteen (14) other businesses or establishments maintaining three or more of the following features: Standardized menu or standardized array of merchandise with 50% or more of in-stock merchandise from a single distributor bearing uniform markings, Trademark or service mark, defined as a word, symbol or design, or a combination of words, phrases, symbols or designs that identifies and distinguishes the source of goods from one party from those of others, on products or as part of the store design. Standardized color scheme used throughout the interior and/or exterior of the establishment. Standardized uniform including but not limited to aprons, pants, shirts, smocks, dresses, hats, and pins other than name tags.
<b>Fragment</b>	A relatively homogeneous type of habitat that is spatially separated from other similar habitats and differs from its surroundings.
<b>Goal</b>	A long-range aspiration that is intended to direct a general course of action or set direction towards an ideal end state that may or may not be achievable.
<b>Ground-water Mining</b>	Refers to a prolonged and progressive decrease in the amount of water stored in a ground-water system, as may occur, for example, in heavily pumped aquifers in arid and semiarid regions. Ground-water mining is a hydrologic term without connotations about water-management practices (U.S. Water Resources Council, 1980).
<b>Growth</b>	New development or intensification of existing development.
<b>Growth Center</b>	Existing area that is a suitable location planned for new growth and redevelopment that has sufficient infrastructure capacity to absorb the impacts of planned growth and redevelopment.
<b>Habitat</b>	Physical features, topography, geology, stream flow, and biological characteristics, vegetation cover, and other species needed to provide food, shelter and reproductive needs of animal or plant species.
<b>Habitat Fragmentation</b>	Breaking up of previously continuous habitat or ecosystems into spatially separated and smaller areas. Habitat fragmentation results from land uses associated with forestry, agriculture and settlement, but can also be caused by natural disturbances like wildfire, wind or flooding. Suburban and rural development commonly change patterns of habitat fragmentation of natural forests, grasslands, wetlands and coastal areas as a result of adding fences, roads, houses, landscaping and other development activities to the area.
<b>Hazardous Material</b>	As defined in the Town of Barnstable General Ordinance Article 39 <i>Control of Toxic and Hazardous Materials</i> .
<b>Hazardous Waste</b>	As defined in MGL Chapter 21C.
<b>Healthcare Sector</b>	Healthcare and medically related services, including hospitals, medical centers and ancillary and support services and professions, including but not limited to physician practices, wellness and holistic practices, nursing, hospice, vocational and educational programs, research and clinical development, biotechnology, and related financial, training and housing components.

<b>Historic Structure</b>	Any building, structure or site which is now listed or is qualified to be listed on the National or State Registers of Historic Places as determined by the State Historic Preservation Officer in consultation with the applicable local historical commission. Qualifications for listing shall be those administered by the Massachusetts Historical Commission, including but not limited to: <ul style="list-style-type: none"> <li>• Association with events that are historically significant;</li> <li>• Association with person(s) significant in our past;</li> <li>• Embodiment of distinctive characteristics of a type, period, or method of construction;</li> <li>• Likelihood of yielding information significant in history or pre-history.</li> </ul>
<b>Infill</b>	The development of new residential, commercial or other land uses on vacant or underutilized sites within existing areas that are substantially developed. Infill may be allowed in return for improvements to community character, traffic congestion and drinking water supply protection as described in the Zoning Ordinance as amended.
<b>Infrastructure</b>	Facilities and services needed to sustain residential, commercial and industrial development including, but not limited to, water supply and distribution facilities, sewage collection and treatment facilities, streets and roads, communications, energy, and public facilities such as schools and fire stations.
<b>Knowledge-Based Sector</b>	This sector includes industries that create and disseminate knowledge. These industries include educational institutions, high-tech services such as computer programming and data processing, and professional services such as marketing and law firms. Average annual wages in this cluster are higher than the average annual wage for all industries in Barnstable County.
<b>LEED</b>	U.S. Green Building Council's Leadership in Energy and Environmental Design Green Rating System. Programs offered for commercial projects include Platinum, Gold, Silver and Basic certification levels. LEED for Homes is the residential program.
<b>Level of Service (LOS)</b>	A standardized, qualitative measure usually applied to vehicle operating conditions on a roadway based on criteria including speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience and operating costs. LOS shall be determined based on the most recent edition of the Transportation Research Board's Highway Capacity Manual. LOS for other municipal services may also be used.
<b>Light Rail</b>	These transit lines are usually driven by electric power taken from overhead electric lines and usually operate much, if not all, of their routes on non-exclusive right-of-way. Light rail systems can operate on streets with other traffic.
<b>Livable Wages</b>	A livable wage is the hourly wage or annual income sufficient to meet a household's basic needs plus all applicable Federal and State taxes. Earning a livable wage means an individual is self-sufficient and does not require subsidies to exist.
<b>Local Business</b>	Local as applied to a business shall mean that it maintains a place of business in the Town of Barnstable, the immediately surrounding towns, or within Barnstable County (the "Area") and ownership resides within the Area. If the business is a corporation, a majority of its outstanding shares must be beneficially owned by individuals who are primary residents of the Area. If a partnership, its partners owning a majority beneficial interest in the partnership are residents. If an individual or a sole proprietor, he or she is a resident. When acting as a bidder to provide goods and services to the Town, those businesses located within the Town shall have first preference. Those within adjacent towns shall have second preference. Those within the County shall have third preference. In any case, all local businesses shall have preference over businesses outside the Area according to the ordinance.

<b>Mansionizing</b>	The construction or remodeling of single-family homes to the maximum allowable size permitted by zoning.
<b>Mitigation</b>	Appropriate measures which, at a minimum, offset any adverse impacts of a proposed development.
<b>Mixed Use</b>	A project that integrates more than one land use that may include residential, commercial or office uses.
<b>Nitrogen</b>	A nutrient, which when released into coastal waters may stimulate the growth of aquatic organisms. Such organisms, upon decomposition, can adversely affect the ecological quality of the waters by depleting its supply of dissolved oxygen.
<b>Open Space</b>	Land set aside and permanently restricted for conservation, agriculture or recreation purposes by a municipality, non-profit conservation organization or land trust, homeowners' association, or person. Open space may include woodlands, pasture, landscaped yards, gardens or play areas, golf courses, walking and riding trails, historic sites and similar areas as appropriate to the site, but shall not include structures such as tennis courts, buildings, or swimming pools. Open Space may be open for public use or access to such areas may be restricted.
<b>Phosphorous</b>	A nutrient, which when released into fresh surface water bodies, may stimulate the growth of aquatic organisms. Such organisms, upon decomposition, can adversely affect the ecological quality of the fresh water body by depleting its supply of dissolved oxygen.
<b>Redevelopment</b>	 Reconstruction, reuse or change in use of any developed property including but not limited to the following: reconstruction, additions or alterations of already developed land that does not intensify use over what is allowed by the Zoning Ordinance and other land use regulations; and the conversion of a seasonal use or dwelling to year-round use.
<b>Regional Facilities</b>	Publicly or privately owned facilities and services used by residents of more than one town including but not limited to streets, schools, parks, recreational facilities, water supplies, waste disposal facilities, social services, health care facilities, transportation facilities and emergency services.
<b>Renewable Energy</b>	Energy obtained from sources that are essentially inexhaustible (unlike, for example, fossil fuels, of which there is a finite supply). Renewable sources of energy include conventional hydroelectric power, wood, waste, geothermal, wind, photovoltaic, and solar thermal energy. There are current programs supporting the application of "renewables" in buildings and as part of a new higher educational curriculum.
<b>Retail</b>	The selling of goods, wares, or merchandise directly to the ultimate consumer or persons without a resale license.
<b>Safe Yield</b>	Commonly is used in efforts to quantify sustainable ground-water development. The term should be used with respect to specific effects of pumping, such as water-level declines, reduced stream flow, and degradation of water quality. The consequences of pumping should be assessed for each level of development, and safe yield taken as the maximum pumpage for which the consequences are considered acceptable.
<b>Seasonal Use</b>	A residential, other than a single family home, commercial or industrial structure or use that lacks one or more of the basic amenities or utilities required for year-round occupancy such as a permanent heating system, insulation, and/or year-round usable plumbing.
<b>Service</b>	Any act, or any result of labor, which does not in itself produce a tangible commodity.

<b>Shuttle Services</b>	The transporting of passengers back and forth regularly over a specified and frequent short route. In this case, that would involve routes between parking lots and specific destinations (e.g. public beaches, special events, transportation center, Main Street, etc.).
<b>Sprawl</b>	Large lot, low density development that consumes open space. A pattern of development characterized by unplanned growth which does not take into account long term zoning and land use planning and management principles. In particular, it results in the use of undeveloped land without account for use of growth activity centers, transportation and water resource infrastructure needs. It further does not result in the benefits of reuse, redevelopment, in-fill and mixed use land use techniques, as well as incentive based programs (i.e. development agreements and TDR).
<b>Strategy</b>	A specific alternative action to further describe the method(s) of implementing a Policy. Strategies may include the RPP Minimum Performance Standards (RPP), but more often will address Other Development Review Policies and Recommended Town Actions that must be included in the CP. At the local level, a Strategy defines other specific actions that should be considered as a means of implementing the CP.
<b>Strip Commercial Development</b>	Continuous or intermittent linear roadside development located outside designated growth centers, generally one store deep. Strip development is generally characterized by multiple roadway access points, highly visible off-street parking, and an assortment of commercial uses with direct access to abutting roads.
<b>Sustainability</b>	Meeting the needs of the present without endangering the ability of future generations to meet their needs. A move to benchmark the synergies among the following areas will serve to note that an improvement or decline in one area contributes to an improvement or decline in connected areas. Areas include: A vibrant, caring, just society; a healthy, nurturing environment; and a diverse, growing economy. Specific economic indicators published in the Sustainability Indicators Report in 2003 include: workforce housing, employment and workforce wages, tourism and hospitality, the retirement economy, and education.
<b>Transfer of Development Rights</b>	The conveyance of development rights by deed, easement, or other legal instrument authorized by local law to another parcel of land and the recording of that conveyance. It may cause the creation of sender zones for development credits and receiver zones for these additional credits. This effectively reduces the density in the sender zones and increases the density in the receiver zones.
<b>Vernal Pool</b>	A vernal pool is a seasonal fresh water body contained in an isolated depression that holds water for at least two consecutive months in most years, is free of adult fish populations and provides breeding habitat for amphibians and invertebrates. Vernal pools must be mapped and certified by the Massachusetts Natural Heritage and Endangered Species Program or identified in the field as eligible for certification by a professional wildlife biologist.
<b>Village Center</b>	A small, compact center with a core of mixed-use residential, commercial and community service uses. These centers incorporate local-scale economic and social functions that are integrated with housing. A village has a recognizable center and pedestrian scale and orientation.
<b>Wetland</b>	An inland area of 500 square feet or greater or a coastal area including wet meadows, marshes, swamps, bogs, and areas of flowing or standing water, such as rivers, streams and ponds. Wetlands are characterized by the presence of wetland vegetation and hydrology as generally described in the Wetlands Protection Act and these areas shall be delineated in accordance with the Act and regulations in 310 CMR 10.00.

**Warehouse Retail**

An off-price or wholesale retail warehouse establishment exceeding 10,000 square feet of gross floor area and offering a full range of general merchandise to the public.

**Wayfinding**

Wayfinding encompasses all of the ways in which people orient themselves in physical space and navigate from place to place (Wikipedia). Wayfinding is not the same as signage. Wayfinding techniques include maps, street numbers, directions, signs and other elements, such as the Walkway to the Sea, that provide visual cues about location, environment and destination.

## Acronyms

ACEC	Areas of Critical Environmental Concern
AOC	Areas of Concern
A-Zones	Floodway areas designated by FEMA
BOH	Board of Health
CCC	Cape Cod Commission
CFR	Code of Federal Regulations
CMR	Code of Massachusetts Regulations
DCPC	District of Critical Planning Concern
DMF	Division of Marine Fisheries
DPW	Department of Public Works
DRI	Development of Regional Impact
FEMA	Federal Emergency Management Agency
GIS	Geographic Information Systems
Gpd	Gallons per day
I/A	Innovative and alternative
LCP	Local Comprehensive Plan
MCL	Maximum contaminant level
MEP	Massachusetts Estuaries Project
MEPA	Massachusetts Environmental Policy Act
M.G.L.	Massachusetts General Law
Mgd	Million gallons per day
Mg/l	Milligrams per liter
Ppm	Parts per million
ROW	Right of way
RPP	Regional Policy Plan
SRF	State Revolving Fund
V-Zone	Velocity zones designated by FEMA
WPCF	Water Pollution Control Facility
WWTF	Waste Water Treatment Facility
WWFP	Waste Water Facilities Plan
ZOC	Zone of Contribution

## Vision

*The seven diverse yet interconnected villages of Barnstable form one community that is an integral part of Cape Cod. As the town in 2010 has been shaped by its past, through this plan Barnstable will shape a sustainable future. The town will preserve its history, environment and community for future generations through active stewardship of community character and quality of life while balancing growth, infrastructure and natural systems.*

### Plan Concept

This vision statement expresses the shared intentions of Barnstable residents for the future of their town as developed through the Village Vision work and the Resident's Survey. The goals, actions, and strategies of the Barnstable Comprehensive Plan 2010 work together to achieve this vision.

Cape Cod faces the challenge of balancing human interaction with the capacities of a fragile peninsula. A comprehensive approach weaving



together social, environmental and economic needs is necessary. This plan promotes incentives for growth and redevelopment in areas with existing infrastructure while discouraging growth in areas with limited ability to absorb the impacts of development.

This Comprehensive Plan highlights the potential for people to live and work on a smaller environmental footprint. Actions are presented to offset impacts threatening the social, environmental and economic attributes that determine our quality of life. Barnstable Comprehensive Plan 2010 puts forward the expectations and

standards necessary to live within the budget of our capacities for natural resources, municipal finances and community preservation.

### Comprehensive Plan Goals

1. Sustain diverse villages and livable neighborhoods for year round residents while providing housing opportunities for all.
2. Preserve, protect and enhance sensitive natural habitats and systems.
3. Provide town services and infrastructure through an efficient, planned and prioritized process.
4. Support and manage the regional resources and services unique to Cape Cod.
5. Preserve and enhance historic and maritime character, public viewsheds and cultural landscapes.
6. Enhance pedestrian activity in historic village centers.
7. Preserve and enhance access to public spaces including the waterfront.
8. Foster and support the creative economy which includes history, culture and arts.
9. Promote traffic reduction, traffic management, alternate transportation modes, property interconnections, and travel demand management.
10. Foster and support public transit while planning for associated parking, pedestrian and bicycle travel needs.
11. Allow development review to be more efficient for applicants and town regulatory bodies in a predictable and fair manner.
12. Develop and support a process to encourage private investments that support appropriate economic development.
13. Fully integrate implementation of plan goals, actions and strategies into the municipal budget and capital planning process

### Section 2.0 Natural Resources

A full treatment of Natural Resources inventory and analysis can be found in the Appendix as Section 2 Natural Resource Inventory. The following summaries, actions and strategies outline key issue areas and methods to address them.

The Town of Barnstable is centrally located on Cape Cod, a sandy peninsula surrounded by ocean. The land in Barnstable is low lying, with extensive areas of wetlands, ponds and marshes. The boundaries with the sea are flat, there are no rocky cliffs, and the sea and shore form a shifting pattern of sandy beaches, dunes, estuaries and marshes. The highest elevation is less than 250 feet. From lookout points along Route 6, both the south shore and the north shore of the town can be seen. The sea is never far from the land.

Water resources are a natural system of groundwater, ponds, salt water estuaries and embayments. Groundwater is the only source of drinking water on Cape Cod, a sole source aquifer. All natural resources have scenic and recreational value for boating, fishing, swimming, walking, or viewing. Traditional natural resource dependent industries such as cranberry culture, finfishing and shellfishing are closely identified with Barnstable. The town's scenic and recreational resources support tourism and retirement economic sectors.

The natural environments are distinctive and varied. Together with the built environment, they form the essential character and identity of the area. To maintain Barnstable's character the natural resources must be protected.



Town of Barnstable Comprehensive Plan 2010

This section is divided into nine subsections and the Open Space and Recreation section that addresses principal natural resources and their protections. Each subsection has goals, actions and strategies:

### Section 2.A

#### Natural Resources

- 2.1 Drinking Water Resources
- 2.2 Coastal Resources
- 2.3 Freshwater Resources
- 2.4 Wetland Resources
- 2.5 Wildlife and Plant Habitat Resources

#### Natural Resource Protection

- 2.6 Wastewater Management
- 2.7 Stormwater Management
- 2.8 Hazardous Materials and Waste Management
- 2.9 Public Education

### Section 2.B

#### Open Space and Recreation

### Section 2.A

#### NATURAL RESOURCES

##### 2.1 Drinking Water Resources

Groundwater is the only source of drinking water. Groundwater flows through layers of saturated sands and gravels to form an extensive "unconfined aquifer" throughout the Cape. Public wells draw water from wide areas known as Zones of Contribution, which occupy approximately thirty percent of the area of the town. Drinking water supplies are vulnerable to contamination because these contributing areas are extensive, because the coarse-grained soils drain rapidly, and because of the low-lying nature of the land, providing little depth to groundwater. The quality and quantity of groundwater is a significant factor in the protection and healthy function of other natural resources, such as ponds, wetlands, marshes, and salt water embayments.

##### 2.2 Coastal Resources

Shoreline systems consist of embayments, beaches, dunes and salt marshes. Salt water embayments and salt marshes are spawning grounds

and nurseries for a great variety and quantity of coastal and oceanic species. Traditional aquaculture and fishing industries utilize these resources. Coastal environments are also very significant recreational, scenic and community character resources.



Shellfish are abundant in the shallow, sheltered coastal embayments in Barnstable. Clams, both soft-shelled and hard-shelled, scallops and oysters can be found in the saltwater embayments and along the shore. Cotuit oysters, cultivated since the mid-19th century, are internationally renowned delicacies. There are approximately 6,178 acres of shellfish beds. Shellfishing is a traditional economic pursuit and recreational pastime. Shellfish resources require pristine water quality to thrive in the quantities necessary to support these activities. In recent years, contamination of coastal waters has caused a decline in harvests.

Coastal systems of dunes, barrier beaches and salt marshes provide storm protection to coastal banks and coastal properties, and provide habitats for wildlife, some of which are listed as endangered species.

Through the Massachusetts Estuaries Program (MEP), the Town, County and Commonwealth are mapping recharge areas for all major estuaries and embayments to identify areas where development and land use have the most impact on coastal water quality. This effort will lead to the establishment of Total Maximum Daily Loads (TMDLs) of nitrogen by the DEP. These TMDLs will become the management tool to restore and protect coastal water quality from the impact of septic systems, fertilizers and runoff. Each embayment has a TMDL. These critical nitrogen-loading rates should not be exceeded. Where they may be exceeded, the town will develop management strategies to reduce the nitrogen load on the embayment.

**2.3 Fresh Water Resources**

Numerous ponds throughout Barnstable provide natural, recreational and scenic resources. Fifty-five ponds exceed three acres and all are highly valued by the residents. The shorelines of several shallow coastal plain ponds contain several rare and endangered species that thrive in these highly specialized environmental niches that are globally rare. Streams are relatively uncommon but where they do occur they provide freshwater for animal species and anadromous fish runs at the entrance to salt water embayments for species such as the alewife.

**2.4 Wetland Resources**

Numerous wetlands are found throughout Barnstable. "Wetland" is a collective term that includes marshes, bogs, swamps, wet meadows and similar environs that reside between open water and dry land. Wetlands function to "polish" water quality effectively by retaining nutrients and sediments, by storing and attenuating floodwaters, and by providing fish and wildlife habitat. Many significant open space vistas are provided by wetlands.

The greatest conflict in wetland protection in Barnstable arises from the development pressure on private property. Development of marginal lots challenges regulators to reconcile development with wetland resources protection performance standards such as adequate buffer zones. Regulatory changes that increase protection for wetlands are recommended.

**2.5 Wildlife and Plant Habitat**

Critical wildlife and plant habitats are numerous in Barnstable. Freshwater fisheries are found in the great ponds and streams. Vernal pools with associated upland areas and margins of shallow ponds are specialized

habitats for rare and endangered species. Upland open space with unfragmented forest supports a wide variety of plant and animal species. Cranberry bogs are specialized agricultural wetlands and are part of the traditional Barnstable landscape. Protecting these resources requires vigilance through careful implementation of and adherence to land use regulations.

**NATURAL RESOURCE PROTECTION**

The town's natural resources continue to experience pressure from increasing development and intensifying use. Careful, consistent resource management is essential to the continued viability of these life sustaining natural systems.

Undeveloped areas protect groundwater quality through the natural system of infiltration and recharge. Over time, some land uses have contaminated groundwater resources and the ponds, streams and estuaries fed by groundwater. While we now have knowledge to avoid these mistakes in the future, contamination requiring closure or treatment of public and private water supplies has already had financial impact on water supply users. Contamination of ponds and salt water embayments has a serious impact on the ability of these systems to support reproduction of freshwater and saltwater species.

Development has resulted in the loss of natural woodlands and grasslands. These upland areas provide habitats for wildlife and are significant scenic and recreational resources. Where development has isolated open space areas, the town should ensure that wildlife corridors are maintained for linkage.

The Town has exercised stewardship through active participation in the Massachusetts Estuaries Program, Wastewater Facilities planning; open space acquisition and sound land use planning in addition to regulatory and outreach programs.

**2.6 Wastewater Management**

The town's water supply protection program of land use controls and restrictions on sewage flows is working. No well has exceeded the Federal Maximum Contamination Level (MCL) of 10 ppm nitrate nitrogen and only one well in Hyannisport, BW HY with 5.7 ppm, exceeds the 5 ppm planning advisory limit.

The Water Pollution Control Facility located in Hyannis off Bearses Way has an average daily discharge of 1.4 million gallons per day (mgd) and a design capacity of 4.2 mgd. This treatment plant is essential to protect groundwater quality, public supply wells and public health. The plant serves the most densely populated area of the Cape including regional commercial areas and high density Hyannis neighborhoods.

On-site treatment systems have a major impact on water quality. Septic systems do not remove nitrogen, phosphorous or other contaminants. These compounds are discharged into the aquifer and flow into wells, ponds, estuaries and coastal waters. Only 12% of all development, part of Hyannis and a small portion of Barnstable Village is connected to town sewer. All other land uses are served by individual on-site septic systems.

It is essential to limit nitrogen, the contaminant of concern for coastal waters, and phosphorous, the contaminant of concern for fresh waters. The inventory for Section 2 includes a thorough discussion of the implications of cesspools, Title 5 Systems, innovative/alternative wastewater treatment facilities, and small wastewater treatment facilities that include privately owned or Package Sewage Treatment Facilities (PSTF). An update on the content and progress of the Wastewater Facilities Plan is also included.

Through the Wastewater Facilities Plan, the Town has begun a town wide Nutrient Management Plan. This plan includes an assessment process to establish wastewater alternatives to restore and protect coastal waters.

**2.7 Stormwater Management**

Stormwater runoff from roads, parking lots and other impervious surfaces contains a variety of contaminants, including: hazardous chemicals derived from oil, gasoline and other automobile fluids; heavy metals; fertilizer, pesticides and herbicides washed off lawn surfaces; and bacteria from animal droppings. Road runoff is the principal cause of closure for shellfish beds and swimming areas. New roads, reconstruction of existing roads, parking lots and drainage systems need to be designed to minimize contamination of groundwater. Many existing stormwater drainage systems that discharge directly to coastal areas have been prioritized for remediation; freshwater areas also need this evaluation and remediation program.

Barnstable is a Phase II Stormwater Community. This program is discussed in detail in Section 4 Capital Facilities and Services. Phase II, mandated by

the Federal Environmental Protection Agency through the Clean Waters Act, was enacted to preserve, protect and improve the nation's water resources from polluted stormwater runoff. This program incorporates best management practices (BMPs) for construction and post construction management of stormwater facilities thereby providing maximum protection to sensitive natural resources.

To help reduce stormwater impacts to sensitive environmental areas, the Town should explore adopting low impact development standards in appropriate regulations.

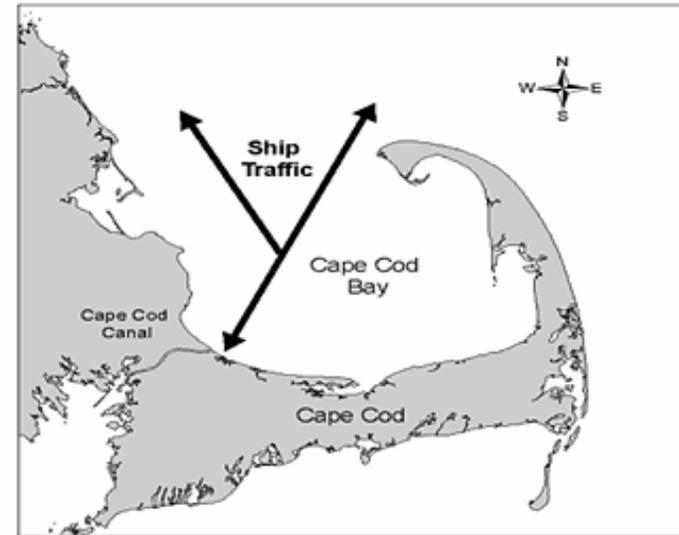
**2.8 Hazardous Materials and Waste Management**

Spills and leaks of hazardous materials may be the greatest threat to drinking water supplies. Five wells in Barnstable have been closed due to contamination with volatile organic compounds (VOCs) and one, BWC ST, remains closed. Other water resources, ponds, streams and coastal embayments can also be affected by groundwater contamination. Cleanup is slow, difficult and very costly. Every effort should be made to prevent contamination with hazardous chemicals, to protect the environment and drinking water supplies.

Many household cleaning agents, paints and stains contain synthetic organic chemicals that can contaminate groundwater, surface water and drinking water supplies if disposed in septic systems or on the ground. Programs to educate homeowners and the public about the Town's ongoing easy to use collection and disposal program should be continued.

With the extension of sewers to the industrial and commercial zone, pre-treatment programs and enforcement of hazardous waste regulations are essential to protect the wastewater treatment facility processes, and prevent contamination of sludge.

Leakage of heating fuel and gasoline from underground storage tanks to groundwater can also result in contamination of water resources and extraordinary costs to property owners. The Town must ensure proper oversight and removal of these tanks. Over the last 20 years, Board of Health regulations have minimized the potential threat of leaking underground storage tanks by requiring inspection and testing programs and removal of underground storage tanks.



**Provincetown Center for Coastal Studies**

Barnstable's coastal resources are threatened by off shore activities. Single hulled vessels routinely transport very large quantities of petroleum products via shipping lanes in Nantucket Sound and Cape Cod Bay. Proposed industrial uses in Nantucket Sound may pose additional threats to sensitive habitat and valuable town resources, which are at risk from spills resulting from vessel collisions, strikes on marine structures or vessel failure.

Solid waste is now disposed by SEMASS waste-to-energy incinerator in Rochester. Illegal dumping of solid waste on open lands remains a town wide problem.

**2.9 Public Education**

Perhaps more than any other issue area, natural resource protection depends largely on public education. Public education increases knowledge of natural resources and encourages residents to engage in activities that protect natural resources. The Town administers several programs that involve and educate the public. These programs reach out to and cooperate with schools and local organizations.

The Town should continue and foster educational outreach programs that promote environmental stewardship and awareness; create opportunities for community involvement; increase community responsibility for actions and their impacts; and build understanding for informed decision making through education and active involvement in stewardship activities.

**Consistency**

**This plan adopts the Regional Policy Plan Goals 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2, 2.2.3, 2.3.1, 2.4.1 and 2.5.1. In lieu of adopting the RPP Minimum Performance Standards the following sections outline Barnstable’s action plan in support of these goals.**

**NATURAL RESOURCES**

**Section 2.1 Drinking Water Resources**

**Goal: 2.1.1: To maintain and improve quality and quantity of groundwater to ensure a sustainable yield of high quality drinking water with the ultimate goal of achieving an untreated water supply.**

**Action 2.1.1.1** Maintain and improve groundwater quality to prevent expensive closure and replacement of public supply wells or the need to treat public water supplies. All public policies shall be compatible with protection of public water supply wells to ensure that all existing and future public supply wells provide high quality drinking water.

**Action 2.1.1.2** Long range planning for future provision and protection of Barnstable public water supply shall remain the highest priority in the key areas of water supply, land use, and capital facilities planning.

**Strategies**

- Estimate water supplies needed for buildout population.
- The Town shall share with and acquire from the independent water districts serving town residents mapping information, demographic information and build out projections to ensure that a comprehensive strategy is in place to facilitate acquisition of future wells and associated lands before development of these land areas.
- Working with all appropriate agencies and water companies, determine, map and protect through regulation the Zones of Contribution and Wellhead Protection Zones for future public supply wells.
- Ensure that town-wide future water supply needs assessments include areas dependent on private wells.

**Action 2.1.1.3** The town shall protect public drinking water supplies by continuing to regulate land use in existing Zones of Contribution to public supply wells and as they may be redefined to accommodate additional withdrawals or installation of new wells.

**Strategies**

- Determine and protect through regulation neighboring towns’ Zones of Contribution that extend into Barnstable.
- Determine if protection exists for Barnstable ZoC’s in the neighboring towns of Sandwich, Mashpee and Yarmouth. This report shall also recommend a strategy for obtaining these protections if missing. An informal inter-municipal arrangement to update this information every few years should be explored.
- Using GIS capabilities identify key land areas for public water supply. Protect the land areas determined by this assessment through regulation.
- Collect and map water quality data from all water suppliers. Use map products to monitor, detect and locate water quality trends. Provide this data to independent water districts.

**Action 2.1.1.4** No development shall occur within a 400-foot radius of a future public supply well. Lands within 400 feet of wells shall be acquired wherever possible.

**Strategy**

- Identify and map all public supply well 400’ Zone 1s. For unprotected areas within these radii, determine a land use strategy, including acquisition, to ensure maximum drinking water supply protection.

**Action 2.1.1.5** Practice water conservation measures to help ensure adequate water supply.

**Strategies**

- Encourage water suppliers to identify and reduce system leakage.
- Explore development and redevelopment regulations to require water saving devices for large quantity users.

**Action 2.1.1.6** Encourage development and implementation of water resource supply management program for the entire town. Coordinate a Comprehensive Water Supply Assessment.

**Strategies**

- This assessment, conducted in cooperation with the private water companies, shall include short term and long term water supply needs of the entire town; water supply management needs; land acquisition needs; land protection needs; and a comprehensive strategy for implementing recommendations.
- Work with the water districts to develop a groundwater model to evaluate water protection areas and undertake a water management optimization assessment.
- Ensure adequate water supplies in the event of short and long-term closure of supply wells.
- Support the work of the Town's Water Quality Advisory Committee, which provides a forum for regular meetings between the Town and the independent water districts.
- Work with independent water districts to develop cross connections and agreements for the exchange of water during emergencies or drought.

**Action 2.1.1.7** Ensure, in addition to the state's permitting determinations, that all water supply wells, public and private, are located to avoid water withdrawal impacts on ponds, streams, coastal embayments and wetlands.

**Strategies**

- Prevent groundwater mining or overdraft and ensure that withdrawals do not exceed the safe yield of the aquifer.
- Ensure that public and private supply well pumping does not cause saltwater intrusion.
- Develop regulations to protect adverse impacts to wetlands and water bodies from large quantity private well or public water supply withdrawals to fill swimming pools or other large quantity use.

**Action 2.1.1.8** Public water supply infrastructure expansion should be prioritized for areas where private wells are vulnerable to contamination from wastewater effluent, saltwater intrusion or other contaminant.

**Strategies**

- Map lots served by private wells.
- Designate areas for connection to public water supply where water quality tests reveal contamination trends.

**Section 2.2 Coastal Resources**

**Goal 2.2.1** The major goal for Coastal Resources is to develop a comprehensive Coastal Resources Management Plan (CRMP). The

**natural resource, aesthetic, historic, and cultural qualities of Barnstable's coastline should be maintained. The unique maritime character of working harbors, coastal villages and other developed areas should be protected and, if possible, enhanced.**

**Action 2.2.1.1** Develop a Coastal Resources Management Plan.

**Strategies**

- The CRMP shall include an inventory of existing coastal resources, all available water quality data, an inventory of existing public and private access for recreational and commercial uses, an overview of existing federal, state and local regulations, an assessment of potential impacts from coastal storms, identification of conflicts, projections for future conditions including a buildout analysis for FEMA A and V zones, barrier beaches and coastal banks, and recommendations for protecting critical habitats and important resources while providing for recreational and commercial uses.
- Include a Resource Management Plan for the Sandy Neck ACEC that meets DEP/MCZM requirements, to aid in the management of this important resource.

**Goal 2.2.2** Development in high hazard areas should be limited in order to minimize loss of life and structures, and reduce erosion and other environmental damage resulting from storms, natural disasters and sea level rise.

**Action 2.2.2.1** To protect the integrity of coastal features that serve as a natural barrier from storms to the greatest feasible extent and so protect human life and private property new development and redevelopment shall be restricted in velocity zones where there is known to be danger of significant flood damage.

**Strategies**

- The Town shall adopt a sewer neutral regulation through a General Ordinance. In barrier beach areas and FEMA A and V Zones where there is existing development the Town may install wastewater infrastructure to better protect or improve coastal waters or sensitive habitat areas subject to the sewer neutral regulation.
- To reduce potential for erosion, damage to structures and loss of sensitive habitat the Town shall acquire land in the FEMA A and V zones and barrier beach areas. The Town will prepare a Pre-Disaster Mitigation Plan in accordance with FEMA regulations. When approved

this plan will make the town eligible for land acquisition funds for these areas, particularly properties subject to repetitive damage.

- To avoid “taking” of property by regulatory requirements ensure reasonable use of property through regulations.
- Development in FEMA V Zones, on barrier beaches or on coastal dunes shall be limited. Existing structures may be reconstructed or renovated in conformance with all regulatory requirements provided there is no increase in area or intensity of use. Where applicable non-water dependent development shall be concentrated on that part of the lot outside the A and V Zones.
- Locate new development outside the FEMA A and V Zones through regulations and incentives.
- To prevent earth placement or removal that interferes with the natural flood protective function of barrier beaches and other coastal formations the Town shall develop a regulation that limits earth removal and placement and develop an appropriate building height definition.
- The town shall adopt a regulation that prevents armoring structures and mounded septic systems from interfering with the natural flood protective function of barrier beaches and other coastal formations.
- Explore adoption of the Cape Cod Commission Model Floodplain Bylaw as an ordinance to better protect land subject to coastal storm flowage and its buffer areas.

**Action 2.2.2.2** Control erosion in barrier beaches and coastal banks to the greatest extent possible to protect important wildlife habitat, storm surge protection and recreational amenities.

**Strategies**

- Development and redevelopment shall be controlled to the greatest extent possible on barrier beaches or coastal dunes as identified and defined by the Wetlands Protection Act and local Conservation Commission regulations.
- Development or redevelopment on a coastal bank or dune or within 100 feet landward of these resources shall be designed to have no adverse effect on the height, stability or use of the bank or dune as a natural sediment source. In areas where dunes or banks are eroding, the setback for all new buildings and septic systems from the top of the bank or dune crest shall be at least 50' in conformity with present Conservation Commission policies and Board of Health regulations requiring 100 feet or more septic system setback from the top of coastal banks.

**Action 2.2.2.3** Buildings and infrastructure in areas of projected sea level rise should be designed for protection from flooding as well as to minimize risk to human health and safety.

**Strategies**

- Determine the extent of protection needed from the real threat of sea level rise.
- Design stormwater management systems and new and replacement septic systems within FEMA A and V zones to accommodate a rise sea level.

**Goal 2.2.3** Maintain and improve coastal water quality to allow shellfishing and recreation as appropriate, and to protect coastal ecosystems which support shellfish and finfish habitat with the ultimate goal of restoring and maintaining ecological integrity in our coastal waters.

**Action 2.2.3.1** Continue, through the Massachusetts Estuaries Program (MEP), Town, County and Commonwealth mapping of recharge areas for all major estuaries and embayments to identify areas where development and land use have the most impact on coastal water quality. This information is available through the Town’s GIS system as it is developed.

**Strategies**

- Through the MEP, a long-term coastal resource water quality monitoring program is underway in Barnstable. The Town will continue to participate through the completion of the project in Barnstable.
- The Town should determine a course of action to comply with the Total Maximum Daily Loads (TMDLs) established as part of the Massachusetts Estuaries Program (MEP).

**Action 2.2.3.2** Protect environmentally fragile areas and reduce nitrate-nitrogen loading in marine recharge areas.

**Strategies**

- Reduce impacts in FEMA A and V zones by amending the Zoning Ordinance to require floor area ratio requirements and impervious area limitations to allow development and redevelopment that does not create large impervious areas that interfere with the flood mitigating function of natural resources.
- Adopt a town-wide regulation to limit impervious surface area.

**Goal 2.2.4 Develop a local Harbors Management Plan (HMP).**

**Action 2.2.4.1** Coordinate the management of harbors that are under the jurisdiction of multiple Town Departments, Boards and Commissions. The HMP shall commence within one year of the adoption of this Comprehensive Plan.

**Strategies**

- Inventory public and private uses in harbors to monitor changes in water and marine dependent uses.
- Inventory, assess existing conditions, needs, and methods for maintaining navigation channels in the HMP. Evaluate the impact of piers and docks on navigation channels.
- Inventory and prioritize necessary repairs to harbor facilities.
- Assess harbor improvements that may contribute to increased access and improve harbor functions.
- Assess the need for and feasibility of additional public restrooms at harbor facilities.
- Establish watershed zoning to protect and preserve traditional maritime uses dependent on harbor location and proximity to marine waters.

**Action 2.2.4.2** A mooring plan shall be included in the HMP. This plan should be reviewed and revised at least every two years.

**Strategies**

- Inventory existing moorings. Evaluate capacity for new moorings in existing mooring fields. Determine if new areas should be designated to meet future demand. Inventory rental and transient mooring permits.
- Site, design and manage new mooring fields to minimize damage to benthic habitats, protect boats from storms and maintain navigability.

**Action 2.2.4.3** Marine vessel sanitary wastes shall not be discharged to coastal waters. Marine wastes from boats and other sources including oil spills, dredge material, solid waste and all other types of waste should be disposed of using environmentally responsible practices.

**Strategies**

- Working with existing programs such as Three Bays and Mass Bays the town shall explore instituting a No Discharge zone in a 500 foot strip from Oregon Beach to the Kennedy breakwater.
- In addition to the three shore side facilities at Three Bays, Bismore Park and Barnstable Harbor and the two boats that serve the area from East

Bay to Hyannis, the Town should locate additional pump-out facilities as needed.

- Develop and adopt a regulation to be applicable to new construction and/or change, alteration or expansion of an existing facility requiring private marinas to provide pump out facilities for their clients.

**Goal 2.2.5 Habitat for shellfish, finfish, rare and endangered species, other coastal wildlife and native coastal plants shall be protected to ensure their survival and sustain their biological diversity.**

**Action 2.2.5.1** Wildlife and plant habitat should be protected and managed to ensure long-term viability of a wide variety of coastal species, including fish and shellfish taken for commercial and recreational use. Particular care should be taken to preserve habitats of rare and endangered species.

**Strategy**

- Plant and wildlife species in the areas depicted on the Sensitive Habitat map should be monitored for changes in population. This map shows Natural Heritage and Endangered Species Program Estimated and Core Habitats. If it is determined that impacts from human activities are detrimental to these species protective measures shall be taken.

**Action 2.2.5.2**

Continue to identify, rate and map existing high value significant shellfish habitat to expand and protect existing and potential habitat areas.

**Strategies**

- The Town shall make special efforts to protect the variety of shellfish species as well as the benthic habitat native to the area.
- Shellfish species in Significant High Value Shellfish Areas, as shown on the CP Sensitive Habitat Map and the Town of Barnstable Significant High Value Shellfish Habitat Maps as may be amended from time to time, shall be monitored for changes in population. Protective measures shall be taken if it is determined that impacts from human activities are detrimental to species in these areas.



- The Town shall continue rating and mapping of significant high value shellfish habitat for the north side.
- The Town shall rate and map potential high value shellfish areas.

**Action 2.2.5.3** Barnstable should continue to promote marine research in local waters and continue to manage licensed aquaculture areas and support aquaculture where appropriate for coastal resources.

**Strategies**

- Barnstable shall promote aqua farming, marine research and aquaculture in local waters.
- The Town should explore providing additional shellfish grants to the aquaculture industry.
- The Town should encourage and coordinate with existing aquaculture education and training programs.

**Action 2.2.5.4** The town will explore, develop and implement watershed zoning as a mechanism for balancing and regulating competing interests in coastal waters such as protecting shellfish, finfish, avian and plant habitat, protecting overall coastal water quality and providing coastal access for passive and active water dependent recreational activities and to ensure that traditional maritime uses continue.

**Strategies**

- The creation of a map depicting existing conditions and proposed expansion areas for critical coastal habitat, mooring fields, public and private navigation channels, docks and piers shall be included in this process. Water dependent uses shall be allowed or limited based on these mapped findings.
- The Conservation Commission should continue to require site-based performance requirements in areas where piers are permitted. Until watershed zoning is fully implemented, the existing policy shall remain in effect. The existing policy states that construction or expansion of docks and piers shall not be permitted in significant high value shellfish habitat areas as shown on the Town of Barnstable Significant High Value Shellfish Habitat Maps as may be amended from time to time.
- The Planning Board should assess their process for Chapter 91 application review.

**Goal 2.2.6** Protect the public interest in the coast and rights for fishing, fowling and navigation and preserve and, where appropriate, expand public access  the shore.

**Action 2.2.6.1** Development or redevelopment of filled tidelands projects should provide or enhance coastal access and use of the shoreline in conjunction with the Chapter 91 licensing program. Continue to re-establish and/or designate through appropriate legal means traditional rights of way to the water to ensure that these are not lost or abandoned,

**Strategy**

- Inventory and map filled tidelands. Analyze results to ensure access is provided in accordance with Chapter 91 requirements.

**Action 2.2.6.2** Continue Ways to Water program building on completed research revealing about 75 ways to water. Develop maintenance, signage and outreach program including GIS mapping for posting to the Town website and internet sites.

**Section 2.3 Fresh Water Resources**

**Goal 2.3.1** The major goal for Fresh Water Resources is the development of a comprehensive Fresh Water Management Plan (FWMP). To the greatest extent possible, the water quality of Barnstable's freshwater water bodies should be maintained to standards that support living organisms appropriate for the pond, and allow recreation for the neighborhood, town residents and other recreational users.

**Action 2.3.1.1** Identify Coastal Plain Ponds. The long-term viability of freshwater ponds serving as habitat for rare and endangered species should be ensured in particular Coastal Plain Ponds, a globally rare natural resource.

**Strategies**

- Include an analysis of the recharge areas and any water supply withdrawal as they relate to Coastal Plain Ponds. This information will be shared with the Health, Conservation and Planning departments and the appropriate Water Companies.
- Wherever possible, land within 100 feet of any freshwater pond should be maintained in its natural, vegetated condition. Where significant populations of rare, endangered or threatened species have been identified, every effort should be made to ensure permanent control over these buffers through acquisition by the town or a conservation organization through acquisition, conservation restriction or deed restriction.

**Action 2.3.1.2** Within pond recharge areas development or redevelopment located within 300' of freshwater water bodies shall be required to meet critical nutrient loading standards. Where existing development exceeds identified critical loading standards for a fresh water recharge area, redevelopment should maintain or improve existing levels of nutrient loading.

**Strategies**

- Support the county testing program through existing and new volunteer programs. Include neighborhood stewardship organizations in this program. The Town should develop and adopt regulations, for development and redevelopment within pond recharge areas that encourage or require septic leaching fields to be located outside of a 300' buffer to ponds.
- Develop management strategies based on scientific studies to ensure diversity of freshwater plant and animal species.
- Determine the capacity of these ponds to attenuate the impacts from onsite septic systems within their recharge areas. Develop incentives through regulations or other approaches including, but not limited to acquisition of undeveloped land or transfer of development rights, to ensure that these capacities are not exceeded or to ensure improvement where necessary.

**Action 2.3.1.3** Continue Ways to Water program to ensure public access to fresh water bodies.

**Section 2.4 Wetland Resources**

**Goal 2.4.1 Preserve and restore quality and functions of Barnstable's coastal and inland wetlands. Reclaim filled or non-functioning wetlands where possible.**

**Action 2.4.1.1** Under existing regulations, only 2500 square feet of a wetland area is allowed to be altered. Inventory altered wetlands and determine whether alteration has impacted their function. Monitoring data collected pursuant to Chapter 237, Section 7E shall be included in this study. Review existing regulations for amendment based on these findings.

**Action 2.4.1.2** Where the size of the lot permits, a buffer of at least 100' from the edge of coastal and inland wetlands including isolated wetlands shall be maintained in an undisturbed, natural state to protect the natural functions of these areas, including but not limited to mitigation of stormwater impacts and

wildlife habitat value. Where the lot size does not permit a 100' buffer, the maximum feasible buffer shall be maintained but in no case shall this buffer be less than 50'. The Conservation Commission may require a larger buffer to protect sensitive areas or where the site conditions such as slopes or soils suggest that a larger buffer is necessary to prevent adverse impacts.

**Action 2.4.1.3** Continue state and federal grant funded measures through the Conservation Division and Commission to restore impaired ponds, salt marshes and estuaries.

**Goal 2.4.2 Preserve, and restore where feasible, quality and function of isolated lands subject to flooding needing additional protection, including vernal pools.**

**Action 2.4.2.1** Continue to identify, certify and map vernal pools.

**Action 2.4.2.2** Determine, through scientific research, if existing buffer regulations for vernal pools adequately protect this resource. Review existing regulations for amendment based on these findings.

**Action 2.4.2.3** Vernal pools shall not be used for stormwater management. Identify and map vernal pools that are now stormwater receptors. Ensure that appropriate remediation for vernal pools is included in the Town's Stormwater Management Program. Develop and enact additional regulations as needed to prevent future incidences of this practice.

**Action 2.4.2.4** Examine the need to amend Wetland Replication Ordinance to exclude vernal pools.

**Action 2.4.2.5** Identify and map other isolated lands subject to flooding. Determine their flood control and flood mitigation value and assess the need for additional regulation to protect this vital function.

**Section 2.5 Wildlife and Plant Habitat Resources**

**Goal 2.5.1 Prevent loss or degradation of critical wildlife and plant habitat, minimize the impact of new development on wildlife and plant habitat, maintain existing populations and species diversity, and maintain areas which will support wildlife's natural breeding, feeding and migration patterns.**

**Action 2.5.1.1** The Sensitive Habitat Map shall guide development decisions.

**Strategy**

- In mapped Sensitive Habitat Areas, clearing of vegetation should be limited. In areas that have multiple habitat attributes, no clearing or cutting of vegetation should be permitted. In less sensitive areas, clearing may be permitted, but will be limited to the minimum area needed for building construction, roads, driveways and accessory structures, and as needed for safe sight distances. In any other undeveloped areas, clearing and alteration of topography should be minimized, with appropriate vegetation planted as needed to enhance or restore wildlife habitat.

**Action 2.5.1.2** In all other undeveloped areas, minimize the impact of development. Fragmentation of wildlife and plant habitat should be minimized.

**Strategies**

- Regulations and policies should ensure the establishment of greenways and wildlife corridors of sufficient width to protect edge species and species that inhabit the interior forest through the protection or acquisition of large unfragmented areas and open space or cluster development. Wildlife should be provided with opportunities for passage through developed areas where such opportunities will maintain the integrity of wildlife corridors.
- Clearing of vegetation and alteration of natural topography shall be minimized, with appropriate vegetation planted as needed to enhance or restore wildlife habitat.
- Minimize fragmentation of wildlife and plant habitat and create green infrastructure by identifying and protecting wildlife corridors and existing large and unfragmented tracts, and by encouraging use of open space and cluster subdivisions.

**Action 2.5.1.3** The Town shall develop and adopt ordinances limiting land clearing and alteration of natural topography. This is a high priority for implementation.

**NATURAL RESOURCE PROTECTION**

**Section 2.6 Wastewater Management**

**Goal 2.6.1 Minimize wastewater contamination of water resources from private or public wastewater management systems to improve drinking water quality, with the ultimate goal of achieving an untreated water supply, and to improve the ecological integrity of streams, ponds and coastal embayments using all available data including Massachusetts Estuaries Program (MEP) data.**

**Action 2.6.1.1** Analyze contaminant capacity to assess impacts to public supply wells, potential public supply wells, private wells, wetlands, ponds, streams, coastal embayments, rare and endangered species habitats and future water resource areas from increased nutrients, pathogens, volatile organic chemicals or metals from wastewater.

**Strategies**

- To maintain the highest levels of water quality and to minimize contamination with other pollutants, such as pathogens and volatile organic chemicals, limit on-site sewage effluent discharges and density of development in Zones of Contribution to public supply wells.
- Prioritize locations within Zones of Contribution that are calculated to exceed contaminant capacities for remediation with connection to sewer or alternative wastewater treatment, either on-site, community or package sewage treatment plant.
- Implement Wastewater Facilities Plan strategies and actions.

**Action 2.6.1.2** Development shall minimize, to the greatest feasible extent, contamination of water resources.

**Strategies**

- The town shall develop and adopt a sewer neutral policy that will apply to all properties and establish that development in a sewer area shall not modify any existing structure or change its use so as to increase sewage flow based on the sewage flow estimates listed in 15.02(13) 310 CMR 15.00, Title V of the State Environmental Code or Board of Health Regulation.
- Existing Board of Health Regulations adequately protect existing and proposed public water supply under S 232-5 and private water supply under S 360-27.
- To reduce impacts to public water supply, new and expanded developments located in zones of contribution to public water supply

wells that generate more than 2,000 gpd shall connect to sewer where available, or if not available, require innovative or alternative wastewater treatment.

- To reduce impacts to private water supplies, new and expanded developments that generate more than 2,000 gpd shall connect to sewer where available, or if not available, require innovative or alternative wastewater treatment.
- Identify and map land areas outside of Zones of Contribution with no abutting private well users. Develop regulations, similar to existing Board of Health regulations, to protect water supply in these areas.
- In sensitive barrier beach areas any construction of public sewers shall not allow increase in sewage flow from existing development. Such wastewater infrastructure shall be designed and constructed to protect sensitive habitats, maintain natural flood protection systems and withstand coastal inundation and erosion.
- The Hyannis Growth Incentive Zone growth center is served by the Town's Water Pollution Control Facility (WPCF).
- Commercial and multi-family development and redevelopment in areas outside the growth center generating more than 2,000 gpd sewage effluent shall connect to sewer where available or, if not available, require innovative or alternative wastewater technology or a private sewage treatment facility (PSTF).
- Residential development supported by the Town that is not located nor will impact environmentally sensitive areas and that also provide a public benefit through diversification of housing stock, provision of workforce housing or other substantial public benefit may generate more than 2,000 gpd. These developments shall connect to sewer where available or, if not available, shall make every possible effort to employ innovative or alternative wastewater technology or a PSTF.

**Action 2.6.1.3** The Town will review Cape Cod Commission impaired groundwater areas designations and develop regulatory strategies as needed.

**Strategies**

- Continue to collect data from all water suppliers, monitor groundwater quality and analyze sensitivity of down gradient receptors.
- Water quality remediation efforts will be prioritized as determined through water quality data as evaluated and prioritized by the Town.

**Action 2.6.1.4** The Board of Health shall continue to monitor and regulate the location of wastewater treatment facilities in environmentally fragile areas.

**Goal 2.6.2 Encourage, in coordination with the Wastewater Facilities Plan, the use of public and private wastewater treatment facilities in appropriate areas where they will provide environmental or other public benefits.**

**2.6.2.1** To maintain water quality, manage wastewater flows in areas dependent on private wells.

**Strategy**

- Complete mapping of private water supply wells. Prioritize areas dependent on private wells for additional groundwater protection regulations.

**Action 2.6.2.2** Locate private WTFs in areas where it is necessary to protect drinking water supply or to remediate impaired water quality.

**Strategies**

- Private and community wells and septic systems or wastewater treatment facilities (WTF) shall be located to avoid contamination. Development and redevelopment shall identify proposed well locations and any existing wells within 400 feet of the proposed and existing septic system or WTF effluent disposal area.
- The Town prefers that private WTF effluent receive tertiary treatment. In all cases, the nutrient removal rates shall be consistent with TMDLs or other water quality standards.

**Action 2.6.2.3** Areas of Concern (AOC), which are priority areas for connection to the Wastewater Treatment Facility, are detailed in the Town's Wastewater Facilities Plan (WFP). To implement this plan the town will:

**Strategies**

- Seek final approval from DEP and the Cape Cod Commission.
- Conduct an analysis of potential effluent discharge sites. Implement expansion of the WPCF capacity consistent with this analysis.

**Action 2.6.2.4** In accordance with the WFP, MEP and other available water quality data, prioritize wastewater remediation for environmentally sensitive areas such as: recharge areas to coastal embayments, fresh water ponds,

flood plains, zones of contribution and WP for public supply wells and private wells dependent areas.

**Action 2.6.2.5** Implement WFP recommendations for effluent treatment to protect the sole source aquifer and its interconnected hydrological system of groundwater, fresh water bodies and coastal waters.

**Action 2.6.2.6** Continue Health Department supervision of inspection and upgrade requirements for on-site systems in especially vulnerable environmentally sensitive areas such as ZOCs to public supply wells, private wells dependent areas, coastal flood plains, and pond recharge areas. Upgrades should be required according to a prioritization of these areas; also, incorporate recommendations of the MEP and WFP.

**Strategies**

- Continue Health Department identification and mapping project to identify septic remediation areas based on lot size, age and proper functioning of systems, soil conditions, depth to groundwater and nutrient loading prioritized by sensitive environmental areas.
- Establish discharge standard regulations for effluent disposal in environmentally sensitive areas.

**Action 2.6.2.7** Continue to implement the septic betterment program through the County.

**Strategies**

- Continue to provide funds for low and moderate income property owners for upgrade of failed on site systems. Prioritize these funds for cases that involve a public health threat or threat to environmentally sensitive areas.
- Provide grants and revolving loan funds for low and moderate income property owners to connect to sewer where individual onsite systems have failed. Prioritize these funds for cases that involve a public health threat or threat to environmentally sensitive areas.

**Action 2.6.2.8** Develop and adopt regulations to ensure that individual on-site septic systems design, location and maintenance minimizes contamination of drinking water, groundwater, surface waters, wetlands and rare and endangered species habitats and are also designed to easily connect to sewer infrastructure when it becomes available or when it is desirable to make the connection.

**Strategy**

- Locate future development outside velocity zones, barrier beaches and flood plains wherever possible. Inventory and map vacant land in velocity zones, barrier beaches and flood plains and develop regulations, such as mandatory cluster, sewer neutral requirements and site design standards, to manage development and ensuing wastewater impacts in velocity zones and flood plains.

**Action 2.6.2.9** In accordance with the WFP, encourage the use of Private Sewage Treatment Facilities (PSTF), an important tool for wastewater management where sewer infrastructure is not available. The design, location and operation of PSTFs shall protect groundwater and surface water resources and be designed to easily connect to sewer infrastructure when it becomes available or it is desirable to make the connection.

**Strategies**

- PSTFs may be constructed only if there are no feasible public treatment facility options available or planned.
- The preferred design for new PSTFs shall be tertiary treatment as required to meet TMDLs or other standards. Where a PSTF is installed to remediate existing wastewater discharge, the requirements for tertiary treatment may be somewhat relaxed provided any down gradient water resource or other natural resource is satisfactorily protected.
- Prior to commencement of operation for privately owned PSTFs Town boards and agencies shall ensure that reliable maintenance, repair and eventual replacement is secured by cash surety or a bond deemed reliable by appropriate Town staff.
- In accordance with the WFP, the town shall regulate PSTFs ownership and management.
- The Town should identify acceptable PSTF technologies and explore regulations to require the identified standard.
- Through local regulations, ensure that application for and all approvals of PSTFs include a detailed plan for all residuals.

**Goal 2.6.3 Encourage the use of innovative or alternative wastewater treatment technologies to achieve higher quality effluent discharge to better protect natural resources, especially water resources with the ultimate goal of achieving an untreated water supply and ecological integrity of streams, ponds and coastal embayments.**

**Action 2.6.3.1** Achieve a higher quality of wastewater treatment including reduced nitrogen and/or phosphorous in sensitive environmental areas by encouraging the use of innovative and alternative (I/A) on-site, community wastewater treatment facilities or sewer connections.

**Strategy**

- At the discretion of the Board of Health, septic system upgrades may be delayed so that alternative wastewater systems yielding higher quality effluent can be developed.
- The use of innovative/alternative wastewater treatment or sewer connection shall not allow increase of wastewater flows over what Title V allows.

**Action 2.6.3.2** Explore adoption of a regulation that requires a minimum natural depth to groundwater for effluent discharge to provide maximum protection of sensitive environmental receptors.

**Action 2.6.3.3** Methods for wastewater disposal in coastal recharge areas shall maintain or improve existing water quality. Advanced public and private sewage treatment in the form of connection to sewer, use of small treatment plants or I/A systems, is encouraged.

**Strategy**

- To maintain or improve water quality in coastal recharge areas continue to implement the Board of Health requirement for upgrading septic systems to denitrifying systems or use other nitrate-nitrogen or bacterial reducing methods. These requirements are triggered by the sale of a home or put in place as part of a local remediation program. Evaluate the need for expanding or altering this program based on all available water quality data. In no case shall wastewater flows exceed what Title V allows.

**Action 2.6.3.4** Methods of wastewater disposal in freshwater body recharge areas, particularly in the 300' buffer to ponds, shall maintain acceptable water quality standards.

**Strategy**

- The Board of Health shall require that new septic systems in the recharge area to freshwater ponds shall help maintain an acceptable standard of water quality. Advanced public and private sewage treatment in the form of connection to sewer, use of small treatment plants or nutrient removing systems should be encouraged.

**Section 2.7 Stormwater Management**

**Goal 2.7.1 Prevent contamination of the environment and public water supply through best management practices for stormwater.**

**Action 2.7.1.1** Continue to provide funding for remediation of town owned stormwater management systems which have been determined to contribute to contamination of fresh and marine water bodies.

**Strategy**

- Repair, upgrade or replace stormwater infrastructure or properly regrade roadways.
- "No Dumping - Drains To \_\_\_\_\_" should be marked on storm drains known to connect to outfalls to fresh or marine water bodies.

**Action 2.7.1.2** To minimize impacts to sensitive environmental areas and water resources develop and adopt regulations that require road design standards that can properly manage generated stormwater for new roads and for reconstruction of existing roads.

**Strategies**

- Review Zoning Ordinance, Site Plan Review Ordinance and Subdivision Rules and Regulations (SRR) for necessary amendments to incorporate best practices for stormwater management including, but not limited to, low impact development (LID) standards.
- Maintain existing stormwater management regulations that prohibit direct discharge to surface waters. Ensure adequate flexibility for manmade surface waters or stormwater management systems that may have evolved into wetlands.
- SRR, Zoning and Site Plan Review ordinances should require deep soil borings at specified locations to ensure proper soil conditions for stormwater management systems.
- Develop and adopt Zoning and Site Plan Review ordinance and SRR amendments that minimize pavement by requiring clustered development, allowing greater flexibility for lot frontage requirements, shared lot access provisions changing road design standards to reflect use and location of roadways.
- Develop and adopt Zoning and Site Plan Review ordinance and SRR amendments that allow grassed or pervious paving options for parking areas.
- In sensitive environmental areas, require oil and grease traps with mechanisms to ensure their maintenance.

- Research, develop and adopt road design standards for the SRR and town roadways that significantly reduce storm water impacts such as direct drainage along the length of the roadway and other proven technologies.

**Action 2.7.1.3** Direct discharge of stormwater into coastal and fresh waters or wetland resource areas including associated buffers and discharges at, above or below mean high water shall not be permitted. All direct untreated stormwater discharges to surface waters and wetlands should be redirected or treated to prevent impacts from heavy metals, hydrocarbons, bacteria, viruses, nitrate-nitrogen, phosphorous or other contaminants entering surface waters and wetlands.

**Strategies**

- The Town should continue to implement the Phase II Stormwater Management Plan developed with Woodard & Curran.
- The Site Plan Committee shall review stormwater management proposals for compliance with best management practices for all commercial and institutional uses. Regulations should also be developed to include residential uses in sensitive environmental areas that generate significant quantities of stormwater.
- The town should continue to fund stormwater connections and upgrades installed by DPW when roadways are opened for construction or other purposes.
- Swimming pool water shall not enter stormwater management systems. Develop and adopt regulations that set out best management practices for swimming pool water disposal. Best management practices for this activity include dispersing the water over lawn and landscaped areas where runoff into wetlands, fresh or coastal waters or stormwater management systems will not occur.

**Action 2.7.1.4** All appropriate town regulatory boards and committees shall adopt, through regulation, Low Impact Development (LID) standards for stormwater management.

**Section 2.8 Hazardous Materials and Waste Management**

**Goal 2.8.1 Prevent contamination of the environment and public water supply through best management practices for hazardous materials and hazardous waste.**

**Action 2.8.1.1** Support and expand recycling programs to reduce waste volumes and disposal costs.

**Action 2.8.1.2** Enhance programs to prevent illegal dumping.

**Strategies**

- Explore increasing household hazardous waste days and/or adding once or twice per year grace for large goods fees at transfer station.
- Explore curbside pick-up. Retain free recycling drop off.
- Continue funding to protect open space from illegal dumping by restricting unauthorized vehicular access with the use of fences, plantings and gates.
- Ordinances prohibiting dumping should be reviewed for appropriate penalties.

**Goal 2.8.2 Prevent contamination of the environment and public water supply through monitoring and enforcing regulations for fueling and servicing operations and underground fuel storage tank replacement.**

**Action 2.8.2.1** Ensure annual enforcement of required underground fuel tank replacements.

**Action 2.8.2.2** Ensure that airport operations do not negatively impact public water supply.

**Strategies**

- The recent Cape Cod Commission Development of Regional Impact decision for the Barnstable Municipal Airport expansion includes provisions to address potential impacts to natural resources from airfield operations. In the event that the DRI permit is not exercised these protections shall be incorporated under existing regulatory schemes. The Barnstable Municipal Airport, the Town of Barnstable and the Cape Cod Commission should work to develop a master plan for future airfield uses.
- Cape Cod Airfield in Marstons Mills lies within groundwater protection district. Operations at this town facility should adequately protect natural resources including drinking water supply.

**Action 2.8.2.3** Continue to maintain the town wide inventory of commercial fueling, fuel storage and vehicle maintenance operations including marine uses and unauthorized operations.

**Goal 2.8.3 Prevent contamination of the environment and public water supply through best management practices for lawn and landscape chemicals.**

**Action 2.8.3.1** Lawn and landscaping chemicals pose a threat to fresh and marine waters, wetlands and sensitive environmental areas.

**Strategies**

- Retain natural vegetation wherever possible by clustering commercial and residential developments to the greatest extent possible. Standards for percentage of naturally vegetated area will vary according to the character and density of each land use category.
- Require a minimum of 6" of loam beneath new lawns and landscaped areas to provide some attenuation of lawn and landscape chemicals.
- To help reduce the amount of nitrogen in coastal waters and phosphorous in fresh waters, encourage the use of native species which require fewer applications of nutrients. Encourage the use of low impact/organic lawn and landscape products.

**Action 2.8.3.2** Ensure that golf courses and agricultural uses such as cranberry growing employ best management techniques that minimize fertilizer and pesticide use.

**Strategy**

- Any new golf course or redevelopment of an existing golf course should limit greens and increase rough areas to minimize impacts of fertilizers and pesticides.
- Inventory active cranberry bogs and map in relation to sensitive environmental areas including GP and WP zones. Research existing regulations and determine if an education or regulatory program is necessary.

**Goal 2.8.4 Prevent contamination of the environment and public water supply through best management practices for road de-icing.**

**Action 2.8.4.1** Identify methods to reduce road and parking lot de-icing applications in a safe and cost effective manner.

**Strategies**

- Continue Brewer Soluble Concentrate de-icing program. Support and continue DPW policies for moderate de-icing and reduction of environmental impacts from chemicals and sand through new technology and methods.

- Through education and other appropriate means, encourage similar de-icing methods for private parking lots, roadways and driveways.

**Goal 2.8.5 Prevent contamination of the environment, coastal waters, sensitive coastal habitat, public and private recreation areas through proactive measures to prevent and prepare an off shore oil spills.**

**Action 2.8.5.1** Advocate for and support state and federal legislation and/or regulations to require:

- Double hulled vessels for shipping of petroleum products and other hazardous materials.
- Require local tug escorts to ensure that best practices for navigation are used.

**SECTION 2.9 Public Education for Natural Resource Protection**

**Goal 2.9.1 Local residents should be involved in protection of natural resources so they can help maintain and improve the quality of life in their neighborhoods.**

**Action 2.9.1.1** The Town should continue public education efforts for water resource protection and planning through cooperation with other organizations.

**Strategy**

- Local schools should use ponds, wetlands, woodlands, grasslands and coastal habitats to illustrate principles of water quality and the aquatic ecosystem through means such as field trips, taking samples for testing, or presentations by town staff.

**Action 2.9.1.2** Advocate use of water saving devices to reduce the need for additional water supplies and thereby lessen impact of pumping on groundwater and pond levels.

**Action 2.9.1.3** Protect public health and ensure that private well water quality meets drinking water standards by encouraging owners to test water quality regularly. The town should map and monitor test results.

**Strategies**

- Through public education, encourage owners of private wells to perform water quality tests for bacteria, inorganics, and nitrogen every two years.

- Through public education, private well owners should be encouraged to test for volatile organic compounds at least every five years, and more frequently in locations near gas stations and similar uses.
- The town should enter private well water quality data on the GIS system so that problem areas can be mapped and identified as soon as possible.

**Action 2.9.1.4** Discourage the use septic system additives. This does not include additives that may be required for alternative treatment systems.

**Strategies**

- Discourage through public education the use of septic system cleaners such as solvents such as TCE, TCA and naphthalene. Educate local businesses about the impacts of these products.
- Develop a small public education program to alert homebuyers and homeowners about maintenance requirements for septic systems and private wells, including the potential for upgrade requirements. Information should also be developed regarding fees for public water supplies and sewers.
- Continue education efforts about managing septic systems through a brochure mailing and articles in the Barnstable Bulletin to encourage regular pump out of septic systems. Systems should be checked at least every three years to determine if pumping is required.

**Action 2.9.1.5** The town should continue educational programs, such as distributing a brochure with each transfer station sticker and articles in the Barnstable Bulletin, to educate residents about non-toxic household cleaners and the proper use and disposal of paints and stains.

**Action 2.9.1.6** The town and the county should continue public education by securing additional funding to continue existing efforts to inform businesses of their responsibility for the proper storage and disposal of hazardous materials.

**Action 2.9.1.7** Information on underground fuel tanks and re-routing of buried fuel lines should be added to public education groundwater protection material. The serious financial consequences of a leak should be emphasized.

**Action 2.9.1.8** Encourage turf management techniques which reduce water and fertilizer needs through public education.

**Strategies**

- Encourage, through the site plan review process and public education, planting of drought and disease-resistant native species and plants common to Cape Cod to reduce water, fertilizer and pesticide use.
- Through public education, discourage the routine use of lawn chemicals. Encourage turf management, which reduces need for fertilizers: plant drought and disease-resistant lawn grasses; use water and lime in lieu of fertilizer; and use water insoluble fertilizer.
- Develop an education program to inform citizens and businesses including professional landscaping and lawn services of the effects of fertilizers, pesticides and herbicides on nearby coastal and fresh waters.

**Action 2.9.1.9** High priority should be given to enforcement of existing regulations on development in the flood plain and to public education about flood action and flood proofing. Town officials should make available materials describing simple and inexpensive means of flood proofing, which may be obtained from agencies such as FEMA.

**Strategies**

- On developed land, private and public property owners should be educated and encouraged to maintain undisturbed natural buffer areas of 50-foot width around wetlands.
- Establish a public information program that informs the boating community about environmental and public health impacts of direct discharge of treated or untreated sanitary waste to coastal waters.
- Educational brochures should be distributed when mooring permits are renewed or new permits are obtained.
- Educate the public about the need and means for proper disposal of oil and other waste materials from boats. Include information about the disposal facility at the transfer station. Disposal sites at marinas and town landings should be watertight and allow secure storage until collection. All waste left in barrels at town landings should be collected by DPW after weekend accumulation.

**Action 2.9.1.10**

To reduce the amount of contaminants entering coastal waters from animal wastes, a public education program should be developed including effective signage in appropriate locations. Particular attention should be given to posting signs at Ways to Water. Regulations regarding waterfowl feeding and domestic animal waste cleanup may help control this problem.

Distribute this information at town licensing locations, veterinarian offices, pet boarding, grooming and care facilities.

### Strategy

- The Board of Health should explore implementing barn regulations.

**Action 2.9.1.11** Through a signage program vehicle, boat and pedestrian traffic should be discouraged in sensitive coastal areas as well as in wetlands, dunes, shallow estuarine areas, shorebird breeding and habitat areas.

### Strategy

- Continue to prohibit storage of boats, seasonal piers, and floats on salt marshes, dunes, and other sensitive areas. Particular attention should be given to enforcing this on Town property.

**Action 2.9.1.12** Develop and implement a program to educate owners of developed property about the environmental benefit from maintaining undisturbed natural buffer areas around freshwater wetlands and ponds. This program should include the proper placement and permitting process for unpaved pedestrian access paths and vista pruning.

### Strategy

- Install informational signage at Ways to Water for ponds that describe allowed uses, and its ecology, significance and history. Explore grant funding for this program.

## Section 2.B

### Open Space and Recreation

#### OPEN SPACE AND RECREATION

To address the Cape Cod Commission requirements for Open Space and Recreation planning the Town's most recently approved Open Space and Recreation Plan (OSRP) is hereby incorporated into the CP.

The OSRP was completed by the Town in November 2005. Following the state mandated format, the OSRP includes many issue areas that are also addressed in other CP sections. The Open Space and Recreation Plan in its entirety is included in the Appendix. Since the OSRP has already been approved by the town, state and Cape Cod Commission, the OSRP will be incorporated in its original form.

The Open Space and Recreation Plan in its entirety can be viewed on the Town website at:

<http://www.town.barnstable.ma.us/GrowthManagement/ComprehensivePlanning/OpenSpaceRec/OpenSpace.asp>

**Introduction**

This economic development section incorporates the visioning of the villages and integrates their economic development goals within the town wide goals and strategies. This section is intended to be used as an action plan and does not include sections dedicated to inventory or data.

Several studies are included in the Appendices as Section 3 Inventory. Additional information about population, economic conditions and housing can be found at the Census Bureau's American Fact Finder - [http://factfinder.census.gov/home/saff/main.html?\\_lang=en](http://factfinder.census.gov/home/saff/main.html?_lang=en). Enter the term "Barnstable Town" as the City. Because of the age of this data, Census 2000, it is not included here.

Another information source is the Massachusetts Department of Workforce Development. The Regional LMI (Labor Market Information) Profile, Annual Profile for the Cape and Islands Workforce Area includes a thorough analysis of this topic and can be found at - [http://lmi2.detma.org/lmi/pdf/profiles/Cape\\_Regional\\_Profile.pdf](http://lmi2.detma.org/lmi/pdf/profiles/Cape_Regional_Profile.pdf). The Appendices include this report.

The Goals, Actions and Strategies presented here were developed through an inclusive process with participants whose knowledge of Barnstable is thorough and comprehensive. This economic development section incorporates the visioning of the villages and integrates their economic development goals within the town wide goals and strategies.

Several goals in the 1997 Local Comprehensive Plan Economic Development section call for defining, planning and implementing growth management strategies for various Activity Centers. To this end, the Downtown Hyannis Growth Incentive Zone was approved by the Cape Cod Commission on April 6, 2006 to manage growth of this important regional resource.

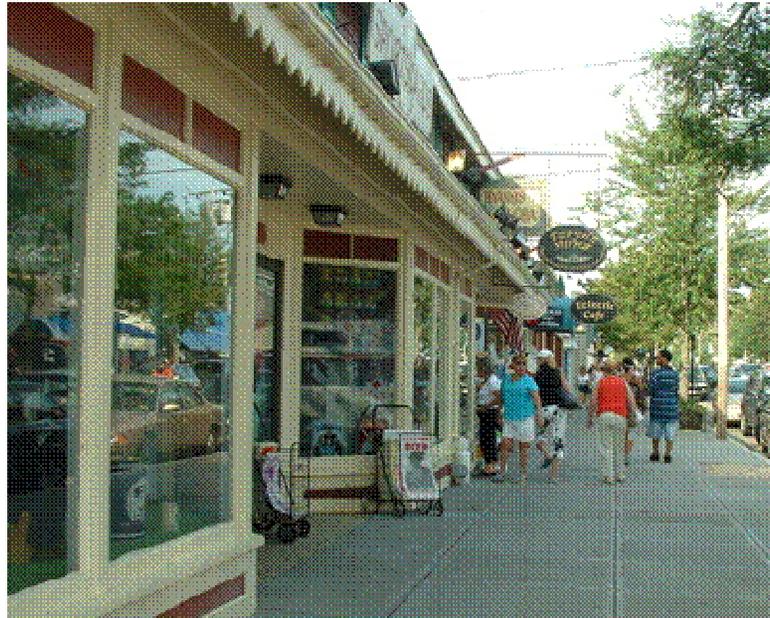
The Town of Barnstable has many economic advantages. It is centrally located and a regional center for economic development on Cape Cod. These regional resources include: the seat of County Government; Cape Cod Community College, the only higher educational institution on Cape Cod; the region's largest mall; major medical services and the Cape Cod Hospital ambulatory, surgical and emergency services; major embarkation point for air, sea, and ground transportation for commercial, visitor and residential use; has vibrant Main Streets in Hyannis as well as in the outlying villages; a working commercial harbor; a vital industrial park; and Internet connectivity. The Town has the potential for growing its commuter connection capacity in the future. Hyannis is the focal point of the most frequently asked question by visitors: "Where's the Kennedy compound?" The Town of Barnstable is a regional economic center for visitors and residents.

**Regional Solutions**

While the town's provision of regional services is valued, this responsibility has direct consequences. The town experiences critical growth management issues such as inadequate roadways, traffic congestion, inadequate parking, environmental impacts, lack of workforce and affordable housing and insufficient employment opportunities.

There are several regional initiatives underway that may help address infrastructure related issues, namely wastewater, environmental preservation and transportation issues. A regional solution to these issues is deserving of the town's support and participation since water and traffic are not contained within town borders. The Town of Barnstable has a unique opportunity, as the largest town on Cape

Cod, to join with abutting towns to explore these regional initiatives. Acknowledging that our environment is our economy creates opportunities for the town to preserve its open space and estuaries while we grow and redevelop.



**Town Solutions**

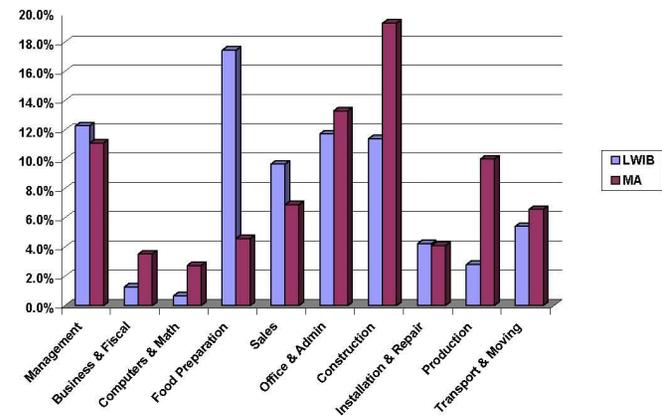
1. Create a plan that works for positive economic change and establish zoning changes and regulatory tools to implement plan goals.
2. Integrate sustainable development planning principles.
3. Build and maintain appropriate infrastructure that supports the plan. This infrastructure includes adequate and efficient roadways, sufficient parking facilities, wastewater solutions, water supply protection, creating and preserving safe, decent, affordable workforce housing and developing a reliable and dependable public transportation system.
4. Work to simplify and increase predictability of Town and Cape Cod Commission permit processes e.g. Growth Incentive Zone throughout the town.
5. Encourage and grow new economic sectors that pay livable wages to balance low-end service sector jobs. For example, marine and environmental technology and sciences, alternative and renewable energy, medical support, business support services and technology. (see wage data)
6. Enhance visitor-based economy and give visitors more reasons to come to Barnstable and stay in Barnstable.
7. Create and maintain educational opportunities that support existing and new economic sectors.
8. Strengthen the creative economy.
9. Capitalize on our recreational assets for residents and visitors by enhancing harbor access, walkways and pathways.
10. Create an economic analysis tool to evaluate the economic contributions of development and redevelopment.
11. Develop and maintain a true town-wide municipal financial analysis of the cost of community services from development and redevelopment.
12. Preserve and enhance the unique character of each village.
13. Support plan implementation through the Town's capital and operating budget process.
14. Ensure that by-laws and regulations are consistent with this plan.

**Principles for a Vital Economic Community**

The following principles set a strategic foundation from which this section's goals and strategies develop. The principles provide a consistent framework for economic development.

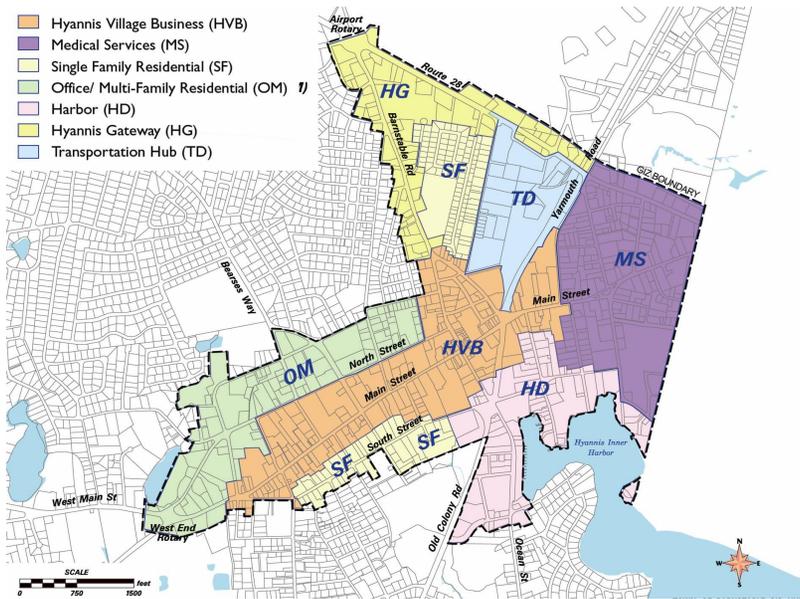
1. Promote mixed land uses making our communities more diverse and active while reducing dependency on the automobile.
2. Maximize density to minimize sprawl and loss of open space. Increased densities can reduce infrastructure costs for roads, sewers and water supply.
3. Offer more diversity and affordability in housing type, opportunity and choice.
4. Walking neighborhoods are essential elements for community vitality.
5. Foster distinctive, attractive communities with a strong sense of place.
6. Use planned public spaces as economic and community development drivers.
7. Preserve critical environmental areas. Our natural environment is our economy.
8. Direct development toward appropriate land use areas.
9. Provide reliable and accessible public transportation choices.
10. Make development review and permitting predictable, fair, timely and cost effective.
15. Encourage community and stakeholder collaboration on development and redevelopment decisions.
16. Analyze economic impacts of major developments.
17. Assure that new development and redevelopment is consistent with the Comprehensive Plan.
18. Work towards incorporating sustainable development in decision making.

Cape and Islands Work Force Area (LWIB) vs. MA Employment Clusters



**Hyannis Growth Incentive Zone**

One of the major challenges outlined in this section has been met for the Downtown Hyannis area of Barnstable. The Town has embraced an effort to revitalize downtown Hyannis. The Hyannis Growth Incentive Zone (GIZ) was approved by the Cape Cod Commission on April 6, 2006. The GIZ streamlines regulatory review in within the GIZ boundaries, defines density bonuses and offsets and creates design and infrastructure parameters for development and redevelopment.



As stated in the Town’s application, the purpose is:

“This Growth Incentive Zone will allow the Town to direct opportunity to the center of the Village of Hyannis by supporting village-scale density and mixed use zoning furthering a town-wide plan to create a healthy community and a sustainable economy. Downtown Hyannis is an area of Barnstable with existing growth infrastructure and capacity, but has many underperforming properties. This plan maximizes the infrastructure advantage while minimizing the negative impacts of growth. It highlights the potential for people to live and work on a smaller environmental footprint reinforced by steps taken to offset

growth in areas of Town where development threatens those human and environmental measures that determine our quality of life...

This ...supports a revitalization plan aimed at literally and figuratively bridging that gap. It encourages redevelopment along historic footprints investing not just in plastic recreations of neighborhoods but also in real neighborhoods. It capitalizes on a unique opportunity for people of varied means to live as neighbors unified by a common desire for active social interaction and a livable, workable, walk-able village rooted in the historic draw of Hyannis Harbor, Lewis Bay and Nantucket Sound.

Cape Cod faces the challenge of balancing human interaction on a fragile peninsula. A comprehensive approach weaving together social, environmental and economic needs is necessary. This effort strikes a balance by creating incentives to develop in areas with existing infrastructure and disincentives for development in areas with limited ability to process the effects of sprawl. For generations Hyannis has carried many burdens for the region. Realizing the potential of Main Street Hyannis will demonstrate the balance required as stewards of our community character and quality of life for generations to come.”

**Consistency**

This plan adopts the Regional Policy Plan Goals 3.3, 3.2 and 3.3. In lieu of adopting the Minimum Performance Standards, the following sections outline Barnstable’s action plan in support of these goals.

**Goals and Actions**

Economic Development goals and actions are set out in three sections: Infrastructure, Economic Sector Development and Growth Incentive Zone Implementation. Other economic development goals and actions are found in Section 1 Land Use Action Plan and Section 2.5 Open Space & Recreation Action Plan.

**Planning and Fiscal Responsibility**

**Goal 3.1: Encourage economic development that expands the town’s tax base and respects and strengthens quality of life, community character and environment. Engage in a focused strategic economic development planning process encompassing the economic development vision included for each village including the Hyannis Growth Incentive Zone.**

**Action 3.1.1** Proactively share development and comprehensive plan policies with developers.

**Action 3.1.2** Implement a balanced real estate tax policy that is fair to residents while preserving the tax base. Tax assessing methodology specifically regarding commercial properties shall be re-examined as part of this policy development.

**Action 3.1.3** Inventory and analyze impacts and capacity to implement mitigation formulas for development and redevelopment projects. Create an economic impact assessment tool to determine the net fiscal impact of development proposals. The project's tax revenue, infrastructure, service and resource impacts shall be analyzed. This economic impact analysis shall be completed before the commencement of Site Plan Review.

**Action 3.1.4** Determine feasible and attractive incentives to encourage local developers and business owners to reinvest profits in Barnstable and implement this incentive program.

**Action 3.1.5** Work in partnership with the County to coordinate economic development and related planning efforts.

**Action 3.1.6** Identify areas for "down-zoning" or undevelopment to offset areas designated for higher density.

### Development Review

**Goal 3.2: Revise and simplify land use regulations including zoning to foster economic development.**

**Action 3.2.1** Facilitate the Growth Incentive Zone and Design and Infrastructure Plan.

**Action 3.2.2** Promote Smart Growth principles, including cluster developments, green space planning, mixed uses and public open space that promote social exchange and the building of community.

**Goal 3.3: Establish a design review process for commercial development.**

**Action 3.3.1** Amend the town's Site Plan Review Zoning Ordinance to add design review criteria for coordination of design standards throughout the Town of Barnstable.

### Business Retention and Support

**Goal 3.4: Retain and strengthen business in the Town of Barnstable.**

**Action 3.4.1** Increase the commercial tax base by encouraging economic development in areas identified as appropriate for growth.

**Action 3.4.2** Make the permitting process predictable and timely through the creation of Development Agreements with the town and other regulatory agencies.

**Action 3.4.3** Determine feasible and attractive incentives to encourage locally owned developments to reinvest profits in our community and implement a program to utilize these incentives

**Action 3.4.4** Provide resources and technical assistance to applicants and investors by all means available including public/private entities, outsourcing, local initiatives and data sharing.

**Action 3.4.5** Retain in-house community development and planning resources. Collaborate with economic development efforts at the municipal and county levels.

### Infrastructure

**Goal 3.5: Provide infrastructure required for growth centers and redevelopment areas.**

**Action 3.5.1** Develop, apply for and support creative funding mechanisms to build and maintain infrastructure needs: workplace housing, renewable energy, wastewater treatment, public water supply, educational support, public transportation, parking and efficient roadways.

**Action 3.5.2** Seek out and support upgrades to telecommunication infrastructure for public and commercial broadband access within Barnstable. Support the creation of Wi-Fi networks such as Open Cape.com or other similar networks.

**Action 3.5.3** Continue to participate in and implement solutions from the state Hyannis Access Study to improve traffic flow.

**Goal 3.6: Support the maintenance and development of recreational activities for residents and visitors. Fund and implement findings and actions from the state approved Open Space and Recreation Plan included in Section 2B of the Comprehensive Plan.**

**Actions 3.6.1** Increase availability of public access to the water. Increase maintenance of existing public access to the water. Use Chapter 91 for this purpose.

**Action 3.6.2** Develop and maintain essential recreational facilities such as fields and parks with supporting amenities.

**Action 3.6.3** Increase maintenance of trails, walking trails, riding trails, public beaches and scenic destinations.

**Action 3.6.4** Complete bike and walking pathways throughout town connected to the County pathway network. Publicize and maintain walking and riding trails, public beaches and scenic destinations.

**Action 3.6.5** Support water-dependent activities with amenities both public and private.

**Action 3.6.6** Support and maintain town owned golf course(s).

**Action 3.6.7** Support the youth and community center.

**Action 3.6.8** Retain the Hyannis Mets and Cotuit Kettleers.

### Economic Sector Growth and Development

**Goal 3.7: Provide for the growth of existing sectors and development of new sectors and enterprises that create stable employment and livable wages for residents at diverse economic levels.**

**Action 3.7.1** Establish, through data collection and analysis, an economic development sector database to make town and County economic data available for use by private developers, the public, and town staff engaged in economic development efforts.

**Action 3.7.2** Identify, plan, implement incentives and fund infrastructure for redevelopment opportunities.

**Action 3.7.3** Identify and actively support the development of economic sectors offering stable employment, livable wages and career advancement opportunities.

**Action 3.7.4** Provide technical support for projects that conform to the CP.

**Goal 3.8: Education Sector: Continually work to establish the Town of Barnstable as a place where education “happens”. Emphasize educational efforts that serve as economic drivers to expand collective intellectual capital and support an emerging workforce. Our educational focus begins at kindergarten level and includes higher educational opportunities.**

**Action 3.8.1** Support development of educational curricula that connects to existing or desirable employment opportunities and career advancement such as renewable energy, medical services and sciences and technologies focusing on coastal, marine and environmental sectors.

**Action 3.8.2** Support the development of entrepreneurial enterprises.

**Goal 3.9 Cultural Sector: Encourage continued development of the creative economy to capture sector dollars and to position the Town as a cultural destination.**

**Action 3.9.1** Reconstitute the Cultural Council to advise policymakers about the Town’s creative economy.

**Action 3.9.2** Facilitate the development of arts economic development in Downtown Hyannis. This development should include artist residences, studios, classrooms, galleries, related retail, performances space and public assembly space.

**Action 3.9.3** Work with local creative, cultural and economic development entities to identify funding, planning and development resources to support the creative economy.

**Action 3.9.4** Foster support of new and existing local cultural entities and expansion of museums.

**Goal 3.10: Visitor Based Sector. Strengthen and enhance our visitor-based economy to make Barnstable a year round destination.**

**Action 3.10.1** Conduct a feasibility study for a Hyannis Conference Center.

**Action 3.10.2** Dedicate 7-10% of the current room occupancy tax revenue to visitor marketing and promotion.

**Action 3.10.3** Enhance and expand the Walkway to the Sea to encompass more of the harbor front, the Cape Cod Maritime Museum, the end of Ocean Street and Kalmus Park.

**Action 3.10.4** Improve traffic plan for visitors including a roadway signage system. Mark roadways, travel lanes, barriers and limit access where necessary for safety and efficiency.

**Action 3.10.5** Create a simple, legible wayfinding system for attractions, destinations and parking where needed.

**Action 3.10.6** Publicize walking trails, riding trails, public beaches and scenic destinations.

**Action 3.10.7** Provide user friendly hours for beaches and parks use.

**Action 3.10.8** Work with appropriate public and private transportation entities to ensure provision of year round, reliable transportation and trolley service.

**Action 3.10.9** Identify locations for parking garages downtown, at the Regional Commercial Center, the Transportation Center, the hospital and the harbor. Where feasible, expand existing facilities to provide adequate parking for recreational areas.

**Action 3.10.10** Support the continued development of eco-tourism, tourism that explores, experiences, and observes nature.

**Action 3.10.11** Consolidate all restaurant, hotel and motel operating permits and fees into one process with a single time frame. Continue to allow Town department inspections on an appropriate schedule.

**Goal 3.11 Healthcare Sector. Healthcare is an important economic sector. This sector provides needed services for visitors and residents while providing a range of livable wage job opportunities.**

**Action 3.11.1** Encourage healthcare providers to locate offices and services within the designated medical services districts in Hyannis. In addition, determine alternative “campus sites” for major expansions that require significant additional infrastructure support.

**Goal 3.12: Hyannis Growth Incentive Zone. The Cape Cod Commission approval of the Hyannis Growth Incentive Zone set several economic development conditions included here as goals and strategies.**

**Action 3.12.1** The Town of Barnstable shall adopt a Business Development Plan prior to issuance of Certificate of Compliance #2. The Plan should include the following:

- Existing Business Inventory: Types of businesses by industry, ownership, number of employees, physical size, lease or own space.
- Existing Business Survey: Identification & analysis of needs and potential for growth.
- Business Development Strategy: Based on inventory and survey, identify specific actions designed to support and attract businesses to the GIZ over the next five years. This should be a collaborative effort with BID, Hyannis Chamber, and other stakeholders. This strategy should link to other plans including the Harbor Plan and the Historic Properties Inventory.

- Site Specific Redevelopment Strategy: An inventory of potential redevelopment sites, procedures for preparing sites for redevelopment from remediation to clearing title issues, site planning / pre-permitting for specific parcels.

This Comprehensive Plan results from four years of work by the Town of Barnstable. Based on community identified issues culled from numerous workshops, citizen surveys, village visioning sessions and public comment, Barnstable Comprehensive Plan 2010 strikes a course for the future and describes actions and strategies the Town should implement to attain a better balance between land use and community resources and to ensure a sustainable future.

The Town's last Comprehensive Plan, adopted in 1997, was the starting point for preparing this plan. This plan reaffirms many of the principles articulated in the 1997 document. Many principles and actions associated with those issue areas remain in need of implementation. This plan also re-focuses on the need to direct growth to designated areas, protect and reconnect sensitive habitat areas, protect and improve drinking water, fresh water and coastal water quality, manage traffic to improve congestion and preserve heritage and community character. A major emphasis of this plan is implementation: the specific actions to be taken to turn the visions of this plan into a reality for a sustainable future.

Cape Cod faces the challenge of balancing human interaction with the resource constraints of this land of sand and water. A comprehensive land use approach weaving together social, environmental and economic needs is critically important. This plan strikes an appropriate balance by creating incentives for development in areas with existing infrastructure while discouraging intense development in areas with limited capacity, and so beginning to counteract the effects of sprawl. For generations Hyannis and so Barnstable have carried many burdens for the region. Realizing the full potential of our villages and regional commercial center will protect and preserve our community character and quality of life.

### **Barnstable Land Use Planning History**

#### 1962 Plan Study Report by Atwood & Blackwell, Boston

The available land use planning archive for Barnstable includes 1962 Plan Study Report by Atwood & Blackwell, Boston. This plan included some inventory and analysis, a town-wide long range land use plan, specific plans for Hyannis and Osterville and economic, facilities, and traffic sections. The plan's two major land use goals are:

1. *Preservation and protection of Cape Cod landscape and village values.*
2. *Making the most of inevitable changes to be wrought by growth in future years.*

Land use and growth management policies of this plan recognize the need to preserve green connections between villages and existing and planned commercial areas. A policy to direct dense development to downtown Hyannis and limit density in the villages is also put forward.

Protection for shellfishing and sensitive ponds is highlighted as well as the need to plan for improved traffic circulation for anticipated growth.

#### 1983 Master Plan for the Town of Barnstable

This plan was prepared by Lozano, White and Associates, Cambridge. This plan contained inventory and analysis and puts forward policies for growth management, water resources, managing residential growth, open space and natural resources, economic development, transportation and traffic. The Growth Policy goal states:

*Maintain the rural scale and quality of life in Barnstable as growth continues;; preserve the quality and supply of water resources; prevent urban sprawl; preserve natural and built environment. "Quality of life" refers to the town's seven villages, each with its own identity, physical attributes, sense of place, community activities, and culture; the contrast between the village centers and surrounding open areas; the many opportunities for recreation and enjoyment of the outdoors that the town's beaches and open spaces provide; the economic opportunities the town can provide for young people and adults, to be able to live, work and remain in Barnstable; and a distinctly non-urban lifestyle.*

#### 1997 Local Comprehensive Plan

This plan was the first completed in concert with the Cape Cod Commission Regional Policy Plan. Determined to accomplish the implementation of planning actions that eluded prior plans, town planners thoroughly researched planning issues to provide a firm foundation for policies and the actions to implement them. The document is very complete with all types of excellent information included in each section, as well as an extensive appendix that included the planning studies and documents researched for the 1997 Local Comprehensive Plan. Areas discussed are land use and growth management, natural resources, economic development, community facilities and services, affordable housing, open space and recreation, historic preservation and community character and health and human services. The Introduction to the Land Use and Growth Management Section describes growth policy for the town:

*The overall growth policy for the Town of Barnstable emphasizes preserving the “quality of life” through elimination of adverse impacts on natural resources, particularly water resources, and by directing growth to “suitable designated areas”. This policy is intended to avoid low density “urban sprawl”, by protecting environmentally sensitive open space and guiding commercial development to “activity centers”.*

The Barnstable Local Comprehensive Plan was approved pursuant to the Cape Cod Commission Act in October 1997 by the Town Council and by the Cape Cod Commission in February 1998.

1997 LCP implementation report

This report is included in the Appendix. Overall the 1997 LCP had moderate success with implementation.

**Town of Barnstable Comprehensive Plan 2010**

Process

In 2002, the Local Planning Committee, which is the Barnstable Planning Board, embarked on a process to complete the five year update to the plan. During this process, various staff, groups and committees worked to update individual sections of the CP. Desiring to submit an update for certification, the LPC decided to use this broad ranging material, collect it into one document, reformat it for ease of use, and submit it for CP update certification.

This update process included public workshops on specific issue areas such as wastewater, community housing, transportation, nitrogen management, smart growth, economic development, natural resources, harbor management, public water supply, open space and recreation, and human services. The committee met in numerous workshop sessions posted and open to the public over the course of the plan update process from 2004 to 2007.

A visioning process was conducted within each of the seven villages. Those products are included in their entirety in the Village Vision section. A townwide survey is conducted annually and those results have been incorporated into this planning document. The Planning Board held hearings on these documents.

This Comprehensive Plan concentrates on growth and land use management, location of development and integration of action items into a cohesive, easy to understand implementation process that will be used by residents, councilors, board members and staff alike as they conduct the town’s business.

The next steps for comprehensive planning in Barnstable will focus on implementation of the sub-area and sub-category plans called for in this document.

Implementation

Town-wide land use planning should ensure that necessary infrastructure to support intended growth and redevelopment is not only planned for and provided, but also that installation or improvements are funded. This plan considers necessary infrastructure to include funding for all soft and hard costs associated with implementing CP Actions and the Town’s concurrency policy.

With this CP, the Town sets a new course for implementing the many actions recommended throughout this plan. Working with senior staff, the Capital Improvement Plan working group, and the Town Manager’s Office an implementation plan was developed that evaluates each recommended action in light of existing staffing levels, operating budgets and the capital budget. The implementation schedule is sobering, but is based in the reality of the Town’s fiscal constraints.

This program design was developed to connect the Comprehensive Plan to the daily work of municipal government. Actions have been prioritized and will be embedded in the work plan for town staff, boards, committees and elected officials. We are confident that the actions planned for implementation in year one will be completed and so forth. On a parallel course, priority actions from each section have been identified for funding through grants, impact fees, project mitigation, and financing options through available State programs.

Consistency

The Barnstable Comprehensive Plan (CP) is the official documentation and statement of the town’s land use and development policy. It is the Town’s goal that the CP be consistent with the Cape Cod Commission Regional Policy Plan (“RPP”) of 2002 and, upon approval by the Barnstable Town

Council in accordance with Section 9 of the Cape Cod Commission Act, that this CP then be certified by the Cape Cod Commission as soon as expeditiously possible.

Goals contained in this CP are short and long range aspirations that are intended to direct a general course of action or set direction towards an ideal end state that may or may not be achieved. Goals provide the basis for Actions and Strategies that more specifically define the programs, regulations and projects necessary to achieve the Goals.

#### Plan Overview

The work program for this CP has resulted in a set of issues, goals, policies and strategies for each of the following seven sections of the CP:

- 1.0 Land Use
- 2.0 Natural Resources
- 3.0 Economic Development
- 4.0 Facilities and Infrastructure
- 5.0 Community Housing
- 6.0 Heritage Preservation
- 7.0 Health and Human Services

Each Section contains Goals, Policies and Strategies covering each issue area. The appendix to each Section contains inventory and background information that further define existing conditions and issues to be addressed. Policies are intended to direct public and private actions to further the stated Goals. Strategies identify private actions (typically requiring adherence to town ordinances and regulations, and/or identified as action items for public education), and town actions (i.e. adoption of ordinances, policies and regulations, and identification of infrastructure improvements and other town-supported physical improvements) to implement CP Goals and Policies. Therefore, the CP includes broad Goals which will set the direction for the future, more detailed Policies that specify how these goals can be accomplished, and specific Strategies that serve as alternate methods to implement a Policy.

#### **Use and Interpretation of the Comprehensive Plan**

The Goals, Policies and Strategies of this Comprehensive Plan may be used to defend or promote official town policies and positions regarding land use, the provision of capital facilities, social and community needs and growth. A decision based on the CP is more defensible than one that contradicts the CP.

The Barnstable Comprehensive Plan may be amended at any time in the same manner it was adopted, through the process outlined in the Cape Cod Commission Act and applicable regulations. The Comprehensive Plan shall be reviewed and updated every five years.

#### **Regional Review**

It is the specific and express intention of the Town of Barnstable that the Goals, Minimum Performance Standards (MPS) and Other Development Review Policies (ODRP) within the Regional Policy Plan (RPP) that must be incorporated within the Barnstable CP for consistency are to be found in the Goals, Policies and Strategies contained within this plan. Within this CP such Goals, Policies and Strategies are identified by the use of the mandatory word "shall". Further, after certification of consistency of this CP by the Commission, such CP Goals, Policies and Strategies shall be considered by the Commission during any DRI review pending before the Commission.

#### **Local Review**

In situations where contradictions appear between existing ordinances and regulations of the Town of Barnstable and the CP, the regulations and ordinances as adopted by the town shall take precedence. The CP shall provide guidance for the amendment of said ordinances and regulations, but shall not supersede such ordinances and regulations. Boards and Commissions that have discretionary decision making power may however, prior to such amendment, make reference to and use of the Plan in support of their decisions to the extent that such reference and use is rationally and reasonably related to the decision in question.

The use of the Policies and Strategies contained in this CP by a Board or Commission that has discretionary decision making power may be flexibly applied if it can be demonstrated by an applicant that the intent of the applicable Goal and the interest(s) protected by a particular Policy or Strategy can be served by the alternate approach. In approving such approach, the local permitting agency must make a finding that the proposed modification meets the intent of the Goal and that it will further the interest(s) of the specific Policy or Strategy as well as, or better than, the original Policy or Strategy. The burden of proof to demonstrate that such a modification is acceptable shall be on the applicant.

**Conflicts**

In the event of any conflict by and between the Goals, Policies and Strategies set forth within this Plan, the most specific shall apply.

This CP has a primary mission to accomplish the following:

- Update the "Goals and Policies for the Town of Barnstable from the 1997 LCP;
- Be consistent with the CCC Regional Policy Plan (RPP) and be certified as such as expeditiously as possible;
- Serve as a land use and growth management guide for the development of infrastructure and programmatic implementation strategies.

**Plan Organization**

The Comprehensive Plan has four parts:

1. Seven Comprehensive Plan sections detail issue areas and detail the goals, actions and strategies for addressing the issues.
2. The Implementation Plan schedules the necessary infrastructure, capital improvements, staffing, and funding actions from the CP necessary to support anticipated development and redevelopment.
3. Village Visions detail citizen input regarding growth management and planning issues from the unique perspective of each village.
4. Appendices contain inventory, data and other supporting documents referenced throughout the plan.

**Comprehensive Planning Cycle**

Implementation of the Comprehensive Plan will be reviewed on an annual basis. The Planning Board, in cooperation with staff, agencies and boards will choose CP actions and strategies for a yearly action plan.

The Planning Board intends to complete its next full comprehensive planning cycle ten years from the date of the adoption and certification of this plan.

**Barnstable Local Planning Committee**

Marlene Weir, Chair

Roy Fogelgren

Ray Lang

David Munsell

Felicia Penn

Patrick Princi

Steve Shumann

Wolfgang Fattler

This Section of the Comprehensive Plan involves infrastructure -- roads, water supply, wastewater and stormwater management, solid and hazardous waste, and town facilities providing services to the community. Barnstable has kept up admirably with capital facility and service needs considering rapid growth, increasing maintenance and improvement costs, and Proposition 2 ½ constraints. However, some of Barnstable's facility and infrastructure is overburdened, outdated and in need of repair.

The Open Space and Recreation Plan, included in the Appendix and incorporated by reference as part of this plan, details Park and Open Space facilities and management.

### **Infrastructure and Facilities**

This section analyzes existing facilities and infrastructure and explores future facilities and infrastructure necessary to accommodate new growth or redevelopment.

The overall goal for infrastructure and facilities is to provide a service delivery system that is efficient, effective and economical and that provides a range of public services adequate to meet the economic, social and individual needs of residents. This section of the CP addresses a wide variety of services and facilities including services provided by other public agencies that require coordination with the town. These services include:

- 4.1 Transportation
- 4.2 Solid and Hazardous Waste
- 4.3 Wastewater
- 4.4 Water Supply
- 4.5 Stormwater
- 4.6 Town Facilities
- 4.7 Energy

### **Providing Adequate Facilities**

Community facilities include wastewater facilities, transfer station, water suppliers, law enforcement, fire services and town administration facilities. Regional facilities include Cape Cod Hospital, Cape Cod Community College, Hyannis Transportation Center, Barnstable Municipal Airport, and town harbors that support facilities that provide marine transportation to the Islands.

Based on land use policies and designations in this plan, sufficient infrastructure are provided, including facilities for police, government, recreation, education, community activities, and waste disposal. The town will cooperate with the quasi-public infrastructure providers for water supply, library, health, fire protection, and other services to ensure coordination of these facilities for appropriate service provision.

### **Infrastructure and Facility Prioritization**

Plans for infrastructure and infrastructure improvements will be funded and implemented according to land use designations and policies defined in Section 1 of this CP including concurrency. Concurrency is the timing of infrastructure and services necessary to mitigate impacts of development without decreasing existing levels of service. If a proposed development is determined to cause levels of service to decline, then the development may not be permitted unless the impacts are mitigated or there is funding in place to mitigate these impacts. Concurrency is required for wastewater, water supply, traffic and stormwater infrastructure and service provision.

### **Regional Facilities**

The Town of Barnstable hosts regional facilities, which provide goods and services to residents of other towns as well as Martha's Vineyard and Nantucket. These facilities provide valuable services from which Barnstable derives economic activity, yet these activities also create infrastructure impacts. Since many of these facilities are tax-exempt, their impacts to the town such as increased traffic congestion, increased need for roadway maintenance, water use, wastewater treatment for example are not mitigated through property taxes. A balance must be created to ensure that economic impacts from these facilities do not outweigh their economic benefit.

These regional facilities include county government, land, air and sea transportation facilities, healthcare facilities and educational institutions.

### **Funding Infrastructure and Facilities**

#### **Debt Management**

To provide for debt management and capital planning, as well as enhance the town's reputation for managing its debt in a responsive manner, the Town Council strategic plan includes a set of comprehensive financial strategies:

- Establish rainy day/budget stabilization reserves
- Prioritized spending plans
- A formalized capital improvement plan

- Long-term financial planning for all liabilities
- Pay-as-you-go financing strategies as part of operating and capital budgets
- 10 year financial forecasts

The Town will develop a capital plan to fund infrastructure required to meet the service demand of existing growth and prepare for new growth anticipated through existing land use regulations. This capital plan will include the existing Capital Improvement Program, state grant funds, enterprise accounts, direct mitigation and applicable programs of the Commonwealth's Office of Business Development. These State programs will be evaluated for their effectiveness and ability to provide financing options where the town is not able to do so through existing funding mechanisms or the creation of enterprise accounts.

**The Capital Improvement Program (CIP)**, a five-year action plan, serves as a link between planning and programming projects requiring town funding. The CIP fiscal constraints and funding sources are a limiting factor to infrastructure expansion and improvement. The CIP has a direct relationship to the rate and location of new growth, infill development and redevelopment. The capital improvement program also includes the following sources of funds in addition to town revenue:

**Direct Mitigation.** Impacts from proposed development will be mitigated by one or more of the following methods.

- Impact fees may be adopted town wide to address wastewater, water supply, open space, parking, transit, roadway and traffic improvements, landscaping, lighting and pedestrian amenities.
- Physical improvements by developers through regulatory agreements
- Development of Regional Impact (DRI) mitigation fees collected by CCC and disbursed to the town for specific projects that fulfill the conditions of the DRI approval in which the mitigation was required.

#### **Massachusetts Office of Business Development (MOBD) Programs.**

MOBD works with companies and municipalities to help them take advantage of economic incentive programs that are available. MOBD also assists companies in navigating and obtaining the technical, human, financial and siting resources necessary to expand and/or re-locate in MA. The Massachusetts Office of Business Development administers the EDIP, DIF and MORE jobs programs. The EDIP includes the Special Tax Assessment and Tax Increment Financing programs.

#### **Special Tax Assessment (STA)**

Covers both the existing and new value of the real estate owned or leased by the prospective Certified Project candidate. In year one, the tax is zero percent of the existing and new assessed value of the real estate. In year two, up to 25% of the assessed value is taxed. In year three, up to 50% of the assessed value is taxed. In year four, up to 75% of the assessed value is taxed. In years five and following, up to 100% of the assessed value is taxed. The Special Tax Assessment is for a period of no less than five and no more than twenty years.

#### **Tax Increment Financing (TIF)**

Massachusetts' version of Tax Increment Financing allows municipalities to provide flexible targeted incentives to stimulate job-creating development. The TIF Plan, completed by the municipality, describes proposed public and private investment in the TIF Zone, and is agreed upon by the municipality and all the private owners in the TIF Zone. The municipality and the prospective Certified Project candidate agree to a property tax exemption based on a percentage of the value added through new construction or significant improvement for a period of no less than five and no more than twenty years.

The real estate taxes generated by the new increased assessed value are then allocated by the agreed-upon percentage of value added to one or more of three categories. The categories are:

- Exemption from real estate taxes.
- Payment of real estate taxes.
- Payment of betterment fee in lieu of real estate taxes to finance related infrastructure.

#### **District Improvement Finance Program (DIF)**

The District Improvement Finance Program (DIF) is a public financing alternative available to all cities and towns in the Commonwealth. The DIF enables municipalities to fund public works, infrastructure and development projects by allocating future, incremental tax revenues collected from a predefined district to pay project costs.

#### **Massachusetts Opportunity Relocation and Expansion (MORE) Jobs Capital Program**

The Massachusetts Opportunity Relocation and Expansion (MORE) Jobs Capital Program provides \$100 million in grant funding for public

infrastructure improvements needed to support business expansion in the Commonwealth of Massachusetts. The purpose of the program is to stimulate job creation and economic growth across the state by providing the public infrastructure developments companies need. MORE was established in an economic stimulus bill and signed into law on June 24, 2006 (Chapter 123 of the Acts of 2006).

### Section 4.1 Transportation

#### Introduction

The transportation system enables people and products to move into, out of and around Barnstable. The key elements of our transportation system are: roadways, public transit such as buses, trains, air travel and ferry service and their associated facilities. For the purposes of this discussion, the transportation system also includes sidewalks and other walkways, bikeways, and parking facilities. The transportation system should provide acceptable service for existing needs of the community and be able to provide for planned growth in the community.

Roadways serve several functions. The roadway network's primary function is to provide vehicle circulation for private users and public transit. Because of long established land use patterns the personal motor vehicle is the primary form of transportation in Barnstable. Roads also provide rights-of-way for public utilities, such as sewer, water, gas and electric lines, both above and below ground.

Sidewalks are important to the character and function of the village centers. They are also necessary to the schools and some commercial areas. A map of existing and proposed sidewalk routes is included in the Map Section. Other walkways include walking trails and ways to water which are used primarily for recreation.

There are a few dedicated bike paths in Barnstable but for the most part bicycle travel takes place on the roadway network. Plans are finalized for a dedicated bikeway between Hyannis and Yarmouth using abandoned rail lines that will link to the Cape Cod Rail Trail. A map of existing and proposed bicycle paths and routes is included in the Map Section.

Parking infrastructure is very important in our auto dependent environment. The majority of parking infrastructure is privately owned, associated with commercial or industrial property. Some additional parking is associated with

institutional uses and town owned properties. Parking goals include reducing excess parking greyfields and encouraging shared parking and construction of decked and/or first floor parking in appropriate locations.

Public transit in Barnstable includes local fixed route and limited demand bus service, inter-city bus service that can link passengers to rail service, air service from Barnstable Municipal Airport in Hyannis and ferry service to the Islands.

#### Major Transportation Issues

##### **Hyannis Transportation Center**

The Cape Cod Regional Transportation Authority (RTA) has built, on the 10.8-acre railroad terminal site owned by the state, the Hyannis Transportation Center (HTC) that serves as a bus terminal, a maintenance facility, and the RTA office. The Town of Barnstable wants the Center to act as a "hub", with coordination of satellite parking, shuttle, railroad, bus, airport, and ferry services.

Given its location in an area where air, bus, ferry and automobile travel options converge, these intermodal goals are sound. The Town is engaged in a bikeway project that provides a link from the Cape Cod Bikeway to HTC transportation options and downtown Hyannis. The Steamship Authority, a primary provider of water transportation for freight and passengers traveling to the Islands, has a parking lot near the HTC. While the Steamship Authority does have a seasonal shuttle service, it is not sufficient to address existing demand. Currently there is no direct public transit or pedestrian connections for island ferry passengers from the airport, remote parking or the HTC. Needed improvements include shuttle service between the airport and the HTC, increased local and regional bus service and remote parking with intermodal connections for travelers going to and coming from the Islands.

At present, inter-city and intra-city bus service does not provide an adequate alternative to the automobile. Ridership and inter-modal efficiency could be increased by integrating and coordinating all modes of transportation such as railroad, ferries, parking facilities, and the Barnstable Municipal Airport.

A reliable and conveniently scheduled shuttle bus system compatible with the ferry arrivals and departures would reduce congestion in downtown Hyannis, improve passenger travel experience and encourage development of remote

parking away from the harbor. This would allow land currently used for parking to develop uses that are more appropriate to this exceptional location a goal of the Downtown Hyannis GIZ.

### **Hyannis Access Study**

The Commonwealth's Executive Office of Transportation is conducting a comprehensive study of the greater Hyannis area in the Town of Barnstable that will examine and recommend ways to improve overall transportation mobility for residents, businesses, and visitors, while minimizing impacts to neighborhoods and communities.

Hyannis Access Study: This study of the greater Hyannis area in the Town of Barnstable will examine and recommend ways to improve overall transportation mobility for residents, businesses, and visitors, while minimizing impacts to neighborhoods and communities. A full range of alternatives will be developed and analyzed as the study progresses. Possible alternatives include transportation demand management and other "non-highway" options in addition to potential roadway improvements. A recommended plan of short-term and long-term improvements - based on the alternatives analysis and the collective input of many stakeholders - will be produced. A task force has been formed to provide an open and participatory forum for community involvement and input into the entire study.

### **Parking**

The Town of Barnstable's goal for parking management is to provide accessible facilities that meet community needs in accordance with best land use practice.

The majority of parking areas in Barnstable are privately owned and located in commercial areas with paved lots associated with commercial, industrial and institutional uses. Priority for parking management should be given to the Downtown Hyannis GIZ and the Route 132 Regional Commercial Center. The time has come for Barnstable to seek opportunities for parking structures in these heavily traveled areas. These parking structures, designed and sited with full consideration of community character will also provide opportunities to redevelop greyfields into green space and viable commercial spaces that support the downtown revitalization and sustainable redevelopment in the Route 132 area.

The town will explore public private partnerships that will foster shuttle bus service from satellite parking facilities to recreational areas, visitor attractions, commercial areas and other destinations.

### **Parking Regulations**

Incentives for shared parking and reduced parking requirements will be developed for all areas. In more intensively developed commercial and mixed-use areas incentives for decked parking, ground floor parking and, where feasible, underground parking will be developed.

Additionally parking regulation changes should be evaluated for all commercial and industrial uses. Many existing parking spaces go unused even during peak demand periods. The village and auto oriented Route 28 business districts are also subject to excessive parking requirements that must be evaluated.

### **Roadways**

The importance of the roads is evidenced by the approximately 40 million vehicle trips that the more than 40,000 residents made using the network of roads and the tens of millions more trips local business generated during the same period. Deferred maintenance and increasing traffic loadings result in an accelerated deterioration of the roadways.

The road network consists of three major regional east-west roads – Route 6A, Route 6 and Route 28, and four regional roads that connect to the east-west roads - Willow Street, Route 132, Phinney's Lane and Route 149. Connecting to these, an intricate network of local streets reflects incremental development over hundreds of years; however, the majority of residential subdivision roadway construction has taken place over the last 30 years. Barnstable's roadway system is strained by local and regional residential and commercial growth.

There are 498 miles of public roadways within Barnstable's corporate limits. Of this total, approximately 220 miles are town owned roads. The town is solely responsible for the maintenance and upkeep of these roadways. Privately owned public roads are roads created through subdivision control or other means that have not been accepted by the Town according to the provisions of Massachusetts General Law.

There are 174.37 miles of private roads within Barnstable. Many private roads carry a great deal of traffic and play an important role in the movement of traffic throughout the town. In the past, the town has performed limited maintenance and emergency repairs on private roads to guarantee emergency vehicle and school bus access. This policy should be evaluated each year during the capital budget process.

Additional roadways are categorized as: 27 miles of ancient ways; 50.24 miles of county roads; 27.73 miles of state roads; and .03 miles of roadway classified as “other”.

#### Functional Classification of Roadways

The Town of Barnstable Department of Public Works maintains a functional classification list of the Town roadway network that incorporates Federal Highway Administration (FHWA) criteria for the National Highway System (NHS) and Massachusetts Highway Department (MHD) for other roads. These criteria are used to classify the roads within urban and rural areas into several systems: Principal Arterial System including Arterials and Extensions, Minor Arterial System, Collector System, and Local Street System.

**Principal Arterials** (including Arterials and Extensions) principally provide for pass-through of regional traffic and access to major activity centers.

**Minor Arterials** principally distribute regional traffic to small activity centers and, on a limited basis, land access.

**Collectors** principally provide both land access and traffic circulation.

**Local/Subdivision Streets** principally provide access to abutting lands and connections to higher order categories.

Using data provided by the Engineering Department, (**Appendix**) the Town has mapped roadways (**Map Section**) and classified them according to Planning Board Subdivision Rules and Regulation designations. The Engineering and Growth Management Departments see a benefit to developing one classification system for roadways. The Engineering Department will have an intern work on this task. Classifications will be developed using town policies, review of the 2006 MassHighway Project Development and Design Guidebook and Cape Cod Commission roadway classification system.

#### Roadway Function, Design and Land Use Designations

The Land Use designations in this plan consider transportation planning as a key component. As is the case with all infrastructure improvements, roadways will be improved in accordance with the land use designations for the area they serve. Roadway widening or signalization is not planned in areas not designated for growth or redevelopment. Instead these areas will be prioritized for maintenance of existing roadways and in some cases pavement reduction. The Subdivision Rules and Regulations and DPW policies must be revised to include road construction standards based on land use designations and incorporate context sensitive design process. This step is necessary to coordinate this significant capital expenditure with Town land use goals.

The traditional village centers are categorized as pedestrian oriented areas needing roadway infrastructure investment only to enhance existing function, including stormwater management improvements, or community character. These areas may benefit from pavement reduction along some village center roadway segments and intersections.

The commercial nodes along the Route 28 Corridor are automobile oriented. Land uses in these areas must be carefully managed for their impacts to traffic congestion, access management and community character. These planning nodes are already substantially built out so focus now turns to providing incentives to achieve interconnections between developments, reduce curb cuts and paved areas as redevelopment takes place. The entire length of this key highway corridor is owned by the state and managed by Massachusetts Highway Department, District 5 (MHD). The town works with MHD directly and through participation in county groups. Overall, the town has less direct influence over road widening, stormwater management and signalization on this roadway than on a town owned roadway, but strong efforts must be made to implement town policies through funding and design review processes.

Given the intense growth of the last few decades, the unique constraints of the Cape Cod economy and environment, perhaps it is time to explore the re-establishment of a Cape Cod Massachusetts Highway Department District.

The most effective action the town can implement to mitigate impacts of auto oriented highway development is to implement new local regulations. A thorough analysis of parking, interconnection and shared access regulations

is critically important. These regulations may be revised or developed to provide incentives that will relieve some congestion, improve traffic flow and consolidate site access.

The growth center in Hyannis has a full set of transportation infrastructure improvements planned and approved as part of the Growth Incentive Zone (GIZ) process. To accommodate planned growth, improvements are required within the GIZ and at critical intersections and roadway links around the GIZ. This includes improvements to Route 28, a state highway. Estimates by Vollmer Associates, LLP indicate about forty percent (40%) of traffic on Main Street in Hyannis is through traffic – motorists using an alternate route to avoid Route 28 and Airport Rotary congestion.

No new road construction is planned for this growth center. Instead methods to reduce automobile use including sidewalk improvements and new construction, bicycle rack installation, bicycle lanes and path designation and construction, additional transit infrastructure between municipal parking and traveler destinations and a Travel Demand Management program to encourage car-pooling will be used. A full description of these planned improvements can be found in the Downtown Hyannis Growth Incentive Zone Application. **(Appendix)**

In areas designated for redevelopment a combination of strategies proposed for village centers and highway commercial nodes may be used. Incentives for access management and interconnections must blend with incentives for a stronger pedestrian element in appropriate areas such as portions of West Main Street in Hyannis.

In residential areas, road improvements should focus on surrounding land use, enhancing or creating pedestrian accommodations where roads connect to nearby commercial, recreational or school uses. Care should be taken to improve overall streetscape in residential neighborhoods using tree plantings, low maintenance landscape materials and traffic calming enhancements where appropriate.

The Subdivision Rules and Regulations will be reviewed to ensure that incentives are in place for interconnecting neighborhoods through roadway or pedestrian connections.

### Context Sensitive Roadway Design

This process includes outreach to the community affected by planned roadway or intersection construction or improvements. Outreach to abutters, users and other stakeholders commences before the design process begins. Engaging in collaborative problem solving to address the planned repair or improvement results in a design that more comprehensively encompasses safety, community character, access, landscape and other community concerns. This process is critically important in the Village Centers but should become standard practice for all projects except emergency repairs.

In all areas of Barnstable, context sensitive design requires an evaluation of Level of Service (LOS), both existing and future, based on average year round conditions. The type of improvements used to address LOS shall be based upon land use designation and community character factors such as pedestrian activity, cultural landscapes, historic structures including stone walls, tree stock and neighborhood response to the design process.

On some portions of Route 28, Route 132, Yarmouth Road/Willow Street and possibly Barnstable Road limited widening of stressed roadway segments may be desirable.

In the Growth Center, the acceptable level of service is D and in some cases E. This designation results from the Growth Incentive Zone (GIZ) infrastructure inventory, analysis and planning process as specified by the Cape Cod Commission GIZ approval. Limited structural improvements that encourage pedestrian activity, support community character, enhance commerce and allow safe efficient access to other modes of travel are encouraged

The Route 132 Regional Commercial Center and the Auto Oriented Route 28 Corridor Nodes may require limited structural improvements to alleviate congestion and promote safe travel where existing or future traffic conditions interfere with commerce, increase travel time and/or impact safe travel.

In Village Centers, Low Density Residential areas and Medium Density Residential areas, structural improvements generally are not desirable. However, along regional corridors that transverse these areas structural improvements, including widening, may be necessary to alleviate extreme congestion or address overriding safety concerns.

The West Main Street Corridor in Hyannis may require structural improvements. Limited widening may be necessary to improve pedestrian amenities, enhance streetscape, support a neighborhood core, alleviate extreme congestion or address overriding safety concerns.

### Sidewalks

There are approximately 66 miles of sidewalks throughout the town with a majority located in villages and commercial areas. The Department of Public Works and the Engineering Department use The Town of Barnstable Sidewalk Plan (**Appendix**), developed with the Growth Management Department, to guide sidewalk repair, improvement and construction. This planning study documents the need for additional sidewalks that must be prioritized among other capital improvement projects.

The Sidewalk Plan includes projects prioritized by location near village centers, recreation lands, local and regional service areas; school priorities; and interconnections to existing sidewalk networks.

Land use designations should inform sidewalk planning priorities. Pedestrian and bike linkages to neighborhoods, village centers and recreational and visitor attractions should be planned. Linking recreational facilities, schools, village centers, and other destinations with bike paths and sidewalks was named as a priority during the village visioning. This planning study should be revised annually as projects are completed and should be included the listed priorities.

### Bikeways

Barnstable has two bike paths totaling 4.8 miles in length. Bike paths are characterized by a separated right of way while bike routes are roadways with wide shoulders that have been designated for bicycle use. Barnstable has 41.2 miles of bike routes.

#### Bike Paths

Bike paths should be linked with a regional network of bikeways throughout Cape Cod. Barnstable has three bikeways that qualify as bike paths:

- The Route 28 Bike Path runs along Route 28 from Bearses Way to Old Stage Road. Constructed in 1980 this path is 2.5 miles long and has 28 roadway crossings.
- The Old Stage Road Bike Path begins at Route 149 continues along the service road and turns down Old Stage Road where it ends at Race

Lane where it connects to the Centerville sidewalk network. This path is 1.9 miles long and has six roadway crossings.

- The Hyannis Transportation Center Path runs from Route 28 to Main Street in Hyannis. This path is .4 miles long and has three roadway crossings.

#### Bike Routes

Bike routes in Barnstable include Race Lane, Newtown Road, Main Street in Cotuit and Centerville, South County Road, Church Street, Parker Road, Phinney's Lane and Pitcher's Way.

Another bike route in Barnstable is the Claire Saltonstall Bikeway, a state designated Bicycle Route. This route is designated from Boston to Woods Hole and Provincetown. It travels across the Sagamore Bridge, along the Service Road in Sandwich and then runs through Barnstable on the Service Road. It continues down Route 132 to Phinney's Lane and Hyannis Road where it then travels along Route 6A into Yarmouth.

The Town of Barnstable has planned a regional bikeway system to connect existing bikeways with interconnecting links. This regional bikeway may be funded through ISTE funding, but other funding sources will be actively pursued. There is enthusiasm from interested parties and towns Cape-wide with the prospect of a regional system. Discussions entail the overall goal as the possibility of two systems; one as a regional system that directly connects with abutting towns' systems and the other a town wide system that links village centers and recreational areas. A map of the Planned Bikeway is included in the Map Section of this plan.

An active project concept, the Trans Barnstable Bikeway, proposes to link the Claire Saltonstall Bikeway through Barnstable to Yarmouth. This proposal also links the eastern portion of the bikeway with the Cape Cod Pathways network.

Following the existing Saltonstall route designation the project would take advantage of the Route 132 reconstruction project the proposal will provide bicycle crossing accommodations at the intersection with Attucks Lane. The next section would use existing roadways to move cyclists along Attucks Lane, Phinney's Lane, Kidd's Hill Road, Independence Drive then to Mary Dunn Road. The next segment requires the cooperation of the Division of Fish and Wildlife (DFW) for a limited route through that property on to Willow Street to access Higgins Crowell Road in Yarmouth.

This project has three segments: Service Road segment requires a bicycle crossing of Route 149 to link two sections of the Service Road. This crossing could also serve as a Cape Cod Pathway link. The Hathaway Pond section involves the Route 132 crossing described above. The last section the Mary Dunn section is the most problematic requiring ongoing legal research, planning, funding and interaction with DFW.

**Section 4.2 Solid and Hazardous Waste Disposal**

Goals include diverting 30% of solid waste from incineration and transfer station facilities to recycling and compost programs. A town-wide emergency response plan for spills of hazardous waste is to be finalized and the locations of approved facilities for disposing of hazardous waste made readily available to all residents. Ordinance 108 requires all municipal agencies, home occupations and commercial businesses that handle, produce, sell and dispose of hazardous material to register with the Health Division. An ordinance preventing large-scale users from operating in wellhead protection districts should be implemented.

Sources of solid waste are:

- 1. Household
- 2. Non-household
  - a. Commercial Establishments
  - b. Manufacturing Establishments
  - c. Town Facilities
  - d. Construction Contractors

**Transfer Station**

The various types of solid waste produced in the town are handled at the Barnstable Solid Waste Management Facility in Marstons Mills. The transfer station area encompasses approximately 64 acres and has been used for dumping, landfill, transfer and recycling purposes for more than sixty years. The Residential Solid Waste Transfer Station and Recycling Facility in Marstons Mills is now open seven days a week.

On August 18, 2001, the Barnstable Town Council passed a municipal recycling ordinance in support of the State's initiative to remove banned wastes from the waste stream. The ordinance requires that commercial trash haulers provide their customers the option of a waste recycling service at a reasonable cost.

Barnstable residents have two options for recycling: 1) to take their recyclables to the Residential Solid Waste Transfer Station and Recycling Facility in Marstons Mills, or 2) to have their commercial trash hauler collect their recyclables curbside. The cost of curbside collection by private haulers varies. There is no charge for basic recycling to residents of the Town of Barnstable at the Residential Transfer Station and Recycling Facility. For some items, such as white goods, tires and cathode ray tubes, the Town must pay a recycler to remove and process items so the Town charges a fee to offset these costs.

The Residential Solid Waste Transfer Station now provides easily accessible and convenient waste disposal for residents. The transfer station's recycling facilities provide an opportunity for all residents to reduce the town's solid waste production. Household product recycling is now supplemented with facilities for recycling leaves, scrap metal, white goods, motor oil, televisions, rechargeable batteries, computer monitors, tires, paint, mattresses, mercury products and fluorescent bulbs. Cell phone and book recycling is also available. The recycling program also supports clothing and bottle redemption donations as well as a swap shop. The construction and demolition transfer service allows residents and small business owners to dispose of this debris more easily. The transfer station also offers household hazardous waste collections.

To achieve the goal of increasing the recycled percentage of the solid waste stream, the Town will develop and implement programs to help private trash haulers become more involved in solid waste reduction. Programs such as curbside pickup of recyclables must also be examined and evaluated.

**Hazardous Waste**

According to recent information gathered from the Department of Environmental Protection (DEP), there are approximately 22 sites in the town that are confirmed hazardous waste sites. Approximately 31 compliant locations must continue to be monitored, investigated, or are being operated to achieve a permanent solution. There are approximately 174 sites that are considered clean according to the Response Action Outcome (RAO) class, which indicates the release has been eliminated, reduced, that a permanent solution has been achieved, or that "no significant risk" exists.

The Town shall review its regulations and ordinances to ensure maximum protection from hazardous waste for drinking water supply and general public safety.

**Hazardous Materials Mitigation**

The development review process for proposed uses that stock large quantities of items classified as hazardous material require mitigation that protects drinking water resources. The town has benefited from this strategy and should continue to provide clear direction for programs to be continued or created.

The Town has adopted two ordinances: Chapter 108: Hazardous Materials and Chapter 326: Fuel and Chemical Storage Tanks. Each commercial business and municipal facility is inventoried for type and quantity of hazardous materials. The ordinances' function is to educate employees and business owners about proper storing, handling, and disposal methods for hazardous materials. The Health Department conducts unannounced site inspections at least once per year with follow-up inspections to ensure that any violations of these ordinances are corrected.

These ordinances shall be evaluated for effectiveness and updated as necessary to ensure maximum protection for drinking water supplies and public safety.

**Comprehensive Water Supply Assessment**

To encourage development and implementation of a water resource supply management program for the entire town, Barnstable will conduct the Town of Barnstable Comprehensive Water Supply Assessment. This assessment, conducted in cooperation with the private water companies, shall include short term and long-term water supply needs of the entire town; water supply management needs; land acquisition needs; land protection needs; and a comprehensive strategy for implementing recommendations.

**Water Supply Coordination**

In Barnstable, four water companies provide water via localized distribution systems to approximately 49,571 customers. The non-municipal water suppliers are Barnstable Fire District (BFD), Centerville-Osterville-Marstons Mills Fire District (COMM) and the Cotuit Fire District (CFD). The only town owned supplier is the Hyannis Water Company, formerly the Barnstable Water Company (BWC). These water suppliers own and maintain 443 miles of mains, 16 interconnections between the water suppliers in Barnstable and abutting towns, 41 wells and 10 storage tanks. They pump over 2 billion gallons of water per year and own approximately 1233 acres of watershed property.

Water suppliers make decisions as to the expansion or extension of the water infrastructure based on their own judgment and availability of funds. The water districts maintain their own infrastructure and plan their own capital expenditures to improve the supply and distribution systems, increase pumping capacity, and respond to other water quality/quantity issues. Where no public water supply is available, residents and businesses rely on individual on-site wells for their potable water needs.

Currently the Water Quality Advisory Committee, a group that includes representatives from all water suppliers, meets several times a year to discuss and coordinate water supply issues across all jurisdictions.

**Section 4.5 Stormwater Management**

As the roadway network and number of paved parking surfaces grow to serve new residential and commercial development, so will the need to effectively and safely manage the stormwater that flows from these impervious surfaces. Stormwater runoff from roadways and paved areas has impacted drinking water supply, shellfish beds and other natural resources. Infrastructure must be designed and extended to capture and treat the runoff before it reaches environmentally sensitive areas. The town must continue to implement a stormwater management plan.

**Contamination from Runoff**

Infrastructure must be designed and extended to capture and treat the runoff before it reaches environmentally sensitive areas. Runoff must be filtered by swales or other means to improve the quality of coastal waters. After the first 1 inch of rainfall, these stormwater management systems shall be designed to have backup retention or detention basins. Recreational resources and fisheries can be better served through the closure or limitation of direct discharge points and the disposal of the stormwater by other means.

An exemplary stormwater attenuation project is part of the Joshua's/Stewart's Creek Improvement Project. Implemented by Four Points Sheraton Hyannis Resort, the typical design for this stormwater management application would be a stone lined pit. Four Points hired a firm to design an actual wetland basin to intercept and treat their parking lot runoff. Constructed in 2004 it now protects Joshua's Creek from bank erosion and pollution runoff. It is also very scenic, adds valuable wildlife habitat to the creek's river corridor, and complements the town's restoration project.

The town will continue to study the existing practice for application of sand and salt on roadways to determine best ratio for safety, prevention of groundwater contamination, and catch basin maintenance. The Town will also continue to monitor areas where water supply wells show high salt content and adjust sand and salt application or improve stormwater management accordingly.

#### **Sustainable Stormwater Management Techniques**

Through development review and regulation, the Town must adopt and implement sustainable stormwater management techniques, like those adopted for the GIZ or using Low Impact Development technology, throughout the entire town. To fully protect salt water estuaries, freshwater bodies, the aquifer, shellfish and other natural resources from stormwater impacts and to prevent flooding from storms, the town will continue adaptive management and best management practices for stormwater through a town-wide Stormwater Management Plan. The ultimate goal is to have all stormwater discharge treated to appropriate levels through adaptive management and best management practices and to provide high quality stormwater recharge to water resources.

#### **Section 4.6 Town Facilities**

In order to deliver high-quality services to Barnstable residents, the town maintains, or in some cases shares, in the maintenance of the following facilities that provide services to residents and visitors:

- Town Hall Complex
- Water Pollution Control Facility
- Hyannis Water Company
- Structures and Grounds Maintenance Facility
- Highway Building
- Marine and Environmental Affairs Building
- Police Department Headquarters
- Senior Center
- Youth and Community Center/Kennedy Rink
- School Administration Building
- Schools
- Village Libraries
- Town harbors, landings and ways to water
- Recreational Facilities such as Cape Cod Airfield, Fairgrounds and Hyannis Golf Courses, structures at Sandy Neck and other beaches.
- Trayser – Coast Guard Heritage Museum

- Zion Union Church Museum
- Lombard property structures, including the Old Selectmen's Building and Community Building
- Hyannis National Guard Armory building

Through these facilities the Town strives to maintain existing levels of service for residents and visitors. The extraordinary growth experienced in the last thirty years placed demands on infrastructure and facilities that are still not fully addressed. As residential and non-residential growth continues, service demand continues to grow. The Town must responsibly assess its ability to meet increased service demand. By examining existing fiscal constraints, other available funding mechanisms and projections for growth allowed by land use regulation, the Town will discover where balance is lacking in the facilities and infrastructure/growth equation. Methods of funding services for new growth must be identified and implemented. To help address these shortfalls, new development and infill must include impact assessment and mitigation.

#### **Section 4.8 Energy**

An effective energy policy and implementation program should include energy efficiency, distributed generation, renewable energy components and a plan to measure, monitor and reduce energy consumption town wide. The Town of Barnstable implemented a municipal energy plan in 2002, and continues to refine and enhance this plan on an ongoing basis.

#### **Town of Barnstable Initiatives**

Barnstable is one of only two Cape & Islands communities with explicit policy commitments addressing threats posed by climate change. Falmouth, the other participating Cape community, and Barnstable officials have met to discuss local initiatives geared toward reducing greenhouse gas emissions (GHGE) and other town energy policy objectives. In 2002, Barnstable joined the Cities for Climate Protection™ campaign administered by the International Council for Local Environmental Initiatives (ICLEI). Barnstable has inventoried GHGE, established emissions reduction targets and timelines, and begun implementing the systematic efforts required to achieve policy goals.

#### **Green Program**

In November of 2003 the Barnstable Town Council resolved to set a goal of reducing greenhouse gas emissions by 20% within the next 10 years. To

achieve this goal, Town Council created the Green Team. This team implements the Council's "Resolve in Support of the Cities for Climate Protection Campaign" which states: "The purpose of the Green Team Committee is to create an Action Plan to implement town policies relative to the reduction of community and municipal greenhouse gas emissions, recycling and energy efficiency."

The Green Team is an interdepartmental collaboration that identifies proactive methods of reducing energy consumption and costs through management efforts that make environmental sense. Components include green building construction and renovation; green land management; on-site energy generation; use of green vehicles; recycling; government procurement and consumption practices; collaboration with the schools and employee initiatives.

#### **Green House Gas Emission (GHGE) Reduction Policy**

As charged by the Barnstable Town Council, the Green Team continues to work on its policy for reduction of GHGE. A grant funded base line inventory was completed three and half years ago, initiatives on the division and department level have addressed lowering the levels through direct and indirect actions such as changing fuel, replacing vehicles and upgrading equipment. The next milestone is to prepare a five year inventory update that will compare levels to this base line and measure progress towards the Town's goal of a 20% emission reduction by 2013.

Specific efforts include using a 5% biodiesel blend for Department of Public Works vehicles. (The DPW is looking to increase the blend to 20%), a comprehensive examination of the municipal fleet targeting the reduction of the number of miles driven by Municipal vehicles, and energy consumption in Town and School buildings being monitored so that energy reduction strategies can be implemented.

#### **School and Town Collaboration**

Green Team members have met with faculty representing school recycling and energy awareness groups from Barnstable High School, Barnstable Middle School and Horace Mann Charter School. Together they discussed recycling and the logistical issues surrounding the collection and disposal of recyclables, energy efficiency initiatives, and opportunities to increase student awareness about renewable energy. The group agreed to build on the cooperation between Town and school, share information, and continue meeting regularly.

Through the "Solarize Our Schools" program from the Massachusetts Technology Collaborative (MTC) and Cape Light Compact, a photovoltaic (PV) system was installed in the high school last year at no cost to the Town. This 2 kilowatt PV system was donated to the High School as part of Green Energy Choices funds made available to the Town. These funds are generated when residents choose to buy Green Energy through the Cape Light Compact. Nearly three percent of Barnstable residents opt to buy Green Energy that is generated using renewable sources such as wind, water, solar and biomass.

#### **Outreach and Education**

Barnstable residents pay some of the highest energy costs in the nation. Electricity costs the residential customer on average 18 cents per kilowatt-hour as of July 2007. Using municipal efforts as a model, the Town's Green Team promotes energy efficiency and awareness to residents and the business sector. The Town should consider expanding its support of student initiatives in the schools.

#### **Consistency**

**This plan adopts the Regional Policy Plan Goals 4.1.1, 4.1.2, 4.1.3, 4.2.1, 4.3.1, 4.4.1, 4.4.2, and 4.5.1. In lieu of adopting the Minimum Performance Standards, the following sections outline Barnstable's action plan in support of these goals.**

#### **Section 4.1 Transportation**

**Goal 4.1.1 The town will improve safety and quality of roadway network traffic circulation and will coordinate and encourage alternate modes of transportation, preserve character in context of surrounding community and protect natural resources to the maximum extent possible.**

**Action 4.1.1.1** The Department of Public Works' Functional Classification of Roadways list will continue to classify Town roadway network within designated urban and rural areas of Barnstable.

#### **Strategies**

- This list will be reviewed and amended as necessary to ensure that classifications are appropriate for designated land use categories.

- The Subdivision Rules and Regulations should be reviewed and amended as necessary to incorporate these classifications where these classifications support a designated land use category.

**Action 4.1.1.2** The Department of Public Works recognizes the Cape Cod Commission Classification of Roadways based on their function and capacity in accordance with the current version of the Cape Cod Commission's Regional Policy Plan, Cape Cod Classification Map.

**Action 4.1.1.3** Continue to inventory, maintain and preserve Scenic Roads. Residents and civic associations should continue to nominate Scenic Roads for official designation by Town Council.

**Action 4.1.1.4** The Functional Roadway Classification system should be consistent with CP land use designations. Where inconsistencies currently exist land use designations will take precedence.

#### Strategies

- Non-residential development or redevelopment that is not located in a growth center, increases vehicle trips and/or peak hour trips will submit a traffic assessment, based on highest peak hour conditions. The assessment will evaluate the impacts to traffic circulation, roadway and intersection operations and safe travel. Developments will mitigate these roadway infrastructure impacts.
- Multi-family residences of three or more units that are not located in a high-density residential area, increase vehicle trips, and/or increase peak hour trips will submit a traffic assessment based on highest peak hour conditions which evaluates the impacts to traffic circulation, roadway and intersection operations and safe travel. Developments will mitigate these impacts on roadway infrastructure.
- Access management methods such as shared access, interconnections between developments and shared parking will be required for all commercial and multi family residential (of three or more units) development or redevelopment. Development and redevelopment that does not incorporate access management will require a special permit. The Zoning Ordinance will be amended to include this provision.
- In Village Centers, Auto Oriented Transportation Corridor Nodes, the Growth Center and the Regional Commercial Center parking will be provided on the side or rear of the building away from the roadways. The Zoning Ordinance will be amended to include this provision.
- In all locations promote trip reduction, encourage pedestrian paths

between land uses, and support transportation options that provide an alternative to the automobile whenever possible.

**Action 4.1.1.5** All subdivision land will comply with the requirements of the Functional Roadway Classification system, including Subdivision Rules and Regulations specific right-of-way and paving standards.

#### Strategies

- The SRR should be amended to include design and construction requirements that are consistent with the Functional Classification of Roadways.
- Non-commercial and multi-family development subdivision right-of-way width will include specific criteria for sidewalks and/or bike paths in addition to paving, curbing, stormwater management and utility location. Sidewalks and bike paths will be incorporated in the planning and design for residential subdivisions.

**Goal 4.1.2** The town should establish roadway and intersection levels of service (LOS), considering the Cape Cod Commission's Regional Policy Plan, that are consistent with land use designations identified in this Plan. It is preferred that these LOS standards be met through non-structural improvements but a combination of both structural and non-structural may be considered. The following action items shall apply to driveways during DRI review and to the maximum extent feasible during local review. During review by local boards and officials the following action items shall be applied to the maximum extent feasible:

**Action 4.1.2.1** The impact of development and redevelopment on local roads and on regional roads not located within or directly connected to Growth Centers or Regional Commercial Centers shall not degrade traffic flow or intersection operation below LOS "C", based on highest peak hour traffic volumes.

**Action 4.1.2.2** Prevent out of character structural improvements such as widening, inappropriate signage, striping or other traffic control mechanisms within Village Centers by allowing the level of service to be reduced when there is adequate provision for safe pedestrian traffic.

**Action 4.1.2.3** Within the Downtown Hyannis GIZ, levels of service may be reduced to LOS "E" when there is adequate provision for safe pedestrian traffic.

**Action 4.1.2.4** The Town should develop a reasonable LOS policy for the Regional Commercial Center before proceeding with designating this area a Growth Center.

**Action 4.1.2.5** Outside the designated Growth Center, development and redevelopment, at the minimum, should maintain or improve LOS in the area impacted by new trips generated.

**Action 4.1.2.6** As deemed necessary by local boards and officials, LOS analysis and full or partial mitigation of project traffic impacts may be required.

**Goal 4.1.3 Mitigate traffic, community character, and environmental impacts from regional transportation facilities.**

**Action 4.1.3.1** Integrate facilities and operations of the Barnstable Municipal Airport with multi-modal facilities and operations to provide intermodal links.

**Strategies**

- Provide a year round direct transportation link for passengers between the Hyannis Transportation Center, regional health care facilities, shopping areas and other popular destinations.
- Provide a new entrance to the airport that provides appropriate alternate access.
- The town will continue to coordinate the planning and provision of multi-modal transportation opportunities with the Cape Cod Regional Transit Authority (RTA), local, state and federal entities.
- Explore with the RTA and local business organizations the feasibility of a town-wide bus system interconnecting village centers, regional facilities, transit and other destinations.

**Action 4.1.3.2** Integrate Hyannis Transportation Center facilities and operations with the other multi-modal facilities and operations to provide intermodal links.

**Strategies**

- Provide adequate parking and pedestrian access and encourage intermodal linkages, coordinated facilities and operations at Hyannis Transportation Center.
- The town should explore the feasibility of on-street bus rapid transit

(BRT) for regional transportation corridors.

- Explore the potential for Transit Oriented Development on the Hyannis Transportation Center site.

**Action 4.1.3.3** Integrate Island ferry service facilities and operations with other multi-modal facilities and operations including, but not limited to, remote parking access, bicycle access and enhanced pedestrian access.

**Strategy**

- To ensure safety on local roadways explore the establishment of a designated truck route for freight carriers traveling to the Steamship Authority terminal.

**Action 4.1.3.4** Explore re-establishment or expansion of railroad service to provide off road freight alternatives. Railroad service should also be explored as an alternative to the automobile for visitors and commuters.

**Goal 4.1.4 Implement the bikeway system connecting major activities and linking with bikeways in neighboring towns.**

**Action 4.1.4.1** Implement the Barnstable Bikeway Network Plan, which includes locations for bike lanes, bike paths and bike routes.

**Strategies**

- The bikeway system will link public facilities, including recreation areas, conservation areas, village centers, educational facilities, the Hyannis Transportation Center, and will connect with other bike paths/bike lanes within the town, where feasible.
- Continue process for approval of the east-west route connecting to Yarmouth Bikeway System.
- Pursue funding from Federal, State, County and other grants or funding programs.
- Continue to address safety and convenience accommodations for bicyclists such as bike racks and signage. Bike racks will be placed at all publicly owned facilities.
- On demand bicycle resources will be explored and encouraged.

**Action 4.1.4.2** Coordinate regional bikeway planning with adjacent towns and the Cape Cod Commission.

**Action 4.1.4.3** Accommodations for intermodal connections, such as bike racks on trains, buses, at workplaces, remote parking facilities and shopping areas, will be encouraged whenever possible

**Action 4.1.4.4** Wherever feasible, roads should include bike lanes and appropriate curbing, pavement markings and signage.

#### **Strategy**

Where feasible in road resurfacing or reconstruction projects, bike lanes or bike paths will be considered in the design as described in the Barnstable Bikeway Plan.

**Action 4.1.4.5** Development and redevelopment will incorporate provisions for bicyclists.

**Goal 4.1.5 The town will improve existing pedestrian facilities and develop additional facilities to improve safety, encourage pedestrian activity and preserve or improve roadway appearance in context with surrounding community.** 

**Action 4.1.5.1** The town will continue to update the **Sidewalk Plan** that will include locations of sidewalks, priorities of construction, and funding sources.

#### **Strategies**

- Sidewalks should be prioritized, based on source and destination of pedestrians, to high traffic areas including arterials and collectors and streets within Village Centers.
- Sidewalks should be installed on arterial and collector roadways for pedestrian safety and to provide safe walking routes to schools.
- Development and redevelopment will incorporate provisions for pedestrians in the site design with particular emphasis on pedestrian safety within parking lot design.
- All new and significant redevelopment sidewalk projects should use a context sensitive design as early in the design process as possible.

**Goal 4.1.6 Adequate on-site and off-site parking should meet the needs of the community. The needs within the Growth Center and the Route 132 Regional Commercial Center are a priority for parking needs analysis, planning studies and infrastructure improvements. Promote shuttle bus service from satellite parking facilities to recreational areas, visitor attractions, commercial areas and other popular destinations.**

**Action 4.1.6.1** The town will promote the use of existing parking facilities to their full capacity, ensuring safe access and attractive landscaping and by supporting decked and first floor parking in the growth center, regional commercial center and, as may be appropriate, other commercial areas.

#### **Strategies**

- Using a coordinated wayfinding strategy, expand existing signage to include wayfinding signs to major parking facilities.
- Improve existing walkways and create new walkways to parking lots, including landscaping, lighting and signage within the downtown Hyannis area, regional commercial center, and other village centers.
- Adopt regulations and design guidelines to encourage decked, first floor parking and, where feasible, underground parking garages.
- In coordination with shuttle service establishment and seasonal and/or weekly use patterns, parking facilities at the Cape Cod Community College, school parking lots, Hyannis Transportation Center, airport, or other facilities should be used as daytime remote parking for visitor destinations during peak season.
- Develop and promote satellite parking with supporting shuttle services for Island ferry travelers 
- Parking lots and parking facilities will be constructed, landscaped, and maintained in a manner that retains surrounding community character. Specific landscaping guidelines for parking lots and facilities should be developed and adopted by Planning Board, Board of Appeals and Site Plan Review.
- Where on-site parking is not feasible, developments may contribute to the creation of public parking facilities and/or multi-modal facilities.
- The town should amend existing parking regulations within the zoning ordinance to reduce parking requirements for development and redevelopment that provide an alternative to single occupant auto usage such as car/van pooling and/or other transportation options.

**Goal 4.1.7 Public and private sectors should participate in improvement of traffic circulation and safety through traffic improvement and mitigation programs.**

**Action 4.1.7.1** The Town should improve existing traffic flow, safety, and signage to reduce congestion along roadways by adopting a traffic management system that minimizes confusion for residents and visitors alike.

**Strategies**

- Develop a comprehensive unified signage and wayfinding plan to direct motorists to transportation facilities, downtown Hyannis, remote parking, and areas of special interest.
- Continue and support seasonal shuttle services provided by the Hyannis Main Street Business Improvement District, the Town and local businesses.
- The Town should pursue every opportunity to work within Southeastern Massachusetts to mitigate the impact of Island freight deliveries.
- Continue to work with the Cape Cod Regional Transit Authority and neighboring towns to coordinate public transportation for residents and visitors.
- In the Airport Rotary area determine the feasibility of the following traffic management methods through the Hyannis Access Study and other Town programs:
  - Reconstruction of Route 28 at selected locations
  - Structural and non-structural improvements to the Airport Rotary.
  - Continue to develop new access to the airport.
  - Complete improvements to coordinate with the Town of Yarmouth Willow Street project.
  - Right lane through signal at intersections where appropriate and necessary.
  - Implement interconnection of traffic signals as signals are installed or upgraded 
  - Explore and implement mitigation procedures such as impact fees and direct mitigation.

**Action 4.1.7.2** Plans for development and redevelopment will make provisions to mitigate traffic impacts based on the highest peak condition, utilizing structural and/or non-structural improvements with special emphasis on alternatives to the use of private automobiles. Such mitigation will take into account road function and classification, as well as the impacts on the natural resources, economy, level of service, community character, scenic views, and historic resources.

**Strategies**

- The Town prefers that necessary roadway improvements will occur concurrently with the construction of any development and/or applicants will make a contribution of funds to the town in lieu thereof.
- The town will explore crediting up to a 25% of project vehicle trips for development and redevelopment that provide practical alternatives to the

- single occupancy vehicle such as transit.
- Require development and redevelopment, through the permitting process, to incorporate recommended traffic and congestion management procedures including parking lot and access interconnection, pedestrian walkways and bike paths between neighboring development sites.
- Development and redevelopment may provide non-structural mitigation that reduces automobile trips and peak traffic demands such as demand management, providing shuttle bus services, car or van pooling, and promoting pedestrian and bicycle accessibility.
- Development and redevelopment may provide structural mitigation to reduce automobile trips, such as the construction of sidewalks, bicycle paths and shuttle bus stops. Such construction should not degrade environmentally sensitive areas, surrounding community character, landscapes, natural resources, economy, level of service, scenic views, and historic resources.
- Development and redevelopment may provide demand and systems management, such as changes to pavement markings, signage, signal timing, optimization of existing traffic lights, turn restrictions, changes in traffic patterns, limited removal of obstructions to safe sight distances, curb cut consolidation, and conflict point reduction. Traffic demand management is the priority; however, all systems should be considered.
- If it is demonstrated to the satisfaction of the town that other forms of mitigation are inadequate to alleviate a project's impact on traffic safety and operations, development and redevelopment may provide structural mitigation as follows:
  - Structural mitigation includes new signalization, new road links, intersection realignment, road widening, intersection construction or other improvements only in areas where environmentally sensitive natural resources, economy, level of service, community character, scenic views, and historic resources would not be degraded by the mitigation.
  - Structural mitigation projects may be allowed only when such proposals are included in, coordinate with and are consistent with planned for roadway improvements.

**Goal 4.1.8** The town will continue to protect its significant public investments in roadways with the roadway infrastructure maintenance program that will, to the maximum extent possible, preserve character of individual roadways and protect adjacent natural resources.

**Action 4.1.8.1** The Town of Barnstable Department of Public Works (DPW) will continue to repair and maintain roadways throughout the town to the maximum extent possible, giving priority to roadways with pavement in the worst condition and to roadways bearing a significant amount of traffic to limit the need to reconstruct them. The funding of this work will come from a combination of sources including general fund revenues, betterments, grants, and gifts.

**Strategies**

- To avoid costly road reconstruction, roads should be maintained in the best possible condition. DPW should continue to evaluate road pavement conditions and continue to conduct traffic counts to prioritize paving projects through the Pavement Condition Index (PCI) and the Pavement Management Program (PMP).
- DPW will continue to prepare an annual report that identifies problems and accomplishments and lists deferred road maintenance projects. This report is included in the CIP and the annual town Report

**Section 4.2 Solid and Hazardous Waste Disposal**

**Goal 4.2.1 The Town shall work to increase source reduction, recycling, composting, incineration, and transfer to SEMASS to reduce the solid waste stream.**

**Action 4.2.1.1** Thirty (30) percent of municipal solid waste delivered to the transfer station shall be diverted from incineration and landfill facilities through recycling and composting programs and forty (40) percent shall be diverted by 2010.

**Strategy**

- The Town shall continue to encourage an increase in residential recycling waste to be recycling at the transfer station through its public education program.

**Action 4.2.1.2** Amend the Zoning Ordinance and other applicable regulations to require non-residential land uses to include adequate, sanitary storage for recyclable materials. A solid and hazardous waste management plan shall be required.

**Action 4.2.1.3** Evaluate existing ordinances and regulations to ensure that construction and demolition debris will be properly disposed of.

**Goal 4.2.2 Hazardous waste generated in the Town of Barnstable shall be disposed in an environmentally sound manner.**

**Action 4.2.2.1** A coordinated town-wide hazardous waste emergency response plan shall be maintained by the Town and the independent fire districts.

**Strategy**

- The Town of Barnstable in coordination with the town's fire districts shall finalize and maintain an emergency response plan for spills of hazardous materials during transit.

**Action 4.2.2.2** Continue and expand the Household Hazardous Waste Collection program.

**Action 4.2.2.3** All land uses shall comply with Hazardous Waste Regulations.

**Strategies**

- Land uses that require treatment, generation, storage, and disposal of hazardous wastes or hazardous materials, with the exception household quantities, are prohibited and should continue to be excluded from drinking water protection districts.
- The Town of Barnstable will continue to refine hazardous materials ordinance and regulations to ensure maximum protection of drinking water supplies and public safety.

**Section 4.3 Wastewater Infrastructure**

**Goal 4.3.1 Provide adequate wastewater treatment facilities to meet community need while protecting the quality and quantity of our sole source aquifer.**

**Action 4.3.1.1** Because water use equals sewage flows, effective wastewater management begins with water use conservation. To reduce impacts to Town wide wastewater infrastructure, including effluent discharge sites, water conservation programs will be developed.

**Strategies**

- Through a Comprehensive Water Supply Assessment, encourage coordination between water and wastewater infrastructure managers with joint meetings of drinking water suppliers, water committees and the Town.

- To lessen the burden on wastewater infrastructure, encourage water conservation through alternative pricing strategies.
- To the extent necessary, identify and acquire appropriate effluent disposal sites that do not adversely impact drinking water supplies.

**Action 4.3.1.2** The current Wastewater Facilities Plan (WFP) will be updated as required by such factors as growth, environmental impact or regulatory requirements to address the community's wastewater needs as prescribed by regional, state and federal regulations.

#### Strategies

- Upgrade and/or expansion of the existing centralized WPCF to respond to priority needs while conforming to the requirements of the groundwater discharge permit and approved WFP.
- Expansion of the sewage collection system for the existing treatment facility will be performed in such a manner to improve groundwater quality consistent with WFP provisions.
- As effluent discharge and well pumping rates increase with increased water use and expansion of the sewage system the Town will continue to monitor the effect of the wastewater treatment facility discharge on water supplies.

**Action 4.3.1.3** The town will guide the use of decentralized wastewater infrastructure to ensure maximum mitigation of their impacts.

#### Strategies

- Identify areas of concern outside of the existing treatment system's service area and define alternative decentralized methods of treatment that may include on-site innovative treatment systems, communal systems, package treatment plants or other approved alternatives. The long-term ownership, operation, maintenance and replacement will be secured through appropriate regulatory processes.
- Through the local Harbor Management Plan process the Town will identify areas where additional infrastructure is needed for recreational boating uses.
- Develop regulations to ensure that decentralized wastewater infrastructure is designed to be consistent so as to easily connect with town wastewater infrastructure when it becomes available or when connection is desirable.

**Action 4.3.1.4** Develop wastewater performance standards for on-site disposal systems in order to address the areas of greatest need.

#### Strategies

- Define thresholds for application of on-site wastewater disposal system alternatives and the structural or non-structural measures needed to correct water quality problems.
- Continue the MEP program to evaluate extent of the existing and potential nitrate contamination of drinking water supply and coastal resources from on-site wastewater disposal systems and the need for wastewater infrastructure or other measures to reduce such contamination.
- Evaluate the extent of existing and potential phosphorous contamination of drinking water and pond resources from on-site wastewater disposal systems and the need for wastewater infrastructure or other measures to reduce contamination.
- Identify the source and transport of pollutants that could pass through a wastewater treatment facility untreated or inadequately treated, thus harming the facility's physical, chemical, or biological processes and so preventing it from complying with regulatory requirements.

**Action 4.3.1.5** Develop and implement public education programs for owners of on-site septic systems.

#### Strategy

- Research existing programs and partner with other organizations where possible.

### Section 4.4 Water Supply Infrastructure

**Goal 4.4.1** Ensure that all areas of town will be provided with adequate drinking water supply, quality, flow and pressure to meet demand.

**Action 4.4.1.1** Coordinate a Comprehensive Water Supply Assessment.

#### Strategy

- This assessment, conducted in cooperation with the private water companies, will include short term and long-term water supply needs of the entire town; water supply management needs; land acquisition needs; land protection needs; and a comprehensive strategy for implementing recommendations.

**Action 4.4.1.2** Continue to update the zones of contribution GIS model. Protect land, the primary infrastructure for providing drinking water, where existing, proven future, and potential future wells are or may be located.

**Action 4.4.1.3** Identify, map and monitor areas without public water supply or wastewater infrastructure. Share information with private water suppliers who may be able to extend their infrastructure should water quality decline in these areas.

### Section 4.5 Stormwater Infrastructure

**Goal 4.5.1** Protect salt water estuaries, freshwater bodies, the aquifer, shellfish and other natural resources from stormwater impacts; prevent flooding from storms; continue inventory of all stormwater infrastructure and incorporate into GIS; maintain existing stormwater infrastructure in conformance with state and federal regulations; study stormwater infiltration and contaminants and the need for structural upgrades; provide high quality stormwater recharge to water resources. The ultimate goal is to have all stormwater discharge treated to appropriate levels through adaptive management and best management practices.

**Action 4.5.1.1** The town will continue adaptive management of stormwater through the town wide Stormwater Management Plan.

#### Strategies

- Study key areas such as bathing beaches, shellfishing habitat, recreational areas, inland and coastal wetlands and natural resources to for regulatory needs, including CIP funded stormwater infrastructure redesign.
- To ensure optimal function, the Town will clean and maintain stormwater infrastructure as necessary.
- Areas impacted by stormwater outflow will be studied and tested on a regular basis. Identify, upgrade and/or install appropriate technologies for maximum reduction of these impacts.

**Action 4.5.1.2** Capital programs and management plans will be allocated to stormwater management projects to prevent untreated direct runoff from entering water bodies and impacting sensitive habitat areas.

#### Strategies

- New development and redevelopment will be required to retain all impervious surface runoff on-site.

- The town will design all roads to meet the best management practices for stormwater retention.
- After the first 1 inch of rainfall, these stormwater management systems will be designed to have backup retention or detention basins.

### Section 4.6 Facilities

**Goal 4.6.1** Provide well-maintained public facilities and services that serve the current and future social, economic, cultural, safety, traffic, and communication needs of the community; that are equitably distributed; and are provided with minimal environmental impact.

**Action 4.6.1.1** The Town will provide public facilities and services in a manner that is consistent with and supports the land use and growth management strategies in this plan. 

**Action 4.6.1.2** When allocating resources to meet capital needs, the Town will consider major maintenance of existing facilities, revenue from the disposition of existing facilities and the provision of new or expanded facilities.

**Action 4.6.1.3** The Town will ensure that those facilities and services necessary to support development and redevelopment will be adequate to serve the development at the time the development is available for occupancy or use, without decreasing levels of service adopted by this plan.

**Action 4.6.1.4** The Town will maintain an inventory of existing capital facilities owned by public entities, showing location and capacities of such facilities.

**Action 4.6.1.5** The Town will maintain a financing plan to finance needed capital facilities within projected funding capacities and based on adopted level of service standards. The financing plan will be updated annually and will include opportunities for public participation early in the process. Planned capital expenditures will be appropriated in the Town's annual budget. In case of emergency, the financing plan and budget covered by the plan may be amended more frequently.

**Action 4.6.1.6** Funding of major capital facilities will typically rely on long-term financing and not on current revenues. The term of the financing should generally be no longer than the useful life of the facility.

**Action 4.6.1.7** The Town will continue to develop and update debt management and cash reserves policies.

**Action 4.6.1.8** The Town may apply various alternative funding mechanisms in the development of capital improvements identified in the Capital Facilities Section to optimize use of limited Town resources. Such mechanisms include joint ventures with the private sector, grants, or other means.

**Action 4.6.1.9** The Town will support and encourage the joint planning, siting, development and use of public facilities and services with other governmental or community organizations in areas of mutual concern and benefit in order to maximize efficiency, reduce costs, and minimize impacts on the environment.

**Action 4.6.1.10** The Town will coordinate with other public entities that provide public services within the Town to ensure that the Capital Facilities Plans of each of these entities are consistent with the Town's Comprehensive Plan. The Town will strive to coordinate with the other public entities during the annual update to the Capital Facilities Plan.

**Action 4.6.1.11** Services provided through enterprise accounts including, but not limited, to Water Pollution Control, Solid Waste Division, Sandy Neck, Barnstable Municipal Airport, Fairgrounds and Hyannis Golf Courses and Town Marinas will be paid primarily by users, except in unusual circumstances where the public benefit may justify the use of general funds. When facility improvements provide benefits primarily to a limited group of users the costs will generally be paid by the benefited parties through Local Improvement Districts (LIDs) or other means.

**Action 4.6.1.12** The capital facilities identified in the elements of the Comprehensive Plan will be included in subsequent five-year financing plans.

**Goal 4.6.2 Provide high quality public safety services for the residents of Barnstable through cost effective maintenance and upgrade of facilities and equipment.**

**Action 4.6.2.1** Maintain and purchase vehicles and equipment as necessary to meet applicable standards.

**Action 4.6.2.2** Upgrade and maintain emergency communication equipment.

**Action 4.6.2.3** Personnel levels should be consistent with population and demographic needs.

**Action 4.6.2.4** Consider the impact of new development presenting extraordinary impacts on Barnstable's public safety services during project review and mitigate those impacts to the extent feasible.

**Goal 4.6.3 Provide educational facilities to meet the present and future needs of Barnstable residents.**

**Action 4.6.3.1** Continue to work with school department to plan for and fund facility maintenance and upgrade of school properties.

**Action 4.6.3.2** Consider allocating funds from school property sales revenue to remaining school facilities.

**Action 4.6.3.3** Because of the scarcity of developable land and the cyclical nature of population trends, the Town should identify and secure or retain land for future school facility expansion.

**Action 4.6.3.4** Ensure that buildout projections and residential development approvals are communicated to the affected public school district in a timely manner so they can plan effectively for future needs.

**Goal 4.6.4 Continue existing operations at the Barnstable Municipal Airport.**

**Action 4.6.4.1** The Airport Commission shall coordinate all master planning activities with the Town's planning agencies and staff.

**Action 4.6.4.2** Airport expansion plans should be consistent with population and demographic needs.

**Action 4.6.4.3** Actively explore integration of multi-modal transportation services with airport services.

**Section 4.7 Energy**

**Goal 4.7.1 Encourage energy conservation and improved energy efficiency.**

**Action 4.7.1.1** Develop and adopt design standards for development and redevelopment that promote efficient energy use such as orienting structures for solar gain; maintaining solar access for adjacent sites and using energy efficient landscape and building methods and materials.

**Action 4.7.1.2** Adopt development review standards for all development and redevelopment that encourage energy efficient construction techniques.

**Action 4.7.1.3** Encourage energy saving transportation activities including carpooling, mass transit programs, bicycling and walking.

**Action 4.7.1.4** Continue to increase use of alternative fuels for Barnstable's municipal vehicle fleet.

**Action 4.7.1.5** Explore grant funding or other funding means for the five year update of the GHGE inventory.

**Action 4.7.1.6** Expand Green Team support of student energy initiatives for schools.

**Goal 4.7.2 Promote the collecting and proper disposal of recyclable items in the work place.**

**Action 4.7.2.1** Develop a Town wide standard to remove paper, plastic and other recyclable materials from the trash stream

**Action 4.7.2.2** Encourage full municipal participation in workplace recycling with a top down commitment.

**Action 4.7.2.3** Encourage a commitment to reduce consumption of materials and promote reuse of items in the workplace where practical.

**Action 4.7.2.4** Continue to increase procurement of recycled content items.

**Action 4.7.2.5** Expand Green Team student recycling initiatives for schools that do not have programs and support existing programs for schools that have programs in place.

**Goal 4.7.3 Promote investment in distributed power generation and renewable energy systems on municipal property.**

**Action 4.7.3.1** Develop and implement a program that ensures consideration of this goal in the planning stages of every Town and School project.

**Action 4.7.3.2** Develop and implement a cost benefit analysis model to show return on investment for distributed power generation, cogeneration and renewable energy projects.

**Action 4.7.3.3** Pursue grants and alternative funding for photovoltaic, wind and bio mass energy systems.

**Action 4.7.3.4** Promote these alternative energy initiatives through regular public outreach using Town and school cable channels and other media.

**Introduction**

The Town of Barnstable is experiencing a housing crisis which affects every aspect of the town’s economic and social well-being. While it is a crisis being experienced all across the Commonwealth, as a town we must seek local solutions. At present 6 percent, or 1,345 units, of the housing stock in the Town of Barnstable is considered affordable by the Department of Housing and Community Development (DHCD). By definition, this means there is an affordable deed restriction on the property, and it is affordable to households earning 80 percent or less than the area median income.

The Town Council, Town Manager and the Barnstable Housing Committee are committed to reaching or exceeding housing goals and ensuring the distribution of affordable housing throughout all seven villages in the Town of Barnstable.

A successful outcome will require the cooperation of all. Town boards, commissions, departments, and each of the Town’s seven villages must work together to reach these affordable housing goals. The private development sector, business and private lenders must also provide assistance. This section outlines projects and initiatives for the next five to ten years. Where possible, those responsible for implementation are identified. This is an ambitious but achievable plan. All the citizens of the Town of Barnstable will reap the benefits of having an appropriate percentage of the town’s housing stock affordable.

**Existing Conditions**

During the past five years, conditions in the local housing market have continued to escalate at an alarming rate. From the years 2000 to 2005, the median sales price for a home in Barnstable more than doubled, increasing from \$193,000 to \$399,600. Unfortunately, regional wage rates have not kept pace with this trend, making it more difficult for residents to purchase or rent an affordable home. In 2005, the average income needed to purchase a home in Barnstable County was \$104,460, and the typical annual salary of our municipal workers police officer, firefighter or teacher for example, was between \$49,000 and \$53,000.

The affordability gap in Barnstable often is widest for the disabled, those on public assistance, the elderly, minorities and the unemployed. The median household income for the Town of Barnstable in 2006 was \$46,811. However, 42 percent of our residents earn less than that figure. Many of

these townspeople are without means, on public assistance, elderly, or cannot find work. Some are part of the "at risk" population, in jeopardy of losing shelter and potentially becoming homeless.

<b>Town of Barnstable Affordable Housing</b>						
<b>Village</b>	<b>SHI* Homeownership Units</b>	<b>SHI Rental Units</b>	<b>Total Year Round Housing Stock - 2009</b>	<b>Total SHI Units – June 2009</b>	<b>10% of Year Round Housing Stock</b>	<b>% of Year Round Housing Stock as Affordable</b>
<b>Barnstable</b>	1	2	1371	3	137	.22%
<b>Centerville</b>	5	54	5611	59	561	1.05%
<b>Cotuit</b>	4	25	2071	29	207	1.4%
<b>Hyannis</b>	109	752	6580	855	658	13.09%
<b>Marstons Mills</b>	61	31	2253	92	225	4.08%
<b>Osterville</b>	3	8	1672	11	167	.66%
<b>West Barnstable</b>	1	23	708	24	71	3.39%
<b>Confidential Units</b>				162		
<b>Town of Barnstable Totals - 2000</b>	184	895	20266	1345	2027	6.66%
* SHI = Subsidized Housing Inventory as defined in the Department of Housing and Community Development publication <a href="#">Eligibility Summary</a> . Chapter 40B Subsidized Housing Inventory – 6/5/09.						

The impact of seasonal rentals and the strong second home market in Barnstable also contributes to making housing unaffordable for most year-round residents. Each year, Barnstable loses a substantial amount of year round housing units to retired and second homebuyers. Due to the Town’s

popular geographic location, and because its housing stock is primarily made up of single-family detached units, houses are being purchased at an alarming rate as second homes by off-Cape residents. This conversion trend has greatly increased demand for rental housing and has driven up rental costs beyond affordable limits. A declining availability of buildable land also exacerbates the problem.

The percentage of a municipality's affordable housing units required, as by the Commonwealth, is determined by dividing the number of affordable units by the number of 2000 year round housing units. According to the 2000 U.S. Census, the Town of Barnstable has 20,266 year round housing units. This ranks Barnstable 24<sup>th</sup> among all of the state's 351 cities and towns, and only slightly lower than many urban communities surrounding Boston such as Malden (23,561) and Medford (22,631). The Town of Barnstable has more year round housing units than some small cities in the Commonwealth such as Peabody (18,838) and Salem (18,103).

The obvious lack of adequate housing choice, combined with less than desirable economic conditions have contributed to an increase of out-migration of young adults between the ages of 20 to 34. While this tracks with national trends, the adverse impact on our local and regional economies may be greater than other areas that do not rely so heavily on this age group in its services sector.

### **Affordable Housing Efforts Implemented Since 1997**

#### **Affordable Housing Plan and Housing Needs Assessment**

In January 31, 2001, the Barnstable Town Council unanimously approved a town-wide Affordable Housing Plan (AHP) (**Appendix**) with the goal of producing 1,000 units of affordable housing over a ten-year period. The Plan outlined a number of potential projects and initiatives designed to achieve this goal, including identifying building sites, estimating the potential number of units that could be built on those sites, and exploring ways to include existing uncounted units in our affordable housing stock.

In March of 2004, DHCD approved the Town's Affordable Housing Plan and accompanying comprehensive Housing Needs Assessment (**Appendix**). The Housing Needs Assessment determined that the greatest need in the Town is for rental housing, especially with monthly rents at or below \$1,200. The document recommended that the Town prioritize the development of

affordable housing as follows: rental (two and three bedroom, primarily for the resident labor force), ownership (primarily for first-time homebuyers), senior housing, and barrier-free units with preference for disabled residents.

Because the Town successfully produced 0.75% (152) affordable housing units in a calendar year (in accordance with the approved Plan), the Town's Affordable Housing Plan was certified by DHCD in September of 2004. This one-year certification period allowed the Town to have full control over all proposed housing development including those it finds inconsistent with local needs. The certification period for Barnstable ended in August of 2005, but the Town continues to work towards recertification.

#### **Accessory Affordable Apartment Program**

In an effort to find creative ways to include existing affordable units in our affordable housing stock, the Town created the Accessory Affordable Apartment Program in November of 2000. The Accessory Affordable Housing Program, also known as the "Amnesty Program", is now viewed statewide as a model affordable housing preservation and production initiative.

The intent of the ordinance and program is to provide an opportunity to bring into compliance many of the currently un-permitted accessory apartments in the Town of Barnstable to create additional affordable housing. The Town Council recognized that these un-permitted and unlawfully occupied units are filling a market demand for housing at rental costs typically below that of units which are and have been lawfully constructed and occupied. In October of 2002, the Town Council adopted two amendments to expand the program to allow property owners to create affordable apartments within existing detached accessory structures, and create a new affordable apartment within attached structures. These two minor revisions helped to clarify the purpose and intent of the Program, and allowed the opportunity to create new, additional units for the town.

The program utilizes the MGL Chapter 40B, "Comprehensive Permit" process to legalize the units and ensure their long-term affordability. Property owners must agree to bring the unit(s) into compliance with both state building and sanitary codes and to rent the legalized unit only to households whose income is 80% or less of the area median income. In addition, they agree to charge a rent that is affordable to that household with a minimum lease term of one year.

Since the Program's inception, 140 housing units have been added to the Town's affordable housing inventory. The Program has successfully upgraded properties, increased the Town's affordable housing stock, and provided property owners with rental income.

#### **Rental Acquisition Program**

In an effort to increase the stock of affordable rental housing, the Town dedicates a percentage of its Community Development Block Grant (CDBG) allocation to fund the Rental Acquisition Program. This authorizes the Town to use these federal funds towards the purchase of existing single and multifamily properties and maintain them as affordable rentals.

The Town solicits applications from various housing agencies and local non-profits who are interested in utilizing the program, and typically provides up to \$25,000 towards the purchase of a property. Between 2000 and 2005, approximately \$365,000 in CDBG funds have been dedicated towards the purchase of 12 properties with deed restricted affordable units.



#### **Inclusionary Zoning Ordinance**

In June of 1999 the Town adopted an Inclusionary Zoning ordinance to assure "that an appropriate share of the remaining undeveloped land in the Town is used to meet the Town's critical need for affordable housing, and to promote the inclusion of a fair share of the cost of construction of affordable housing in all residential and nonresidential land development activity in the Town".

Under the ordinance, in certain developments of 10 or more units, at least 10% of the residential units constructed must be dedicated by deed restriction to affordable housing. A developer may apply to the Town to enter into a development agreement pursuant to the Town's Development Agreement Ordinance. In this case, the Barnstable Housing Committee would review any development agreement proposed, and advise the Town Council as to whether it provides benefits to the Town that are at least as beneficial to the Town as the affordable housing benefits provided for in the ordinance. A Development Agreement could propose off site affordable units, land conveyance, or cash payments.

To date, the Inclusionary Zoning ordinance has resulted in the permitting of ten units of deed restricted affordable rental housing units. The Town monitors the long-term affordability of the units.

#### **Building Cap Ordinance**

Due to fragile environments and limited drinking water resources, the Town is very concerned about managing growth. The Town has taken steps to curb market rate residential development while simultaneously working to increase affordable housing development. The Barnstable Town Council approved a Building Cap Ordinance through a Growth Management Zoning Amendment in July of 2001. A key component of the Building Cap Ordinance is the provision addressing affordable housing production. "The rate of residential development in Barnstable is determined by and should not exceed the ability of the town to provide adequate infrastructure and to protect natural environment. In addition, the development rate is attended to further the legitimate Commonwealth and local interests in the provision in the fair share of housing that is affordable to persons with both low and moderate income."

#### **Growth Management Department Creation**

In September of 2005, the Town of Barnstable undertook a bold new endeavor in directing its growth and development by creating the Growth Management Department (GMD). The GMD merges previously separate town divisions within the Town to create a multi-disciplinary team to coordinate a long-term vision for the future of the town and its villages, bridge that long-term vision with the regulatory review of private development, and coordinate capital improvements towards that overall vision.

The mission of the GMD is to preserve the character of the seven villages and improve the quality of life for Town residents by developing and implementing land use, traffic management, and property management strategies while promoting consistent sustainable economic development. The Department is comprised of six functions, Regulatory Review, Comprehensive Planning, Community Development (Housing), Economic Development, Property Management, and Traffic and Parking Management. Specifically, the Community Development Division is charged with encouraging livability and diversity by providing affordable and work force housing opportunities throughout the Town.

#### **Adoption of Growth Incentive Zone**

The Hyannis Growth Incentive Zone (GIZ) received final approval on June 21, 2006. The first GIZ approved on Cape Cod, the Hyannis Growth Incentive Zone is centered around Main Street, Hyannis, and includes the surrounding area from the Airport Rotary to the Hyannis Inner Harbor to the West End Rotary.

As requested by the Town and approved by the County, the GIZ enables the Town to permit up to 600 new residential units and 585,000 square feet of new non-residential development. With the approval of the GIZ, projects require only local permitting and are not required to be reviewed by the Cape Cod Commission. This streamlined permitting process provides an incentive for Hyannis property owners to invest in and redevelop their property, and allows for residential development above commercial space.

The Hyannis Growth Incentive Zone application and related documents can be obtained from the Town of Barnstable website. On the home page, go to the Special Notices box and click on Growth Incentive Zone application.

#### **Workforce Housing**

Housing needs span a broad range of household incomes. Many area households earning between 81% and 120% of the median area income exceed state income limits for affordable units, but have difficulty obtaining housing due to the Cape's expensive housing market.

The Town is working to address the need for "workforce housing" in the 2005 rezoning of downtown Hyannis. The zoning provides density bonuses to encourage the production of workforce housing units. Three of the new zoning districts, including the Office-Multifamily, Medical Services, and Hyannis Gateway Zoning Districts offer density bonuses for the provision of

workforce housing, including:

#### **Medical Services District:**

By-right market units – not more than 6 units or 12 bedrooms per acre

Special permit workforce units – not more than 12 units per acre

#### **Office-Multifamily District:**

By-right market units – not more than 12 units or 24 bedrooms per acre

Special permit workforce units – not more than 16 units or 32 bedrooms per acre

#### **Hyannis Gateway District:**

By-right market units – not more than 4 units or 8 bedrooms per acre

Special permit workforce units – not more than 16 units or 32 bedrooms per acre

The Town is committed to continuing to work with the business community to develop innovative strategies to address the need for additional workforce housing to support our workforce and, in turn, our economy.

#### **Artist Loft Housing**

The 2005 rezoning of downtown Hyannis also provides for live/work spaces for artists seeking to reside in Hyannis. Artists' lofts are allowed in the HVB, SF, OM, and HD Districts. An artists' loft is defined as "A place designed to be used as both a dwelling and a place of work by an artist, artisan, or craftsperson, including persons engaged in the application, teaching, or performance of fine arts such as drawing, vocal or instrumental music, painting, sculpture, fiber arts, photography, graphics, media arts, and writing. The work activities shall not adversely impact the public health, safety, and welfare, or the livability, functioning, and appearance of adjacent property."

The Town recognizes the role of a dynamic arts and cultural community in economic revitalization, and is actively seeking to develop deed restricted affordable artist live / workspace in downtown Hyannis.

#### **Town Owned Land Affordable Housing Development Since 1997**

One of the biggest barriers to developing housing in Barnstable is the lack of land available for housing development. To address this problem, a primary focus of the Town Manager and Town Council has been to utilize town owned land for the development of affordable housing. The Growth Management Department recently completed a thorough, comprehensive analysis of all surplus town-owned land and assessed its suitability for development.

Since 1997, the Town has identified several key parcels and has begun the process of developing affordable housing on the sites. The locations are as follows:

YMCA / Lombard Farms, West Barnstable

In May 2001, the Town of Barnstable, with a predevelopment grant from the Massachusetts Housing Partnership Fund, hired the environmental firm of Horsley and Witten, Inc. to conduct a site analysis and feasibility study of the 7.93 acre Lombard parcel on Route 149 in West Barnstable. The town also hired a local engineering firm to prepare a concept plan and preliminary site plan for a four-acre site owned by the Town adjacent to the YMCA in West Barnstable.

The results of the site analyses led the Town to issue a Request for Proposals (RFP) for the development of affordable housing on the two parcels in December of 2003. The Housing Assistance Corporation (HAC) was awarded the bid to construct 28 family rental units at the YMCA property, and 12 senior rental housing units at the Lombard site. Construction was completed in the summer of 2009 and both properties are fully occupied.



Town owned Parcels in Osterville

The Town identified three parcels of municipally controlled land along Old Mill Road in Osterville deemed suitable for affordable housing development. The three parcels are as follows: a 2.06 acre parcel located at 30 Oakville Avenue, a 1.02 acre parcel on Josh Lumbert Road, and a 2.25 acre parcel on Old Mill Road.

After securing a grant from the Department of Housing and Community Development's Priority Development Fund, the Town issued an RFP in August of 2006 to conduct an engineering, planning and design analysis for affordable housing on the sites. In 2008, the Town issued an RFP for the housing development. Development of this project is pending.

**Private Affordable Housing Development Since 1997**

The majority of the affordable housing development that has taken place since 1997 has been done by private developers through the MGL Chapter 40B "Comprehensive Permit" process. In many cases, the Town has

coordinated or "partnered" with the developer through the Local Initiative Program to facilitate the permitting process. Some of the major affordable housing developments that have been permitted and/or built since 1997 are as follows:

Danvers Way, Habitat for Humanity – Hyannis

Also in February of 2003, a comprehensive permit was issued to Habitat for Humanity for the construction of 16 single-family homeownership units in eight two-family buildings off Route 28 in Hyannis. All 16 units are deed restricted as affordable. This development was constructed and the units are occupied.

School House Pond - Hyannisport

In October of 2001, a comprehensive permit was issued to Chatham Real Properties, Inc for the construction of eight homeownership condominium units in a single structure on 2.26 acres on Scudder Ave in Hyannisport. Two of the units are deed restricted as affordable. This development was constructed and the units are occupied.

Village Green - Barnstable Village

JDJ, LLC, was granted a comprehensive permit in July of 2004 for the creation of 130 rental units on 14.32 acres of land off Independence Drive in Barnstable Village. Twenty-five percent of the units will be set aside as low and moderate income. Building permits have not yet been issued for this project.

Southside Village – Hyannis

In February of 2003, a comprehensive permit was issued to Southside Realty Trust for the construction of fourteen (14) attached condominium units on 1.35 acres located off Route 28 (Falmouth Road) in Hyannis. All 14 units are deed restricted as affordable. This development was constructed and the units are occupied.

Housing Land Trust for Cape Cod - Marstons Mills

In 2001, the Town of Barnstable negotiated the acquisition of 19.07 acres of vacant land known as the Childs Property, which borders the Marstons Mills

Elementary and Middle Schools. Of the 19.07 acres, 6.4 acres was designated for affordable housing, and the balance designated for recreation and open space. The 12.69 acres of recreational/open space were purchased by the Town utilizing Land Bank funds, and the 6.4 acre parcel was purchased by the Housing Land Trust for Cape Cod. A comprehensive permit was issued to WBC, LLC for the property in January of 2004. Today, there are 30 occupied homeownership units at the Village at Marstons Mills, 18 of which are deed restricted as affordable.

#### Mill Pond Estates - Osterville

A comprehensive permit was issued through the Local Initiative Program to Starboard, LLC in June of 2005 to develop 11 single-family homes on a 2.81 parcel on Old Mill Road in Osterville. Three of the units will be deed restricted as affordable.

#### Cotuit Meadows - Cotuit

In April of 2006, a comprehensive permit was issued to Cotuit Equitable Housing, LLC to authorize the development of 124 single-family homes on a 50.44 acres site off Route 28 in Cotuit. Twenty-five percent, or 31 units, will be deed restricted as affordable. Phase I is under construction and 6 affordable units have been sold to first time homebuyers.

#### Settlers Landing I - Hyannis

In May of 2006, a comprehensive permit was issued to the Settlers Landing Realty Trust for the construction of 20 single-family homeownership units at Settlers Landing and Castlewood Circle in Hyannis. Five of the 20 units will be deed restricted as affordable.

#### LIFE, Inc – Hyannis

In July of 2006, Living Independently Forever (LIFE, Inc) was granted a modification of their original comprehensive permit issued in 1995 to construct a fifth building containing four condominium units at Lincoln Road Extension in Hyannis. All four of the units will be deed restricted as affordable.

#### Private – Initiated Affordable Housing Development (PIAHD)

The Planning Board, as part of a mediation process initiated by the Housing Appeals Committee, developed the Private Initiated Affordable Housing Development (PIAHD) ordinance. The ordinance, limited to a small area in Hyannis, requires 20% of all project units to qualify as affordable units.

When the projects are constructed, the two PIAHD projects, totaling 58 units, will produce 12 affordable units.

### **Affordable Housing Needs Going Forward**

#### Affordable Housing Preservation

Several strategies are used to preserve the affordability of housing units. Permits are conditioned to require proper deed restrictions safeguarding the affordability in perpetuity and through foreclosure; provisions for the timely recording of these restrictions; and a mechanism for monitoring of these units at the time of resale.

In recent years, affordable housing permit decisions have included adequate provisions for affordable housing preservation. The older affordable housing developments in Barnstable do not have these provisions. The town shall inventory the affordable units at risk; determine whether proper restrictions have been recorded and identify and implement steps to ensure the continued affordability of these units.

Affordable Apartment Amnesty Program (AAP) monitoring is conducted annually by the AAP Coordinator. This monitoring ensures that program participants are in compliance with the terms and conditions of the comprehensive permit issued to them. The property owner is required to submit a copy of a 12-month lease and proof of income for their tenant to verify that they earn 80% or less of the median income. If a property owner is found to be in non-compliance, a hearing will be held before the Hearing Officer of the Zoning Board of Appeals to determine if the comprehensive permit should be revoked.

#### Homelessness

The Town through its Human Services Committee (HSC) has been active in this area. Working with local service providers the HSC developed “Operation In from the Cold” in early December 2005. This program placed ten out of twenty-four individuals in permanent housing and brought the Barnstable Police together with outreach personnel and agencies who work with the homeless population. Public awareness was raised and a process for periodic assessment of the homeless population and their needs is now in place. The HSC wants to expand this collaborative program to “Operation In from the Streets” to bring these groups together again in an effort to reach out to all those living outdoors in Hyannis.

This group is also developing the "Street Sheet 2006" flyer that lists available resources and their location and contact information.

The Leadership Council to End Homelessness on Cape Cod and the Islands released the Ten Year Plan to End Homelessness on Cape Cod and the Islands in February of 2005. This effort is in its second year of implementation. The Plan's Action Items do not assign any actions to the Town. However many services and service providers are located in Hyannis. The Town must continue to participate with these organizations as local issues arise.

### **Workforce Housing**

The town must continue to watch closely the housing needs of all its residents. A diverse housing stock will provide the housing necessary to sustain a stable workforce. Escalating housing costs also affect households with incomes above 80% of the Area Median Income. Most housing subsidies are targeted at those at 80% AMI or lower. There is mounting evidence that those at 100% to 120% of the AMI are having difficulty finding home buying opportunities. The Town should carefully watch these trends and be prepared to help address these increasing housing needs. An analysis of the housing needs of households at 80% to 120% of the AMI should be including in the next Housing Needs Assessment.

### **Regulatory Tools**

The town must develop new regulatory tools to guide housing development in accordance with its Housing Production goals. A collaborative process between the Growth Management Department, the Planning Board and the Housing Committee should be initiated to explore options and set priorities.

### **Consistency**

This plan adopts the Regional Policy Plan Goals 5.1, 5.2, 5.3 and 5.4. In lieu of adopting the Minimum Performance Standards, the following sections outline Barnstable's action plan in support of those goals.

### **Goals and Actions**

**Goal 5.1 Promote the provision of fair, decent and safe affordable housing, for rental or purchase, which meets the present and future needs of the low-to-moderate income residents (incomes less than 80% of the county median income) of Barnstable.**

**Action 5.1.1** In all of its actions the Town of Barnstable shall work to prevent discrimination in housing because of race, color, creed, religion, sex, national origin, primary language, age, political affiliation, disability, sexual orientation or any other consideration prohibited by law, and shall not knowingly approve any development that so discriminates.

#### **Strategies**

- Conduct fair housing and local preference outreach and education using DHCD local workshop or materials
- Examine Rental Registration and Occupancy Ordinances through the ordinance required subcommittee.
- Determine who has responsibility for Fair Housing in Barnstable. Consider delegating these duties to the Housing Committee for better coordination.

**Action 5.1.2** Commit appropriate town resources coordinated through the Growth Management Department (GMD).

#### **Strategies**

- GMD will coordinate allocation of the town's Community Development Block Grant program funding affordable housing portion to support development activities and for conversion or rehabilitation of existing housing stock to affordable units.
- GMD will coordinate maximum participation within the Barnstable County HOME Consortium and the County's "Soft Second Loan Program" to access financial resources to stimulate affordable housing.
- Allocate Community Preservation Act funds for production and preservation of affordable housing. With the Barnstable Housing Committee (BHC) and the Community Preservation Committee (CPC) explore allocating additional CPA funds for housing in coordination with the Town' housing plan as updated.
- Develop a plan to allocate additional CPA funds for housing.
- Obtain Technical Assistance Program funds to develop a "How to Develop Affordable Housing in Barnstable" brochure.

**Action 5.1.3** To fund affordable housing initiatives, seek a reliable funding source for the Barnstable Affordable Housing and Economic Development Trust Fund.

#### **Strategies**

- To access these funds, the Housing Committee shall work with the

- Town Manager's Office on the appointment of fund Trustees
- The Housing Committee shall work with Trustees to develop appropriate criteria for fund disbursement.
- The Affordable Housing and Economic Development Trust Fund will receive mitigation funds and an annual allocation from CPA funds.
- Explore real estate transfer tax or deed recording fee for allocation to the Affordable Housing Trust Fund.

**Action 5.1.4** Continue to monitor needs of homeless families and individuals.

**Strategies**

- The Barnstable Housing Committee will advise the Town Manager's Office if the need for Town action should arise.
- The Town should continue to collaborate with local service providers to address homelessness through the efforts of the Human Services Committee and/or other groups as necessary.
- The Human Services Committee shall advise local officials on policy issues that impact service delivery to the homeless.

**Action 5.1.6** Nonresidential Development of Regional Impacts project reviewed by the Cape Cod Commission should be evaluated as to the need for affordable housing created by such development and should provide appropriate mitigation for impacts to affordable housing.

**Goal 5.2** The Town's goal is to have at least 10% of the year-round housing stock as permanently affordable housing units with an effort to achieve this Goal by the year 2015.

**Action 5.2.1** Use the Local Initiative Program (LIP) Units Only certification process under 760 CMR 45.00 to add units to the town's Subsidized Housing Inventory (SHI). GMD will report to BHC annually on Units Only certifications.

**Action 5.2.2** Modify existing zoning regulations to remove impediments to the development of affordable housing.

**Strategies**

- GMD will analyze development and redevelopment opportunities in locations appropriate for increased density. The results of this analysis to be provided to HC.
- GMD will conduct a town wide analysis of zoning districts showing

districts where multi-family housing is allowed as of right, as a conditional use or prohibited. The results of this analysis is to be provided to BHC.

- Amend 240-21 A(9)(i) of the Zoning Ordinance to condition the grant of a Special Permit that allows an increase in the maximum lot coverage to 50% based on the developer agreeing to provide a 50% of the additional units as affordable housing.
- Grant density bonuses in appropriate locations for developments that provide all units as affordable for the vulnerable segments of the community: the elderly, very low income (50% of the AMI), single-family heads of households, racial minorities, homeless, disabled and others with special needs.
- Research, identify and draft additional zoning ordinance amendments designed to increase desirable types of housing production for populations identified in the Housing Needs Assessment.
- Continue to work on the Affordable Housing Overlay District or other similar zoning ordinance.

**Action 5.2.3** Provide zoning incentives to encourage the development of workforce housing affordable to those at or below 120% of Area Median Income (AMI).

**Strategies**

- GMD will draft ordinances based on successful models such as the Dennis Zoning By-law Section 4.9 Provisions To Encourage the Development of Affordable Housing In Dennis, a method to allow affordable housing development on undersized lots.
- GMD will initiate discussion with the Housing Committee and the Planning Board to explore and prioritize development of new regulatory tools for housing production.

**Action 5.2.4** Provide regulatory incentives to stimulate the creation of affordable units to be added to the town's stock.

**Strategies**

- Grant a reduction in permitting fees to contribute to the financial feasibility of the conversion of existing housing to affordable rental units.
- Grant a reduction from impact fees for developments that provide more affordable housing than required in Growth Centers.

- GMD will explore extending Chapter 168, Regulatory Agreements town wide to allow inclusionary units to be placed offsite and/or payments in lieu of units.
- GMD will draft a comprehensive permit policy that expedites the 40B process provided certain agreed-upon criteria are met.

**Action 5.2.5** Transfer all on-site and off-site property contributed by developers as a result of the Development of Regional Impact (DRI) review by the Cape Cod Commission to the BHA.

**Action 5.2.6** Promote the adaptive re-use of existing structures for affordable housing.

**Strategies**

- GMD will identify properties suitable for conversion to affordable residential use. The HC will be included in the final evaluation of these properties.
- Identify funding sources and develop a program for the Town to assist in the acquisition of these properties.
- The Town will provide financial assistance to projects that convert existing housing stock to affordable housing. i.e. Accessory Affordable Apartment Program.

**Goal 5.3 Ensure the distribution of affordable housing throughout the seven villages.**

**Action 5.3.1** Promote all types of housing – rental, ownership, elderly, special needs and family housing – in all villages.

**Strategies**

- All villages shall aim to provide at least 10% of that village's year round housing stock as affordable in accordance with MGL Chapter 40B. The Barnstable Housing Production Plan and subsequent updates shall document affordable housing stock percentages and types in all seven villages.
- Encourage mixed-use affordable housing that is close to transportation within the village centers.
- Research, identify and promote innovative wastewater management technologies that would allow higher densities in village areas with inadequate infrastructure.

- Identify and fund essential infrastructure improvements necessary to affordable housing developments in the village centers.
- Encourage small-scale affordable housing developments within village centers.

**Goal 5.4 Integrate the development of affordable housing with protection of the Cape's environment.**

**Action 5.4.1** Affordable housing development that increases density levels above existing zoning densities shall comply with Title V.

**Strategies**

- In appropriate locations in aquifer protection zones, increased density for affordable housing development may be permitted where regulatory authorities find a substantial public benefit.
- Encourage the use of cumulative loading analyses to allow increased density for affordable housing. Town staff will work with regulatory authorities to confirm appropriate set aside areas for site-specific cumulative loading analyses.
- Increase in development density in areas served by municipal sewer for affordable housing

**Goal 5.5 The Town through the Growth Management Department shall update and track implementation of the Housing Production Plan and provide biannual updates to the Housing Needs Assessment.**

**Action 5.5.1** The GMD will update the Housing Production Plan (PPP) as needed or as required by DHCD. A PPP implementation report should be prepared annually and distributed to the Barnstable Housing Committee and the Town Council.

**Action 5.5.2** The GMD will update the Housing Needs Assessment (HNA). In addition to the HNA elements required by DHCD, the update shall analyze the needs of households between 80 – 120% of the AMI, the homeless population, transitional housing, congregate housing, student housing and seasonal workforce housing.

### Introduction

The Town of Barnstable, by virtue of geographic location near the center of the Cape Cod peninsula and regional nature of its development, has become a centralized location for the providers of social services. This has led to a concentration of human service providers based in the Town of Barnstable primarily in the village of Hyannis.

Historically, the Town has provided funding to human service agencies and collaboratives to assist program implementation for housing, employment training, economic development, community development and social welfare services for town residents.

The Town of Barnstable has been designated a “Metropolitan New England City and Town Area”, and receives annual entitlement funds from the Department of Housing & Urban Development (HUD) Community Development Block Grant (CDBG) program. CDBG funding must be used to provide for development of viable communities by providing decent housing, a suitable living environment and expanded economic opportunities, principally for persons of low and moderate income.

Human service needs are vast, and action-oriented strategies are necessary to answer these needs. The following priorities have been identified by the Barnstable County Department of Health and Human services as the major needs of the Town of Barnstable:

**Transportation** - A critical need to enable access to service and employment opportunities.

**Affordable Housing** - Shelter is the primary need for the homeless and low income populations.

**Child Care** - The need for affordable daycare services is increasingly apparent as the numbers of working women with children and single parent families increase.

**Disabling and Chronic Health Concerns** - Major health problems impair the ability to be self sufficient.

**Youth Recreation Needs** - The rapid growth of this segment of the population has increased the need for constructive alternatives.

**Elder Services** - The town's rapidly increasing elderly population will require more resources for care and attention.

### Goals Policies and Strategies

**Goal 7.1 Quality of life: Enhance the quality of life for all Barnstable residents by ensuring a full range of health and human services in an efficient, coordinated and cost effective manner.**

**Action 7.1.1** The Town Council or its designated agent will evaluate land use and developmental decisions in a manner consistent with health and human service needs and to determine responses necessary to maintain and enhance the delivery of those services. This decision making process should measure impacts to human services prior to final approval.

#### Strategies

- Develop guidelines for evaluating impacts of land use and development to populations in need of human services, including the location of development, employment opportunities provided, and specific human services that may be affected by the development.
- Include the Human Services Committee in the notification process for major land use and development applications to Site Plan Review, Board of Appeals, Planning Board and CCC Developments of Regional Impact and also major project grant applications.
- A Human Services Committee member should be appointed to the Community Preservation Committee.
- The Human Services Committee should serve in an advisory capacity to the Growth Management Department policy development and development review process.

**Action 7.1.2** Town Council's Human Services Committee will develop a Health and Human Service Needs and Resource Assessment in cooperation with service providers and the community. This assessment should be conducted annually.

#### Strategy

- Using all available studies and reports, the assessment will identify needs, service gaps, establish priorities, impediments and opportunities. At a minimum, this assessment shall include health and human service delivery systems for all ages such as child care, elder care, youth support, substance abuse, mental health, job training and people with disabilities. The needs of visitors will be included in the assessment.

**Action 7.1.3** The Town Council's Human Services Committee, utilizing the Health and Human Service Needs and Resources Assessment, will convene an annual Health and Human Services Roundtable including all health and human service providers within and/or offering services within the boundaries of the Town of Barnstable. This roundtable shall review timely issues, discuss and determine solution alternatives, and provide advice and recommendations for coordinating health and human service delivery efforts. This Roundtable shall provide a report and publish its proceedings and findings of its annual meeting.

**Action 7.1.4** Town Council's Human Services Committee shall develop, in coordination with all Barnstable service providers, a Health and Human Services Action Plan. This plan shall be based on the annual Health and Human Services Needs Assessment and the annual report of the Health and Human Services Roundtable and shall develop policies and procedures to meet health and human service needs.

**Strategies**

- The plan will include strategies for meeting these needs with available resources and detail resource shortfalls with recommendations for closing these resource and service gaps.
- The Health and Human Plan shall include the following areas to identify and health and human service needs and focus on service delivery methods:

- Transportation
- Health/Chronic Disease
- Child Care/Welfare/Protection/Development
- Elder Affairs/Home Health Care
- Legal Services
- Recreation
- Substance Abuse
- Clergy
- Mental Health/Disabled Persons
- Job Training
- Housing/Homeless
- Adolescent Services
- Education
- Veterans Services

**Action 7.1.5** Town Council's Human Services Committee will develop a public education and community awareness effort to promote the Town's health and human service environment. Education and awareness materials will be developed to provide information about health and human service eligibility, system capabilities, and service delivery contacts.

**Strategies**

- The materials developed for this effort will identify specific populations (e.g. the visual and hearing impaired) and provide information through a method appropriate to their needs.
- The materials developed for this effort will be readily available to the community through the Town website and other media distribution methods.