Town of Barnstable 2005 Open Space and Recreation Plan



Prepared for:

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November 15, 2005

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² The Zoning Map include in Appendix G is not labeled Map 1 or altered in any way per direction of Barnstable Town Counsel and Planning Division so as not to alter a legal document.

Acknowledgements

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SECTION 1 PLAN SUMMARY



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Decades after a comprehensive open space plan was drafted for the Town of Barnstable, the competing interests of development and open space remain a matter of contention, sometimes divisive, for town officials and residents. This plan is an attempt to offer some guidance as the people of the town work to preserve for future generations those attributes that make Barnstable a special place to live and visit.

The plan includes:

- an analysis of the town's natural and cultural resources (including scenic resources, unique environments and environmental problems);
- an inventory of conservation and recreation lands currently owned by the state, town and private nonprofit groups;
- an analysis of community open space and recreation needs; and,
- an outline of the community's goals, objectives and proposed actions to fulfill those needs.

This 2005 Open Space and Recreation Plan update builds on the earlier plan (revised 1997). It incorporates the goals of protecting natural resources, conserving open space and providing a varied recreation program. The Plan is designed to meet the state's current *Open Space and Recreation Plan Requirements* and to be consistent with the Open Space and Recreation Element of the updated *Town of Barnstable's Local Comprehensive Plan* (LCP), scheduled for completion in June 2005. The LCP, once approved by the Cape Cod Commission and town officials, will serve as the town's response to the Cape Cod Regional Policy Plan (1991, amended 2002) and its comprehensive guide for future planning and growth. These two documents together will provide a formidable basis upon which to guide the town. In addition, approval of this updated 2005 Open Space and Recreation Plan by the state Division of Conservation Services (DCS) will enable the town to be eligible for land acquisition and recreation facility reimbursement funding through programs such as Self-Help, Urban Self-Help and the Federal Land & Water Conservation Fund.

Continued development remains the greatest threat to the town's open space and recreation resources by reducing the amount of available land and also placing more public use pressure on the areas that are available. Open space planning efforts must continue to keep pace with this reality while finding more creative ways to accomplish the same goals. Consistently rapid development during the last several decades has cleared and segmented thousands of acres, leaving only a few unbroken areas. This has resulted in the creation of an increasingly suburban landscape, increasing highway strip development, groundwater pollution, and the destruction of unique and irreplaceable resources such as shellfish beds.

In spite of this, the town has made great strides in open space acquisition during this time. Since the last iteration of this Plan in 1997, the town has continued its aggressive land acquisition strategy. Using Land Bank funds made available beginning in 1999, the town has purchased 32

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parcels totaling 1,122.41 acres for a total of 38,690,595 (34,471/acre)³. Major recent acquisitions include the following:

- The Hovey Property, the first Land Bank acquisition in the town, covering 25 acres and purchased in 1999 for \$965,000;
- The Danforth Property, consisting of the Marstons Mills Airport, covering 217 acres, purchased in 2004 for more than \$11 million;
- The Hyannis Golf Course, covering 125 acres, purchased in 2005 for \$5.5 million.

Private land purchases have also helped protect undeveloped lands. Since its inception in 1983, the Barnstable Land Trust (formerly the Barnstable Conservation Foundation) has preserved approximately 138 parcels totaling 532 acres⁴ throughout the town, protecting river corridors and wetlands and filling in gaps in the town's green belt. The Mary Barton Land Trust, founded in 1980, has also contributed approximately 19 parcels totaling 152 acres.

These collective conservation efforts have been buoyed over the last decade by such legislative tools as the Cape Cod Land Bank, mentioned above, the Cape Cod Commission Act and most recently the Community Preservation Act (CPA). Yet in spite of increased efforts and success, conservation efforts will always struggle to keep pace with the unceasing development pressure placed on the region, which continues to lure droves of visitors each season. With every passing year, more and more of these visitors have become permanent residents, and the town's carrying capacity is being pressed to its limit.

During the fall of 2004, the town's Conservation and Recreation Divisions began to address the need for a revised Open Space and Recreation Plan that would reflect the town's evolving land use identity. Rob Gatewood, Conservation Administrator, retained David Hendrycks, an Americorps Cape Cod member to assist the town in preparing the revised Plan and contracted independent planning consultant Jeff Thibodeau to help focus these efforts. During the initial stages of this process, it became apparent that more manpower would be necessary to complete the revision in time to be eligible for the state's next round of grants. Thus, the town decided to seek professional assistance to prepare the entire Plan and issued a Request for Proposals from eligible firms and individuals in accordance with the state Uniform Procurement Act (MGL c.30B). The contract was awarded to *Centerline Studios Inc., Landscape Architecture and Planning* and a kickoff meeting were held in December 2004.

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³ See complete list provided by Lindsey Counsell, Chairman of Barnstable Land Bank Committee, in Section 5.

⁴ The Compact of Cape Cod Conservation Trusts, Inc. 2003 figures sent via email correspondence, December 28, 2004.

Public input was sought through two surveys, the 2004 and 2005 Barnstable Citizen Surveys, both conducted as part of the Bridgewater State College Institute for Regional Development's annual town survey. The purpose of this survey is "to determine citizen satisfaction with town services and resident's perceptions of Barnstable's quality of life and town government" (2004 Town of Barnstable Citizen Survey).⁵ The 2005 survey, which has recently been sent out, contains questions regarding various topics relevant to town planning, including open space and recreation. Since this survey is not yet complete, results from the 2004 survey have been used in this Plan to elucidate public opinion regarding open space and recreation issues. Survey results and interviews with the Workgroup and town officials were used to develop the broad goals outlined in Section 6.

Though many of the survey results, environmental characteristics and issues facing the town remain consistent with the last Plan, there are several notable demographic trends. Population data indicates that middle aged and retired people are the most numerous and fastest growing age groups in Barnstable and that in the coming decades, open space and recreation planning will need to provide ample passive recreational opportunities that will serve this largest segment of the population well into retirement age. Based on Cape Trends data, Barnstable residents rank 41st out of 351 towns in the state (ranked by increasing age) with a median age of 42.3 years old. Income growth over the 1989 –1999 decade was 40.1 percent in the Town of Barnstable. This income growth rate is slightly higher than the statewide average of 36.7 percent, but lower than the Cape average of 44.6 percent. The 1999 median household income in Barnstable was \$46,811 with the per capita income \$25,554 (U.S. Census 2000). U.S. Census data indicates that over the past decade, the resident labor force (employed and unemployed) in Barnstable County increased by 17,329 or 19.3 percent, from 89,855 in 1990 to 107,184 in 2000. Although in the last several years there has been a steady increase in unemployment rates, the year 2004 has shown a slight decrease in Barnstable's unemployment rate from 4.5 percent in 2003 to 4.3 percent (Mass DET) and the economy continues to improve overall, which bodes well for the near future. All of this data illustrates the healthy economic growth occurring Barnstable during the last decade with a notable trend towards greater worker autonomy.

Industries with the highest wages are consistently in the following sectors:

- Finance and Insurance
- Manufacturing
- Wholesale trade
- Professional and Technical Services
- Health Care and social assistance
- Information

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⁵ Institute for Regional Development, Bridgewater College, *Town of Barnstable Citizen Survey 2004*, report authored by Jennifer Reid, M.P.A., March 2004.

As the town looks forward to planning for its future, it is aided by various state, regional and local planning initiatives. At the state and local levels, the Community Preservation Act (CPA) will become an increasingly important planning tool in the coming years. The CPA was signed into law by former Governor Paul Cellucci and Lt. Governor Jane Swift on September 14, 2000. It allows communities to create a local Community Preservation Fund in the municipality to be used through a surcharge of up to 3 percent of the real estate tax levy to be spent on real property for open space, historic preservation and low and moderate housing. The act also creates a significant state matching fund of more than \$25 million annually, which will serve as an incentive to communities to take advantage of the provisions of this legislation. The town passed the CPA in 2004 by popular referendum.

The state's buildout analyses and affordable housing initiatives also play a large role in influencing the town's planning decisions. To assist in identifying the town's future needs, the state Executive Office of Environmental Affairs (EOEA) sponsored the creation of a set of buildout maps and analyses for all 351 cities and towns within the Commonwealth of Massachusetts. It also continues to promote the development of affordable housing. There have also been habitat based regional planning studies including the Cape Cod Wildlife Conservation Project, the Priority Ponds Project and others. These projects have brought increased attention to specific resource protection needs. Detailed results and recommendations of these reports are summarized in this Plan, all of which point to the need for continued open space protection. These programs are extremely important but also add to the variety and intensity of interest groups competing for available land.

Barnstable's existing open space and recreation lands are both privately and publicly owned. Most of the privately owned conservation lands are designated as state Chapter 61 properties, restricted by conservation easements or in the form of unprotected quasi public recreation lands such as those found on school fields and golf courses.

Publicly owned open space and recreation lands are more numerous. There are a total of 6.304 acres owned and managed by the Town of Barnstable Conservation Division. An additional 894 acres is listed as Open Space acquired with Land Bank funds equaling a total of 7,198 acres of municipally owqned conservation land. By contrast, there are only 111 acres owned and managed by the Town of Barnstable Recreation Division. This amounts to only 1.5 percent of the Conservation total of 7,198 acres. Due to the relative lack of land dedicated for recreation purposes in the Town of Barnstable, and the expressed needs of the Recreation Division for additional facilities, there should be a concerted focus upon identifying and acquiring land for recreational uses in town. In addition to parcels that are clearly dedicated for conservation and recreation uses, there is a large amount of land owned by the town but designated for other uses including those listed below in order of acreage totals:

General Municipal Use –866 acres;

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- Airport 35 parcels totaling 603 acres;
- School Properties 13 parcels totaling 311 acres;
- Beaches 17 parcels totaling 133 acres;
- Cemeteries 19 parcels totaling 166 acres;
- Public Landings 27 parcels totaling more than 12 acres; and,
- Ways to Water 77 ways to water (see Map 11 *Ways to Water*).
- Town Municipal (Lombard Trust) 31 parcels totaling over 50 acres
- Town Municipal (Cobb Trust) 8 parcels totaling 37 acres.

Protecting additional land is paramount in order to keep pace with the increased development, however due to limited time and funding, it is important to prioritize needs. In order to assist with this, one of the major recommendations of this Plan is to create a single master *Priority Parcel Acquisition List*. This list should be compiled from and shared between various conservation groups in Town. Additionally, it is proposed that a new Open Space Committee be formed to take over where the Land Bank Committee left off, governing the prioritization of targeted parcels as well as the management of funds received through various sources. In addition to natural resource protection, one of the most important criteria to consider in the prioritization process is a parcel's potential for recreational use, as the need for additional recreational facilities is one of the highest priorities that has arisen during preparation of this Plan.

This Plan defines the following broad brush goals:

- 1. It is very important for the Town of Barnstable to continue to preserve open space in order to protect the environment, provide recreational opportunities and slow development.
- 2. It is very important to protect the appearance and character of Barnstable in order to maintain and improve the economy and overall quality of life that attracted and keeps people here.
- 3. Beaches and other open space and recreation areas are considered to be one of the most important assets of the town and should be protected and managed as vital natural and cultural resources.
- 4. Open space and recreation planning should strive to combat the increased overdevelopment, population growth and traffic congestion, which are considered by many residents to be the greatest problems facing the town.

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CENTERLINE STUDIOS INC. Landscape Architecture More specifically, the goals and objectives detailed in this Plan are:

<u>GOAL 1:</u> Acquire, Retain, Preserve and Protect a Maximum Amount of Open Space for the Community and its Natural and Wildlife Habitats, while Balancing this with Practical Needs such as Recreation, Affordable Housing, and Water Supply.

OBJECTIVES:

- 1A. Develop a *Town of Barnstable Priority Parcel Acquisition List* that includes the following properties:
- Lands within or adjacent to designated protected open space or potential open space areas;
- Lands within or adjacent to fresh and saltwater bodies, beaches, (salt and fresh water), wetlands, (marshes, swamps, bogs, meadows, ponds, and creeks), and floodplains;
- Lands containing vernal pools or which provide refuge to federally or state listed endangered, or threatened species or species listed as of special concern;
- Lands providing wildlife corridors which allow movement and migration of wildlife indigenous to Barnstable including maximum Priority parcels identified by the Cape Cod Wildlife Conservation Project and areas within and abutting Core Habitats identified by the Massachusetts Natural Heritage and Endangered Species Program;
- Lands useful for multiple public purposes or enhancement of Cape Cod Pathways and bike trails;
- Potential Water Supply Areas and land abutting existing water supply areas;
- Lands needed to complete the acquisition of parcels at the Lumbert Mill conservation area, so that the site may be readily enjoyed by the public;
- Maximum priority parcels identified by the Priority Ponds Project;
- Rights of first refusal on Chapter 61 properties;
- Conservation restrictions that are not perpetual;
- High priority parcels listed by the Town Land Bank Committee (now CPA), the Barnstable Land Trust, and other conservation groups.
- **1B.** The town should continue to seek funds to promote the *acquisition* of prime open space.
- 1C. The town should encourage the use of creative regulatory and non-regulatory land protection tools such as conservation restrictions, tax abatements, gifts and zoning measures.

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- 1D. All new residential subdivisions greater than four (4) acres and located within significant resource areas should be designated as Open Space Residential Development in which 50 to 60 percent of the total upland area should be reserved as permanent open space.
- 1E. Regulations and Design Guidelines should be developed for commercial and industrial subdivisions that incorporate the concept of 40 percent of all land as open space, shared parking, entrances and landscape amenities.

GOAL 2: Protect Public Access to, Use and Environmental Health of Barnstable's Surface Water Resources.

OBJECTIVES:

- 2A. All construction and land division along the coastlines shall provide at a minimum the public benefit of view easements to the coast and to tidal lands. All commercial development along the coastline shall provide for public access along the water's edge where possible and practical.
- **2B.** All development, redevelopment and building with possible access to the water's edge should plan for public access.
- 2C. Harbor (and other water-based resource) Management Plans should be developed to ensure a balance between human use and enjoyment and natural resource protection.
- 2D. Regulations governing development within the 100 year coastal flood plain and buffers to other wetland resource areas should be reviewed and strengthened if necessary.
- 2E. Improve pedestrian access, vehicular transportation and parking near the shore.

GOAL 3: Protect the Town's Present and Future Groundwater Supply.

OBJECTIVES:

3A. Identify and protect future wellfield areas through zoning or acquisition.

3B. Improve waste disposal methods and systems.

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GOAL 4: Identify and Coordinate Open Space and Recreation Needs to Benefit Each Simultaneously.

OBJECTIVES:

4A. Update and implement the Town of Barnstable Open Space and Recreation Plan every five years as required.

GOAL 5: Accomplish Open Space and Recreation Goals, Objectives and Actions Expeditiously and at Minimum Expense.

OBJECTIVES:

- 5A. Coordinate cooperative meetings between various groups involved in Barnstable's open space and recreation planning to assign implementation of action items.
- GOAL 6. Protect and Enhance Barnstable's Unique and Fragile Natural and Cultural Resources including Scenic Beauty, Historic Areas and Unique Habitats.

OBJECTIVES:

- 6A. Existing and proposed development should strive to protect significant natural and fragile areas including critical wildlife and plant habitat, water resources, historic, cultural and archaeological areas, significant scenic roads and views, unfragmented forest and significant landforms.
- GOAL 7: Acquire, Maintain and Expand Recreational Opportunities throughout Barnstable and Ensure that the Needs of Every User Group and Village are Met Appropriately.

OBJECTIVES:

7A. Dedicate appropriate non-sensitive areas of town-owned open space to active recreational use and encourage retention of existing private recreational facilities, particularly equestrian riding areas, Chapter 61B properties and private school fields. Appropriate non-sensitive areas that may be considered should be limited to

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- 7B. Focus more intently on improving the availability of and access to recreational resources.
- 7C. Public recreational facilities and open space areas shall be designed for year-round and be multi-use where appropriate.
- 7D. The town shall undertake assessment of all existing recreational facilities and shall develop and fund a program for repairs, improvements and rehabilitation of the facilities to meet today's needs and standards. All renewal of facilities shall strive to meet national standards.
- 7E. The Recreation Division should undertake a thorough internal needs assessment including plans to fulfill those identified needs.
- **7F.** The Recreation Division, in concert with other town agencies, shall strive to educate the public on the availability of programs, facilities, and services, and to promote public use.
- 7G. Open space and recreational facilities shall be made accessible to handicapped persons and program opportunities shall be available to special populations when possible and practical.
- 7H. Town agencies should work cooperatively to ensure that public facilities meet the needs of local and community groups and facilitate nonprofit and social gatherings and events.
- 7I. In all revenue-producing programs and facilities, assurances must be obtained that the opportunity for an individual or family to participate is not closed due to fees or expenses.
- GOAL 8: Design and Develop Aesthetically Pleasing and Pedestrian-Friendly Open Space and Recreation Areas to Enhance Barnstable's Overall Appeal.

OBJECTIVES:

8A. Develop Streetscape/Site Design Plans that promote enhanced visual appeal, improved pedestrian circulation and economic viability of developed village areas, ports, beaches, and other major destinations.

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GOAL 9: All Public Properties of the Town Should be Designed and Managed for their Intended Public Benefit and to Protect Open Space and Recreational Resources.

OBJECTIVES:

9A. Existing town-owned properties shall be managed and maintained to ensure appropriate use and public benefit.

GOAL 10: Protect and Increase Wildlife Population and Habitats.

OBJECTIVES:

10A. Identify and preserve wildlife corridors that foster habitat diversity and links to known wildlife resource areas.

The future of Barnstable's natural and cultural landscape, now more than ever before, is dependent on a collaborative and timely effort to define, plan, and then implement our collective vision for the future. The achievement of each of the goals and objectives contained in this Plan is possible within the next five years provide consistent and concerted effort is expended by each of the parties charged with their implementation and adequate funding is provided. By doing so together we can protect and continue to create anew Barnstable's natural and cultural environment, which continues to enchant us with its richness, mystery and beauty.

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SECTION 2 INTRODUCTION



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2A. Statement of Purpose

The purpose of this Open Space and Recreation Plan is to provide a framework and guide for responsible conservation and recreation planning in the Town of Barnstable. Major objectives are the conservation of Barnstable's natural resources and the provision of ample public recreational opportunities.

Since the last iteration of this plan in 1997, the town has continued its efforts to acquire, conserve and manage conservation and recreation resources in town. Recent years have seen a slowing in Barnstable's growth rate relative to past growth spurts, allowing the town's leaders and citizens an opportunity to evaluate past attempts at planning the town's growth before the next, inevitable growth spurt. This plan will guide the town to best take advantage of what may be our last opportunity to acquire the remaining significant parcels.

Continued development remains the greatest threat to the town's open space and recreation resources by reducing the amount of available land and also placing more public use pressure on the areas that are available. Open space planning efforts must continue to keep pace with this reality while finding more creative ways to accomplish the same goals. Barnstable's previous open space planning efforts include *A Plan for Open Space: Barnstable, MA* (1973) by the Regional Field Service of the Harvard Graduate School of Design, Department of Landscape Architecture; *Goals and Policies for the Town of Barnstable* (1983) by Lozano-White Associates; *The Town of Barnstable Open Space Plan* (1984; updated 1987 and 1997) by previous town committees; and *Coastal Resources Management Plan: Town of Barnstable* by Camp, Dresser and McKee (1990).

Consistently rapid development during the last several decades has cleared and segmented thousands of acres, leaving only a few unbroken areas. This has resulted in the creation of an increasingly suburban landscape, increasing highway strip development, groundwater pollution, and the destruction of unique and irreplaceable resources such as shellfish beds.

In spite of this, the town has made great strides in open space acquisition during this time. Major acquisitions include the following:

- The Hovey Property, the first Land Bank acquisition in the town, covering 25 acres and purchased in 1999 for \$965,000;
- The Danforth Property, consisting of the Marstons Mills Airport, covering 217 acres, purchased in 2004 for more than \$11 million;
- The Hyannis Golf Course, covering 125 acres, purchased in 2005 for \$5.5 million.

Since the last iteration of this Plan in 1997, the town has continued its aggressive land acquisition strategy. Using Land Bank funds made available beginning in 1999, the town has

purchased 32 parcels totaling 1,122.41 acres for a total of 38,690,595 (34,471/acre)⁶. A complete listing⁷ of all existing conservation and recreation lands in Barnstable is included in Appendix B, *Town of Barnstable Government and Protected Land*, and further described in Section 5.

Private land purchases have also helped protect undeveloped lands. Since its inception in 1983, the Barnstable Land Trust (formerly the Barnstable Conservation Foundation) has preserved approximately 138 parcels totaling 532 acres⁸ throughout the town, protecting river corridors and wetlands and filling in gaps in the town's green belt. The Mary Barton Land Trust, founded in 1980, has also contributed approximately 19 parcels totaling 152 acres.

These collective conservation efforts have been buoyed over the last decade by such legislative tools as the Cape Cod Land Bank, mentioned above, the Cape Cod Commission Act and most recently the Community Preservation Act (CPA). Yet in spite of increased efforts and success, conservation efforts will always struggle to keep pace with the unceasing development pressure placed on the region, which continues to lure droves of visitors each season. With every passing year, more and more of these visitors have become permanent residents, and the town's carrying capacity is being pressed to its limit. Recognizing this, the town's current draft of the Local Comprehensive Plan has established Strategy 6.2.1.4 Open Space Carrying Capacity, which states "The ability for land to support human use is limited by the land's natural and environmental limitations, balanced with the degree of development and control. The capacity of open space must be appeased and mitigation undertaken to ensure that human use does not impact the resource or degrade the human experience. Critical areas of concern include the Ocean Beaches, Sandy Neck and the Great Marshes, all the Great Ponds, Herring Runs and wetlands."⁹ This must be taken into consideration not only with economic and business development but with the development and use of conservation and recreation resources as well.

While some of the adverse impacts of increased development and more intense land use are obvious, it will probably be years before the full impact of the last 35 years of growth can be seen. Conservation and recreation planning in the 21st century will need to respond appropriately and creatively to the changing natural and cultural landscape. In addition to continued efforts to preserve the remaining open space, many towns in the region, including Barnstable, are rewriting the rulebook for conservation by razing abandoned buildings, reclaiming and cleaning up contaminated sites and reusing the land for conservation and recreation related purposes. Recent trends toward reclaiming developed lands known as "undevelopment" and the greening of contaminated sites, known as "Brownfield redevelopment," will need to continue and be built upon.

⁹ Town of Barnstable Local Comprehensive Plan Draft, Section 6.0 Open Space and Recreation, 2005.

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⁶ See complete list provided by Lindsey Counsell, Chairman of Barnstable Land Bank Committee, in Section 5.

⁷ Town of Barnstable Assessors Office, 2004 Figures sent via email correspondence.

⁸ The Compact of Cape Cod Conservation Trusts, Inc. 2003 figures sent via email correspondence, December 28, 2004.

A recent publication produced by The Compact of Cape Cod Conservation Trusts Inc., entitled Take Back the Cape – Discovering Opportunities for Undevelopment, defines undevelopment as "the removal of existing manmade structures and influence upon the land followed by site restoration to a more natural state".¹⁰ The Barnstable Land Trust has completed two successful Undevelopment projects, one at East Bay Road and Parker Pond (Osterville) and the other at Cobb Boat House (Barnstable Village). Detailed descriptions of these projects are included in Appendix D, Undevelopment Examples in Barnstable. Similarly, the town has completed six building removal projects on property purchased with Land Bank funds. These included two former gas stations and four residential properties that contained six dwellings, various out buildings and commercial greenhouses.¹¹

Such creative approaches to land protection will enable conservation and recreation resources to keep pace with the increased demands and impacts of development while simultaneously improving the quality of life.

2B. **Planning Process and Public Participation**

Under the direction of the Town Council, the Town Manager was asked to secure additional funding for Open Space purchases in early 2004. In consultation with the Open Space Committee, several sources were identified. In order to be eligible for the variety of funds available through the State Division of Conservation Services a new Open Space and Recreation Plan was needed

During the fall of 2004, the town's Conservation and Recreation Divisions began to address the need for a revised Open Space and Recreation Plan that would reflect the town's evolving land Rob Gatewood, Conservation Administrator, retained David Hendrycks, an use identity. Americorps Cape Cod member to assist the town in preparing the revised Plan and contracted independent planning consultant Jeff Thibodeau to help focus these efforts. During the initial stages of this process, it became apparent that a more concerted effort would be necessary to complete the revision in time to be eligible for the state's next round of grants. Thus, the town decided to seek professional assistance to prepare the entire Plan and issued a Request for Proposals from eligible firms and individuals in accordance with the state Uniform Procurement Act (MGL c.30B). The contract was awarded to Centerline Studios Inc., Landscape Architecture and Planning and a kickoff meeting was held in December 2004.

Individuals present at the kickoff meeting were:

David Curley, Recreation Division Director

Prepared By:

2005 Open Space and Recreation Plan Town of Barnstable, Massachusetts November 15, 2005

Prepared for:

¹⁰ The Compact of Cape Cod Conservation Trusts, Inc., Take Back the Cape - Discovering Opportunities for Undevelopment, Sunderland Printing, Hyannis, MA., 2001.

¹¹ According to Land Bank Committee (now defunct), 2004.

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- Rob Gatewood, Conservation Administrator
- David Hendrycks, Americorps Cape Cod Member
- Jennifer Malila, Centerline Studios Inc. Principal
- John Parker, Conservation Commission Vice President
- Jeff Thibodeau, Centerline Studios Inc. Principal

During this meeting, the workplan was refined, a loose working group was defined, initial tasks were assigned, and a schedule was established. It was decided that much of the information necessary for the Plan update existed and could be used as a basis for the update. Foremost among these were the town's Local Comprehensive Plan (LCP), which was in draft form at that time, and extant maps produced by the Town's Geographic Information Systems (GIS) Department for other projects. Using these resources and the 1997 Open Space and Recreation Plan update as a springboard, work on the new Plan was begun.

To facilitate the process, an ad hoc Barnstable Open Space and Recreation Plan Workgroup was formed composed of the following groups and individuals:

- Tom Broadrick, Barnstable Director of Planning, Zoning, and Historic Preservation
- Lindsey Counsell, Open Space Committee Chairman, Land Bank Committee Chairman (both now inactive) and Founder of Three Bays Preservation Trust Inc., and Town of Barnstable Director of Environmental Services
- David Curley, Town of Barnstable Recreation Division Director
- Rob Gatewood, Town of Barnstable Conservation Administrator
- David Hendrycks, Americorps Cape Cod Member
- Patti Machado, Town of Barnstable Assistant Recreation Division Director
- John Parker, Town of Barnstable Conservation Commission Vice President
- Dan St, Pierre, Town of Barnstable Geographic Information Systems (GIS) Department
- Jeff Thibodeau, Centerline Studios Inc. Principal

In addition, the town's Disabilities Commission, represented by Al Melcher, Chairman of the Disabilities Committee, and the town's Human Resources Director, William Cole, were called upon to help assess and inventory handicapped accessibility at town open space and recreation facilities.

During the winter and spring of 2004-05, the group met approximately twice a month to assign tasks and review drafts. Information was collected by all members, some of whom contributed

Prepared By:

CENTERLINE STUDIOS INC. Landscape Architecture and Planning to writing sections of the Plan in their areas of expertise. The overall Plan was compiled, formatted and written by Jeff Thibodeau and the Americorps Cape Cod member, David Hendrycks under the direction of this workgroup.

In March 2005, a first draft of Plan Section one through five was completed and submitted to the Conservation and Recreation Divisions, as well as others, for review. In April 2005 the second half of the draft Plan was submitted and comments received. The edited Final Draft of the entire Plan, completed in early May 2005, was submitted to the Town Manager, Town Council, Town Planning Board, and County Commission and others (see distribution list in Section 10) for letters of review. The edited Final Plan was then submitted to the Massachusetts Division of Conservation Services for acceptance.

The Executive Office of Environmental Affairs' *Open Space and Recreation Plan Requirements* and the *Open Space Planner's Workbook - Companion to the 1990 Open Space and Recreation Plan Requirements*, were used as guides for preparing the Plan. Barnstable's 1997 Open Space and Recreation Plan and draft Local Comprehensive Plan (LCP) provided much of the information contained in this plan and are consistent with it. Whenever possible and prudent, existing documents and records were incorporated directly into the revised Plan.

Public input was sought through two surveys, the 2004 and 2005 Barnstable Citizen Surveys, both conducted as part of the Bridgewater State College Institute for Regional Development's annual town survey. Surveys are collected through a random sample of Barnstable's adult residents. The 2004 Citizen Survey was released in February 2004. A total of 418 interviews were conducted with Barnstable residents over the age of 18. The margin of error is approximately 4.8 percent at the 95 percent confidence level. The survey contains questions regarding various topics relevant to town planning, including open space and recreation. The 2005 Open Space and Recreation Plan Workgroup developed and submitted a total of 42 questions (listed below) to the Town Manager's Office for inclusion in the 2005 Citizen Survey. Due to space considerations, the Town Manager's office was able to include three of these questions in the final survey form. Due to time constraints, results of the 2005 survey are not included in this Plan.

2005 Open Space and Recreation Plan Update Survey Questions Submitted by the Open Space and Recreation Plan Workgroup

- A. Conservation Related Survey Questions In Order of Priority
- 1. Please rank the following criteria when considering open space land acquisitions with **1 being most important and 8 being least important**:
 - Biodiversity preservation/endangered and threatened species protection
- Aesthetics/scenic vistas
- Land protected from development in perpetuity
- Drinking water preservation

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Linking open space parcels together, thereby increasing open tracts of land to give the Town
more of a rural feel Undevelopment of currently developed land(s) for open space use
Possible active recreational use in the future
Other (please specify)
2. Are you aware that the Land Bank (and its funds) have been replaced by the recently voter passed Community Preservation Act (CPA)? (check one) Yes
No
 3. Are you aware that for the last five years the Land Bank was the <i>sole</i> land acquisition device for the Town to purchase open space conservation and recreation purposes? (check one) Yes No
 5. With the passage of the Community Preservation Act (CPA), which allows its generated funds to be used to purchase open space, affordable housing and/or historic preservation lands, in order of priority how should CPA revenue be spent? (rank 1, most important, to 3, least important) Open space Affordable housing Historical preservation
 6. What <i>Town</i> actions do you favor to preserve open space? (please rank 1, most important, through 6, least important) Combination of public & private purchase Town purchase of land Mandatory dedication of open space by developers Purchase and acquisition of conservation restrictions Zoning for open space conservation
Other (please specify)
7. The revenue generated from recreation area usage fees (e.g.; fees for beach access) goes to the Town's general fund and not necessarily back to maintenance of those recreational lands. How much would you support the idea of the generated revenue going DIRECTLY back to those recreation lands for facility maintenance as well as recreation land acquisition? (check one) Much
Much Some
Little
NA/DK
 8. Would you rather see open space lands be purchased in urban, suburban or rural areas? (rank 1, most important, to 3, least important) Urban
Suburban

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	_Rural
9.	Please rank on a scale of 1 (most important) to 11 (least important) the following had
	that are in most need of protection:
	_ Freshwater wetlands
	_Salt marshes
	Forested lands
	Sand dunes/beach barriers
	Ponds/lakes
	Bogs and agricultural lands
	Ocean/open water
	Fishing, shell fishing, herring runs
	Open fields/grasslands
	Beaches
	Other (please specify)
10.	Which of these conservation lands are you the most familiar with? Rank on the follo
	scale: 1 (very familiar), 2 (somewhat familiar), 3 (unfamiliar)
	_Bridge Creek
	Crocker Neck
	Danforth Airfield
	Long Pond
	Old Jail Lane
	Santuit Pond Preserve
	West Barnstable
	Whelan
	Other (please specify)
11.	To preserve open space in Town, would you do any of the following? (rank the follo
	from 1, most likely, to 7, least likely)
	Contribute some land to the Town, the state or a land trust
	Donate money to buy land
	Rewrite your deed to limit future development of your land (conservation restriction)
	Sell land to the Town at a 'bargain price'
	Sell some land to the Town at fair market value
	Vote for a Town-supported land acquisition program
	Other (please specify)
10	
12.	How well has the Town used its Land Bank funds to purchase open space parcels? (c
	one)
	Excellent
	Good
	Average
	_Below average
	Poor
	How accessible do you feel are <i>conservation</i> lands to the public <i>at-large</i> ? (check one)

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	Very
	Somewhat
	Not
	DK
14	How accessible do you feel are <i>conservation</i> lands to <i>the handicapped</i> ? (check one)
1 1.	Very
	Somewhat
	Not
	DK
	DK
15	Do you feel you are getting sufficient information about the Town's conservation resource
15.	(check one)
	Yes
	Somewhat
	No
16.	How do you receive your news and information concerning conservation resources (plea rank 1, most often, through 8, least often)?
	Newspaper(s)
	Town's Web site
	Other internet source(s)
	Radio
	Word-of-mouth
	Natural Resources Department/informational pamphlets
	Conservation Department/informational pamphlets
	Other (please specify)
17.	Are open space and conservation needs being met for the following age groups (y
	newhat, no, NA/DK)?
	and-younger
18-	55
55-	older
55	
B.	Recreation Related Survey Questions In Order of Priority
1.	In planning for open space and recreation, what types of recreational use should the Toy
	consider first? Rank the following types 1 through 11, with 1 being "most important" a
	11 being "least important."
	Public boating & fishing
	Beach access & amenities
	Golf
	Active recreation (i.e. baseball, basketball, playgrounds, soccer, tennis, etc)
	Bicycling/mountain biking
	Passive recreation (i.e. hiking/walking, bird watching, etc)
	Hunting
	Extreme sports (i.e. motocross, windsurfing, kite surfing, etc)

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	Urban parks (i.e. pocket parks, neighborhood parks, civic green spaces, etc) Other (please specify)
2.	applicable/don't know)?
18.	and-younger
18-	-55
22.	older
	Are active recreation needs being met for the following age groups (yes, somewhat, no applicable/don't know)? and-younger
18.	55
55-	older
	Do you think the Town should charge fees for the use or recreational facilities to be use facility maintenance and acquisition? (check one) Yes
	_No
	Yes, but without fees
5.	Do you think that money generated through usage fees should be used exclusively for facility being paid for or should this money be used wherever it is needed most? Exclusively for facility being used and paid for Wherever it is needed most Don't know/no preference
6.	Should recreation areas be open to both residents and non-residents? (check one) Residents only
	_Residents and non-residents
7.	If fees are charged, should both residents and non-residents pay? (check one) _ Residents and non-residents should pay _ Only non-residents should pay _ Nobody should pay fees
8.	Do you feel an 'adopt-a-field' program should be used to help maintain facilities? An 'a a-field' program allows private individuals or groups to take responsibility for a fact maintenance and funding. (check one) Yes
	_No _NA/DK
9.	If such a program was implemented, should the adopting group(s) have rights to privat of these facilities? (check one)

YK.

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2	1/11

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V
<u>Yes</u>
No
NA/DK
10. Dote the following courses of represention facility funding in order of priority using a coole
10. Rate the following sources of recreation facility funding in order of priority using a scale
ranging from 1, most important to 4, least important
State/federal funding
Grants
Increase user fees
Other (please specify)
11. What specific recreation program or service would you like to see offered? (please specify)
12. Which of these <i>recreation</i> lands are you the most familiar with? Rank on the following
scale: 1 (very familiar), 2 (somewhat familiar), 3 (unfamiliar)
Lopes Field
Andrew's Property
Veterans Park Beach
Centerville Community Center
Burgess Park
Child's Property
Ellen McBarron Recreational Facility
Barnstable Hallow
Other (please specify)
Outer (preuse speeny)
13. Do you feel you are getting sufficient information about the Town's recreation resources? (check one)
Yes
Somewhat
No
—
14. How do you receive your news and information concerning recreation resources (please rank 1, most often, through 8, least often)?
Newspaper(s)
Town's Web site
Other internet source(s)
Radio
Word-of-mouth
Recreation Department/informational pamphlets/signs
Natural Resources Department/informational pamphlets/signs
Other (please specify)
15. How do you rate the quality of the following <i>active</i> recreational facilities on the following
scale?
1-Excellent 2-Good 3-Average 4-Below Average 5-Poor

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	Ballparks (including little league, soccer, etc)
	Parks
	Golf Courses
	Hunting Areas
	Extreme sports areas (e.g.; motocross, windsurfing, kite surfing, skateboarding, etc.)
	Playgrounds Mountain/paved biking trails
	Public boating & fishing
	Other (please specify)
(Other (prease specify)
	How do you rate the quality of the following <i>passive</i> recreational facilities on the following scale?
	cellent 2-Good 3-Average 4-Below Average 5-Poor
	Walking/hiking trails
	Bird watching/nature enjoyment
	Beach access & amenities
(Other (please specify)
r	What should the Town do to increase accessibility and public enjoyment of <i>active</i> recreational facilities? (Please rank the following with 1 being most important, 5 being
	east important)
	More/better public parking at facilities
	More/better public transportation to/from facilities
	Improve existing facilities
	Acquire/build new facilities
(Other (please specify)
	What should the Town do to increase accessibility and public enjoyment of <i>passive</i> recreational facilities? (Please rank the following with 1 being most important, 5 being
	east important)
	More/better public parking at facilities
	More/better public transportation to/from facilities
	Improve existing facilities
	Acquire/build new facilities
(Other (please specify)
19. F	How familiar are you with the Cape Cod Pathways Program trail system? (check one)
	Very familiar
	Somewhat familiar
	Unfamiliar
s i	How much would you support the creation/designation of an All-terrain vehicle (ATV)- specific trail/area in order to curb the encroachment of ATVs on existing recreational lands, .e. mountain bike and walking trails? There are currently no trails/areas designated exclusively for ATVs (check one) Much support
	WHICH SUDDOLL
1	Some support

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No support NA/DK
 21. Where should such an ATV area be located? (check one) In an existing recreation area In a newly acquired, previously unused recreation area Other
 22. Should there be a separate recreation area designated solely for dog/pet walking? (check one) Yes No NA/DK
 23. Where should such a dog/pet area be located? (check one) In an existing recreation area In a newly acquired, previously unused recreation area
 24. How accessible are recreation lands (i.e. playgrounds, ball fields, beaches, etc) to the <i>public at-large</i>? (check one) Very Somewhat Not accessible Don't know (DK)
 25. How accessible are recreation lands (i.e. walking trails, bird watching, etc) to the <i>disabled</i>? (check one) Very Somewhat Not DK
 26. Should <i>active recreation</i> lands be open to Town residents and non-residents? (check one) Yes No NA/DK

Although very few of the above questions were included in the final survey form, these questions should be taken into account during future open space and recreation planning efforts.

The 2004 Barnstable Citizen Survey returned the following results:

• An overwhelming majority of respondents (77.8 percent) report that preserving open space to protect the environment, provide recreational opportunities and slow development is "very important".

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- Twenty percent of the respondents were attracted to Barnstable for its accessibility to jobs; 17.8 percent were attracted by the location on Cape Cod and 10.5 percent of the respondents moved to Barnstable for the quality and price of housing; 8.5 percent moved for the appearance/character of the town.
- 96.5 percent of the respondents in the most affluent village of Osterville rated the quality of Barnstable as excellent or good; while only 70.2 percent of respondents from Hyannis rated the quality of Barnstable as excellent or good.
- 27.6 percent of the respondents liked beaches and the ocean the most; slightly more than 25 percent liked the location most.
- Traffic/street maintenance (27.1 percent) was most commonly cited by residents as the worst part about living in Barnstable; 20.2 percent sited rapid growth as what they liked least.
- 75.9 percent of respondents rated the town's recreation services as good or excellent.
- 80.8 percent of respondents rated the town's conservation services as good or excellent.
- Only 5.8 percent of respondents indicated that they would specifically like to see recreation services improved.
- The majority of respondents (75.5 percent) were "very supportive" or "somewhat supportive" of continuing the land bank program, recognizing that this may require a small tax surcharge.
- An overwhelming majority of respondents (84.9 percent) reported that increased traffic and congestion has had "much" or "some impact" on their regular shopping trips and other travel in Barnstable.
- The majority of respondents (75.5 percent) were in favor of a plan to build sewers in environmentally sensitive areas of town. Respondents over age 71 are statistically more likely (79.5 percent) to favor a plan to build sewers in Barnstable, compared to younger respondents (54.8 percent) between ages 26-35.
- 26.9 percent of the respondents felt that over-development, growth and population are the most serious problems facing Barnstable; following this, nearly 24 percent of the respondents felt that education is the most serious issue facing Barnstable; 10.9 percent felt that traffic and roads are the most serious problems facing Barnstable.
- More than half of the respondents (54.4 percent) described Barnstable as "a great community;" 10.7 percent described the town as "struggling".
- Of the 137 respondents who felt the image of Barnstable has declined, 20 thought the decline is due to over development and 19 to growth/population.

Survey results and interviews with the Workgroup and town officials were used to develop the broad goals outlined in Section 6.

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SECTION 3 COMMUNITY SETTING



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A. Regional Context

Introduction¹²

Barnstable is a "Mid-Cape" town, centrally located on the peninsula known as Cape Cod. Located approximately 70 miles from Boston and 250 miles from New York City, Barnstable is situated 15 miles from the Cape Cod Canal, the westernmost boundary of Cape Cod.

At 60.17 square miles, Barnstable is the largest town on the Cape, and is the third largest in the Commonwealth. Barnstable is bounded by the Towns of Mashpee and Sandwich to the west, Cape Cod Bay to the north, the Town of Yarmouth to the east, and Nantucket Sound to the south. Barnstable's diversity of natural resources, proximity to Boston and other population centers of the Northeast, and location near the center of Cape Cod have fostered its development as a major tourist destination, making it a popular location for residential and commercial development, leading to its evolution as the commercial and service "hub" of the Cape.

The Town of Barnstable is divided into seven village areas: Hyannis, Centerville, Osterville, Cotuit, Marstons Mills, West Barnstable and Barnstable Village. Each has a dynamic history of development and a unique village character. This report covers the town as a whole, though in some instances, the individual differences between villages are discussed. The town's historic development dates back over 350 years, during which dramatic changes have occurred.

Hyannis has the largest population and the most intense commercial activity of the seven villages and serves as the commercial and transportation center of the Cape and Islands region. It contains major shopping centers, the Barnstable Municipal Airport, Cape Cod Hospital, and Hyannis Harbor, the terminus of boat traffic to the islands of Nantucket and Martha's Vineyard. The political seat of Barnstable County's 15 towns is located in Barnstable village.

Formation of the Landscape

The configuration and natural conditions of the town originated with the progression and retreat of ice during the Wisconsin glacial stage (14,000 years ago) of the last North American Ice Age. As the glacial sheet withdrew, its meltwater deposited the sediments that make up the Sandwich Moraine, a high ridge line of boulders and stones that today forms the geological backbone of the Cape and provides the highest topography in Barnstable. South of this moraine is the outwash plain, a lower and more level area between the moraine and the waters of Nantucket Sound. To the north of the moraine, the landscape was created by ice contact deposits, or segments of materials left from the glacier retreat. Over this landscape, the ice sheet also left pieces of itself that became imbedded in the land, leaving "kettlehole" depression as they melted, which later became infiltrated with groundwater to produce the lakes and ponds that grace the region.

Evolution of the Landscape

12 Much information in this Section is taken verbatim from the Town's Local Comprehensive Plan.

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CENTERLINE STUDIOS INC. Landscape Architecture This geological history provided the canvas that is constantly reworked by the effects of water and wind to shape the mutable edges of this ever-changing place. The post-glacial landscape evolved as all ecosystems do, through the process of natural succession. First, pioneer plant species took hold and helped to stabilize the shifting sands marshlands and tidal creeks. As the soil became enriched and new habitats were created in the shady understory of these early plant communities, secondary successional species began to infiltrate and then to dominate. Finally, the ecosystem developed into more complex climax plant communities including hardwood species such as beech, oak, birch, ash, sweet gum, and others. The result was a richly diverse ecosystem composed of various species and plant communities inhabited by an array of wildlife.

Human Development

It was on this landscape setting that humans arrived. First to come were the Native American game hunters, followed by the settling tribes and European colonists. The Native Americans lived sustainably off the natural bounty provided by the sea and land, leaving only scattered traces of their existence buried along the shorelines and inland waterways. The European settlers that followed, however, impacted the landscape much more dramatically, most notably through their rapid deforestation of climax forest communities for field cultivation, fuel and building materials. In the process, the land was laid barren, subject again to the forces of nature and culture. The European settlers were efficient consumers of natural resources, using sand for glass, clay for bricks, bog areas for cultivating cranberries, woods and field for hunting, and the sea for salt, shell fish, finfish and whales.

The location of the peninsula made it a natural port for shipping and seafaring. During the 19th and 20th centuries, the growth of the Cape's ports and agriculture spurred the need for rail transit, and correspondingly opened the Cape to tourism and second "seasonal" homes. As seaport importance declined, the vacation and recreation opportunities of the Cape increased in economic importance. Barnstable, especially Hyannis, became the focal point for commercial, residential and industrial growth.

Cape Cod flourished as a seacoast resort and retirement community. Tourism, combined with the industrial and commercial boom of the 1980s, dramatically impacted Barnstable. Subdivisions were continuously carved from the "wood lots", construction reached all-time highs, land values skyrocketed and both year-round and seasonal populations increased. Today Cape Cod is the destination of millions of travelers each year. With continued development, the importance of open space preservation for its natural beauty, recreational use, wildlife habitat and groundwater protection has increased. It has become very apparent that the amount of this land and its resources are indeed finite and that committed efforts and funding are necessary to prevent further degradation of the town's natural resources.

Regional Center

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CENTERLINE STUDIOS INC. Landscape Architecture and Planning The Town of Barnstable, especially the village area of Hyannis, has emerged as the economic, retail, institutional and transportation center for all of Cape Cod. While the other six villages (Centerville, Osterville, Cotuit, Marstons Mills, Barnstable Village and West Barnstable) have retained their historic charm, they have also been greatly affected by recent development.

Government Center

Barnstable Village has always been the County Seat of Government, and hosts the Cape's judicial court system. The County Complex, located in the village center along historic Route 6A, serves all 15 Cape Cod towns. Hyannis, being the population center, hosts federal and state government services including the Department of Employment and Training and the Registry of Motor Vehicles.

Transportation Center

Barnstable Municipal Airport, located in Hyannis, is the region's busiest airport, serving as the Cape's commercial and vacation air link to Boston, New York City, and the islands of Martha's Vineyard and Nantucket. The Steamship Authority and Hy-Line boat services in Hyannis Harbor link the Cape with the islands of Nantucket and Martha's Vineyard, and serve as a conduit for commuters, tourists and freight.

Institutional Center

Cape Cod Hospital, located in Hyannis, is the largest hospital on Cape Cod. Cape Cod Community College, located in West Barnstable, serves the higher educational needs of the Cape and provides links to the educational and research institutions of greater Boston.

Cultural Center

Cultural pursuits for the entire Cape flourish in Barnstable through the Cape Cod Performing Arts Center, the performing stage of the Cape Cod Symphony and the home of the Cape Cod Ballet Society.

Social Service Center

The Cape Cod YMCA facilities are located adjacent to the Performing Arts Center and across from the college. Many of Cape Cod's human service are headquartered in Hyannis, including the Red Cross, Big Brothers/Big Sisters, the Salvation Army, and Cape and Island Legal Services.

Regionally Shared Natural Resources

Sole Source Aquifer: Cape Cod's sole source water aquifer is the only local source of potable water for Cape Cod towns, with precipitation the only means of natural recharge. The aquifer stretches underground for the entire length of the Cape, ignoring town lines and other manmade

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boundaries, obeying only hydrogeologic principles. The aquifer is a dynamic system in constant change and intimately interacts with human land uses. It is unarguably the most critical natural resource for every town in the region. Because whatever occurs in one part of the aquifer eventually affects the entire system, its protection is a regional responsibility that requires collaborative management efforts. As awareness of the aquifer's importance grew, it became apparent that open lands could protect the quantity and quality of the groundwater in the region. The interior long narrow "wood lots" which provided free firewood for early residents grew greatly in monetary, resource and esthetic value.

Wetlands, once considered wasteland to be filled in and built upon, are today recognized for their ability to hold and purify surface water runoff, as well as for their other natural resource values. Coastal wetlands, acting in concert with barrier beaches, provide protection against the violent surge of the sea; the beaches and marshes absorb the energy of the wave action, while the wetlands provide a holding area for the tidal surges. They are the most biologically productive ecosystem in the region, providing the nursery grounds for marine species and a vital food source for marine life, animals and birds. The days of filling wetlands are past, though, as the town moves towards buildout and more marginal parcels are being developed, there are some who fear that without further layers of legal protection, filling wetlands may once again become reality. Providing this second layer of protection through the use of conservation restrictions and fee ownership should be one of the thrusts for 21st century open space and recreation planning in Barnstable.

As development continued, a new and strong realization grew that open lands, which provide for public enjoyment, were being divided and subsequently limited in both access and use. As a community, the town was destroying the very scenic attraction the Cape has always offered. Grassy fields and vegetated forests continued to be divided and developed for homes, roads and commercial establishments. The quintessential "Cape Cod landscape," which originally attracted that development, was quickly vanishing. Priorities were set and the public responded during the 1980s with a conscious effort to conserve, preserve, protect and acquire land in its natural open state.

Coastline

All of the Cape towns share a dynamic coastline with access either to Cape Cod Bay, Nantucket Sound or the Atlantic Ocean. The nearby Stellwagen Bank and its overlying waters are a designated federal Marine Sanctuary shared not only by the towns of Cape Cod but by the nation and the world. The dynamics of littoral drift, in response to the net effects of longshore currents, alter the sands, building new land in some cases and taking it away in others.

Barnstable also shares some of its harbors with neighboring towns: Popponesset Bay with Mashpee, Hyannis Harbor and Lewis Bay with Yarmouth, and Barnstable Harbor and its Great Marshes with Yarmouth and Sandwich.

Regionally Shared Cultural Resources & Problems:

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As a 250 square mile peninsula, all Cape Cod towns share in its regional cultural assets and liabilities. Construction and tourism, the major sources of employment, are also the major impacts on the economy and land use of the Cape and Barnstable. Recreational areas, such as beaches, trails and lodging facilities, are regionally shared. Most tourists visit several towns, creating Cape-wide problems in traffic circulation.

As the Cape has grown in popularity as a vacation and retirement area, permanent population growth has impacted all of the Cape's towns and their natural resources. Rapid development has changed the character of the Cape. The demand for clean drinking water may someday surpass supply. Disposal of waste outweighs the land's ability to absorb the impact and cleanse itself and most towns on Cape currently ship their trash off-Cape, having closed their landfills

Country roads have been widened and strip commercial development has proliferated, particularly in Barnstable along Route 28 and 132 and their arterial roads. Historic structures have been demolished or "modernized" at an alarming rate. In 1973 the state created the Old King's Highway Regional Historic District along Route 6A on the north side of Cape Cod . For the Town of Barnstable, this designation has meant the preservation of character for most of Barnstable village and West Barnstable and an accompanying increase in historic tourism. The south side of the town has been less fortunate.

B. History of the Community

Archeological sites scattered throughout the town indicate that Barnstable has been inhabited since the end of the Ice Age. From bands of big game hunters to the Wampanoag tribe to European settlers, humans have lived on the sandy shores and in the woodlands of the town for more than 10,000 years.

The first European settlement took place at what is now Barnstable Village in the late 1630s, and the town was formally established in 1639. The importance of Barnstable as a regional administrative center was established in 1685 with the creation of Barnstable County and the designation of present Route 6A as the county road.

Pockets of 17th and 18th century agricultural settlement were concentrated on the north side of town. Limited industrial development during this period, consisting of grist and fulling mills, occurred in Barnstable Village, West Barnstable and Marstons Mills. In the early 19th century, prosperity from fishing, salt-making, ship-building and shipping stimulated south-side development in Cotuit, Osterville, Centerville and especially Hyannis with its deep water port. Mid-19th century rail connections served the growing north-side villages of West Barnstable and Barnstable Village, while the southern branch to Hyannis assured its subsequent growth as the primary local center, and as a south shore port of regional importance.

By the turn of the 20th century development of the south-side coast intensified with the growing popularity of seaside resorts. Concentrated summer communities were established at Hyannis Port, Craigville, Wianno and, later, Osterville's Grand Island (Oyster Harbors). The resort boom,

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	November 15, 2005

coupled with the continued expansion of Hyannis as a regional commercial center, was furthered by the establishment of Route 28 as a primary east-west automobile corridor in the 20th century. Areas of concentrated summer development remain in Hyannis Port, Wianno and Craigville, while Marstons Mills and West Barnstable best preserve the town's early agricultural character, though glimpses of that heritage are few and far between today and the town exhibits a more suburban residential look.

Intensive post-war development of Barnstable has continued, stimulated by completion of the high-speed Route 6 (Mid-Cape Highway) corridor and expansion of a regional shopping mall and commercial centers on Route 132 in Hyannis. Widespread suburban growth, including tract developments and condominium communities, has been intense in the last three decades. This growth has encroached upon the traditional historic landscape, which is characterized by six dense and distinct village settlements, along with the scattered pastoral development of Marstons Mills, widely separated by interceding rural and forested lands.

C. Population Characteristics¹³

Population in Barnstable and throughout Cape Cod has been steadily increasing over the last several decades. Table 1 *Barnstable and Cape Cod Population Change 1980-2000*, shows that between 1980 and 1990, there was a 32.5 percent increase in Barnstable's population (3.25 percent avg. per year). This was higher than the 26.1 percent increase for the entire region over the same ten year period. By contrast, however, population change for 1990-2000 was only about half of that, at 16.8 percent (1.68 percent avg. per year). This was less than the Cape-wide increase of 20.8 percent for the same period but still relatively high. In the last few years growth has continued but at a relatively slower rate.

Population Change 1980-2000							
				1980-199	90	1990-200	00
Location	1980	1990	2000	Net Change	Percent Change	Net Change	Percent Change
Cape and Islands Region	161,954	204,256	246,737	42,302	26.10%	42,481	20.80%
Barnstable	30,898	40,949	47,821	10,051	32.50%	6,872	16.80%

Table 1Barnstable and Cape Cod Population Change 1980-2000

Source: Massachusetts Department of Employment and Training (DET) Web site (<u>http://www.detma.org/pdf/WIA_Pop.pdf</u>)

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¹³ Much of the information contained in this section is taken verbatim and/or adapted from *Cape Trends*, published by the Cape Cod Commission and found on their Web site at: http://www.capecodcommission.org/data/CapeTrends-Population080504.pdf

Looking even further back at the Cape's growth rate since 1920, one sees that population growth in the region has always been high, ranking in the top three regions across the state. The most notable trend here is the drop in growth since 1990, shown in Table 2, Cape Growth Rate 1920-2001, below.

Years	Rank	Growth	Population	Gain in
		(%)	(in latter year)	Decade/Year
1920–1930	3	21.20	32,305	5,635
1930–1940	1	15.4	37,295	4,990
1940–1950	1	25.5	46,805	9,510
1950–1960	1	50.2	70,286	23,481
1960–1970	1	37.5	96,656	26,370
1970–1980	1	53	147,925	51,269
1980–1990	2	26.1	186,605	38,680
1990–2000	3	19.1	222,230	35,625
2000-2001	3	2.1	226,809	4,579 (year)

Table 2 Cane Growth Rate 1920-2001

(http://www.capecodcommission.org/data/CapeTrends-Population080102.pdf)

Growth rates are affected by many factors including economic trends, employment rates, real estate costs, and the availability of buildable land. Due to the limited area and fragile natural resources here, the town is rapidly approaching its carrying capacity. As the Cape approaches buildout and there is less land available for even higher cost, growth rates may either slow down or possibly speed up as people race to get their share of the pie before there is none left. Recent growth rates suggest a slowing trend, but actual trends will not become clear for several years.

Cape Cod Population Growth 1920-2000 Chart 1



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Recent Growth Rates

According to *Cape Trends*, published regularly by the Cape Cod Commission, Cape population reached 229,545 in 2003, according to the latest estimates from the U.S. Census Bureau, and Cape Cod Commission staff analysis finds that growth levels in five Cape towns during this period ranked in the state's top 35 of its 351 cities and towns.

From 2002 to 2003, Barnstable increased its population by 206 people, ranking 34th in the state but had a surprisingly low population growth rate of only 0.4 percent, ranking 188th in the state. Table 3, *Barnstable Population Estimates 2000-2003*,indicates that Barnstable reached an estimated 48,907 in 2003, up 1,086 or 2.3 percent from the U.S.Census count of 47,821 in 2000, ranking 16th out of the state's 351 communities. This amounts to less than a 1 percent increase each year since 2000.

Population growth trends in Barnstable are clear. Population gains across the entire region have been steady for decades, typically ranking in the top three across the state and as a whole the region is continuing to grow at a rapid rate, with notable reductions in the last three years.

Table 3Barnstable Population Estimates 2000-2003

U.S. Census I	Bureau – Resident	Population E	stimates		
Town	July 2003	July 2002	July 2001	July 2000	U.S. Census Count April 2000
Barnstable	48,907 (+0.4% change)	48,701 (+0.8%)	48,300 (+0.6%)	47,995	47,821

Source: Cape Cod Commission Web site (http://www.capecodcommission.org/data/CapeTrends-Population080504.pdf)

Age Profile¹⁴

U.S. Census 2000 found the Northeast had the highest median age in the nation at 36.8 years. Since 1980 the median age of Barnstable County residents has been the highest of the 14 Massachusetts counties. Since 1990, the Cape's median age increased 5.1 years, from 39.5 to 44.6 in 2000. The statewide median age increased from 33.6 in 1990 to 36.5 in 2000.

Eleven of the Cape's 15 towns comprised more than half the state's top 20 communities in median age. U.S. Census 2000 documented the 35–44 and 45–54 age groups as the Cape's largest with 33,982 and 32,802 residents, respectively, or 15 percent of the Cape's 222,230

¹⁴ Information obtained from *Cape Trends* on Cape Cod Commission Website, town records and U.S. Census.

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residents. The 35–44 age group was also largest in six Cape towns including Barnstable at 7,847 people, or 16.4 percent of the total. This age group also leads the nation.

The Cape 's 45–54 age group registered the highest growth —both numerical and percentage — nearly doubling from 17,573 in 1990 to 32,802 in 2000,a gain of 15,229 or 87 percent. Barnstable also noted its highest change in its 45–54 age group, increasing 81.5 percent since 1990. The 55–59 age group was second in growth rate during that period at 46.2 percent increase with the 85 and over a distant third at 28.6 percent. The age groups of under 5, 20-24 and 25–34 all showed significant decreases in growth.

Clearly population data indicates that middle aged and retired people are the most numerous and fastest growing age groups in Barnstable and that in the coming decades, open space and recreation planning will need to provide ample passive recreational opportunities that will serve this largest segment of the population well into retirement age. Based on *Cape Trends* data, Barnstable residents rank 41st out of 351 towns in the state (ranked by increasing age) with a median age of 42.3 years old.

Table 4 Dal	instable Age i toi	ne (0.5. Censi	us 2000)	
Age Group	1990	2000	% of 2000 Total	% Change since 1990
Under 5	2,671	2,509	5.2	-6.1
5-9 years	2,531	2,994	6.3	18.3
10-14 years	2,244	3,174	6.6	41.4
15-19 years	2,184	2,690	5.6	23.2
20-24 years	2,467	1,832	3.8	-25.7
25-34 years	6,315	4,962	10.4	-21.4
35-44 years	6,234	7,847	16.4	25.9

Table 4Barnstable Age Profile (U.S. Census 2000)

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45-54 years	3,924	7,124	14.9	81.5
55-59 years	1,871	2,736	5.7	46.2
60-64 years	2,223	2,354	4.9	5.9
65-74 years	4,842	5,007	10.5	3.4
75-84 years	2,583	3,486	7.3	35
85 and over	860	1,106	2.3	28.6
TOTALS	40,949	47,821	100	16.8
Median Age	38.1	42.3		11.0

Source: Cape Cod Commission and Metropolitan Area Planning Council (MAPC) Web sites

Income (U.S. Census)

According to the Cape Cod Commission's Cape Trends data, between 1989 and 1999 Barnstable County led the 14 Massachusetts counties both in the rate of median household income growth and in the decline in percent of families with income below poverty level. Cape Cod median household income increased 44.6 percent (from \$31,766 in 1989 to \$45,933 in 1999), compared with statewide growth of 36.7 percent (from \$36,952 in 1989 to \$50,502 in 1999). Income growth over the 1989 –1999 decade was 40.1 percent in the Town of Barnstable. This income growth rate is slightly higher than the statewide average of 36.7 percent, but lower than the Cape average of 44.6 percent. The 1999 median household income in Barnstable was \$46,811 with the per capita income \$25,554 (U.S. Census 2000). Table 5, Median Household Income in Barnstable, shows decennial census figures for the years 1979, 1989 and 1999.

Table 5	Median H	ousehold I	ncome in I	Barnstable			
Median Ho	usehold In	come in Ba	arnstable				
	1979		1989		1999		
Town	Income	County	Income	County	Income	County	Change
		Rank		Rank		Rank	
Barnstable	\$16,312	4	\$33,411	5	\$46,811	5	+40.1%
Sources Cone	Cod Commi	acton Wah at	to				

Source: Cape Cod Commission Web site

(http://www.capecodcommission.org/data/CapeTrends-Population080504.pdf)

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Clearly, Barnstable ranks relatively high in income compared to other Massachusetts towns. However, it is unclear why Barnstable, the town with the most commercial activity, has a lower income level than the Cape average. One reason may be that many of the higher income town residents have higher off-Cape incomes and either commute to work or use their Cape residence as a second home, thereby inflating the income figures for their towns. In other words, income in those towns may not be earned in those towns. Also, as can be seen by looking at Table 6 *Labor Force, Employment and Unemployment Figures 1990-2003*, many jobs on the Cape fall into the lower wage sectors of retail sales, construction and tourism-related services, which are seasonal and dependant on variable factors such as weather, public safety, etc.

Labor Force, Employment and Unemployment

Cape Cod

U.S. Census data indicates that over the past decade, the resident labor force (employed and unemployed) in Barnstable County increased by 17,329 or 19.3 percent, from 89,855 in 1990 to 107,184 in 2000. Resident workers age 16 and up increased by 17,413 or 21.3 percent, from 81,784 in 1990 to 99,197 in 2000. Self-employed residents increased by 2,807 or 28.7 percent, from 9,766 in 1990 to 12,573 in 2000,while Cape residents who worked at home increased by 1,752 or 51.7 percent over the decade, from 3,392 in 1990 to 5,144 in 2000. Official data of the Massachusetts Division of Employment and Training (DET) derived from employers' reports indicate job growth of 25.9 percent over the decade in Barnstable County, a gain of 18,250 jobs from an annual average of 70,333 in 1990 to 88,583 in 2000. The latest available DET data indicate an annual increase of 2.1 percent in nonfarm jobs in the Barnstable-Yarmouth Metropolitan Area in January between 2002 and 2003, from 58,200 to 59,400. Comparable nonfarm jobs statewide dipped 1.1 percent over the same span, from 3,209,700 to 3,174,700¹⁵. All of this data illustrates the healthy economic growth occurring Barnstable during the last decade with a notable trend towards greater worker autonomy as there was a 50 percent increase in the number of people working at home.

Barnstable

Table 6 and Chart 2 *Town and State Unemployment Comparisons 1990-2003* show Barnstable labor force, employment and unemployment figures for the years 1990-2003 as well as state unemployment figures for comparison purposes. They indicate that town and state unemployment rates followed the same trends each year during this period. Whereas from 1990-2000, Barnstable's unemployment rate was higher than state's, that relationship has changed in the last few years. Also in the last few years there has been a steady increase in unemployment rates, likely associated with the general economic downturn but not as marked in Barnstable.

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¹⁵ The Barnstable-Yarmouth Metropolitan Area includes 10 of the 15 Cape towns, all except Bourne, Falmouth, Provincetown, Truro and Wellfleet (source: Cape Cod Commission).

The year 2004 has shown a slight decrease in Barnstable's unemployment rate from 4.5 percent in 2003 to 4.3 percent (Mass DET) and the economy continues to improve overall, which bodes well for the near future.

Year	Labor Force	Employed	Unemployed	Unemployment Rate	State Unemployment Rate
2003	26,054	24,883	1,171	4.5	5.8
2002	25,440	24,388	1,052	4.1	5.3
2001	24,199	23,382	817	3.4	3.7
2000	23,475	22,761	714	3.0	2.6
1999	24,121	23,280	841	3.5	3.2
1998	23,507	22,574	933	4.0	3.3
1997	23,266	22,116	1,150	4.9	4
1996	22,673	21,490	1,183	5.2	4.3
1995	22,381	21,030	1,351	6.0	5.4
1994	22,096	20,391	1,705	7.7	6
1993	21,921	20,058	1,863	8.5	6.9
1992	21,489	19,303	2,186	10.2	8.6
1991	21,782	19,347	2,435	11.2	9.1
1990	22,370	20,434	1,936	8.7	6

 Table 6 Town and State Laborforce, Employment and Unemployment Figures 1990-2003

Source: Mass DET Web site (<u>http://www.detma.org/LMILMI.htm</u>)

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Chart 2 Town and State Unemployment Comparison 1990-2003

Table 7 *Employment and Wages by Industry in Barnstable 2001-2003* shows that both employment and wages have increased slightly each year since 2001. Industries with the highest wages are consistently in the following sectors:

- Finance and Insurance (number one in all three years)
- Manufacturing
- Wholesale trade
- Professional and Technical Services
- Health Care and social assistance
- Information

Though not providing the highest wages, the largest employment sector is retail trade, followed by health and social services, and accommodation and food services. Construction also employed a notably high number of workers.

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These figures illustrate the town's thriving and diverse economy employing both professional and blue collar workers, its dependence on tourism, as well as the presence of the region's main health care services, including Cape Cod Hospital.

YearIndustry	Establish ments	-Total Wages	Average Employment	Average Weekly Wage
2003 Total, All IndustriesA Ownership	112,279	\$1,003,999,555	528,323	\$682
Total, All IndustriesPrivat Ownership	te2,218	\$867,976,985	25,265	\$661
Agriculture, Forestry, Fishing d Hunting	&13	\$732,647	24	\$581
Construction	215	\$51,577,043	1,257	\$789
Manufacturing	60	\$50,273,305	933	\$1,036
Wholesale Trade	71	\$20,332,398	372	\$1,052
Retail Trade	426	\$150,299,802	5,993	\$482
Transportation and Warehousing	41	\$22,428,010	866	\$498
Information	48	\$44,124,258	886	\$958
Finance and Insurance	102	\$58,812,014	877	\$1,290
Real Estate and Rental and Leasing	72	\$10,845,272	390	\$534
Professional and Technical Services	221	\$49,313,693	904	\$1,049
Management of Companies an Enterprises	d13	\$20,232,502	570	\$683
Administrative and Waste Services	141	\$30,758,682	1,178	\$502
Educational Services	17	\$4,879,583	195	\$481
Health Care and Social Assistance	209	\$236,471,818	5,209	\$873
Arts, Entertainment, and Recreation	42	\$18,396,940	576	\$614

Table 7	Employment and	Wages by Industry	v in Barnstable 2001-2003
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Accommodation and Food Services	209	\$59,797,739	3,500	\$329
Other Services, Ex. Public Admin	315	\$35,678,172	1,472	\$466
2002 Total, All IndustriesAl Ownership	12,231	\$978,717,355	28,213	\$667
Total, All IndustriesPrivate Ownership	e2,166	\$845,969,031	25,109	\$648
Agriculture, Forestry, Fishing & Hunting	211	\$657,328	23	\$552
Construction	207	\$51,690,386	1,269	\$784
Manufacturing	61	\$56,971,199	1,095	\$1,000
Wholesale Trade	69	\$20,230,794	369	\$1,053
Retail Trade	423	\$144,141,093	5,898	\$470
Transportation and Warehousing	45	\$23,335,788	922	\$487
Information	47	\$54,555,995	923	\$1,136
Finance and Insurance	98	\$50,863,901	803	\$1,218
Real Estate and Rental and Leasing	76	\$12,534,928	447	\$539
Professional and Technical Services	213	\$46,885,713	919	\$981
Management of Companies and Enterprises	d14	\$20,901,691	600	\$669
Administrative and Waste Services	129	\$27,611,954	1,152	\$461
Educational Services	14	\$7,416,689	297	\$481
Health Care and Social Assistance	208	\$217,563,609	4,843	\$864
Arts, Entertainment, and Recreation	41	\$15,836,501	541	\$563
Accommodation and Food Services	199	\$57,297,273	3,488	\$316
Other Services, Ex. Public Admin	308	\$34,675,879	1,457	\$458
001 Total, All IndustriesAl Ownership	12,230	\$942,898,238	28,045	\$647

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Total, All IndustriesPrivat Ownership	e 2,169	\$816,969,386	24,906	\$631
Agriculture, Forestry, Fishing & Hunting	&10	\$631,221	24	\$504
Construction	197	\$51,081,750	1,288	\$763
Manufacturing	64	\$68,807,202	1,283	\$1,031
Wholesale Trade	73	\$18,937,978	366	\$996
Retail Trade	433	\$139,207,865	5,882	\$455
Transportation and Warehousing	44	\$22,206,384	902	\$474
Information	45	\$42,170,493	933	\$869
Finance and Insurance	102	\$50,224,672	802	\$1,205
Real Estate and Rental and Leasing	73	\$10,504,525	409	\$494
Professional and Technical Services	221	\$55,512,153	1,070	\$998
Management of Companies an Enterprises	d13	\$22,112,122	654	\$650
Administrative and Waste Services	137	\$26,686,066	1,102	\$466
Educational Services	14	\$7,650,186	319	\$462
Health Care and Social Assistance	207	\$197,179,001	4,642	\$817
Arts, Entertainment, and Recreation	39	\$15,761,759	568	\$534
Accommodation and Food Services	193	\$51,349,020	3,143	\$314
Other Services, Ex. Public Admin	300	\$33,764,385	1,457	\$446
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Source: Massachusetts DET

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Commuting Trends, 1960–2000¹⁶

On-Cape Commuters

Off-Cape residents commuting into Barnstable County numbered 7,845 in 2000. Eighty percent (5,761) of off-Cape commuters working in Barnstable County came from neighboring Plymouth and Bristol counties: 61 per- cent (4,371) from Plymouth County, and 19 percent (1,390) from Bristol. Another 13 percent of off-Cape residents working on Cape hailed from the three-county Boston area: 355 or 5 percent from Norfolk County, 325 or 4.5 percent from Middlesex County, and 237 or 3 percent from Suffolk County. Providence County, Rhode Island, represented both the origin and the destination of 2 percent of Cape trips: 285 or 2 percent of Cape-resident commuters traveled to work there, while 159 or 2 percent of off-Cape residents commuting to work in Barnstable County were from Providence County.

Off-Cape Commuters

Until 1980, off-Cape residents commuting onto the Cape outnumbered Cape residents commuting off Cape, but by 2000 outbound Cape commuters were nearly double their incoming counterparts. In April 2000, 14,493 of Barnstable County's 99,197 working residents commuted off Cape to work, almost half again the 10,477 who commuted in 1990. Over the past 40 years, Barnstable County population more than tripled from 70,286, while off-Cape commuting increased 1,440 percent.

Nine out of ten Cape commuters went to five adjacent counties. Nearly half (48 percent) of Cape commuters traveled to the three-county Boston area, and another 41 percent traveled to neighboring Plymouth and Bristol counties. With only county data available so far, the single top destination for Cape residents commuting off Cape in 2000 was Plymouth County, attracting 4,152 or 31 percent of Cape commuters. Another 1,264 or 9.5 percent of Cape commuters traveled to Bristol County. Boston-bound commuters included 2,767 or 21 percent of Cape commuters headed to Suffolk County, another 1,888 or 14percent to Norfolk County, and 1,768 or 13 percent to Middlesex County.

Off-Cape Commuting and Cape Population Growth Rates

The rate of growth in off-Cape commuting peaked in the 1970s when Cape commuters nearly tripled from 2,095 in 1970 to 6,239 in 1980, after doubling from 941 in 1960. Although the percentage of commuters has continued to increase in the past two decades, growth rates have slowed to double-digit from the triple-digit rates of the prior two decades. The 1980 –1990 rate of growth in off-Cape commuting was 67.9 percent, falling by nearly half in the most recent decade to 38.3 percent. Still, that growth rate is double the 19- percent rate of overall Cape

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¹⁶ Most of the information contained in this section is taken verbatim and/or adapted from *Cape Trends*, published by the Cape Cod Commission and found on their Web site at: http://www.capecodcommission.org/data/CapeTrends-Population080504.pdf

population growth from 1990 to 2000. In numbers, the 1980s saw the greatest 10-year gain in off-Cape commuters of the past four decades, up 4,238 from 1980 to 1990, ahead of the 4,144 added from 1970 to 1980 and the gain of 4,016 in the most recent decade. Overall Cape population growth peaked in the 1970s with the addition of 52,269 residents, followed by another 38,680 in the 1980s, and 35,625 in the 1990s. Over the past 40 years, off-Cape commuters as a share of all Cape residents grew fivefold, from 1.3 percent of all residents in 1960 to 6.5 percent in 2000.

D. Growth and Development Patterns

1. Patterns and Trends

From its origin in 1639, the Town of Barnstable has evolved from an agricultural, fishing and shipping society to its present mixture of summer resort, retirement community and regional commercial, transportation and shopping center, with a smattering of agriculture, shell fishing and light manufacturing. Fundamental, too, is the distinctive personality of the seven villages. Each has its own concentration of one or more of the characteristics of the town as a whole, and each in its own way is striving to maintain its historic character.

Today, the town is substantially built out. In January 2005, it is estimated that in single-family residentially zoned areas, 20,280 or 92% of potential lots have been developed, only an additional 1,815 lots, or 8%, could be developed. Most of this development has occurred in the last 30 years. Within commercial and industrial areas, the extent of buildout is harder to estimate with the major undeveloped lands located in the Industrial

Zone. Most commercial areas have been developed to some extent, with redevelopment becoming more common.

Given that so much of Barnstable is already developed, it is anticipated that the main development pressures in future years are expansion, conversion and re-development. In commercial areas, redevelopment provides opportunities to improve deteriorated areas and strip commercial development, provided the town implements mechanisms that protect historic resources and community character. This is necessary to ensure high quality building and site design in all commercial areas. It is essential to improve design in the town and village centers which are so important to the historical image and character of the town.

Future growth potential exists primarily in the areas of multi-family housing, affordable housing (Chapter 40B) and in the commercial/industrial sector due to current zoning and growth initiatives that encourage increased densities in these areas. In the past, residential development has continued unabated and the minimum lot size in residentially zoned areas has changed in response to wastewater and water protection concerns, among others. In the mid 1980's, one acre minimum lot size was established to protect Zone II Wellhead Protection Area Zones of Contribution. Though this was helpful it became apparent over time this was insufficient to protect coastal embayments and areas served by private wells from growing contamination. As a result, in October 2000, the town established a Resource Protection Overlay District (RPOD)

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Landscape Architecture and Planning over approximately two-thirds of the town's area with a minimum lot size of two acres. This change has had a large impact on the growth potential of town, effectively reducing the number of potentially developable lots by over half.

In the coming years as complete buildout is approached, patterns and trends in both development and open space protection will become more creative by necessity. To keep pace with the increasing development pressures and impacts, open space planners will need to focus on new and better ways of protecting land including:

- Continued open space acquisition for natural resource protection and for active recreation, including acquisition of pond front and ocean access lands;
- Development of pocket parks and green spaces in and around dense residential and commercial areas;
- Undevelopment of existing developed parcels;
- Water supply development and protection;
- Historic preservation including scenic easements (especially along Route 6A) and protection of cultural landmarks and landscapes; and,
- Improved and expanded wastewater planning throughout town.

2. Infrastructure

a. Transportation

Historically, the harbors at Barnstable, Cotuit, Osterville, Centerville and Hyannis, the northside road now known as Route 6A, and the southside road now known as Route 28 had much to do with the development of the town. Routes 6A and 28 still account for major vehicular traffic, along with Route 6, a limited access highway traversing the town. A network of north-south routes completes the major road system.

The primary means of transportation in Barnstable, and indeed on Cape Cod, is by automobile. The town's road system is therefore a critical component of the infrastructure. As in many historic New England towns, many of Barnstable's connecting roadways developed along historic routes, the oldest and best known of which is Rte. 6A, the Old Kings Highway. Many of these historic routes now function as major roads and were not laid out or designed for the purpose they now serve. Only four major new roads have been added to the major network in the 20th Century – Rt. 132, Rt. 28, Rt. 6 and Hadaway Road. Most of Barnstable's major roads are seriously over-capacity, and the challenge facing the town is to improve the capacity of the major roads – Rt. 132, Rt. 28 in Hyannis and Yarmouth Road, and at the same time, improve the appearance of these roadways with landscaped medians, textured paved surfaces where

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Landscape Architecture and Planning landscaping is not practical, architectural light and traffic control devices, and street tree plantings.

The town needs to continue concentrating improvements to major arteries while protecting its historic, scenic roads from inappropriate widening of both pavement width and intersections. Double yellow road striping should also be used selectively on major roads, and not on historic, rural roadways. One mechanism for the protection of the character of a historic roadway is designation as a Scenic Road.

The Plymouth & Brockton Bus Company provides regular bus service to Boston and towns en route, as well as to upper and lower Cape destinations. The bus terminal also provides service via Trailways, Peter Pan and Greyhound to the rest of the country. Buses operated by the Cape Cod Regional Transit Authority provide a variety of local and on-demand services. The Senior Center also provides a bus service as needed for seniors.

Rail freight service is available year-round. Ferry service is available year-round from Hyannis to Nantucket and Martha's Vineyard. The Barnstable Municipal Airport is the Cape's hub for air traffic to Boston, New York, the Islands, and to other New England destinations.

b. Water Supply

Barnstable residents are served by four water districts. Each of these water districts is a separate government entity formed under the authority of Massachusetts General Laws:

- 1. Cotuit-Osterville-Marstons Mills (COMM) COMM serves the villages of Cotuit, Osterville and Marstons Mills and has 19 wells with a total permitted capacity of 1,303,000,000 gallons per year (GPY) serving approximately 30,000 customers, tripling in summer months.
- Cotuit Water Department (CT) Cotuit Water Department serves the village of Cotuit and has 5 wells with a total permitted capacity if 175,000,000 GPY serving approximately 3,400 year round residents jumping up to and 5,300 during the summer months.
- 3. Barnstable Fire District (BFD) BFD serves the village of Barnstable and has 4 wells with a total permitted capacity of 237,250,000 GPY serving 1,890 customers.
- 4. Recently the Town of Barnstable purchased the Barnstable Water Company, which has 11 wells with a total permitted capacity of 1,244,650,000 GPY (3.41 MGPD).

West Barnstable Fire District (WB) – WB serves the village of West Barnstable with fire protection. The WB Fire District does not produce public water supplies; this village is dependent upon private wells.

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In spite of the relatively large number of wells in town, there remains the need for continued acquisition and development of well fields. One third of the town is within a Zone II area of contribution and development intensity is not dwindling. Incidences of contamination have occurred in the wells on the eastern portions of town, which are more susceptible to contamination from nearby industrial and commercial land uses. All wells are vulnerable to potential sources of contamination with particular susceptibility in the following areas:

- Independence Park and the Hyannis Ponds Complex where there are industrial uses within the Zone 2;
- Wells located to the east of Yarmouth Road, <u>close to the airport, industrial uses and gas</u> <u>stations along Route 28.</u>
- Wells to the south of downtown area, <u>which are down gradient of the most densely</u> <u>developed areas of the town, in Hyannis and the adjacent village of Centerville.</u>

c. Wastewater System

The large majority of town's residential and commercial areas depend upon on site Title V septic systems for wastewater disposal. There is municipal sewer service available in a small area of Barnstable Village, portions of Hyannis, and Independence Park. The areas serving Barnstable Village is primarily for the county complex and areas near the harbor. This system is a forced main with a small capacity and it is difficult to tap into for any expansion of the system. There is the Wastewater Pollution Control Facility located off Bearses Way and Route 28 in Hyannis. However, this facility is experiencing severe groundwater mounding in this location, and there are ongoing studies to locate areas where offsite disposal of effluent from this plant can occur.

3. Long-term Development Patterns

Today the town is experiencing the boom and bust cycle brought on by the development rush of the 1980's followed by the economic downturn experienced for most of the 1990's. The regulation and control of growth is a priority, but this continues to be a period of time when the town is attempting to play "catch-up" in developing infrastructure and services needed to serve the development boom of the 1980s and 1990s. For many of the most important issues facing the town, the state can act as a planning partner by providing technical assistance as well as incentive and funding programs. One of the most important programs recently instituted is the Community Preservation Act which, through its enactment, recognizes the importance for working now to shape a community's long term development patterns.

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The Community Preservation Act¹⁷

The Community Preservation Act (CPA) was signed into law by former Governor Paul Cellucci and Lt. Governor Jane Swift on September 14, 2000. The CPA allows communities to create a local Community Preservation Fund in the municipality to be used through a surcharge of up to 3 percent of the real estate tax levy to be spent on real property for open space, historic preservation and low and moderate income housing. The act also creates a significant state matching fund of more than \$25 million annually, which will serve as an incentive to communities to take advantage of the provisions of this legislation. As noted in Table 8 *Community Preservation Act Details* the town passed the CPA in 2004 by popular referendum.

The CPA is an innovative tool for communities to address important community needs. Once adopted locally, the Act requires at least 10 percent of the monies raised to be distributed to each of three categories: historic preservation, open space protection and low and moderate income housing, allowing the community flexibility in distributing the majority of the money for any of the three categories as determined by the community. Each of the three areas highlighted by the fund is an important focus for Barnstable's open space and recreation planning. To assist in identifying the town's future needs, the state Executive Office of Environmental Affairs (EOEA) sponsored the creation of a set of buildout maps and analyses for all 351 cities and towns within the Commonwealth of Massachusetts.

Barnstable Comr	ity Preservation Act Details	
Details		
Date of passage:	11/2/2004	
Vote count	Passed election 17558 yes, 4923 no (78%)
passage:		
Percentage:	3%	
Exemptions:	None	
Description		
spending:		
Contact:		
	367 Main St.	
	Barnstable, MA 02601	
	Phone: (508) 862-4000	

Table 8	Community Preservation Act Details
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17 Much of the following information was taken verbatim from the Massachusetts Executive Office of Environmental Affairs (EOEA) Web site at http://commpres.env.state.ma.us/content/cpa.asp.

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Buildout Analysis¹⁸

To help communities consider and address questions regarding future community issues and needs, the state EOEA sponsored the creation of a set of buildout maps and analyses for all 351 cities and towns within the Commonwealth of Massachusetts. The maps and analyses developed by EOEA depict currently developed and protected land within a community and what a community would look like if remaining undeveloped land was completely developed in accordance with current local zoning maps and ordinances (see Map 1, *Zoning*, for more details).

Given the home rule nature of Massachusetts land use governance, EOEA thought it was critical to provide all 351 cities and towns this useful tool to explore growth and development planning. The buildout project allows every community to see its current and potential future development, and determine whether or not it is near buildout, or growth pressures are scarce. Another intent of the project is to inspire communities to work together across borders to address issues such as shared water supplies that pay no attention to political borders.

A buildout analysis consists of a series of 4-5 GIS maps that visually show a community its development patterns and future growth projections based upon existing local zoning. The maps act as storyboards that unfold a picture of land use decisions the community has made to date and what these decisions may mean for the community in the future. These buildout maps project the default scenario for growth by graphically illustrating what the community may look like if all remaining developable lands were developed to their maximum potential based on existing zoning. Thus, the buildout provides a good basis for decisions about future development and potential impacts on the community.

EOEA contracted with Massachusetts' 13 regional planning agencies to utilize a common methodology to develop buildouts for communities within their jurisdiction. A standard protocol was followed which involved meetings with local officials to acquire current information, confirm assumptions and customize this standard methodology to reflect the details of each individual community's unique zoning regulations. In fact, some communities that are closer to buildout chose to conduct redevelopment analyses in areas of underutilized sites where new development might be seen as an improvement to the community.

The summary data below is for the Town of Barnstable. This data profile includes summary statistics that are a component of a buildout map and analysis series. The analysis starts with available land in each zoning district and makes projections of additional housing units and commercial/industrial space according to each district's minimum lot size and other regulations. The projections only account for as of right development and do not include development by special or comprehensive permit that may increase the amount of development. These buildout

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¹⁸ Most of the information contained in this section is taken verbatim and/or adapted from the EOEA Web site.

projections were combined with U.S. Census 2000 and other data to create a profile of each community at buildout according to its current zoning.

Town of Barnstable Buildout Analysis Summary

Buildout completion date: 2000 **Demographic Projections**

Population

1990 40,949.00

Current (2000) 47,821.00

Buildout 59,876.00

Students

1990 5,827.00

Current 7,106.00

Buildout 9,048.00

Households

1990 16,601.00

Current 25,018.00

Buildout 29,899.00

Water Use(gallons/day)

Current 6,804,975.34

Buildout 8,438,977.34

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Buildout Impacts

Additional Residents 12,055.00

Additional School Children 1,942.00

Additional Residential Units 6,874.00

Additional Developable Land Area(sq ft) 377,917,325.00

Additional Developable Land Area(acres) 8,675.80

Additional Commercial/Industrial Buildable Floor Area(sq ft) 9,731,754.00

Additional Water Demand at Buildout(gallons/day) 1,634,002.00

Residential 904,120.00

Commercial and Industrial 729,882.00

Additional Solid Waste(tons/yr) 6,184.00

Non-Recyclable 4,400.00 Recyclable 1,784.00

Additional Roadway at Buildout(miles) 110.00

Notes:

1. "Developable Land Area" includes undeveloped upland that has not been subdivided. Both salt and fresh water wetlands were excluded from the residential and comm./ind undeveloped land.

2. "Residential Water Use" is based on 75 gallons per person per day.

3. "Comm./Ind. Water Use" is based on 75 gallons per 1,000 square feet of floor space

4. "Municipal Solid Waste" is based on 1026 lbs. per person per year. All waste estimates are for residential uses only

5. "Non-Recycled Solid Waste" is a subset of the Municipal Solid Waste and is based on information from the EPA report "Characterization of Municipal Solid Waste in the U.S.", 1994 update.

6. The number of "Students" at buildout is based on a student per household ratio taken from external demographic estimates, including student population from town

7. "New Roads" are based on an assumption that 60 percent of the new residential lots will have required frontage on

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new roads. Town and Commission planners feel this is a "worst case" number and road mileage would be less due to reduced frontage in cluster sub

8. No new residential lots are expected to have more than one dwelling Additional dwellings come from affordable housing on municipal land. developments.

Source: EOEA Web site

(http://commpres.env.state.ma.us/print/pcmty_profile.asp?communityID=20&communityName=Barnstable&comm unityCode=barn&communityType=TownWithCityGvt&displayType=®ionID=CPIS®ionName=Cape+Cod+ and+Islands_)

The buildout scenario, by definition, attempts to illustrate what the town will look like when completely developed. Thus, all trends and impacts are upwards and usually dramatic. Based on the numbers provided by the EOEA, demographic projections indicate increases of between 20 and 30 percent in all categories: Population (25 percent), Students (27 percent), Households (20 percent), Water Use (24 percent)¹⁹. Because all percentage increases approximate 25 percent, it can be expected that the town will have the same apparent visual density upon buildout, provided development patterns are similar to those existing. However, impacts upon town services may be high. Increased traffic is likely to overburden some major roads, where gridlock is already a problem. Schools may not be able to accommodate larger numbers of students. Issues with water and wastewater are likely to intensify. The number and availability of open space and recreation facilities will need to keep pace with the needs of a growing population. The Town of Barnstable should strive to increase the number of open space and recreation facilities by a minimum of 25 percent in each category in order to ensure that the ratio between current facilities and buildout projections is maintained and possibly increased.

Affordable Housing and Open Space

The Commonwealth of Massachusetts encourages the creation of more affordable housing for its citizens through the establishment and enforcement of M.G.L. Ch. 40B, The Massachusetts Comprehensive Permit Law, whose purpose is to increase the supply and improve the regional distribution of low and moderate income housing by allowing a limited suspension of existing local regulations which are inconsistent with construction of such housing (Mass DHCD Web site: <u>http://www.mass.gov/dhcd/ToolKit/ch40Bgl.htm</u>).

Prior to applying for a comprehensive permit, a proposal to build affordable housing must receive preliminary approval (normally a Project Eligibility or Site Approval letter) under a state or federal subsidy program. The application, containing the eligibility letter and preliminary development plans, is then filed with the local zoning board of appeals. The board then notifies and seeks recommendations from other local boards.

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¹⁹ Percentage calculation conducted by Centerline Studios, Inc. based on EOEA figures.

The zoning board of appeals holds a public hearing to ensure that local concerns are properly addressed. Local concerns include health, safety, environmental, design, open space and other concerns raised by town officials or residents. In making its decision, the board acts on behalf of all other town boards and officials, but only with regard to matters where local restrictions are more stringent than state requirements. The board can issue a single comprehensive permit, which subsumes all local permits and approvals normally issued by local boards. It can also issue a comprehensive permit with conditions or deny the permit. If a comprehensive permit is granted, the applicant, prior to construction, must normally present final, detailed construction plans to the building inspector or similar officials to ensure that the plans are consistent with the comprehensive permit and state requirements.

The general principle governing hearings before the local board and the Housing Appeals Committee is that all local restrictions, as applied to the proposed affordable housing, are "consistent with local needs." General Laws c. 40B, § 20 defines consistency with local needs as being reasonable in view of the need for low and moderate income housing balanced against health, safety, environmental, design, open space and other local concerns. If less than 10 percent of municipality's total housing units are subsidized low and moderate income housing units, there is a presumption that there is a substantial housing need which outweighs local concerns. See 760 CMR 31.07(1)(e); Board of Appeals of Hanover v. H.A.C., 363 Mass. 339, 367, 294 N.E.2d 393, 413 (1973).

In addition to M.G.L. Ch. 40B, the Community Preservation Act also encourages spending on affordable housing, requiring that at least 10 percent of generated revenues be spent on affordable housing.

In Barnstable there is an active push to create more affordable housing spearheaded by the Barnstable Housing Authority in order to be consistent with the state's requirements. However, the creation of more affordable housing can often present a challenge to open space and recreation planning efforts when developments are proposed on land that may be valuable for open space and recreational purposes. Even though the state's description of the CPA states "there is a presumption that there is a substantial housing need which outweighs local concerns", not all would agree with this, particularly when important natural resource values are overlooked. As the Town of Barnstable Affordable Housing Plan states, "One of the biggest barriers to developing housing in Barnstable is the lack of land available for housing development. To address this problem, the town has located several parcels of surplus townowned land, and is preparing them for housing development"²⁰. To date, the town has identified five large parcels of land that could support construction of multifamily dwellings. The town is currently moving forward with the development of 30 units of housing within the Village of West Barnstable and working to develop 87 units within the Village of Osterville. The town will continue to search for other such parcels while working to prepare these sites for construction.

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²⁰ Town of Barnstable Affordable Housing Plan p.23 on http://www.mass.gov/dhcd/ToolKit/PProd/apBarn.pdf

Below is a brief description of the highest priority parcels slated for affordable housing $development^{21}$.

1. Darby Parcel, Osterville

The Darby property, which contains a total of 107 acres, was purchased by the town in 1985 for general municipal purposes. The portion of the property designated for the mixed-income housing is located along Old Mill Road between Micha and Joshua ponds. The area is largely vegetated and woodland. By resolution, at its November 7, 2002 meeting, the Barnstable Town Council authorized the Town Manager to enter into the lease or leases of up to 99 year terms for the construction of not more than 87 units of qualified affordable housing, that may include but not be limited to, affordable elderly housing on the town-owned parcels which is not dedicated to conservation use, on land located on Old Mill Road in Osterville. Of the 87 units proposed, 43 would be maintained as affordable in perpetuity; 57 units will be constructed for families, 30 of which will be affordable; 30 units will be elderly with 13 affordable. In June of 2002, with a pre-development grant for the Massachusetts Housing Partnership Fund, the town engaged an environmental consulting firm to conduct a site analysis study of the parcel. The firm evaluated the impacts of wastewater treatment and nitrogen loading, storm-water, water supply and the cost of constructing of the wastewater treatment facility. The report is available through the Town's Office of Community and Economic Development. In April 2002, the town engaged an engineering firm to prepare a lease plan of land for the 25 acres site. Wetland boundaries have been delineated by the firm and have been inspected by the staff of Town's Conservation Commission. The Town of Barnstable is working to ensure that the site is developed, not only to provide affordable housing options to its residents, but also to be done in the manner that respects the area's community character and is sensitive to the local environment.

The town has developed a Request For Proposals (RFP) and an invitation to bid for the long-term leasing of the 25 acre Darby site. The RFP also includes design, construction and maintenance specifications for the on-site sewage treatment plant which have been prepared by the Town's Department of Public Works professional staff.

2. Sweeney Property, Osterville

In 2001 the Town of Barnstable acquired, through eminent domain, a 2.8-acre wooded parcel along Old Mill Road in Osterville approximately one quarter of a mile north of the 25 acre Darby site. This site was part of the affordable housing plan developed by the Osterville Civic Association. In January of 2003 the town hired an engineering consulting firm to prepare a site analysis and feasibility study of the Sweeney site. The firm concluded that this site could support approximately 10 units of rental housing with 25 bedrooms. Under this scenario it was assumed that the wastewater would be pumped to the Darby treatment facility. A more likely

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²¹ Descriptions of these parcels provided by the Barnstable Housing Authority in their Barnstable Affordable Housing Plan.

scenario for this site is to construct five individually owned homes on approximately half-acre sites each with either individual or shared on-site Title V system(s).

3. YMCA Site, West Barnstable

A four-acre site owned by the town adjacent to the YMCA in West Barnstable located off Route 132 has been identified for the construction of affordable housing. Twenty units of family rental housing have been prepared for this site. The town has hired a local engineering firm to prepare a concept plan and preliminary site plan. Town staff and members of the West Barnstable Civic Association have worked to prepare a Request For Proposals and invitation to bid for a long-term lease of this site.

4. Lombard Trust, West Barnstable

The 7.93-acre Lombard parcel, owned by the Lombard Trust, in West Barnstable has also been identified as a site for the construction of affordable housing. The administrator of the Trust is the Barnstable Town Manager. In May 2001, the Town of Barnstable, with a predevelopment grant from the Massachusetts Housing Partnership Fund, hired an environmental firm to conduct a site analysis and feasibility study of the Lombard parcel. The parcel consists of woodland and open fields. No town water or sewer exists on this site. Initially the firm had been asked by the town to assess the feasibility of placing approximately 30 two-bedroom units on the 7.93-acre parcel. Based on this analysis it was concluded that the Lombard land is suitable for affordable housing development at a level significantly below the 30 two-bedroom units initially intended by the town.

Research suggests that the most feasible development options would be to build 10 two-bedroom units on this parcel, along with the private water supply well and an adequately sized Title V septic leaching field. The plan for redevelopment of this site is to reconstruct the former Lombard Farm House that was on the site until being destroyed by fire in the 1970s. The Lombard House was once used as a 36-bed infirmary. The town's plan, in conjunction with the West Barnstable Civic Association, is to construct a replica of the former Lombard House for use as 10 units of affordable housing with a private well and on-site septic system. The town's plan is to solicit a private developer through an RFP process.

5. Village Green, Marstons Mills

Housing Land Trust is planning 30 units on a 6.4-acre parcel originally part of a 20-acre parcel. This land was subdivided off for affordable housing and the remainder was purchased through the Land Bank Act. This partnership between the Open Space committee and the Housing Land Trust is one that should be encouraged and developed as the town moves into the CPA.

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CENTERLINE STUDIOS INC. Landscape Architecture and Planning In each of the above five cases, the town has pursued all affordable housing development options with a clear intent to protect natural resources and has contracted all the pertinent planning studies to document the best location and densities for this development. In order for the town to achieve the state-mandated goal of 10 percent subsidized housing inventory and also to achieve its open space and recreation planning goals, it will need to consciously identify and purchase lands for each of these uses. To accomplish this, the Barnstable Housing Authority should meet with the Conservation and Recreation Divisions to discuss and identify needs and ways to integrate them.

Table 9	DHCD Barnstable Affordable Housing Inventory

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (DHCD) CHAPTER 40B SUBSIDIZED HOUSING INVENTORY				
Community	2000 Census Year Round Housing Units	Total Development Units	Total SHI Units	Percent SHI Units
Barnstable	20,266	1,323	1,261	6.2%

Source: Mass DHCD Web site (<u>http://www.mass.gov/dhcd/components/hac/HsInvRev.pdf</u>)

Commercial and Large Scale Residential Development Projects

There are several notable development projects currently underway in Barnstable. The Cape Cod Commission in its 2003 annual report approved several renovations of existing properties, including:

- Conversion of Independence Medical, 100 Independence Drive Conversion of 26,000sq.ft. general office;
- Arts Hyannis (Barnstable) space into medical office space in an existing conditions (01/23/03) 46,000-sq.ft. building on 7.81 acres;
- Cape Cod Healthcare, Hadaway Road Development Agreement (12-year contract) approval;
- Ambulatory Complex in Independence Park for an eventual 263,100-sq.ft. health-care Hyannis (Barnstable) campus on 40.6 acres;
- BJ's Wholesale Club, Hadaway Road Construction of a 68,831-sq.ft. facility on Independence Park on 15.78 acres now built and open;

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- Home Depot Lite now constructed in Southwind Plaza approved as a reuse of a vacant retail store facility (Settlement Agreement approval 05/08/03 Hyannis (Barnstable) former Bradlees) for a 79,995-sq.ft. store;
- Cape Cod Academy, Osterville Construction of a 19,200-sq.ft. science center on 43.71 acres received DRI Exemption approval 06/05/03.

Also, construction began in 2004 on eight homeownership units by Habitat for Humanity and 14 rental units by the Housing Assistance Corporation, both in Hyannis.

In 2002, the Barnstable County Commissioners and Assembly of Delegates allocated \$75,000 to the Housing Assistance Corporation to acquire 14 newly constructed two and three-bedroom rental units in Hyannis.

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SECTION 4 ENVIRONMENTAL INVENTORY AND ANALYSIS



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A. Geology, Soils and Topography²²

<u>Geology</u>

Like all of Cape Cod, the present geology and shape of the Town of Barnstable is the result of glacial activity during the Wisconsin stage of the Pleistocene epoch, 15,000 to 25,000 years ago. The retreat of the ice sheets from their maximum stage of advance, at the islands of Martha's Vineyard and Nantucket, resulted in the deposition of rock debris (known as glacial drift) over the original bedrock, which now underlies the surface of the town at depths of between 150 to 400 feet below sea level.

Two major types of drift formations were left behind by the glacier: moraine and outwash plain. The moraine is a ridge of debris that accumulated when the glacier remained more or less stationary for a long period of time. The outwash plain is composed of sand and gravel washed out of the moraine by meltwater streams during this period. In the present-day landscape, these two formations are reflected in the hills of the Sandwich moraine, which runs across the town from east to west along the course of the Mid-Cape highway, and in the Mashpee and Barnstable outwash plains which extend from the moraine to the south shore. Numerous ponds and lakes were formed within the outwash plain when blocks of ice left behind by the glacier melted and left 'kettle holes' that were later filled by groundwater.

North of the moraine, along the north shore of the town, the present terrain is the result of meltwater deposits in a glacial lake that formed between the ice front and Cape Cod during the northward retreat of the glacier from Cape Cod Bay. In the deeper parts of the lake, fine silts and clays were deposited, resulting in the heavy soils that characterize many areas of the north shore.

The numerous barrier beach and salt marsh systems within the town, including Sandy Neck and the extensive Great Marshes on the north shore, were formed from coastal processes over the last several thousand years.

From a planning standpoint, the various geologic formations of the town have been a major determinant of land use patterns. The difficult topography of the 'knob and kettle' landscape of the moraine, along with problematic availability of groundwater and poor soils characterized by sands mixed with clays, cobbles and boulders, have caused it to be developed slowly in comparison with the rest of the town. Relatively large areas of the moraine, including the West Barnstable Conservation Area and Old Jail Lane preserve, remain undeveloped.

The soils that characterize the glacial lake deposits of the north shore, where clays and peats dominate, limit drainage and on-site sewage disposal, posing developmental constraints. Sewage

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²² Sources for this section include the *Town of Barnstable Open Space and Recreation Plan*, 1997, and the *Town of Barnstable Local Comprehensive Plan*, 1997.

effluent is not easily discharged and bacterial contamination can occur because of the lack of adequate filtration. Although this area was historically the first to be settled within the town, modern development has been concentrated in central and southern portions of the town.

The comparatively level topography of the outwash plain, combined with readily available groundwater and the ease of on-site sewage disposal in the sandy soils, has resulted in extensive development from the nineteenth century onward. This growth was centered primarily along the south shore and in the villages, but spread out to more inland areas and villages, including Centerville, Hyannis and Marstons Mills, in recent decades. However, rapid drainage and minimal depths to groundwater make these soils vulnerable to contamination of ground and surface waters.

<u>Soils</u>

Soil types for the Town of Barnstable have been mapped by the U.S. Department of Agriculture Soil Conservation Service (now part of federal Natural Resources Conservation Service (NRCS). Fifty-nine naturally occurring soil types are described for the town, classified according to composition (relative amounts of stone, sand, loam and silt), degree of slope, and other factors affecting their use and management. Maps and interpretative data indicating the limitations of individual soils for different land uses such as on-site sewage disposal, homesites, and woodlands, are available for review through the NRCS or through the Conservation Commission office in Barnstable Town Hall.

In general terms, five major soil associations are found within the town, corresponding closely to the geologic formations described above and can be viewed on Map 2 *Soils* and Map 3 *Geology*.

<u>Plymouth-Barnstable Association</u> - drouthy, very stony and extremely stony and bouldery soils on moderate to steep slopes. Soils of this association are characteristic of the moraine. According to NRCS criteria, these soils are generally suitable for upland wildlife and for recreational uses such as hiking and nature trails; Plymouth-Barnstable soils also present moderate to severe limitations for residential and other intensive uses due to the degree of slope, plus the presence of many stones and boulders.

<u>Carver-Windsor-Hinckley Association</u> - drouthy, coarse sandy soils on nearly level to strongly sloping terrain. These are the characteristic soils of the outwash plain, and present only slight to moderate limitations to residential, commercial and industrial uses due to relatively level terrain and the ease of on-site sewage disposal in coarse sands and gravels.

<u>Enfield-Agawam Association</u> - well-drained, loamy soils underlain by sands on nearly level to moderately sloping terrain. These soils are found within portions of the outwash plain, primarily in the Marstons Mills area in the western part of the town, and were formed as a result of wind action following the retreat of the glacier, when the recently deposited sediments were subject to

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extensive erosion. Fine sediments were transported by strong winds and deposited in an "eolian mantle" over the coarser sediments of the outwash plain. The resulting soils are among the most suitable within the town for agriculture, due to the relatively level slope, lack of stone, and loamy composition that retains moisture and nutrients. Like the soils of the Carver-Windsor-Hinckley association, the Enfield-Agawam soils are generally suitable for residential development and onsite sewage disposal.

<u>Belgrade-Raynham-Hinesburg Association</u> - moderately well drained soils, poorly drained soils, and soils with hardpan on nearly level and gently sloping terrain. These are the characteristic soils of the glacial lake deposits on the north shore within Barnstable and West Barnstable villages. The better-drained soils of this association are highly suitable for farming, and in the past have been extensively cleared for this purpose. In general, this soil association has severe limitations for residential or other uses that require on-site septic disposal, due to a high water table and/or slow percolation rate.

<u>Tidal marsh-Dune sand-Sanded muck Association</u> - low-lying soils subject to regular tidal overflow, partly stable drouthy sands and very poorly drained organic soils. This association includes Sandy Neck, the Great Marshes, and other beaches, salt marshes and inland wetlands throughout the town. Tidal marshes comprise about 50 percent of this association; dune sand and coastal beach about 25 percent; and muck and peat soils the remainder. This soil association in general provides excellent wildlife habitat, with tidal marshes fulfilling a particularly critical role, both as wetland wildlife habitat and for finfish and shellfish resources. The importance of inland wetland functions such as groundwater recharge and flood control has been well documented. On the Cape, and within Barnstable, many peat soils have been developed into cranberry bogs. Beaches and dune systems are major attractions as recreational areas, although pedestrian and vehicular uses can severely impact dune vegetation. All of these soils have severe limitations for residential or other intensive uses, and should be managed only for conservation and recreation purposes.

The Town of Barnstable contains a significant proportion of soils which are potentially productive for agricultural purposes. These soils, which have been inventoried by the Soil Conservation Service, should be preserved wherever possible for future food production. According to SCS criteria, 10,482 acres, or 26 percent of the town's land area, are classified as agricultural soils of prime, State, or local importance. Of these, 4,657 acres are prime farmland soils and, therefore, rank among the most productive in Massachusetts. Prime soils are mainly concentrated in the Marstons Mills area, on soils of the Enfield-Agawam association, and in portions of the north shore, on better drained soils of the Belgrade-Raynham-Hinesburg association. Surprisingly, several of the soils of the Plymouth-Barnstable association are classified as agricultural soils of State and local importance, indicating that portions of the moraine could potentially be used for agricultural purposes.

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<u>SCS C</u>	LASSIFICATION	Farmland Soil Type*	Agricultural Capability Class**	Total Acreage
12b	Plymouth-Barnstable loamy sand, 3-8% slopes	S	2	263
12c	Plymouth-Barnstable loamy sand, 8-15%	S	3	84
13b	Paxton fine sandy loam, 3-8%	Р	2	55
13c	Paxton fine sandy loam, 8-15%	S	3	30
52a	Windsor loamy sand, 0-3%	S	3	1,848
52b	Windsor loamy sand, 3-8%	S	3	1,034
53a	Agawam fine sandy loam, 0-3%	Р	1	1,138
53b	Agawam fine sandy loam, 3-8%	Р	2	439
53c	Agawam fine sandy loam, 8-15%	S	3	63
54a	Deerfield loamy coarse sand, 0-3%	S	3	27
63a	Enfield very fine sandy loam, 0-3%	Р	1	1,648
63b	Enfield very fine sandy loam, 3-8%	S	2	226
64a	Tisbury very fine sandy loam, 0-3%	Р	2	25
74a	Ninigret fine sandy loam, silty soil variable 0-3	3% P	2	12
74b	Hinesberg fine sandy loam, 3-8%	Р	2	10
84a	Belgrade silt loam, 0-3%	Р	2	176
84b	Belgrade silt loam, 3-8%	Р	2	776
85a	Raynham silt loam, 0-3%	Р	3	378
212b	Plymouth-Barnstable very stony loamy sand, 3	-8% S	4	745
212c	Plymouth-Barnstable very stony loamy sand, 8	-15%S	4	1,505
	Total			10,482

TABLE 10 Agricultural Soils of Prime State and Local Importance, Town of Barnstable

(Source: Natural Resources Conservation Service)

Key to Symbols:

*P = Prime farmland soils; has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oil seed crops. Must meet specific criteria established by SCS. S = Farmland soils of State or local importance; fails to meet one or more of the criteria for prime farmland, but is important for the production of food, feed, fiber or forage crops. ** = 1 = High, 4 = Medium, 7 = Low

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Topography

Elevations within the Town of Barnstable range from sea level along the north and south shores to a maximum of approximately 230 feet above sea level on the moraine, near the Sandwich town line, within the West Barnstable Conservation Area. The moraine generally declines in altitude from west to east, to a maximum elevation of around 100 feet at the Yarmouth town line, the eastern boundary of Barnstable. Similarly, the maximum elevation of the outwash plain located farther south declines from around 120 feet above sea level at the Sandwich line to around 50 feet at the Yarmouth line.

As previously noted, the most extensively sloping terrain is generally found within the irregular 'knob and kettle' landscape of the moraine. The outwash plain has for the most part level to moderately sloping terrain, with the exception of the numerous glacial kettleholes, which are frequently characterized by moderate to extremely steep slopes abutting water bodies, wetlands, or occasionally dry upland bottoms. Removal of native vegetation and exposure of the underlying sandy soils on the moderate to steep slopes of the moraine and outwash plains can result in severe erosion problems.

Where steep slopes occur adjacent to water bodies, sedimentation and pollution from surface water runoff are potential adverse effects of inappropriate land usage.

Two soil associations pose higher risks of ground and surface water contamination, due to the simple fact that the other three currently have limited development on them. Plymouth-Barnstable Association soils provide for little filtration of sewage effluent, potentially resulting in contamination of groundwater, surface water bodies and coastal waters. The Enfield-Agawam soils are generally suitable for development and on-site sewage disposal, although the underlying sands and gravels are poor filters and, therefore, present the possibility of groundwater and surface water contamination. In general, Tidal marsh-Dune sand-Sanded muck Association soil has risk for groundwater contamination. Tidal marsh-Dune sand-Sanded muck Association has been restricted from development for several decades since the establishment of the Wetland Protection Act, and the threats to groundwater contamination in wetland resource areas stem chiefly from vehicular usage along roads and parking lots. It is recommended that Off-Road Vehicles (ORV's) be restricted to certain designated areas and that routine vehicle inspections are required to ensure that no potentially harmful oil and gas leaks occur. Vehicles with such leaks should have their permits revoked until such leaks are repaired to the satisfaction of the inspector, at which time said permit shall be reinstated.

The glacial lake deposits of the north shore are characterized by nearly level to gently sloping terrain, generally bordering salt marsh along their northern limit. Salt marsh and other wetlands occur on virtually level terrain; most inland wetlands are former ponds and lakes which have filled in with organic muck and debris. By contrast, coastal dunes are molded by wind and wave action into ridges which are constantly changing in shape and size.

Most soils in the town are now classified by the USGS as having moderate to severe restraints for development.

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	November 15, 2005

B. Landscape Character

Barnstable's landscapes vary from wooded upland areas covered by oaks and pines to seashore habitats of salt marshes, beach grasses and dunes. 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. Also significant are the inland wetland areas, including pond and lakeshore areas, cranberry bogs and associated red maple and cedar swamps. There are numerous wetlands throughout the town because of low elevations and high groundwater levels. As most of the prime upland has been consumed by development, there is a greater pressure to develop these sensitive areas. Streams are relatively uncommon because of the porous nature of the soils, but where they do occur, they provide freshwater for animal species, and at the entrance to saltwater embayments, anadramous fish runs are found.

Barnstable is at the heart of the Cape Cod moraine with the highest elevations in town running slightly north of the mid-line. This area is traversed by the Mid-Cape Highway, Route 6, which bisects the town in the east-west directions. The land for several miles in each direction is currently covered by the oak/pine forests. Much of this area has already been developed, but a significant amount has been preserved in a natural state by purchase for open space or by conservation restrictions. Paradoxically, the Route 6 corridor has become a spine around which the majority of the town's conservation areas have been preserved. One reason for this is that throughout this area are many ponds and lakes with their associated streams and water courses. In spite of these conservation areas, most of the land surrounding these water bodies is privately owned developed land, and is dominated by single-family homes. According to The Compact of Cape Cod Conservation Trusts, Inc. *Wildlife Habitat Conservation Project*, from a habitat perspective approximately 44 percent of the town has been developed, though more than that percentage of parcels has experienced at least partial development²³.

To the south, the land levels off in topography and the fresh water courses connect to the numerous bays and inlets that lead to the Sound. Several of the older village centers are located along these bays. Most of this land is completely developed and the visual and landscape character is one of continuous development, becoming increasingly suburban, with strip-malls strung between more condensed, small urban centers.

With the exception of bridge crossings and the occasional public beach, the line of sight to the shore is cut off by structures and mature landscape vegetation. Currently, however, there is progress being made to visually and physically reconnect the main village of Hyannis to its harbor through the use of open space, parks and pedestrian pathways and bridges. The "Walkway to the Sea", completed in the spring of 2004, connects Hyannis Main Street to Hyannis Harbor and offers passive and active recreation as well as much-needed visual relief along its route. As described in the 1997 *Local Comprehensive Plan*, the concept has been

²³ Source: The Cape Cod Compact of Conservation Trusts, Inc., Wildlife Habitat Conservation Project, 2003.

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around for several decades, and with state and town funding it was able to be completed as part of the Downtown Hyannis/Main Street Revitalization Project.

Land north of the moraine and Route 6 slopes more abruptly to the ocean. This area is currently under protection via the Old King's Highway legislation, which is designed to protect the visual and historic character of the land north of Route 6. More intense modern-day development has occurred some distance away from Route 6A in the back fields of the old farms within newer subdivision and side streets, hidden from view. Thus much of the visual character in the area has been maintained, especially immediately adjacent to Route 6A, which continues to maintain a colonial era feel. Further to the north are the Great Marshes and the barrier beach Sandy Neck, which has been designated as the Sandy Neck/Barnstable Harbor Area of Critical Environmental Concern (ACEC). Areas of Critical Environmental Concern are places in Massachusetts that receive special recognition because of the quality, uniqueness and significance of their natural and cultural resources. These areas are identified and nominated at the community level and are reviewed and designated by the state's Secretary of Environmental Affairs. ACEC designation creates a framework for local and regional stewardship of critical resources and ecosystems²⁴. The town's only ACEC is further discussed in Section 4F.

The north side of town has fared better in terms of visual impact of development than has the south side. Even public access to the shore on the south side is severely limited with existing resources already at maximum capacity during peak use times. To enhance greater availability of seaside recreational areas in town, there must be some effort to expand salt water and fresh water beaches for future generations. Also some consideration must be given to redefining village character along the south side's connecting roadways, primarily Routes 28 and 132 and to a much lesser extent, Main Street. Urban sprawl along Route 28 and 132 and their arterial roads is unsightly and lacks visual diversity and relief. Indeed, when driving these roads, one could easily confuse the five villages of Cotuit, Marstons Mills, Osterville, Centerville and Hyannis as being a series of generic strip mall development interspersed with brief areas of woodland.

The Town of Barnstable has an environment that is very accommodating to public recreational needs. The gentle slopes of the moraine and outwash plain offer much in the way of passive recreation in the form of walking, hiking, bird watching and scenic viewing. The relative flatness also affords the town a significant opportunity for active recreation; open tracts of land with few peaks and valleys provide perfect opportunities for ball field construction and other active-recreation activities. Currently there is a need for more recreational facilities serving active recreational user groups and older age groups. Unique features and scenic resources are discussed further in Section 4F and mapped on Map 4 *Unique Features*.

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²⁴ Massachusetts Division of Conservation and Recreation, http://www.mass.gov/dem/programs/acec/

C. Water Resources

Barnstable's water resources can be grouped into two broad categories: <u>fresh water</u>, including groundwater and numerous inland surface water bodies, and <u>marine waters</u>, which include tidal estuaries as well as harbors connected to Cape Cod Bay and Nantucket Sound. Together, these two broadly defined systems constitute the town's most important natural resource, as the groundwater is the source of all of its potable drinking water, and the abundant inland and coastal water resources historically have provided and continue to provide great attraction as a place to live and visit. Water resources in Barnstable are discussed below and shown on Map 5 *Wells and Zones of Contribution*, Map 6 *Wetlands*, and Map 8 *Fisheries and Vernal Pools*.

Freshwater Resources

1. Groundwater/Aquifer Recharge Areas

Barnstable's potable drinking water supply source is its underground sole source aquifer. Public wells draw water from wide surface areas known as Zones of Contribution to Public Water Supply wells, and occupy approximately 30 percent of the area of the Town. Map 5, *Wells and Zones of Contribution*, shows Barnstable's wells and groundwater protection zones:

- Wellhead Protection Overlay District
- Groundwater Protection Overlay District
- Aquifer Protection Overlay District

The Aquifer Protection Overlay District consists of all areas of the town, except those areas within the Groundwater and Well Protection Overlay Districts. The Well Protection Overlay District consists of the area within the five year time of travel zone to existing and proposed public supply wells. The Groundwater Protection Overlay District consists of all those areas within Zones of Contribution as shown on the Overlay District Zoning to public supply wells²⁵.

These zones are spread throughout the most intensely developed portions of town and zoning districts have not evolved in a manner consistent with the protection of water supplies. Like most Cape Cod towns, development has outpaced knowledge regarding its potential adverse effects and we are in the position of remediating problems and preventing future ones through creative land use planning. Thus, there is constant vulnerability to contamination due to the extensive development occurring within these Zones of Contribution and the porous underlying soils.

In general terms, the groundwater system can be described as the saturated zone of water-bearing glacial deposits beneath the land surface. The upper surface of this zone, known as the water table, lies at depths beneath the land ranging from more than 100 feet in the highest part of the moraine to 0 to 10 feet along the shores and in the vicinity of ponds and lakes. In cross-section,

25 According to Town of Barnstable's Zoning Ordinance 3-5.2 Groundwater Protection Overlay Districts.

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the groundwater body is shaped like a lens, with the highest elevations of the water table being found along the groundwater divide, which in Barnstable roughly parallels the east-west axis of the moraine. Groundwater flows from the higher water table contours along the divide north and south to the lower elevations near the town's shores and beaches.

The town's groundwater system, like the whole of Cape Cod, is replenished entirely by precipitation. The level of the water table fluctuates seasonally due to evaporation, precipitation and water withdrawals. The major threat to the aquifer is from contamination due to land use impacts. The sewage treatment plant in Hyannis and the wastewater treatment plant in Marstons Mills are point sources of pollution located upland of public supply wells. The industrial zone at Independence Park resides in Hyannis' primary drinking water supply area, as does the Barnstable Municipal Airport. On-site sewage systems are a possible source of groundwater pollution if located in unsuitable soils, at high density, or in close proximity to water bodies or the groundwater. This water quality is a constant concern, however the quantity of available groundwater within the town appears to be adequate to serve the town's drinking water needs for the foreseeable future. The quality and quantity of groundwater is also the most significant factor in the maintenance of the ecological integrity of other natural resources, especially ponds, wetlands, marshes and salt water embayments.

Septic systems are abundant in the town, and are used by residents, business and municipalities. However, on-site septic system leaking and failures are unfortunately commonplace, and high levels of nitrates in the groundwater have been recorded by the Town's Health Division.

2. Wetlands

The Town of Barnstable's wetlands, both coastal and inland, are considerable in extent and in function. Approximately 10 percent (4,000 acres) of total town acreage consists of salt marsh, the bulk of which is within the Sandy Neck/Barnstable Harbor ACEC area, and while estimates of inland wetland acreage are variable, Barnstable's endowment is indeed generous, given its numerous ponds, streams and proximity to groundwater. 'Wetlands' is a collective term which includes marshes, bogs, swamps, wet meadows and similar environments which reside between open water and dry land. The importance of wetlands has been well documented by past Town Open Space and Recreation Plans, and detail how wetlands offer much in the way of wildlife and land conservation.

Wetland plants are adaptable, enabling them to survive the stresses of surface flooding, soil saturation, oxygen limitations, and changes in salinity. Wetlands function to effectively improve water quality by retaining nutrients and sediments, and by storing and attenuating floodwaters. Wetlands also help to provide valuable flood control, wildlife habitat and attractive scenery. Since the establishment of the Wetland Protection Act, Barnstable has experience limited loss of wetlands.

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The Town of Barnstable has 19 tidally restricted wetland sites, sites impacted by transportationrelated facilities such as roads, railroads, causeways, and footpaths²⁶. Seven are within the ACEC of the Sandy Neck/Great Marsh area; five contain rare species habitat, several provide shellfishing areas and some are adjacent to existing protected open space. These sites offer the town numerous opportunities to restore affected ecosystems. To date, successful restoration projects have been realized at Bridge Creek, West Barnstable and at Sandy Neck with the Interdune Swale Project.

In addition to supporting highly productive ecosystems, the Town of Barnstable's coastline contains beaches, harbors and water views with great natural beauty and excellent recreational potential. While these areas are extremely appealing and attractive to both tourists and residents, they are fragile environments easily damaged by inappropriate land use or high levels of human activity. It is essential for the town to maintain the quality of its coastal resources so it can remain a picturesque seaside community, an image that holds great economic and environmental importance.

The Town of Barnstable's coastal resources are extensive. The town contains approximately 99 miles of tidal shoreline, ranking first among the 351 cities and towns in Massachusetts. These resources are the result of the continuing interaction of the Atlantic Ocean and climatic forces with the geologic landforms left by the glacier, processes which continue to shape the coastal landscape today. Most of the exposed shorelines are eroding landward from the effects of land subsidence, wave activity and a gradual rise in sea level. This natural process of erosion is aggravated by the action of coastal storms. During the winter of 2004-05, the Cape has seen frequent, intense coastal storms, including severe northeasters accompanied by serious coastal erosion and storm flooding. Flooding often causes significant damage to homes and businesses near the waterfront. Septic systems can be exposed, causing sewerage to enter nearby surface waters. Barrier beaches, natural buffers from the forces of the sea, also sustain damage.

Barrier beaches and coastal dunes are subjected to continual erosion, accretion and movement because of constant exposure to winds and water. Localized accretion is also occurring due to longshore sediment transport along barrier beaches, for example at the tip of Sandy Neck. Numerous groins, jetties and revetments have been built in an attempt to protect residences and to stabilize inlets and harbors for boating activities. Such structures, however, are not without environmental consequences of their own, as they starve downdrift areas of sand nourishment. Natural protection is provided by the town's major barrier beaches: Sandy Neck, Dead Neck/Sampson's Isle, and Long Beach.

Development in Barnstable has historically focused along its shorelines. Coastal waters and beaches are used heavily for recreational activities such as boating, swimming, fishing and shellfishing. The harbors, bays, estuaries and tidal flats are rich in shellfish resources, yielding a variety of shellfish (softshell clams, quahogs) to both recreational and commercial harvesters.

²⁶ Cape Cod Commission, Cape Cod Atlas of Tidally Restricted Salt Marshes: Town of Barnstable, December 2001.

Localized water quality problems have been caused by cesspools or inadequate septic systems, storm drains and other non-point sources of pollution related to development. Increased boating activities associated with accelerated growth has also contributed to local coastal pollution from various sources, such as outboard motor combustion, boat sewage and fueling spills. All of these discharges contain nitrate-nitrogen and most include bacteria as well. Nitrate-nitrogen is a nutrient for algae, and high concentrations can result in blooms that are unsightly and foul smelling. Decomposition of heavy algae growth also reduces the oxygen supply, so less is available for fish and other organisms. This impact is extremely significant because coastal waters are nurseries for a wide diversity of species. Coastal waters have been degraded to the point where large areas of tidal flats are regularly closed to shellfishing year-round. Examples of recent shellfish closures include one acre in North Bay, and all of East Bay. To date the town has spent in excess of \$300,000 on measures to mitigate stormwater impacts in East Bay, according to the Town's Health Division²⁷. Fueling spills are a constant concern, as fuel and resources are shipped to Nantucket and Martha's Vineyard from Hyannis Harbor on a daily basis. In the winter of 2005, a refueling spill in Hyannis Inner Harbor resulted in an intensive and successful cleanup effort.

The Town of Barnstable has several developed harbors whose historic architecture and many traditional waterfront activities add greatly to the town's appeal to tourists and visitors. Marinas provide essential services to both commercial and recreational boaters, and are an important part of the town's economy. Hyannis Harbor is a major activity center in the Town of Barnstable, offering transportation and tourist functions, and historically offering fishing. There are few natural features left in this area, and some of the present uses are somewhat deteriorated, with expansive parking lots along part of the waterfront and little fin and shell fishing²⁸.

The town's many sheltered embayments and coastal harbors provide excellent boating, sailing and water-dependent recreation. For many, the adjacent waters of Nantucket Sound to the south and Cape Cod Bay to the north are a unique and unparalleled recreational resource. For a few, these waters provide a livelihood (shellfish, finfish).

3. Surface Waters

Overall above-ground water sources, including marine beaches and freshwater ponds, are in very good shape in terms of water quality. Sampling results for the 2004 bathing season indicate exceptional water quality for beaches and ponds in the town. Fourteen instances of marine (salt) water beach failures were tallied, and two fresh (pond) water beach failures were noted. The

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²⁷ Saad, Dale L. Ph. D., Application for a Federal No Discharge Designation For The Three Bays/Centerville Harbor Area in the Town of Barnstable, Massachusetts, Coastal Health Resource Coordinator, Town of Barnstable Health Division, 2000.

²⁸ Town of Barnstable, Local Comprehensive Plan, 1997.

majority of failing instances were one-time only instances, and the majority of the failures observed this season occurred during or within 24 hours of precipitation events²⁹.

All of the Town of Barnstable's ponds and lakes intersect the groundwater table. The majority of these water bodies are located on the outwash plain, having formed in kettle holes. In size, they range from the 654 acres of Wequaquet Lake, the third largest fresh water body on Cape Cod, to numerous smaller ponds varying in size. These ponds are a great scenic, recreational, and wildlife habitat resource, but also provide desirable home sites, particularly as coastal waterfront lots become scarcer and more expensive.

The Great Ponds of Barnstable, all 10 acres or larger in size, are:

- Garretts Pond
- Hamblin Pond
- Hathaway Pond
- Long Pond
- Lovells Pond
- Middle Pond
- Mystic Lake
- Round Pond
- Rushy Marsh Pond (originally tidal)
- Shubael Pond
- Wequaquet Lake (includes Bearse Pond)³⁰

Each of these ponds has high open space and recreation value. Town Great Ponds managed by the State Division of Fisheries and Wildlife include Hamblin, Hathaway, Lovells, and Shubael Pond and Wequaquet Lake. Section 5 Inventory of Conservation and Recreation Lands provides more information regarding recreational usage of these water bodies.

The town has 61 ponds of at least two acres. They contain a total area of 2.9 square miles and comprise about 5 percent of the town's land area. Ponds are an important source of recreation for the town. They are used for swimming, boating, fishing, and ice fishing. They also provide habitat for waterfowl and fish³¹.

The Hyannis Coastal Plains Ponds are a unique resource. The ponds in this complex include Mary Dunn, Lamson, Israel, Israel Pond and pondlets, Flintrock, Campground and Lewis Ponds. Their shores and surrounding vegetation contain habitat for significant populations of very rare plant and animal species. In 2003, the town through state Department of Environmental Protection (DEP) grant funding constructed approximately one mile of guardrail along Mary Dunn Road to help protect the ponds from illegal dumping and ORV's.

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²⁹ Barnstable County Department of Health and Environment, Barnstable Public Bathing Beach Water Quality Report, 2004.

³⁰ According to Massachusetts Department of Environmental Protection, Waterways Protection Regulation Program, April 14, 1997.

³¹ Town of Barnstable, Local Comprehensive Plan 1997.

Because all of the town's surface waters are water table ponds and lakes, the town and its residents have a rare ability to literally see the effects of groundwater well pumping. This is especially true in the Coastal Plains Ponds area, where water withdrawals can directly impact this unique ecosystem. Most of these ponds are shallow, with average depths from 0.6 to 3.4 ft., and several occasionally dry up in the summer. This can be further caused by heavy pumping of wells, drought and/or other influences. In the area of the ponds, groundwater levels are strongly affected by nearby public water supply wells and are subject to seasonal changes in groundwater levels of three to four feet. These seasonal fluctuations help to create and maintain the special Coastal Plain Pond Shore, which provides habitat for some important rare species. Dramatic changes to the hydrology of these habitats represents a significant threat to these ecosystems.

There are no navigable freshwater streams or rivers within the Town of Barnstable. Several socalled rivers (for example, the Bumps, Centerville, and Marstons Mills Rivers) are actually groundwater-fed streams running north-south across the outwash plain, receiving drainage from surrounding shallow watersheds and frequently connecting existing kettle hole ponds or lakes, thereby creating makeshift runs for herring and other anadramous fish to gain access to the ponds and lakes to spawn. More on fisheries will be discussed in Section 4E. Along the coast, the streams mix with tidal waters and become estuarine in nature. In addition to the natural runs, several artificial ditches have been excavated to serve as herring runs, and two are still in use: a 2,000 foot channel running from the outlet of Middle Pond to the Marstons Mills River, and ditches connecting Wequaquet Lake, Long Pond, and the Centerville River. Dry most of the year, these ditches are opened by the Town's Marine and Environmental Affairs Division in spring and fall during herring migration periods. They also provide a means of shunting stormwater flows to reduce high lake levels.

The town's streams have had their flows extensively altered and regulated by cranberry growers over several centuries. Several ponds within the town are former cranberry bogs which have been permanently flooded.

Nitrogen is used as an indicator of surface water contamination by sewage effluent, which may contain other contaminants, such as pathogens (viruses and bacteria), and hazardous chemicals. Nitrogen is the principal nutrient responsible for algae growth in marine waters and degradation of water quality. Concentrations of less than 1 part per million may result in a decline in water quality and other changes to the marine environment. Road runoff is a principal cause of closure of shellfish beds and swimming areas³².

4. Flood Hazard Areas

The 100-year coastal floodplain, the area that has the statistical probability of being flooded by major storm, events that occur on the average once every 100 years, has been mapped by the

32 Town of Barnstable, Local Comprehensive Plan,, 1997.

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Federal Emergency Management Agency (FEMA), and comprises approximately 20 percent of the land area of the town. Development is closely regulated in the floodplain in order to minimize storm damage; however, the floodplain has been extensively developed, primarily for residential homes. The floodplain zoning by-law sets standards for new construction within floodplains.

D. Vegetation

The Town of Barnstable contains a number of diverse vegetative communities which are ecologically significant, and which help to define the visual character of the town. There is a wide diversity in the size, successional stage and vulnerability to development of these communities.

Vegetation performs many critical functions. Plant species moderate weather extremes, help maintain the quality of the soil and air, protect against erosion, and absorb runoff, therefore protecting groundwater supplies. Vegetation provides useful habitats for wildlife, including shelter and food, breeding and overwintering habitat. Some wild plants, such as those producing berries, provide food for humans. Trees, shrubs and groundcover have aesthetic value, and are a major component of Barnstable's visual quality.

Several areas of the Town of Barnstable, notably sections of Sandy Neck and the Hyannis Pond/Independence Park Complex, contain rare vegetative communities. The Massachusetts Natural Heritage and Endangered Species Program (MNHESP) has mapped these areas based on current available information (see Map 7B *Mass. NHESP Barnstable BioMap Core Habitats*).

MNHESP BioMap and Core Habitats

The Massachusetts Natural Heritage and Endangered Species Program, with funding made available by the Executive Office of Environmental Affairs, developed a BioMap to identify the areas most in need of protection in order to protect the native biodiversity of the Commonwealth. BioMap focuses primarily on state-listed rare species and exemplary natural communities but also includes the full breadth of the State's biological diversity. The goal of the BioMap is to promote strategic land protection by producing a map showing areas that, if protected, would provide suitable habitat over the long term for the maximum number of Massachusetts' terrestrial and wetland plant and animal species and natural communities (MNHESP Web site at http://www.mass.gov/dfwele/dfw/nhesp/nhbiomap.htm).

The BioMap produced for Barnstable and shown below indicates three major MNHESP Core Habitat areas that include and surround the town's three largest conservation areas: West Barnstable Conservation Area, Sandy Neck barrier beach, and the Division of Fisheries and Wildlife Land. Thus the town is well on its way to protecting these Core Habitat areas. However, after looking at the BioMap there are significant areas within the Core Habitats that are not permanently protected open space. These areas should be considered as high priority

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land acquisition zones and the parcels located within them added to the proposed master *Priority Parcel Acquisition List* for the town.

Ninety-two verified natural communities were identified in the Town's Core Habitats³³. Core Habitats represent habitat for the most viable rare plant and animal populations and include exemplary natural communities and aquatic habitats. Some Core Habitats are protected, and others are in private, developable areas. These natural communities support hundreds of species of vegetation, including 246 vascular plant species, and 23 aquatic vascular plant species. Only a handful of the Town's Core Habitats will be discussed in this narrative.

There are four state-defined *Critically Imperiled* natural communities in the Core Habitat that encompasses the Sandy Neck/Great Marshes/Barnstable Harbor area: Coastal Interdunal Marsh/Swale, Maritime Juniper Woodland/Shrubland, Maritime Oak-Holly Forest/Woodland, and Maritime Pitch Pine On Dunes. This Core Habitat contains a 1,000-acre dune system, and there are more than 25 swales supporting excellent Coastal Interdunal Marsh vegetation. Coastal Interdunal Marsh Swales range from unvegetated pools to low shrub-dominated communities.

The *Vulnerable* Estuarine Intertidal Salt Marshes are a graminoid-dominated, tidally flooded coastal community with several zones. Cordgrasses (*Spartina alterniflora* and *S. Patens*) are the dominant plants here. A series of 15 Core Habitats contain excellent diversity of vegetation and run along Barnstable Harbor in the Great Marsh. The Brackish Bulrush (*Scirpus cylindricus*), a member of the sedge family that is rare throughout the New England region, is found here near the edge of the salt marsh. Also within the Core Habitat is a population of the *Threatened* Swamp Oats (*Sphenopholis pennsylvanica*).

Spanning the Towns of Barnstable and Sandwich, the Core Habitat including the West Barnstable Conservation Area encompasses pine/oak woodlands and barrens, as well as Coastal Plain Ponds. Several *Threatened* or *Special Concern* species are in the Habitat, including New England Blazing Star (*Liatris scariosa var. novae-angliae*) and Rough Panic-grass (*Dichanthelium scabriusculum*). Of note to the town is how much of this Core Habitat currently under management by the Town of Sandwich is not considered protected according to MNHESP.

The Hyannis Ponds Complex, a Core Habitat shared by the Towns of Barnstable and Yarmouth and managed by the state Division of Fisheries and Wildlife, is considered by many to be the single best example of the Coastal Plain Pondshore natural community in the world. Coastal Plain Pondshore communities are herbaceous communities of exposed pondshores in areas of oak and oak pine forests, characterized by a distinct coastal plain flora and subject to flooding and drought. Vegetation is correlated with flooding regime, and species composition varies from year to year. Dense clusters of rare plants including Plymouth Gentian (*Sabatia kennedyana*), Redroot (*Lachnanthes caroliana*), and the *Endangered* Torrey's Beak-Sedge (*Rhynchospora*

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³³ All Core Habitat summaries according to Massachusetts Division of Fisheries & Wildlife Natural Heritage & Endangered Species Program, *BioMap: Core Habitat Summaries, Barnstable*, 2004.

torreyana) and Mattamusket Panic-Grass (Dichanthelium dichotomum ssp. Mattamuskeetense) have been found here. In addition, this habitat includes pitch pine/scrub oak barrens, as well as an Imperiled Coastal Atlantic White Cedar Swamp Habitat, with basin swamps dominated by Atlantic White Cedar (Chamaecyparis thyoides) in the overstory and a mixture of coastal species in the understory. White pine (Pinus strobus) and hemlock (Tsuga canadensis) are infrequent associates. Some of this Core Habitat is not under conservation restrictions, most notably the areas surrounding Flintrock and Mary Dunn Ponds; the Habitat is directly north of the Barnstable Municipal Airport, which is under town jurisdiction and considered off-limits to development yet is impacted by airport land use.

The roughly triangular-shaped Core Habitat that is bounded by Phinney's Lane, Route 132 and Route 6 surrounds the Hathaways Ponds Conservation Area and contains Coastal Plain Pondshore communities as well the Endangered Papillose Nut-Sedge (Scleria pauciflora var caroliniana). About one third of this Core Habitat is protected.

The Core Habitats around Shallow Pond and around Round Pond both contain Coastal Plain Pondshore communities. The Endangered Torrey's Beak-Sedge has been found in the Shallow Pond Core Habitat, and the Special Concern species Terete Arrowhead (Sagittaria teres) is found in a shallow cove in Wequaquet Lake.

While the list of vegetation already mentioned is of considerable uniqueness in terms of species diversity, more-dominant vegetation will be listed below.

The dominant species in seashores and sand dunes is American beachgrass (Ammophila breviligulata), which is significant in stabilizing dunes from wind and storm erosion. This plant is very sensitive to vehicular and foot traffic. Other common plants include seaside goldenrod (Solidago sempervirens), salt-spray rose (Rosa rugosa), bayberry (Myrica pennsylvanica), and beach plum (Prunus maritima).

Pond, stream and lake margins are populated by the yellow pond-lily (Nuphar variegata), and the white water-lily (Numphaea odorata). Freshwater bogs are common throughout the town and contain cranberries (Vaccinium macrocarpon), highbush blueberries (Vaccinium corymbosum), and swamp azaleas (Rhododendron viscosum).

Woodland areas are characterized by a mixed oak-pine association dominated by several species of oak (Quercus spp.) and pine, principally pitch pine (Pinus rigida). Pitch pine is dominant in areas where fires have been frequent over the years, because it is extremely fire resistant. Areas covered by pitch pine forests have, however, declined in recent years, as fire prevention methods have improved.

Former agricultural areas, including abandoned fields, meadows and pastures, are important habitats for a wide diversity of weed-like plants and wildflowers. Pokeweed (Phytolacca americana), wild morning-glory (Convolvulus sepina), chicory (Cichorium intybus), Queen Anne's Lace (Daucus carota), and the common milkweed (Asclepias syriaca) are common

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throughout these areas. These habitats are in an intermediate stage of succession, and if left undisturbed will be replaced by a variety of woody vegetation, including eastern red cedar (*Juniperus virginiana*) and wild cherry (*Prunus serotina*).

In addition to the state-level MNHESP Core Habitat identification, there is another important regional study of wildlife habitat called the Cape Cod Wildlife Habitat Conservation Project.

Cape Cod Wildlife Habitat Conservation Project³⁴

The central goal of the Cape Cod Wildlife Habitat Conservation Project, conducted by The Compact of Cape Cod Conservation Trusts, Inc., is *to preserve and enhance biodiversity on Cape Cod*. To achieve this ambitious goal, the project focused upon the identification, mapping and ranking of natural communities, including existing areas held for conservation or other open space purposes. Existing sources were utilized to identify and map 32 distinct community types³⁵. By integrating principles of landscape ecology and conservation biology, the project acknowledges the importance of both habitat quantity *and* quality. Although "bigger is usually better" since larger areas provide greater opportunities to sustain populations, protection of smaller areas, such as sites that contain vernal pools or rare habitat types are also important for maintaining overall diversity. Thus, the project has attempted to determine the habitat requirements for the more than 400 species that are known or expected to occur within Barnstable County and map these habitats in order to determine priority areas for protection³⁶. See Map 7A *Cape Cod Wildlife Habitat Conservation Project* for more details.

The results of this analysis provide a comprehensive view of the best *potential* wildlife habitats on Cape Cod based upon natural community type (i.e. vegetation cover, geologic and hydrologic features), size, condition and landscape context³⁷. One of the greatest threats to wildlife populations on Cape Cod is the continued fragmentation of habitat resulting from land development practices. This project presents an opportunity to lessen the impact of habitat loss by identifying the most important remaining areas in need of protection for use by those interested in preserving the Cape's wildlife diversity.

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³⁴ Much of this section was taken verbatim directly from the project's final report entitled *Cape Cod Wildlife Conservation Project: A Strategy for Preserving Natural Diversity*, published by The Compact of Cape Cod Conservation Trusts, Inc. and reorganized and adapted for use in this Plan. For a copy of the complete report, contact The Compact at 508-362-2565.

³⁵ This number is approximate and may include other community types not mentioned.

³⁶ Does not include fish or marine species.

³⁷ No wildlife surveys were conducted in conjunction with this project.

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Summary of Regional Results and Recommendations

- 32 habitat types were identified and mapped. 7,754 individual areas or habitat "patches" were mapped which contained a total of approximately 160,000 acres, or 61 percent of the Cape's land area 38 .
- Town-by-town summary tables were prepared which identify the total amount of each habitat type (in acres) mapped and illustrate the distribution of habitat types across the region. Table 12 shows results for the Town of Barnstable.
- Most of the highest ranking habitat areas are contained within six large "core" areas which include the Massachusetts Military Reservation, the Sandy Neck/Chase Garden Creek complex in Barnstable/Yarmouth, Punkhorn Parklands in Brewster, Nickerson State Park in Brewster/Orleans, Monomoy National Wildlife Refuge and much of the Cape Cod National Seashore.
- Other significant areas include Bournedale in the northwestern corner of Bourne, Town Neck Beach and marsh system in Sandwich, the town conservation lands in East Sandwich/West Barnstable area, Quivet Neck/Crowe's Pasture in Dennis and Brewster, Namskaket Creek in Brewster/Orleans, and Herring River/Boat Meadow Creek in Eastham.
- Roughly half (46 percent) of the identified habitat areas are protected as open space by public agencies or private organizations. Some of these areas may not be adequately protected or managed to maximize conditions for wildlife.
- In general, wildlife habitat is highly fragmented on Cape Cod as a result of land development for residential, commercial, recreation, transportation and other uses. Overall, the average "patch" size mapped, irrespective of habitat type, was approximately 20 acres.
- Forested woodlands are the most common habitat types on the Cape, accounting for 60 percent (104,368 acres) of the total mapped area. The dominant woodland community type is the mixed pitch pine -oak that is characteristic of much of the dry upland sites in the Upper and Mid-Cape region.
- Woodland habitats support the greatest potential number of breeding species (134) than any other habitat type found on Cape Cod. Grasslands and heathlands (52) and wooded swamps (45) support the next highest potential number of species, respectively.
- The most important breeding habitats for the protection of state-listed rare species (Endangered, Threatened, or Special Concern) are coastal plain pondshores, vernal pools, and barrier beaches and dune systems.
- Sandplain grasslands, coastal heathlands, and pitch pine/scrub oak barrens are important rare habitats found on the Cape which also provide habitat for a number of state listed species. Fire suppression, development and natural succession have reduced these open

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³⁸ Total area includes both protected and unprotected areas as well as the undeveloped portions of properties that may contain some development, such as one dwelling unit on a multiple-acres parcel.

habitats dramatically. Today, these habitat types represent only about two percent of the total area mapped.

Due to the scarcity of the grassland and heathland communities, there are few opportunities to protect more of these habitat types through outright acquisition. Some expansion and enhancement of these habitats may be achieved through the active management and habitat restoration efforts.

Approximately 30,000 real estate parcels were identified that contained one or more habitat types. The total area associated with these properties is approximately 138,000 acres. These included existing protected areas, as well as undeveloped and under-developed properties of two acres or greater.

Each parcel was ranked for its conservation value. The criteria used to determine conservation value were parcel size, habitat value, surrounding land uses (context), and percent upland.

Parcel Ranking Summary: Cape Cod Totals								
Ranking	% Acres Protected							
Maximum	1,633	42,763	86 %					
High	11,388	61,591	48 %					
Medium	13,382	31,174	16%					
Low	2,810	2,923	8%					
Total	29,213	138,451	52%					

Parcel Panking Summary: Cana Cod Totals

- More than half (52 percent) of the total acreage associated with parcels containing some According to the ranking, the Cape has managed to wildlife habitat are protected. protect most (86 percent) of the highest ranked properties.
- Roughly half of the total area associated with protected parcels occurs in the following towns: Barnstable, Bourne, Eastham, Sandwich, Truro, and Wellfleet.
- The land area associated with the remaining unprotected parcels is 66,467 acres. The distribution in terms of the habitat ranking is as follows: 5,867 acres in the Maximum category, 31,876 acres in High category, 26,040 acres in Medium category, and 2,683 acres of Low category.
- The towns with the largest amount of unprotected acreage in the Maximum parcel category are: Mashpee (1,412 acres), Harwich (883 acres), Bourne (743 acres), Falmouth (640) and Barnstable (458 acres). This represents 70 percent of the total acreage in the Maximum category Cape-wide.
- A significant number of opportunities exist to preserve additional habitat areas through land acquisition and other conservation techniques, but few large, unprotected properties remain. The mean size for all parcels evaluated is 4.74 acres. The largest parcel ranked occurs within the Massachusetts Military Reservation in Bourne and is nearly 9,000 acres.

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• The greatest opportunity for protecting additional acreage falls within parcels that are ranked in the High and Medium categories. Many of these properties are located adjacent to existing protected open space and may present opportunities to expand existing areas or provide a linkage between habitats using buffers or linear corridors.

Habitat Classification Results and Summary Statistics

The project has identified and mapped 32 wildlife habitat types based on vegetation, hydrology, or geologic features. The classification scheme resulted in the delineation of 21 wetland and eleven upland habitat types or natural communities. The project did not support any fieldwork and therefore relied upon existing information and some local knowledge to identify community types. Numerous sources were consulted, including the Cape Cod Commission, Mass GIS, Department of Environmental Protection, MA Natural Heritage and Endangered Species Program, Association for the Preservation of Cape Cod and The Compact's panel of Scientific Advisors. GIS mapping technology was used to integrate geographic data from the different sources and distinguish habitat types.

Habitat Descriptions

The Wildlife Conservation Project began with a detailed mapping of each major habitat type found Cape Cod. Habitats types were described based on definable natural community characteristic including dominant vegetation cover, hydrology and/or geology. In and of themselves the maps proved to be useful tools for understanding the occurrence and distribution of the remaining wildlife habitats on the Cape. For the first time, these maps show the proximity of developed and undeveloped areas at a scale which is useful for local planning purposes. What they did not show was which of the remaining habitat areas are the most important for conserving wildlife. In order to accomplish this, the Compact had to develop a method for comparing the relative value of these areas to wildlife. Since it was beyond the scope of the project to determine this information from field surveys, the Compact sought to assemble the best available, existing information to approximate these values.

Thirty-two community types have been identified and mapped from existing sources. The 32 community types identified include salt marsh, barrier beach, barrier beach/dunes systems, coastal beach, coastal dune, coastal bluff, rocky inter-tidal shore, tidal flat, ponds and lakes, streams and riparian corridors, fresh marsh, shrub swamp, wooded swamp deciduous, red maple swamps, wooded swamp coniferous, Atlantic white cedar swamp, wooded swamp mixed, coastal plain pond shores, vernal pools, bog, cranberry bog, sandplain grassland, coastal heathland, grassy heath, cultural fields, pitch pine-scrub oak barrens, pitch pine-oak woodland, white pine-hardwood woodland, American beech woodland, oak-hickory woodland and unclassified woodlands. Other "significant woodland communities" were included where small stands of unique tree species were known to exist

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The data provided in Table 11. summarizes the relative amount of each habitat type mapped for Cape Cod.

Habitat Type	Occurrences	Sum Acres	Percent of Total	
DEVELOPED AREAS	4,807	102,666.061	37	
SALT MARSH	1,109	13,944.841	5.05	
BARRIER BEACH/DUNE SYSTEM	261	4,816.818	1.75	
POND/LAKE	847	11,261.194	4.08	
SHRUB SWAMP	2,377	4,053.762	1.47	
BOG	51	157.320	0.06	
FRESHWATER MARSH	954	2,324.545	0.84	
SANDPLAIN GRASSLAND	15	2,561.390	0.93	
COASTAL HEATHLAND	22	805.623	0.29	
CULTURAL FIELD	50	1,201.733	0.44	
PITCH PINE-OAK WOODLAND	8	581.901	0.21	
WHITE PINE-HARDWOOD WOODLAND	16	258.923	0.09	
AMERICAN BEECH WOODLAND	27	302.870	0.11	
OAK-HICKORY WOODLAND	6	104.435	0.04	
PITCH PINE-SCRUB OAK BARREN	8	1,270.108	0.46	
CRANBERRY BOG	332	1,190.105	0.43	
BARRIER BEACH	519	3,845.424	1.39	
GRASSY HEATH	2	50.545	0.02	
UNCATEGORIZED FOREST	2,768	104,368.247	38	
SIG WOODLAND COMMUNITY	91	233.530	0.08	
WOODED SWAMP DECIDUOUS	1,270	2,349.787	0.85	
WOODED SWAMP CONIFEROUS	429	673.712	0.24	
WOODED SWAMP MIXED TREES	395	784.034	0.28	
TIDAL FLAT	395	11,853.713	4.30	
COASTAL BEACH	564	1,811.020	0.66	
COASTAL DUNE	561	1,654.842	0.60	
BANK BLUFF/SEA CLIFF	485	694.979	0.25	
ROCKY INTERTIDAL SHORE	80	82.590	0.03	
Totals	18,450	275,904.052	100.00	

 Table 11.
 Summary of Habitat Types for Cape Cod

Source: Cape Cod Wildlife Habitat Conservation Project

Occurrence and Distribution of Wildlife Habitats in Barnstable

Although mostly upland forest, there are significant differences in the occurrence and distribution of many of the other habitat types found on Cape Cod. Each town has its own unique mix or "natural signature" reflected in the mosaic of community types present. To some extent, these variations reflect the patterns of development in each town as well as the amount

and location of existing open space. But there are also geographic differences that are related to geologic conditions, topography, exposure and soil characteristics that provide an environment which allows some community types to thrive while prohibiting the establishment of others altogether. These regional differences define the natural landscape and help point out the opportunities for protecting biodiversity by emphasizing which towns contain the most of each community type.

As noted previously, the vast majority of Cape Cod's remaining natural habitats are forested woodlands. Table 12 *Summary of Priority Habitat Percentages in Barnstable*, and Appendix F *Detailed Priority Habitat Percentages in Barnstable*, show habitat breakdowns for Barnstable's approximately 40,000 acres. On a town-wide basis, the predominant habitat type was Uncategorized Forest totaling 30.7 percent of the total, the majority of which exists in the large conservation areas on the east and west borders of town. Salt marsh was a distant second at 9.54 percent of the total acreage and Ponds/Lakes came in third at 4.67 percent of the total. It is also notable that more than 44 percent of the town is considered developed, compared to the regional figure of 17 percent, which clearly indicates the more urban nature of this town compared to others on Cape.

Additional findings relevant to Barnstable are:

- The four towns with the most remaining forested woodland account for 50 percent of the total remaining acreage. Barnstable is 4th with 12,348 acres (11.5 percent).
- The town of Barnstable contains the most extensive amount of salt marsh with just over 3,800 acres or about 27 percent of the total for Cape Cod. Most of this salt marsh is located within the Great Marsh behind Sandy Neck in Barnstable harbor.
- For the purpose of summarizing the distribution and occurrence of habitats by type, the acreage figures for barrier beach/dune system, barrier beach, coastal beach, coastal dunes and coastal bluff were combined. Of course, not all species utilize these coastal landforms in the same manner, thus it may be necessary to consult the more specific biological information to determine if sufficient habitat area is available for species with specific needs. For all coastal categories included above Barnstable ranks 2nd at 16.6 percent of the total acreage
- Vegetated wetlands include shrub swamps, wooded swamps, fresh marsh and bogs. Of these types, the shrub swamp is the most prevalent totaling more than 4,000 acres Capewide. Truro has the most shrub swamp with 635 acres (15.65 percent), followed by Barnstable with 468 acres (11.6 percent).
- The total acreage for all types of wooded swamp (deciduous, coniferous and mixed) is approximately 3,800, comparable to the 4,000 acres total for shrub swamps. In fact, if left undisturbed, many of the present day shrub swamps will eventually mature into wooded swamps through natural succession. The town with the largest combined acreage for this habitat type is Barnstable with 624 acres (16 percent).
- Fresh marsh is a common wetland type on Cape Cod, with just under 1,000 occurrences with a total area of approximately 2,325 acres. Unfortunately, there are few large intact systems remaining and the vast majority (90 percent) of the occurrences are less than five

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acres in size. The largest single unit mapped was 114.5 acres and occurred in the Town of Bourne. Overall, Barnstable has the largest proportion of fresh marsh within its boundaries with 265 acres or about 11.4 percent of the region's total.

- Today, sphagnum bogs are somewhat of a rarity, with only 51 occurrences mapped for a little less than 160 acres. Barnstable ranks 3rd with 17 acres (11 percent).
- There were 332 occurrences of cranberry bog mapped for a total area of 1,190 acres. Barnstable leads the Cape with 242 acres (20 percent) dedicated to growing berries.
- Sandplain grasslands have been mapped in only seven of the Cape's 15 towns and the majority of these areas are associated with the fields around airports. Barnstable ranks 7th on Cape with 12.4 acres.
- As the largest town, Barnstable also contains the most open water with 1,868 acres or about 17 percent of the total area.

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	overall					
Habitat Type (initials)	#	sum (ac)	%	%		
			Barn.	Cape		
Developed Areas (XX)	706	17764.8	44.42	17.30		
Salt Marsh (SM)	203	3817.3	9.54	27.37		
Barrier Beach/Dune System	29	932.4	2.33	19.36		
(BB/DS)						
Pond/Lake (P/L)	223	1868.1	4.67	16.59		
Shrub Swamp (SS)	393	466.7	1.17	11.51		
Bog (BG)	7	17.1	0.04	10.90		
Freshwater Marsh (FM)	168	264.6	0.66	11.38		
Sandplain Grassland (SG)	2	12.4	0.03	0.48		
Coastal Heathland (CH)	0	0.0	0.00	0.00		
Cultural Field (CF)	13	681.7	1.70	56.73		
Pitch Pine-Oak Woodland (PP)	1	47.2	0.12	8.11		
White Pine-Hardwood Woodland	4	44.7	0.11	17.27		
(WP-H)						
American Beech Woodland (AB)	2	13.9	0.03	4.58		
Oak-Hickory Woodland (O-H)	0	0.0	0.00	0.00		
Pitch Pine-Scrub Oak Barrens	0	0.0	0.00	0.00		
(POB)						
Cranberry Bog (CB)	57	241.8	0.60	20.32		
Barrier Beach (BB)	117	594.5	1.49	15.46		
Grassy Heath (GH)	0	0.0	0.00	0.00		
Uncategorized Forest (UF)	505	12105.7	30.27	11.60		
Significant Woodland Community	20	136.4	0.34	58.42		
(WC)						
Wooded Swamp Deciduous	239	421.7	1.05	17.95		
(WSD)						
Wooded Swamp Coniferous	51	82.2	0.21	12.20		
(WSC)						
Wooded Swamp Mixed Trees	63	119.9	0.30	15.29		
(WSM)						
Tidal Flat (TF)	341	159.9	0.40	1.35		
Coastal Beach (COB)	79	98.8	0.25	5.46		
Coastal Dune (COD)	76	75.5	0.19	4.56		
Coastal Bank Bluff or Sea Cliff	34	28.3	0.07	4.08		
(COBB)						
Rocky Intertidal Shore (RIS)	1	0.2	0.00	0.27		
TOTALS Source: Cape Cod Wildlife Habitat Co	3334	39995.9	100.00	NaN		

Table 12Summary of Priority Habitat Percentages in Barnstable

Source: Cape Cod Wildlife Habitat Conservation Project

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Key Recommendations for Maintaining and Enhancing Regional Wildlife Habitat Diversity

The Cape's land trusts and other conservation organizations are encouraged to use the maps that accompany The Compact's report as a guide for wildlife habitat planning and preservation efforts. There are three different sets of maps available. The Habitat Classification map shows the location, extent and distribution of the 32 habitat types identified for Cape Cod. The Wildlife Habitat Ranking map prioritizes these areas according criteria designed to approximate the importance of each area to the region's overall biodiversity value. Finally, a set of 15 town-wide Parcel Ranking maps shows the conservation priority and protection status for each of the nearly 30,000 parcels ranked. In general, the highest-ranking (unprotected) parcels represent the top priorities for protecting of wildlife habitat on a regional basis. In order to prevent misuse of this information, none of these maps are included in this report, but are available to conservation groups working to protect this land.

It is recommended that Cape Cod Wildlife Habitat Conservation Project habitat information and parcel rankings be used to help guide all future land acquisition decisions in the Town of Barnstable and that all maximum priority parcels be included in the proposed master Priority Parcel Acquisition List for the town. Each of the recommendations contained in the Cape Cod Wildlife Habitat Conservation Project report are applicable and directly transferable to this Open Space and Recreation Plan update. These are:

1. Prioritize! Prioritize! Prioritize! At current real estate values, the total pool of conservation funding including the Cape Cod Land Bank, is only capable of protecting roughly 10-15 percent of the remaining unprotected acreage. In order to maximize the habitat value of every dollar spent, priority consideration should be given to the Maximum ranked parcels included in this report. Towns with existing ranking lists should incorporate the findings of this report in any update.

2. Apply a regional focus to local land protection efforts: 70 percent of the highest ranked, habitat-containing parcels Cape-wide exist within just five towns. The Land Trusts and municipal Land Bank Open Space Committees in towns should begin immediately to investigate the remaining unprotected parcels listed in the Maximum categories for their respective towns and develop strategic plans for their protection. Working together, towns can stretch available acquisition funds and expertise, as Barnstable and Mashpee did in 2002 to help protect the 300-acre Santuit Pond, a maximum-ranked tract³⁹.

3. Discriminate. Not all parcels are created equal. Some of the highest ranked properties may contain existing structures or be actively used for recreation or other purposes. These "on the ground" characteristics must be taken into account and may influence habitat quality and final protection decisions.

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³⁹ The Massachusetts Executive Office of Environmental Affairs was an equal (1/3) partner in this acquisition.

3. Build upon past investments. Due to the overall fragmented nature and small size of the remaining unprotected habitat areas, future conservation efforts should seek to build upon identified protected core areas wherever possible in order to help maintain the viability of existing wildlife populations on Cape Cod.

4. Connections to the core areas and other open spaces should be sought through the creation of linear corridors and perimeter buffers to nearby developments. Natural landscape features including wetlands, water bodies, coastal features, and some utility easements, provide opportunities to link adjoining areas, often at less cost per acre than uplands and with potentially greater diversity.

5. Develop wildlife and habitat management plans for existing protected areas. Although substantial areas of important wildlife habitat are already protected, careful management of these areas is required to preserve diversity. For example, public access and recreational use should be carefully planned and managed to insure that important nesting areas, particularly for rare or other sensitive species, are not disturbed.

6. Expansion of rare sandplain grassland, coastal heathland and pitch pine/scrub oak barrens should be encouraged through active management and restoration wherever possible. These rare habitat types, which are critical to many state and federally-listed species, account for less than 2 percent of the total habitat area.

7. Wildlife surveys should be conducted within high priority areas to determine the status of resident populations and establish indicators for measuring biodiversity. The annual EOEA-sponsored "Biodiversity Days" is an excellent opportunity to undertake a broad-based general survey of this nature.

8. Consider using conservations restrictions, land donations and other tax planning land protection techniques to protect habitats on properties with existing homes or other forms of development. Conservation restrictions may reduce the cost of habitat protection on under-developed properties where fee simple acquisition is impractical or undesirable.

9. Build partnerships and collaborations to stretch funding and insure coordination. Habitat conservation at the landscape-level (Cape-wide) will require coordination between towns, the land trusts, and other public and private organizations with land stewardship responsibility. This is particularly true with respect to protection of the Cape's rare habitat types, which are key to maintaining the overall biological diversity. Key entities include the Massachusetts Military Reservation Management Committee, Cape Cod National Seashore, Massachusetts Department of Environmental Management (DEM), Mass Wildlife, U. S. Fish and Wildlife Service, and the Massachusetts Audubon Society.

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E. **Fisheries and Wildlife**

Wildlife is an important recreational, commercial and educational resource, and represents a rich, natural heritage which helps to define the basic character of the town. It adds interest and variety to the landscape, plays an important role in controlling pest infestation, and in general is a barometer of the ecological health of the community. In addition, hunting has historically been and continues to be an important recreational activity.

As throughout all of Cape Cod, land development in the Town of Barnstable places increasing pressures on wildlife and fishery resources. The rapid spread of roads and subdivisions has reduced and greatly fragmented the habitat of many native wildlife species which cannot easily survive. Many of these species have already been replaced with species which have adapted to suburban environments; others remain threatened by development.

1. Inventory

In the general wildlife inventory below, the town's wildlife species are divided into three categories with emphasis placed upon Endangered, Threatened and Special Concern species: Vertebrates, Invertebrates and Birds/Fowl⁴⁰. In 2003, the state identified the following fauna in the Town of Barnstable: 21 different species of Birds, 11 Reptiles, 6 Amphibians, 4 Mammals, 52 Moths & Butterflies, 25 Damselflies and Dragonflies, 10 Beetles, 11 species of Fish, 7 Mussels, and 23 species of Aquatic Invertebrates⁴¹.

All of the following rare species have been identified in one of the Town's Core Habitats:

- > Vertebrates include Diamondback Terrapins (Malaclemys terrapin), Eastern Spadefoot Toads (Scaphiopus holbrookii), Eastern Box Turtles (Terrapene Carolina), and Four-toed Salamanders (Hemidactylium scutatum). Opossum, bats, flying squirrels, fox, raccoon and White-tailed deer have all been documented in the town, along with snakes, salamanders, frogs and turtles among the amphibian and reptile species.
- > Invertebrates include rare moths, such as the Coastal Heathland Cutworm (Abagrotis nefascia benjamini), the Dune Noctuid Moth (Oncocnemis riparia), and other species, Barrens Buckmoth (Hemileuca maia), Comet Darner (Anax longipes), New England Bluet Damselfly (Enallagma laterale), Pine Barrens Bluet (Enallagma recurvatum), and Water-willow Stem Borer Moth (Papaipema sulphurata).
- > Birds/Fowl species include Least Terns (Sterna antillarum), Common Terns (Sterna hirundo), one of the largest concentrations of breeding Piping Plovers in the Commonwealth (Charadrius melodus, in the Sandy Neck Core Habitat), Eastern Towhee

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⁴⁰ There is the possibility that other, undocumented species could exist in the town.

⁴¹ Massachusetts Division of Fisheries & Wildlife, Natural Heritage & Endangered Species Program, BioMap and Living Waters: Core Habitats of Barnstable, 2004.

(*Pipilo erythrophthalmus*), Northern Parula Warbler (*Parula Americana*), Black-crowned Night-Herons (*Nycticorax nycticorax*), Snowy Egrets (*Egretta thula*), Great Egrets (Casmerodius albus), Herring Gulls (Larus argentatus), Great Blackbacked Gulls (*Larus marinus*), and Roseate Terns (*Sterna dougallii*). In addition, grebes, heron, ducks, osprey, owls, hawks, swallows, flycatchers, hummingbirds and warblers have all been documented.

Cape Cod is considered a birder's paradise because of its location along the Atlantic Flyway, one of the most important corridors for migratory birds. Barnstable's extensive shoreline provides important habitat for shorebird nesting, breeding, foraging and for shelter during the winter. Sandy Neck, Sampson's Island/Dead Neck, Kalmus and Long Beaches are designated as habitats for rare and endangered shorebird species⁴².

Shellfish and finfish are another important wildlife resource, and their subtidal and intertidal habitats and adjacent saltmarsh resources are important wildlife habitats. In addition, interior wetlands, streams and surface water bodies are important wildlife habitats. An additional less obvious upland wildlife habitat resource which should be mentioned is utility company right-of-ways and similar marginal areas. These areas provide ideal edge conditions and browse for upland wildlife.

Many key and unique habitat areas have been mapped over the last several decades by Local, State and Federal agencies. On the local level the Cape Cod Wildlife Conservation Project, completed in 2003 by The Compact of Cape Cod Conservation Trusts, Inc., noted that natural communities in the town's protected areas, namely Sandy Neck and the West Barnstable Conservation Area, are the largest, least-disturbed and therefore best wildlife habitat areas in the town. The Compact also noted the Dead Neck and the Hyannis Ponds Areas as having maximum habitat ranking⁴³. This project is discussed in depth in Section 4D.

The bulk of the moraine along both sides of Route 6, particularly in the western half of the town, remains primary wildlife habitat. Particularly important are the areas east of the West Barnstable Conservation Area from Route 149 to Oak Street, and the area on the north side of the mid-Cape from Cape Cod Community College to the Old Jail Lane Conservation Area.

The Hathaway Ponds area is also of critical importance for wildlife, and with the town's purchase of the 125-acre Hyannis Golf Course at Iyanough Hills, the protected area has nearly doubled in acreage, providing increased habitat for wildlife as well as a larger visual corridor along Route 132.

Ponds provide high quality freshwater fisheries habitat. Trout are stocked in Hamblin, Hathaway, Shubael and Lovells Ponds. Three streams in Barnstable, the Santuit River, Marstons

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⁴² According to Mass. Natural Heritage and Endangered Species Program.

⁴³ The Compact of Cape Cod Conservation Trusts, Inc., Cape Cod Wildlife Habitat Conservation Project, 2003.

Mills River, and Bridge Creek are also stocked with trout. Smallmouth bass, yellow perch and other species are also found in the town's ponds. Anadromous fish live most of their lives in salt water, but use fresh water for breeding and spawning. Anadromous fish runs include the Centerville. Marstons Mills and Santuit Rivers. Following is a general breakdown of fisheries resources in Barnstable. See Map 8 Fisheries and Vernal Pools for more information on fisheries.

Shellfish Resources: The Town of Barnstable has roughly 100 miles of coastline, including estuaries and marshes. There are more than 6,000 acres of shellfishing area within the town. A number of town ways to water are used for shellfishing purposes. Approximately 2,000 people shellfish for recreational purposes in town, and the Town's Marine and Environmental Affairs Division has projected a total Town Shellfish Propagation Budget for 2005 Projects of \$72,000 to \$74,000.44

The topography of **Barnstable Harbor** and its marshes is varied. The harbor is comprised of shifting tidal flats and bars, peat marshes, and extensive tidal creeks. As such, it is considered prime shellfish habitat.

Species harvested from the area include soft shell clams, quahogs, sea clams, razor clams, blue mussels and scallops. The most abundant of these species are soft shell clams, guahogs, and blue mussels. The Great Marsh, and the Huckins, Little Thatch and Great Thatch Islands are ideal for soft shell clamming. Natural quahogs are also found in the Eel Grass Cove, Mussel Point and Calves Pasture areas.

Natural mussels beds are found off Mussel Point and Bone Hill. These beds are subject to forces of nature such as ice flows and predation by waterfowl. These beds are extensively used by large flocks of eider ducks, and the threat of nutrient-loading by water fowl is high. Phillis Island is home to a town shellfish propagation project.

Mill Creek, Hallet's Pond, Short Wharf Creek, Maraspin Creek, Upper Scorton Creek (west) are all classified as prohibited to shellfishing.

The southern shoreline of North Bay and West Bay is characterized by sandy substrate. Moving northward in West Bay and Cotuit Bay, the soils become interspersed with peat marshes and small sandy beaches. The northern half of North Bay and Marstons Mills River is surrounded by low-lying tidal marshes. Species harvested from the area include soft shell clams, quahogs, and scallops. Scallops are harvested from North Bay, Cotuit Bay and West Bay in the fall months. Another town shellfish propagation project is taking place along the West Bay.

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⁴⁴ According to Town Shellfish Biologist Tom Marcotti and Town Shellfish Committee Meeting (3/16/2005) minutes, available on the Town's Web site at

http://www.town.barnstable.ma.us/tob02/Depts/CommunityServices/MarineEnvironmental/ShellComMinutes/SC03 05.pdf

Oysters were the most frequently harvested species in the **East Bay, Centerville River/Bumps River** area until 1985. It was around this time that oyster beds on the south shore and oyster grants experienced devastating oyster mortalities, due to the spread of a parasitic oyster disease identified as MSX (haplosporidan parasite *Minchinia nelsoni*).

Quahogs and soft shell clams thrived despite the effect of the MSX on the oysters. Sandy substrate and tidal flats at the river junction create a perfect habitat for both species. These areas are classified as *restricted* to shellfishing, however.

Lewis Bay is comprised of sandy substrate. Species harvested from Lewis Bay include soft shell clams, quahogs and bay scallops.

Quahogs and soft shell clams can be found along the east side of Lewis Bay. Soft shell clams can be found on Egg Island. Snow's Creek in Lewis Bay is *prohibited*. Scallops are found in all areas of Lewis Bay and Hyannis Harbor.

The soils of **Shoestring Bay** are interspersed with peat marshes. There are two large tidal flats exposed at low tide on the west side of Crocker's Neck. Soft shell clams can be found on these flats and also extending all the way around Ryefield Point. Quahogs can be found in the same general area. A portion of Shoestring Bay is prohibited to shellfishing.

2. Vernal Pools

Vernal pools are a poorly protected freshwater habitat. Because they are temporary bodies of water, isolated in low spots in woodland, they are easily overlooked and deemed to be insignificant. These fish-free environments are perfect places for fairy shrimp, spotted salamanders, wood frogs and a variety of insects. Vernal pools are also important recharge areas for our aquifer. The locations of the 13 certified vernal pools in Barnstable are shown on Map 8 *Fisheries and Vernal Pools*.

3. Wildlife Corridors

Vegetation and wildlife habitat is discussed extensively in Section 4D and shown on Map 7A, *Cape Cod Wildlife Conservation Project*, Map 7B *Mass. NHESP Barnstable Biomap Core Habitats* and Map 7C *Mass. NHESP Barnstable Wildlife Habitats*. A brief discussion of wildlife *corridors* in included below.

Given that the major patterns of land use are already established on Cape Cod, the design tools for building and improving upon the existing system of open spaces should include perimeter buffers and connecting corridors. Water can be an important form of linkage here. Wetland systems, lakes and ponds, stream corridors and their associated uplands (riparian zones) are all very important habitats themselves and potential connectors to other areas. Shoreline areas,

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particularly salt marshes, are some of the most productive habitats in the world. The town should make every effort to protect wildlife corridors and linkages as well as their adjoining parcels wherever possible.

4. Rare Species

Table 13, *MNHESP Rare Species List for Barnstable*, was produced by the Natural Heritage & Endangered Species Program in 2003 and can be found on the MNHESP Web site at www.nhesp.org⁴⁵.

Town		Taxonomic Group	Scientific Name	Common Name	State Rank	Federal Rank	Most Recent Obs
BARNSTABLE	*	Fish	Notropis bifrenatus	Bridle Shiner	SC		1993
BARNSTABLE		Amphibian	Hemidactylium scutatum	Four-Toed Salamander	SC		1976
BARNSTABLE	*	Amphibian	Scaphiopus holbrookii	Eastern Spadefoot	Т		1985
BARNSTABLE	*	Reptile	Clemmys guttata	Spotted Turtle	SC		2000
BARNSTABLE	*	Reptile	Malaclemys terrapin	Diamondback Terrapin	Т		1997
BARNSTABLE	*	Reptile	Terrapene carolina	Eastern Box Turtle	SC		2000
BARNSTABLE		Bird	Asio flammeus	Short-Eared Owl	Е		1965
BARNSTABLE		Bird	Asio otus	Long-Eared Owl	SC		1978
BARNSTABLE	*	Bird	Charadrius	Piping Plover	Т	(LE,LT)	1996

 Table 13
 MNHESP Rare Species List for Barnstable

45 Massachusetts Department of Fisheries & Wildlife, Natural Heritage & Endangered Species Program, 2003, www.nhesp.org. The 'Most Recent Obs' field represents the most recent observation of a species in a town. An asterisk (*) indicates that the species was most recently observed within the past 25 years. However, many rare species are difficult to detect even though they are present, and Natural Heritage does not conduct methodical species surveys in each town on a consistent basis. Therefore, the fact that the 'Most Recent Obs' for a species may be several years old should not lead to the interpretation that the species no longer occurs in a town.

Note: Only those rare species records that are less than 25 years old are used in Natural Heritage project review associated with the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00) and the Massachusetts Endangered Species Act Regulations (321 CMR 10.00).

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			melodus				
BARNSTABLE	*	Bird	Parula americana	Northern Parula	Т		1989
BARNSTABLE	*	Bird	Sterna antillarum	Least Tern	SC	(PS:LE)	1998
BARNSTABLE	*	Bird	Sterna dougallii	Roseate Tern	Е	(PS:LE,L T)	1989
BARNSTABLE	*	Bird	Sterna hirundo	Common Tern	SC		1998
BARNSTABLE		Bird	Sterna paradisaea	Arctic Tern	SC		1901
BARNSTABLE		Snail	Ferrissia walkeri	Walker's Limpet	SC		1976
BARNSTABLE	*	Mussel	Alasmidonta undulata	Triangle Floater	SC		1997
BARNSTABLE	*	Mussel	Leptodea ochracea	Tidewater Mucket	SC		1997
BARNSTABLE	*	Mussel	Ligumia nasuta	Eastern Pondmussel	SC		1997
BARNSTABLE	*	Dragonfly/Da mselfly	Anax longipes	Comet Darner	SC		1997
BARNSTABLE		Dragonfly/Da mselfly	Enallagma carunculatum	Tule Bluet	SC		1941
BARNSTABLE	*	Dragonfly/Da mselfly	Enallagma laterale	New England Bluet	SC		1989
BARNSTABLE	*	Dragonfly/Da mselfly	Enallagma recurvatum	Pine Barrens Bluet	Т		1995
BARNSTABLE	*	Butterfly/Mot h	Abagrotis nefascia benjamini	Coastal Heathland Cutworm	SC		1982
BARNSTABLE		Butterfly/Mot h	Bagisara rectifascia	Straight Lined Mallow Moth	SC		1951
BARNSTABLE		Butterfly/Mot h	Cingilia catenaria	Chain Dot Geometer	SC		1954
BARNSTABLE		Butterfly/Mot h	Erynnis persius persius	Persius Duskywing	Е		1952
BARNSTABLE	*	Butterfly/Mot h	Hemileuca maia	Barrens Buckmoth	SC		1994
BARNSTABLE		Butterfly/Mot h	Itame sp 1 nr inextricata	Pine Barrens Itame	SC		1968
BARNSTABLE		Butterfly/Mot h	Papaipema stenocelis	Chain Fern Borer Moth	Т		1950
BARNSTABLE	*	Butterfly/Mot h	Papaipema sulphurata	Water-Willow Stem Borer	Т		1996
BARNSTABLE		Butterfly/Mot h	Pieris oleracea	Eastern Veined White	Т		1949
BARNSTABLE	*	Butterfly/Mot	Satyrium favonius	Oak Hairstreak	SC		1982

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BARNSTABLE	*		Amelanchier antucketensis	Nantucket Shadbush	SC	1993
BARNSTABLE			Aristida urpurascens	Purple Needlegrass	Т	1916
BARNSTABLE		Vascular Plant C	Corema conradii	Broom Crowberry	SC	1916
BARNSTABLE	*		Dichanthelium ommonsianum	Commons's Panic-Grass	SC	1986
BARNSTABLE			Dichanthelium nattamuskeetense	Mattamuskeet Panic-Grass	E	1968
BARNSTABLE	*		Dichanthelium vrightianum	Wright's Panic- Grass	SC	1989
BARNSTABLE	*		Helianthemum umosum	Bushy Rockrose	SC	1999
BARNSTABLE	*		achnanthes aroliana	Redroot	SC	1989
BARNSTABLE	*	Vascular Plant	Liatris borealis	New England Blazing Star	SC	1996
BARNSTABLE	*		Linum ntercursum	Sandplain Flax	SC	1989
BARNSTABLE	*		Linum medium ar texanum	Rigid Flax	Т	1983
BARNSTABLE		Vascular Plant	Listera cordata	Heartleaf Twayblade	E	1916
BARNSTABLE	*	Vascular Plant	Malaxis bayardii	Bayard's Green Adder's-Mouth	E	1997
BARNSTABLE			Dphioglossum usillum	Adder's-Tongue Fern	Т	196-
BARNSTABLE	*		Panicum hiladelphicum	Philadelphia Panic-Grass	SC	1989
BARNSTABLE	*		Polygonum uritanorum	Pondshore Knotweed	SC	1988
BARNSTABLE		Vascular Plant R	Rhexia mariana	Maryland Meadow Beauty	E	1967
BARNSTABLE	*		Rhynchospora itens	Short-Beaked Bald-Sedge	Т	1985
BARNSTABLE	*		Rhynchospora cirpoides	Long-Beaked Bald-Sedge	SC	1989
BARNSTABLE	*		Rhynchospora orreyana	Torrey's Beak- Sedge	E	1994
BARNSTABLE	*		Sabatia ampanulata	Slender Marsh Pink	E	2001

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BARNSTABLE	*	Vascular Plant	Sabatia kennedyana	Plymouth Gentian	SC	1997
BARNSTABLE	*	Vascular Plant	Sagittaria teres	Terete Arrowhead	SC	1997
BARNSTABLE	*	Vascular Plant	Scleria pauciflora var caroliniana	Papillose Nut- Sedge	E	1986
BARNSTABLE		Vascular Plant	Setaria geniculata	Bristly Foxtail	SC	1919
BARNSTABLE	*	Vascular Plant	Sphenopholis pensylvanica	Swamp Oats	Т	1988
BARNSTABLE	*	Vascular Plant	Spiranthes vernalis	Grass-Leaved Ladies'-Tresses	Т	1986
BARNSTABLE	*	Vascular Plant	Tipularia discolor	Cranefly Orchid	Е	1983
BARNSTABLE		Vascular Plant	Utricularia striata	Fibrous Bladderwort	Т	1908

Source: Massachusetts Natural Heritage and Endangered Species Program

F. Scenic Resources and Unique Environments

1. Scenic Landscapes

The assessment of scenic landscape quality is a difficult task. Though the subjective approach may resonate more harmoniously with most residents and visitors on Cape Cod, it is important to attempt to answer questions like "why is this beautiful?" or "what makes this piece of land more beautiful than that parcel, which is half as expensive ?" These are worthwhile questions. The answers may mean the difference between preservation and development. The challenge is to combine the advantages of a purely objective representation with the equally necessary subjective determination of visual beauty.

Massachusetts Department of Environmental Management (DEM) Scenic Landscape Inventory

There are as many methodologies for scenic resource assessment as there are scenic resources. This is surely not a hard science and yet each methodology is itself worthy of a doctoral dissertation. The Massachusetts Landscape Inventory evolved from the efforts of the Department of Environmental Management (DEM, now part of Department of Conservation and Recreation) and the Nature Conservancy, who began by seeking to identify and locate the state's important natural features. An advisory committee composed of public and private conservation professionals, academics, a consulting naturalist, and the DEM staff "sought a system of visual assessment that would provide an accurate statewide survey of scenic areas". To this end, they did a thorough literature search and ended up basing their work on two precedents: Scotland's Scenic Heritage, which offered similarity of cultural history and values, and the U.S. Forest Service Method of assessment, which breaks components of landscape beauty down into

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Landscape Architecture and Planning objectified visual criteria. This study focused on two variables: landscape complexity and visual/cultural compatibility.

With an objective basis of visual criteria, the advisory team was left to their personal assessments. The result is a cooperative but subjective determination of the presence or absence of specific, predetermined objective criteria. These criteria are partly based on public opinion research, i.e. "visual / cultural compatibility".

For every square mile of Massachusetts, landscapes were annotated as Distinctive, Noteworthy, or Common in order of descending uniqueness. The state was broken down into physiographic regions, with the Coastal Plain region composing all of Cape Cod and the Islands. Whereas one may suppose the bias to be towards the declaration of Distinctive landscapes, only 4 percent of the state was labeled as such. Noteworthy landscapes comprise 5 percent and the remaining 91 percent was deemed Common, though this does not imply unimportance.

Barnstable's Sandy Neck is the only notable area in Barnstable identified by the inventory with the seaward sections of the barrier beach designated as Distinctive and the more inland section shown as Noteworthy⁴⁶. Not surprisingly, all of these landscapes have immediate views to coastal resources. Most of the interior of Barnstable is considered a common scenic landscape. Barnstable offers beautiful views of several landscape types including marsh, woodland, beach, dune, open water, and sky. In addition, the cultural landscape, enhanced by views of fishermen working their plots, boats hauling their catch, people walking the shore, and wharves punctuating the horizon, adds remarkably to the visual and personal satisfaction of those who visit this area. This aspect is extremely important to scenic resource assessment. The combination of natural and cultural scenery is the sort of beauty people want to experience when they come to Cape Cod, and the sort of beauty this open space plan seeks to preserve. As the inventory states, "The most important justification for surveying and preserving prime landscapes is that scenic beauty - and the environmental and social well-being it reflects - is a basic human need." (DEM) Open space planning in Barnstable should reflect that need by incorporating scenic assessment in its open space protection efforts.

Town of Barnstable Scenic Areas Inventory

The following lists are compiled from information provided by the Town's Conservation Division and Marine and Environmental Affairs Division. Map 4, *Unique Features*, provides more detail on the location of these resources⁴⁷.

Scenic Areas:

1. Sandy Neck and the Great Marsh (at the parking area)

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⁴⁶ The Massachusetts Landscape Inventory, DEM.

⁴⁷ Not all of the scenic resources listed here are shown on the Unique Features map due to scale considerations, however the most important ones are and many of those listed can be lumped into the general areas indicated on the map.

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- 2. Maraspin Creek along Commerce Road
- 3. Harbor Point area by Bone Hill Road & Indian Trail Road
- 4. Hallets Mill Pond area and wetlands (also in Yarmouth)
- 5. Cranberry bogs along Bog and River Roads
- 6. Fullers Marsh and Pinquickset Cove
- 7. Sampsons Island and Dead Neck Barrier Beach
- 8. Centerville Harbor Area, including Dowses, Long, Craigville and Covell's Beaches
- 9. Squaw Island and Hyannis Port Golf Course
- 10. Hyannis Harbor, including Hyannis Port, Eugenia Fortes and Kalmus Beaches and Keyes Memorial
- 11. Veteran's Memorial Park
- 12. Pine Street and Parker Roads Area, including Whelden/Jenkins farmstead and cranberry bogs
- 13. Mills River and Prince Cove Area
- 14. Rushy Marsh Pond and Area including Loops Beach and Oregon Beach
- 15. Scudder Lane
- 16. Bridge Creek along Route 6A
- 17. Little River Road
- 18. Cordwood Rd
- 19. Old Shore Road
- 20. Oyster Place

Scenic Vistas:

- 1. from Mid-Cape Highway at Shoot Flying Hill looking over Lake Wequaquet to Centerville Harbor and overlook to Barnstable Harbor
- 2. from Craigville Center to Centerville River over wetlands (including Centerville River Bridge and Bumps River Bridge)
- 3. Sunset Hill overlook to Squaw Island and Hyannis Port Golf Course and Centerville Harbor
- 4. Marstons Mills Airfield/Danforth Property (open field viewing)
- 5. Mystic Lake (small way to water, vista) and then Little Pond (vista) all along Race Lane
- 6. Audubon area at Bone Hill Road & Harbor Point Road (for birdwatching)
- 7. Bridge Creek Conservation Area (for birdwatching/benches for sitting)
- 8. Washington Ave & Hyannis Avenue (Hyannis Harbor view, popular with tour buses)
- 9. End of Sea View Avenue (vistas of end of Dead Neck to West & Eel River to East)
- 10. End of Wianno Avenue (parking, vista of Nantucket Sound)
- 11. Bridge Street (vistas into North Bay & West Bay on either side)
- 12. Bay Lane (see all of Bumps River into Scudder Bay)

Scenic Corridors:

- 1. Route 6A (entire length)
- 2. Route 149 (entire length)

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2. Unusual Geologic Features

The Sandwich Moraine runs west-east along the Town of Barnstable's north side, with Route 6 along its ridge. Soils are clearly divided by the moraine, with clay-like, generally non-permeable soils to the north, and the sandy ground of the outwash plain stretching south to Nantucket Sound.

There are numerous kettle ponds. Many host rare plant species, including wildflowers that attract threatened butterflies, moths and dragonflies. At the Hyannis Ponds Complex is found one of the most unusual and diverse assemblages of plants, animals and especially invertebrates in the state.

The Great Marshes area, protected by Sandy Neck, is the largest salt marsh on Cape Cod, and has ACEC status. Evidence remains that this was a rich salt-haying area. Fishing remains excellent. Sandy Neck rivals Monomoy as a major barrier beach. Abundant recreational use (including off-road vehicles) makes wildlife management at Sandy Neck a considerable challenge. Sandy Neck includes several *Imperiled* Natural Communities of rare native biodiversity⁴⁸.

Critical habitats in the town in need of protection, in addition to those mentioned above, include coastal plain ponds, sphagnum bogs, cedar swamps, sandplain grass communities, herring runs with undisturbed banks and edges, and Sandy Neck's holly forests and coastal basswood stands.

3. Cultural and Historic Areas

Too many to enumerate in full here, the town's cultural and historic resources offer a wealth of recreational pursuits for the town's residents and visitors.

Every village has its unique historical assets, and each reflects the history and development of its area. To experience the flavor of Cape Cod, one can visit the many historical society museums, libraries and cemeteries throughout the town. Some examples are:

- The **Olde Colonial Courthouse**, built in 1774 and renovated in 1974, serves as a meeting place and cultural and historical repository. It also serves as home to Tales of Cape Cod, an organization dedicated to recording an oral history of Cape Cod.
- The **Sturgis Library**, established in 1867, is of special interest to those seeking genealogical information. The oldest part of the library, built in 1644 by Rev. John Lothrop, contains his Bible. The second oldest part houses a room named for local historian Henry Kittredge, and holds his maritime collection and other memorabilia.

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⁴⁸ Massachusetts Division of Fisheries & Wildlife, BioMap: Core Habitat Summaries, Natural Heritage & Endangered Species Program, 2004.

- Located in the U.S. Custom House (c. 1855) and old jail (c. 1690), the Town-owned **Trayser Museum** focuses on the history of Barnstable County, especially the growth of industry, culture and society; a special area of emphasis is the town's maritime and judicial history.
- The **Cotuit Library** exhibits ship models and the Historical Society of Santuit and Cotuit houses early American articles.
- The **Centerville Historical Society** displays Cape Cod art, industry, domestic life, Sandwich glass, maritime artifacts and textiles.

Barnstable's art and theatre events have long been an attraction to residents and visitors. The Cape Cod Art Association fosters local artists with a teaching gallery that conducts art shows, classes and demonstrations throughout the year. The Cape Cod Symphony Orchestra and the Hyannis Ballet Company stage many theatre productions.

Cape Cod has long been recognized for its artist colonies. Art galleries showcase local and regional talent in various mediums including oils, paints, photography and sculpture. The Arts Center at the Old Town Hall is humming with activity, with reading and writing groups, poetry, painting and drawing classes, and exhibits produced by the Heritage Group. People may attend a wide array of art classes at the Community College and other schools.

Other points of interest include the Cape Cod Central Railroad, which departs from Hyannis for 1-3/4 hours scenic excursions aboard a vintage train. Cranberry bogs are throughout the town, with many located along Route 6A. Whale watching out of Barnstable Harbor is a wonderful way to admire and learn about marine mammals. The town also has many special-interest organizations, including bird-watching groups, sports clubs, walking groups, garden clubs and yacht clubs.

Summer brings many special cultural events and include: a pro volleyball tournament played at Craigville Beach, the Hyannis Harbor Festival, the Chowder Festival, the Pops By the Sea, the summer stock theatre, the Johnny Kelley road race, and the annual Figawi boat race to Nantucket.

Winter also brings a variety of events. Most villages sponsor Christmas festivals, plays and "strolls" down main streets. Since New Year's Eve in 1991, the town has hosted an annual First Night celebration with art shows, concerts, poetry readings, ice sculptures and a parade.

4. Unique Environments

Areas of Critical Environmental Concern

• As stated previously, the only Area of Critical Environmental Concern within the town is the Sandy Neck/Barnstable Harbor ACEC, designated as such in 1978. One of eight such

Prepared By: <u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning areas on Cape Cod, ACEC's are state designations for areas which have "unique natural and human resource values whose protection requires regional as well as local consideration⁴⁹. Barnstable's ACEC includes Sandy Neck barrier beach, Barnstable Harbor and the Great Marshes. This area was reserved for special protection because of its quality, productivity, uniqueness and economic benefits⁵⁰. There is evidence of human settlement in this area dating to the Middle Archaic period, and in Colonial times the land held try-works for whaling⁵¹.

G. Environmental Challenges⁵²

Many of the environmental challenges that Barnstable faces are a direct result of its development pace and pattern over the past three hundred years. It is increasingly important to mitigate the impacts of increasing development and redevelopment through careful and integrated planning which incorporates the protection of conservation land with other environmental values. Due to the varying needs of each village, there is also the unique challenge of managing regulations, resources, personnel and funds.

The problem related to growth is the steady depletion of irreplaceable open space resources. The problem of limited open space is not new. It has been with the town for generations. However, with the rapid development of the town since the 1950's, the ability to balance protected open land with continuing development has reached a level of critical concern. The lack of sufficient open space and recreational area was first documented in the Town of Barnstable's <u>1926</u> <u>Comprehensive Plan</u>. Later, in the <u>1962 Comprehensive Plan</u> and again in the early 1980's <u>Open Space and Recreation Plan</u>, the impacts of continued uncontrolled growth and development were documented. Today more than ever, that scenario still applies. Views of rural landscapes and activities, concentrated village settlements, traditional New England open spaces and landscapes are disappearing. The woodlands and fields are being replaced with suburban subdivisions showing little respect for the land. Unique and irreplaceable natural resources have been and are being degraded and destroyed. Lands open to public use are limited. Vegetation coverage is being removed and our water resources, lakes and streams are being polluted.

The implications of uncontrolled growth and the problem of limited open space and recreational areas remain one of the top priorities to residents and visitors in Barnstable. The general issues facing open space conservation and recreation are:

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⁴⁹ Massachusetts Department of Conservation and Recreation, Areas of Critical Environmental Concern 2003, Executive Office of Environmental Affairs, http://www.mass.gov/dem/programs/acec/.

⁵⁰ Town of Barnstable, The Town of Barnstable Open Space and Recreation Plan, by previous Town committees, 1997.

⁵¹ Town of Barnstable, Local Comprehensive Plan, 1997.

⁵² Portions of this section are taken directl yfrom the town's Local Comprehesnive Plan.

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- a deficiency exists in the location, type and linkage of neighborhood open spaces, linkage of public lands, access to water and preservation and protection of natural resources;
- many natural resources including rivers, ponds, estuaries, salt water embayments and water courses, remain unprotected
- the number of large undeveloped vacant parcels is small, land values are high and funds for acquisition of open space are limited; and
- the need to address preservation and management of harbors, tidal areas and open waters for both recreation and business remains critical.

Specific challenges include the following.

1. Hazardous wastes

Several significant sources of pollution in the Village of Hyannis contribute to the overall degradation of the sole source aquifer. There have been 233 reported hazardous material releases in the town since 1994⁵³.

• The Thornton Drive and Independence Park area of Hyannis is a very ecologically sensitive region for an industrial park, with many hazardous waste producers in the area, as well as continued new development projects. Past incidents of illegal dumping are unfortunately not isolated and may continue into the future without more strict enforcement strategy. The town should make provisions for enforcement of hazardous waste and storage of materials regulations to prevent additional pollution and illegal dumping in the Independence Park areas, and throughout town.

The town septic treatment plant, which collects and treats sewage from homes and businesses in Hyannis and Barnstable Village, was a contributor to the contamination plume under Hyannis. Today, the treatment plant is producing effluent that meets drinking water standards. The filter beds however, are located at a high point in the groundwater table and for this reason, additional capacity cannot be put into the groundwater in the existing location. Another location for infiltration of treated effluent is required.. Innovative small wastewater treatment plants in Marstons Mills, are being closely monitored.l.

2. Landfills

The town's Transfer Station and Recycling Center was capped in 1997 to protect the groundwater from further contamination. There are unofficial and illegal dumping sites in the town, and agencies remain vigilant in their monitoring at these sites and in prosecution of

⁵³ According to Massachusetts DEP Bureau of Waste Site Cleanup, February 2005, http://www.mass.gov/dep/bwsc/sites/report.htm

violators. The Conservation Commission and Conservation Department as well as the Property Management Division have been very proactive in protecting conservation and open space lands from unauthorized vehicular access and illegal dumping with locked gates and large boulders.

3. Erosion.

Coastal erosion will always be a problem for the Town of Barnstable. Land areas will be cut and filled by the action of the sea and tides. Wise planning must allow for these inevitable changes and direct human activities to best coincide with this natural cycle. Two town-owned barrier beaches, Long Beach and Sandy Neck, are areas of constant natural erosion; according to Lindsey Counsell, It should be noted that the town owns only a 3.5-acre section of Long Beach, the vast majority is privately held. Also, continued development continues to erode and degrade topsoil, adversely affecting the local flora and fauna.

The uniquely beautiful and fragile resource of Sandy Neck barrier beach needs additional protection against further development, excessive use and "mansionizing" of existing cottages.

4. Chronic flooding.

Long Beach Road is a low-lying, barrier beach residential area and remains subject to frequent flooding. The town has yet to have much success in step-by-step acquisition of properties on Long Beach Road, a goal in the *1997 Open Space and Recreation Plan*. Today, the cost of land acquisition in this area would be extraordinarily high. On the other hand, residents have twice nourished Long Beach using private funds to lessen flood vulnerability. Long Beach is adversely affected by the jetty at Dowses Beach, which robs the barrier beach of sediments. Fortunately, few developed parcels in Barnstable reside in coastal velocity zones.

5. Sedimentation.

In the Town of Barnstable, harbor channels are the areas most prone to sedimentation. The shifting currents cause channels to fill in at rapid rates, necessitating frequent maintenance dredging. The sandy and gravely soils on the upland portions of the town drain well enough that sedimentation is not a problem.

6. Water Pollution

- Housing development has placed septic systems directly upon aquifer recharge areas throughout town.
- Stormwater run-off is a key pollutant to ground and surface water supplies. Therefore roadway and parking lot infiltration systems must be carefully planned to reduce impacts. Improvements to storm water systems should be encouraged in cases of redevelopment of a parcel. Use of vegetated swales and installation of stormwater retention basins should

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be encouraged by town oversight agencies to accommodate and mitigate the effects of run-off.

- Nitrogen loading of the aquifer is the most serious threat to groundwater, drinking water supplies and coastal embayments in the town. A source of nitrogen loading is direct discharge of stormwater runoff to coastal waters. There are a number of locations in the town where large volumes of stormwater runoff are piped directly into harbors or embayments. The Town's Engineering Department is currently working on fulfilling the federal and state requirements Phase II stormwater MPDES permit; the department started in May of 2003 and has until 2008 to accomplish its goals. Mapping of all potential direct stormwater discharge locations is underway and will be completed by the end of 2005. The Town's Health Division has the Coastal Mitigation Program in place to deal with direct discharge stormwater runoff through identifying key impact locations as well as remediation plans to correct them. A few cesspools are still utilized by town residents, but not nearly as many as in the past. Typical shoreline development often includes older seasonal cottages on undersized lots which may have been constructed many years ago, with later conversion and/or expansion to full-sized or larger year-round homes. This type of growth can result in high densities with a large amount of nitratenitrogen produced by sewage and runoff, as well as other contaminants, on each acre of land. Water quality problems already exist near these locations.
- The principal source of nitrate nitrogen loading to coastal embayments is residential development. On the south coast Barnstable these embayment and watersheds stretch inland towards the Mid-Cape Highway to the north. Title 5 septic systems do not remove a significant amount nitrate nitrogen from the effluent discharged by these septic systems. This nitrogen then enters the groundwater and flows southward to the coastal embayments. These contributions come largely from septic systems, (85%) and also from fertilizers used on lawns, gardens, golf courses (8%). Wastewater management to remediate and prevent further contamination of coastal waters is subject of an on-going studies in the town. Implementation of the recommendations of theses studies will be very costly. Due to the limited capacity of the existing wastewater treatment facility that sewers can be extended outside of Hyannis except to a couple of areas in the adjacent Centerville/Craigville area. A plan of decentralized treatment systems, both on-site and clustered, will be required.

Overall estuary health can be described as declining steadily, especially those estuaries on the South side, as they are considered to have poor water quality. Estuary health gets better as one heads South to Nantucket Sound, where salt water flushing to the embayment is less constrained . The north side along Barnstable Harbor has about 10-foot tides compared to 3-foot tides on south side, and the natural flushing of salt waters is greater on the north side. Given the nature of the town's estuaries, and considering their natural flushing characteristics, more focus and care should be paid to those along Nantucket Sound, including the Centerville River area, Three Bays area and Shoestring Bay. These areas have only recently enjoyed concentrated efforts to improve their quality. The State DEP, in partnership with the town, the EPA and the USGS is completing the studies of all the coastal embayments in Barnstable through the Mass. Estuaries

Project (MEP). The MEP study for Shoestring Bay/Popponesset Bay on the Mashpee-Barnstable boarder is complete. This extensive report shows that Shoestring Bay is significantly nitrogen impaired. The Total Maximum Daily Load (TMDL) has been established. Work is underway to determine the best solutions to this problem. The Three Bays report will be complete in the fall of 2005. Preliminary draft reports show that the upper reaches of this embayment is significantly impaired by excess nitrogen entering the system from the Marstons Mills River and from the groundwater that reaches the bays. The Centerville River, Hyannis and Barnstable Harbor reports will be completed in late 2006 or early 2007. It is anticipated that the Centerville report will mirror the Three Bays results in many aspects. Hyannis Harbor and Lewis Bay have relatively good water quality. While a portion of Hyannis Inner Harbor has impaired water quality, the rest of the harbor is only slightly impaired. This is due in large part to the fact that large areas of Hyannis have been on municipal sewering for many years. This is a case in point for the construction of wastewater treatment facilities in the western part of the town of Barnstable. Barnstable Harbor on the north side with its 10 foot tide range and small village center that is already sewered is not impacted by excess nitrogen loads.

7. Wastewater Management

As described in earlier chapters, the biggest, persistent problems are environmental and public health issues related to wastewater disposal and drinking water quality. Sewers re installed in only a very few areas of town. The remainder of the homeowners continue to rely upon on-site septic systems. Though most of the town's soils are highly permeable, there are still failed systems due to a high water table in many areas, and in the older developed areas of the town, small lots that can not accommodate new or expanded septic systems because of size constraints. Because the soils are highly permeable, nitrates, phosphates and viruses are readily transmitted off-site to surface waters, particularly harbors, ponds and streams, and into the ground water. There is insufficient depth to ground water on some lots, leading to the design of "mounded" systems, which can be aesthetically displeasing to many people as well as enabling development to go where it otherwise would not be permitted. Some of these problems can be alleviated through serious planning measures which reduce pollution sources and provide public sewering. The Wastewater Facilities Management Plan (WFMP) for the Hyannis Wastewater Pollution Control Facility needs to be completed and implemented. The western portion of town is in desperate need of a second WFMP to begin the planning for sewering these areas. The MEP will serve as the principal tool to guide engineers and planners to what areas of town will need to be sewered to reduce nitrogen loading to our drinking water supply and our coastal embayments. There is also a need to expand the municipal water supply to areas where there is documented contamination of private wells by nitrogen and other pollutants.

8. Biodiversity

A third issue relates to the impact of continued development on biodiversity and open space land availability in general. Perhaps with the approval of the town Local Comprehensive Plan, development agreements for subdivisions of any size can be instituted by the Planning Board.

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(Note: – at this point it is unlikely that DA's can be used for open space mitigation, except thru the CCC) Commercial developments currently undergo site plan review with input from multiple town boards and agencies.

9. Resource Management

Resource management problems include illegal trash dumping, unauthorized motorized off-road vehicle use, and vandalism on conservation and other open space parcels. It cost the Town of Barnstable \$10,620 to dispose of illegally dumped material and \$85,000 in labor to pick up the materials in 2003. While dumping can adversely impact any parcel, wellfield lands remain the most susceptible to harm due to potential pollution of drinking water supplies. An Illegal Dumping Management Plan was prepared by the Conservation Division for the Town Manager in 2004. The plan addresses illegal dumping concerns and offers some solutions to the problems.

Unauthorized vehicle use, such as dirt bikes and ATVs, is an increasing problem in conservation areas and open space parcels. Even with the Natural Resource Department getting some assistance from the Police Department, unauthorized vehicle use is a never ending problem. More and more people, ranging from preteens to adults, are purchasing vehicles. It will only be matter of time before someone gets seriously hurt on the trails. Two areas that suffer from both damage to the trails and noise pollution from the vehicles are West Barnstable Conservation Area and the Cape Club Property.

The larger conservation parcels that have trails, parking areas, gates and signs suffer the most vandalism. If you place a gate up it is only a matter of time before someone finds a way to drive around it. Observation decks have been burned to the ground and steel gates removed from the hinges and tossed into a lake.

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SECTION 5 INVENTORY OF CONSERVATION AND RECREATION LANDS



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Conservation and recreation lands provide enjoyment to residents, visitors and vacationers alike. These features have given the Town of Barnstable its international reputation as a vacation Mecca. It is a landscape of rapid changes in terrain, from the hilly Cape Cod Moraine through pine and scrub oaks forests, past kettle ponds and glacial boulders to the sandy coastlines, North and South. It is a landscape established by glacial remains from the great ice flow over North America which ended over 12,000 years ago. Constant scouring, by the warm Gulf Stream on the South shore and the cold Newfoundland current on the North side, has washed away some and built up other edges of this fragile peninsula.

Traditionally both the land and sea were harvested; cranberries were grown in its numerous bogs, sea grass gathered from its marshes, shellfish collected from its shores, fish from its waters, wild game and birds were hunted in its woods and fields. Barnstable's 60 square miles⁵⁴, is a diverse landscape, blessed with various flora and fauna. The natural resources were utilized. Bricks were made from native clay, glass from the white sands, and salt taken from the sea's waters. The native forest fired the brick and glass furnaces and provided fuel to extract oil from sperm whales which were once so numerous in the cold waters to the North.

With time and evolution the Cape became a place for summer vacationers and concern for the open lands increased. Access to the coastline and inland water bodies became scarce. With continued development and the rise in the popularity of second homes, preservation of open space, for its natural beauty, recreational use, wildlife habitat and groundwater protection, increased. It became apparent that the amount of this land and its resources are indeed finite.

As awareness of the Cape's aquifer, its sole source of fresh water, grew, it became apparent that open lands could protect the quantity and quality of the groundwater aquifer. The interior long narrow "wood lots" which provided free fire wood for early residents, and which were at one time commonly given or gambled away, grew greatly in monetary, resource and esthetic value.

Wetlands, once considered wasteland to be filled in and built upon, are today recognized for their ability to hold and purify surface water runoff. Coastal wetlands, acting in concert with barrier beaches, provide protection against the violent surge of the sea; the beaches and marshes absorb the energy of the wave action, while the wetlands provide a holding area for the tidal surges. They are a most productive ecosystem, providing the `nursery grounds' for marine species and a vital food source for marine life, animals and birds. Gone are the days of filling the land and building upon this natural system of protection, and resulting in destruction of the vital ecosystem.

A new and strong realization grew that open lands, which provide for public enjoyment, were being divided and limited in access and use. We were destroying the very scenic attraction the Cape has always offered. Grassy fields and vegetated forests continued to be divided and developed for homes, roads and commercial establishments. The Cape Cod landscape, which attracted that development, was quickly vanishing. Priorities were set and the public has

⁵⁴ 1990 U.S. Census - area excludes 2.74 square miles of open water ponds and rivers but includes wetlands and marsh area.

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responded during the last three decades with a conscious effort to conserve, preserve, protect and acquire land in its natural open state.

Since that time, the town has acquired numerous conservation and recreation parcels and continues to actively promote the protection, use and management of open space and recreation lands⁵⁵.

This section inventories and discusses lands of conservation and recreation interest, including land that is currently being used as such and also land that may be desired for those purposes. The purpose of this section is to inventory and describe existing conservation and recreation lands in town and to identify potential future conservation and recreation parcels. This inventory is composed of lists generated and supplied by various public and private entities including the following:

- Town of Barnstable Conservation Division;
- Town of Barnstable Recreation Division;
- Town of Barnstable Assessor;
- Town of Barnstable Land Bank Committee Records (courtesy Lindsey Counsell);
- The Compact of Cape Cod Conservation Trusts, Inc.; and,
- Barnstable Land Trust Inc.

The Town Assessor maintains detailed lists of all properties in town, including both privately owned land at the full assessed value and municipal or privately owned tax-exempt land and taxreduced lands. Lands taxed at their full assessed value include primarily privately owned commercial and residential properties and generate income for the town through property tax collections. Tax exempt properties include all land owned by the town regardless of its land use status as well as land owned by private non-profit organizations such as the Barnstable Land Trust, Three Bays Preservation Trust, The Nature Conservancy, and others. Because these lands are not being used for financial profit, do not generate substantial income, and are in the public's best interests, this land is not taxed. Lands that have a reduced tax assessment include lands with conservation restrictions and lands under MG.L. Chapter 61 tax incentive programs. Owners of these parcels have agreed to forfeit some or all development rights for a specified period of time while agreeing to keep part or all of their property in conservation or recreation uses, thereby lowering their assessed value and associated property taxes.

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⁵⁵ This introductory section was adapted from the Local Comprehensive Plan

The following discussion is divided into two sections, one concerning privately owned land and the other concerning public and nonprofit lands. Whenever relevant and available, a detailed table of individual properties is provided.

A. **Private Parcels**

Privately owned parcels include all land that is not owned by a municipal, state or federal agency and represent the majority of land in Barnstable. This land may be used for commercial or residential purposes. Private lands that have specific open space and/or recreation values are widely considered the most valuable properties in town - financially, ecologically and socially and are therefore coveted for both development and preservation. On Cape Cod, where land is relatively scarce and the amount of available undeveloped land is dwindling, the competition for this land is intense and land values have skyrocketed. Conservation groups and individuals have felt for decades now that theirs is a race against time to protect as much of this land as possible before it is completely developed. Recognizing the need to prioritize their interests, various initiatives and lists have been developed over the years by these groups to help focus their efforts Some of these land protection initiatives are facilitated by local and state and money. governments, such as the state's Wetlands Protection Act and Chapter 61 programs. Others are run by regional private non-profit groups such as the Priority Ponds and Cape Cod Wildlife Conservation projects, both conducted by The Compact of Cape Cod Conservation Trusts Inc. For these private projects, desirable land has been prioritized for potential acquisition. Most of these privately generated lists are kept behind closed doors, used only for preservation purposes, in an attempt to avoid their potential misuse by developers.

In the discussion that follows, information is provided about these land preservation initiatives that will help to shape the town's future open space and recreation planning. When relevant and prudent, lists of these parcels are included. The land that is discussed below represents the most important privately owned land to be preserved in the Town of Barnstable. Currently these lists are being used by preservation groups to direct acquisition efforts. Though each of these groups holds a slightly different set of priorities, and therefore uses a different list(s), there is often overlap and sharing of these lists amongst groups. In the future, the Town of Barnstable should work more closely with land conservation groups to develop a master Priority Parcel Acquisition List, to help focus and integrate all land preservation efforts in town. A master list will help to integrate and streamline efforts between groups, make land protection opportunities more widely visible and fundraising and public relations efforts more cooperative.

Successful protection of high priority private parcels requires a commitment to implementation. Thus, the first task is to contact private landowners to seek permission to use part or all of their land for conservation and/or recreation purposes. For all properties included on the proposed master Priority Parcel Acquisition List, it is suggested that first contact be made by letter and followed up by phone. Appendix A contains a list of legal land protection tools that may be employed in this process. Barnstable Town Counsel should draft all legal documents and preside over all transactions conducted with landowners.

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- 1. Agricultural Properties
- A. Agricultural Land Tax Law Property (M.G.L. Chapter 61A)⁵⁶

The agricultural and horticultural land classification program under Massachusetts General Laws Chapter 61A is designed to encourage the preservation of the state's valuable farmland and promote active agricultural and horticultural land use. It offers significant local tax benefits to property owners willing to make a long term commitment to farming. In exchange for these benefits, the city or town in which the land is located is given the right to recover some of the tax benefits afforded the owner when the land is removed from classification and an option to purchase the property should the land be sold or used for any purpose other than to continue raising farm products.

Eligible property must consist of at least 5 contiguous acres of land under the same ownership and be "actively devoted" to agricultural or horticultural land use under Chapter 61A. Land is used for agricultural or horticultural purposes if it is used primarily and directly to raise or grow the following for sale in the regular course of business:

- Animals, including, but not limited to dairy cattle, beef cattle, poultry, sheep, swine, horses, ponies, mules, goats, bees and fur-bearing animals, or products derived from the animals.
- Fruits, vegetables, berries, nuts and other foods for human consumption, feed for animals, tobacco, flowers, sod, trees, nursery or greenhouse products.
- Forest products under a forest management plan approved by the State Forester (see Chapter 61 discussion).

Land is also used for agricultural and horticultural purposes if it is used primarily and directly in a manner related to the production of the animals or crops and that use is necessary and incidental to the actual production or preparation of the animals or crops for market.

For the land to be considered "actively devoted" to a farm use, it must have been farmed for the two fiscal years prior to the year of classification and must have produced a certain amount of sales. The minimum gross sales requirement is \$500 for the first 5 acres of productive land. That amount is increased by \$5 for each additional acre of productive land being classified, unless the additional acreage is woodland or wetland. In that case, the amount is increased by only \$.50 for each additional acre.

The minimum gross sales requirement for land being used to cultivate or raise a farm product that takes more than one season to produce its first harvest is satisfied if the land is being used in

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⁵⁶ Chapter 61, 61A and 61B information presented in this section is from the Massachusetts Department of Revenue Division of Local Services Property Tax Bureau's "Taxpayer's Guide to Classification and Taxation of Agricultural/Horticultural Land in Massachusetts", Brochure dated October 1997.

a manner intended to produce those sales within the product development period set by the Farmland Valuation Advisory Commission⁵⁷ for the particular crop or animal.

Buildings and other structures located on the parcel, as well as any land on which a residence is located or regularly used for residential purposes, do not qualify for classification and continue to be assessed a regular local property tax.

Table 14, *Chapter 61 Properties in Barnstable*, lists 54 parcels totaling 749 acres with an assessed value of \$22,558,000 partially or completely in Chapter 61A status.

B. Other Agricultural Lands

There are no other privately held agricultural lands of mention in Barnstable besides Chapter 61A properties. Barnstable County owns and operates the Barnstable County Farm, a section of which has a conservation restriction on it, and the county leases other sections of the farm to other non-profit and government groups, such as the Southeastern Massachusetts Aquaculture Center who uses the farm to grow aquaculture seed . The farm also provides open space along densely developed Route 6A.

- 2. Forested Land
- A. Forestland Tax Law Property (M.G.L. Chapter 61)

The forest land classification program under Massachusetts General Laws Chapter 61 is designed to encourage the preservation and enhancement of the state's forests. It offers significant local tax benefits to property owners willing to make a long term commitment to forestry. In exchange for these benefits, the city or town in which the land is located is given the right to recover some of the tax benefits afforded the owner when the land is removed from classification and an option to purchase the property should the land be sold or used for non-forestry uses.

Eligible parcels must consist of at least 10 contiguous acres of land under the same ownership and be managed under a 10-year management plan approved and certified by the State Forester in order to qualify for and retain classification as forest land under Chapter 61. Buildings and other structures located on the parcel, as well as the land on which they are located and any accessory land, do not qualify for classification and continue to be assessed a regular local property tax.

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⁵⁷ The Farmland Valuation Advisory Commission is a state board made up of a representative from the Department of Food and Agriculture, Department of Revenue, University of Massachusetts College of Food and Natural Resources, Executive Office of Communities and Development and a local Board of Assessors.

Massachusetts General Laws Chapter 61 allows landowners to reduce the property tax burden on their woodlands if they are willing to keep the forested land undeveloped and in wood production. Land certified under Chapter 61 is taxed at 5 percent of fair market value or at \$10 per acre, whichever is greater. In addition, a products tax of 8 percent is charged on the stumpage value of any wood cut from the property.

To qualify for Chapter 61, landowners must have 10 or more contiguous acres of private woodland managed for wood production under an approved long-term forest management plan. The plan must be approved by the DEM service forester and then filed with the local board of assessors. To continue in the program, the plan must be renewed every 10 years. As part of the agreement, the town receives an option to purchase the property if the owner decides to sell to someone other than a relative.

Generally speaking, if the land is not kept in wood production for at least 10 years, the costs incurred will be greater than paying the normal tax bills as they come due. If landowners choose to remove their land from Chapter 61 prior to the 10 year anniversary, they must repay all the taxes which were avoided and a 14 percent interest penalty.

The only property in Barnstable specifically dedicated to forestland production is the land held in trust by James A. Jenkins and known as the Jenkins Forest. All tolled, Jenkins owns 13 separate parcels totaling approximately 159.21 acres. Assessor's information has this property listed as Mixed/Chapter 61A but it may be more appropriately designated as Chapter 61 forestland. The exact designation, however, is less important than its continued protection as actively managed open space. This area is managed by the Conservation Division.

3. Recreation Land Tax Law Property (M.G.L. Chapter 61B)⁵⁸

The recreational land classification program under Massachusetts General Laws Chapter 61B is designed to encourage the preservation of the Commonwealth's valuable open space and promote recreational land uses. It offers significant local tax benefits to property owners willing to make a long term commitment to preserving land in an undeveloped condition or for use for outdoor activities. In exchange for these benefits, the city or town in which the land is located is given the right to recover some of the tax benefits afforded the owner and an option to purchase the property should the land be sold or used for any purpose other than to maintain it as open space or for recreational use.

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⁵⁸ The majority of this section is copied verbatim from the TAXPAYER'S GUIDE TO CLASSIFICATION AND TAXATION IN

MASSACHUSETTS CHAPTER 61B RECREATIONAL LAND Massachusetts Department of Revenue Division of Local Services Property Tax Bureau found at http://www.dls.state.ma.us/Ptb/pdfs/Ch61B.pdf

Property must consist of at least five contiguous acres of land under the same ownership in order to qualify for and retain classification as recreational land under Chapter 61B. The land must fall into one of the following two categories to qualify:

1. It must be maintained in a substantially natural, wild or open condition or must be maintained in a landscaped condition permitting the preservation of wildlife and natural resources. It does not have to be open to the public, but can be held as private, undeveloped, open space land.

2. It must be used for certain recreational purposes and must be open to the public or members of a non- profit organization. Recreational purposes include land used primarily for any of the following outdoor activities, so long as they do not materially interfere with the environmental benefits of the land: hiking, camping, nature study and observation, boating, golfing, non-commercial youth soccer, horseback riding, hunting, fishing, skiing, swimming, picnicking, private non-commercial flying, hang gliding, archery, and target shooting. Buildings and other structures located on the land, as well as the land on which a residence is located or regularly used for residential purposes, do not qualify for classification and will continue to be assessed a regular local property tax.

Under Chapter 61B, the owner still pays an annual property tax to the city or town in which the classified land is located. However, the tax is based on the commercial tax rate for the fiscal year applied to the value of the land for recreational purposes, rather than its fair market value as would be the case if the land were not classified. The value of the land for recreational purposes is determined annually by the assessors and cannot exceed 25 percent of the fair market value of the land. The property tax is due in the same number of installments and at the same time as other local property tax payments in the city or town. Interest is charged on any overdue taxes at the same rate applicable to overdue local property taxes.

The city or town has an option to purchase any classified land whenever the owner plans to sell or convert it to a residential, commercial or industrial use. The owner must notify by certified mail the mayor and city council or the selectmen, assessors, planning board and conservation commission of the city or town of any intention to sell or convert the land to those uses. If the owner plans to sell the land, the city or town has the right to match a bona fide offer to purchase it. If the owner plans to convert it, the city or town has the right to purchase it at its fair market value, which is determined by an impartial appraisal. The city or town may also assign its option to a non-profit, conservation organization. The owner cannot sell or convert the land until at least 120 days after the mailing of the required notices or until the owner has been notified in writing that the option will not be exercised, whichever is earlier. This option is not available to the city or town and the notice requirement does not apply if the recreational use is simply discontinued, or if the owner plans to build a residence for his or her use, or the use of his or her parent, grandparent, child, grandchild, brother or sister, the surviving spouse of any of those relatives, or an employee working full time in the recreational use of the land.

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CENTERLINE STUDIOS INC. Landscape Architecture and Planning Table 14 lists 10 parcels in Barnstable in Chapter 61B status totaling 447 acres with and assessed value of \$31,804,100. The Wianno, Iyanough Hills and Oyster Harbors Golf Clubs account for about 408 acres, more than 91 percent of the total acreage in the Chapter 61B category. They are easily the largest privately owned parcels in Barnstable making them vital resources for both the town and region and should be maintained as public resources in perpetuity even if they do not remain privately owned golf courses.

To this end, in 2005 the town will close on its purchase of the Hyannis Golf Club at Iyanough Hills. The total purchase price is \$9,500,000 with \$5,500,000 of that total coming directly from Land Bank (now defunct) funds. This represents a huge success in Barnstable open space and recreation planning and ensures the protection of 126 acres of contiguous open space in the heart of town. The course will be managed by the Town's Recreation Division, and will provide a steady stream of dedicated land management funds derived from course profits.

To ensure the continued protection of all Chapter 61 properties, the Town of Barnstable Conservation and Recreation Divisions in cooperation with the Assessor should conduct an annual review (including interviews with owners) of all Chapter 61 properties to assess which properties should be pursued for potential acquisition. By conducting these reviews annually, the town will have a head start in acquiring the funding necessary for such purchases that the three month Right of First Refusal period does not necessarily provide. Reviews and interviews should strive to acquire information while being careful not to artificially inflate the market value of the land. During this annual assessment, other properties in town not currently in the 61B program should be evaluated for possible inclusion.

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MAP	BLOCK	LOT	LUC	ТҮРЕ	OWNER'S NAME	#	STREET NAME	ASS'D VALUE	LAND AREA
									(ACRES)
156	15		7190	61A LAND	ADAMS,	742	MAIN ST./RTE	\$12,900	28.40
					MALCOLM H &		6A(W.BARN.)		
156	17		0713	MIXED/ CH	ADAMS,	820	MAIN ST./RTE	\$373,900	26.35
				61A	WILLIAM B		6A(W.BARN.)		
335	26		0713	MIXED/ CH	ALIBRANDI,	4093	MAIN ST./RTE	\$462,400	15.00
				61A	MARSHA		6A(BARN.)		
336	98		7120	61A LAND	BRYANS,	178	STONEY POINT	\$1,400	2.23
					DOUGLAS A		ROAD		
336	99		7120	61A LAND	BRYANS,	140	STONEY POINT	\$1,300	2.03
					DOUGLAS A		ROAD		
336	100		7120	61A LAND	BRYANS,	156	STONEY POINT	\$2,700	4.31
					DOUGLAS A		ROAD		
155	32	1	7220	61A LAND	BURKE,	2320	MEETINGHOUSE	\$1,400	18.06
					KATHLEEN H		WAY/RTE 149		
					TRS				
45	16	5	7200	61A LAND	CHANNEL POINT	0	BOG ROAD	\$43,100	5.68
					REALTY, INC				
144	10		0710	MIXED/ CH	COOMBS,	595	BUMPS RIVER	\$668,700	20.75
				61A	DONALD		ROAD		
45	17	1	7100	61A LAND	CUDDY, BRIAN C	110	BOG ROAD	\$64,200	60.00
					TRS				
62	54		7100	61A LAND	CUDDY, BRIAN C	0	WHISTLEBERRY	\$9,800	9.17
					TRS		DRIVE		
318	25	1	0712	MIXED/ CH	DILLINGHAM	242	COMMERCE ROAD	\$508,600	22.98
				61A	PROPERTIES LLC				
17	7		0717	MIXED/ CH	GRIFFIN,	1541	MAIN STREET	\$1,346,300	67.57
				61A	WILLIAM F JR TR		(COTUIT)		
18	107		0717	MIXED/ CH	GRIFFIN,	255	RUSHY MARSH	\$94,200	4.18
				61A	WILLIAM F JR TR		ROAD	,	

Table 14Chapter 61 Properties in Barnstable

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17	14		0720	MIXED/ CH 61A	GRIFFIN, WILLIAM F JR TR	1524	MAIN STREET (COTUIT)	\$10,687,600	14.29
18	106		7170	61A LAND	GRIFFIN, WILLIAM F JR TR	0	WAQUOIT ROAD	\$300	3.88
29	7	1	0713	MIXED/ CH 61A		611	SANTUIT- NEWTOWN ROAD	\$484,900	6.99
45	11		7100	61A LAND	HAMBLIN, SETH R	948	RIVER ROAD	\$31,000	10.12
124	2	1	0718	MIXED/ CH 61A	HARNOIS, PATRICIA & VENEZIA, N TRS	290	FLINT STREET	\$421,300	4.39
124	3		0718	MIXED/ CH 61A	/	240	FLINT STREET	\$772,500	6.00
124	2	2	7180	61A LAND	HARNOIS, PATRICIA & VENEZIA, N TRS	260	FLINT STREET	\$600	5.10
60	4	4	0710	MIXED/ CH 61A	,	36	ROSA LANE	\$412,100	30.30
175	10		0710	MIXED/ CH 61A	JENKINS, JAMES A TR	471	PARKER ROAD	\$570,300	44.00
176	19		0710	MIXED/ CH 61A	JENKINS, JAMES A TR	301	PARKER ROAD	\$315,400	24.70
188	45		0710	MIXED/ CH 61A	JENKINS, JAMES A TR	1246	BUMPS RIVER ROAD	\$291,600	20.67
190	46		0710	MIXED/ CH 61A	JENKINS, JAMES A TR	0	FOX HILL ROAD	\$8,000	6.55
176	2	2	7100	61A LAND	JENKINS, JAMES A TR	110	SHAWS LANE	\$11,400	7.20
188	12		7100	61A LAND	JENKINS, JAMES A TR	0	MARIE-ANN TERRACE	\$800	0.50
188	75		7100	61A LAND	JENKINS, JAMES A TR	1271	BUMPS RIVER ROAD	\$200	0.11
188	76		7100	61A LAND	JENKINS, JAMES A TR	0	BUMPS RIVER ROAD	\$100	0.09



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188	138		7100	61A LAND	JENKINS, JAMES A TR	0	MARIE-ANN TERRACE	\$300	0.19
234	18	B00	0710	MIXED/ CH 61A	JENKINS, JAMES A TR &	0	PLEASANT PINES AVE	\$362,500	13.00
234	18	W00	0710	MIXED/ CH 61A	JENKINS, JAMES A TR &	0	PLEASANT PINES AVE	\$347,500	10.83
234	18	Т00	7200	61A LAND	JENKINS, JAMES A TR &	0	PLEASANT PINES AVE	\$2,700	1.07
120	42	1	7190	61A LAND	JOHNSON, HARRY F &	195	BUMPS RIVER ROAD	\$219,600	7.12
173	86	2	7100	61A LAND	JUNNILA, HENRY R & RUTH B TRS	1095	OLD STAGE ROAD	\$13,300	6.83
236	8		7170	61A LAND	KNOTT, WILLIAM D	2199	MAIN ST./RTE 6A(BARN.)	\$3,100	15.17
99	61	1	0720	MIXED/ CH 61A	KOMAR, RODERIC & MARILYN	0	BOURGEOIS LANE	\$304,000	12.62
99	28	2	7100	61A LAND	KOMAR, RODERIC & MARILYN	68	SOLSTICE LANE	\$31,800	19.82
196	32		6010	61 LAND	LEBLANC, GORDON J	27	FALCON ROAD	\$15,200	11.69
16	28		0703	MIXED/ CH 61A	LLOYD, H GATES III TR	340	VINEYARD ROAD	\$994,300	7.89
318	25	4	7120	61A LAND	MAGRUDER, SAMUEL & MARY & SARAH	0	INDIAN TRAIL	\$62,000	25.90
130	32		0718	MIXED/ CH 61A	MALOUF, ANTOINETTE A TR	625	WILLOW STREET	\$388,400	14.83
45	16	3	0710	MIXED/ CH 61A	MCGRATH, LARRY P	141	BOG ROAD	\$332,000	6.94
132	7		0710	MIXED/ CH 61A	ROSS, DAVID	60	WIDGEON LANE	\$638,100	29.70



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44	14		0710	MIXED/ CH 61A	SAGAMORE CRANBERRY CORP	0	RIVER ROAD	\$161,500	27.60
40	1		7100	61A LAND	SAGAMORE CRANBERRY CORP	0	FALMOUTH ROAD/RTE 28	\$21,500	18.50
81	5		7100	61A LAND	SAGAMORE CRANBERRY CORP	110	HOLLIDGE HILL LANE	\$8,300	7.55
102	186		7100	61A LAND	SAGAMORE CRANBERRY CORP B	0	ROUTE 149	\$5,600	3.50
44	9	1	0712	MIXED/ CH 61A	WARNER, JOHN L & ZOE F	330	OLDE HOMESTEAD DRIVE	\$347,700	6.58
18	120		7180	61A LAND	WESSON, VICTORIA TR	0	RUSHY MARSH ROAD	\$500	4.69
103	109	2	0719	MIXED/ CH 61A	WHEELER, WILFRED JR TRS	150	WHEELER ROAD	\$519,100	7.80
82	11		7190	61A LAND	WHEELER, WILFRED JR TRS	178	WHEELER ROAD	\$1,000	1.70
195	38		6010	61 LAND	WIRTANEN, MARK S	28	FALCON ROAD	\$179,000	15.96
SUBT	OTAL CHA	PTER 61A	Å	•	•			\$22,558,000	749.08
3	3		0803	MIXED/ REC	LLOYD, H GATES III TR	36	BAILEY ROAD	\$3,504,100	10.120
3	4		0803	MIXED/ REC	LLOYD, NINA W TR	42	BAILEY ROAD	\$4,555,700	11.340
254	16		8050	REC LAND	OCHS, PAUL F TRS ET ALS	1800	IYANNOUGH ROAD/ROUTE132	\$3,999,300	125.860
71	4	1	8050	REC LAND	OYSTER HARBORS CLUB, INC	145	GRAND ISLAND DRIVE	\$8,681,400	134.070
216	76	W00	0806	MIXED/ REC	TRI, BRENDA	2051	MAIN ST./RTE 6A(BARN.)	\$703,800	3.040



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216	75	2	8060	REC LAND	TRI, BRENDA	0	MAIN ST./RTE 6A(BARN.)	\$49,100	2.170		
216	76	B00	8060	REC LAND	TRI, BRENDA	2051	MAIN ST./RTE 6A(BARN.)	\$49,100	2.150		
152	3	1	8070	REC LAND	WEST BARNS DEER CLUB INC	1800	OLD STAGE ROAD	\$288,800	9.990		
152	11		8070	REC LAND	WEST BARNS DEER CLUB INC	0	PARKER ROAD	\$3,500	0.160		
115	22		8050	REC LAND	WIANNO CLUB	379	PARKER ROAD	\$9,969,300	148.400		
SUBTO	TAL CHAPT	ER 61B	3					\$31,804,100	447.30		
СНАРТ	CHAPTER 61 TOTALS								1196.38		



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3. Areas Significant for Water Resource Protection

The entire Cape is significant for water resource protection due to the presence of a single underground sole source aquifer and the abundance of surface water resources, as well as their importance to the region's economy. Surface water resources include salt and freshwater bodies and wetland habitats of all kinds. Map 6, *Wetlands*, Map 8 *Fisheries and Vernal Pools* and Map 9 *Conservation and Recreation Land* show all of Barnstable's surface water resources. Map 6 includes the state's wetlands GIS data layer. Wetland resources are protected through the regulatory oversight of the town Conservation Commission in accordance with the Massachusetts Wetland Protection Act (M.G.L. Chapter 131), and the town local wetlands bylaw. The town also establishes rules and regulations for the public use of municipal recreational and drinking water resources. In addition, there are regional and town-wide initiatives aimed at protecting specific resource types including the land-based initiatives discussed below.

a. Cape Cod Priority Ponds Project – A Land Conservation Guide for Cape Cod's Freshwater Ponds⁵⁹

The Cape Cod Priority Ponds Project was conducted by the Compact of Cape Cod Conservation Trusts, Inc. to assist public and private land conservation programs on Cape Cod. The focus of the guide is the identification of the remaining undeveloped land parcels adjoining fresh water ponds⁶⁰. The primary goal of the project is to assist in the protection of the most important remaining undeveloped pond shore areas on Cape Cod for water quality, conservation and passive recreation purposes.

The specific objectives of the project include:

- To identify, map and rank all the remaining pond shore parcels on Cape Cod (both undeveloped and under-developed).
- To develop protection strategies for the top priority properties, particularly those surrounding Great Ponds and Coastal Plain Ponds.
- To conduct targeted outreach for landowners controlling priority parcels to provide information on land values and identify protection options.
- To provide a digital database containing maps and a parcel-specific database to support ongoing land protection and water quality monitoring activities.

⁵⁹ The majority of this section is copied verbatim from the report authored by The Compact of Cape Cod Conservation Trusts, Inc. with minor changes to accommodate the purposes of this report.

⁶⁰ Though the protection of undeveloped property is the primary interest of most land conservation efforts, this study also includes so-called under-developed parcels. Under-developed parcels are large lots that may contain existing structures, but also include sufficient additional land area (beyond the minimum lot size required by zoning) to warrant consideration for conservation purposes.

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• To promote further cooperation among the Commonwealth's environmental agencies, Town environmental protection committees, and local non-profit land trusts in protecting the public interest in freshwater ponds.

The Cape Cod Priority Ponds Project is the first comprehensive evaluation of pond shore property ever done for Cape Cod. The regional study is inclusive of all ponds, regardless of size, location or public recognition and included well over 1,000 ponds and more than 3,000 land parcels. From this extensive database, 200 properties have been culled out based upon an assessment of their conservation values. The top 200 Priority Parcels are intended to serve as a guide for decision-making by the local land trusts and town Land Bank Committees. Ideally this information will allow these groups to determine which properties they should protect before the land comes on the market or a development proposal is initiated.

One important step in maintaining pond ecology and water quality is to conserve as much of the surrounding uplands as possible. However, it is not possible (or necessary) to protect all the remaining open land around the Cape's ponds. It is simply too costly and in those instances where the shoreline is already extensively developed, conservation may not achieve the desired effect. The delineation of surface watersheds and ground water recharge areas can help focus protection efforts to achieve maximum water quality benefit. Where available, pond (ground water) recharge areas were considered in setting priorities for protection in this project.

Nearly 3,000 parcels, with a total area in excess of 12,000 acres, were evaluated and ranked. All of these properties were mapped and the general parcel information stored in The Compact's project files. From this list, the top 200 highest scoring parcels were selected for further analysis and information gathering. As would be expected, the top 200 parcels are not evenly distributed among the Cape's 15 towns. Some towns may contain several of the "top 200 priority parcels", while others may only contain one or two. The intent is to stimulate a collective, local effort that will help ensure protection of a regional resource and to provide an opportunity to target local funds to properties that may have greater than local value. It is also expected that this approach will help stretch limited acquisition funds by highlighting those properties that may be most likely to attract additional sources of funding.

The following criteria were used in the evaluation:

- Zones of contribution to public water supply wells Source: Cape Cod Commission
- Areas of Critical Environmental Concern Source: MassGIS
- Pond Recharge Areas (weighted for emphasis) Source: Cape Cod Commission

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- Great Ponds
 Source: Cape Cod Commission
- Coastal Plain Pond Shores (weighted for emphasis) Source: MassGIS
- Wildlife Habitat Ranking (weighted for emphasis) Source: The Compact of Cape Cod Conservation Trusts, Inc. Cape Cod Wildlife Conservation Project
- Potential Vernal Pool Habitat Source: MA Natural Heritage and Endangered Species Program
- Linkage to Existing Open Space Source: MassGIS and The Compact of Cape Cod Conservation Trusts, Inc.
- Parcel Size (0.1-4.99, 5.00-9.99, 10+ acres) Source: Cape Cod Commission, digitized tax assessor's maps

The Cape Cod Commission is currently compiling substantial additional information for many of the Cape's fresh water ponds. While not used specifically to rank parcels in this study, it is expected to be of value to the land trust community, particularly when selecting among priority parcels that may be competing for available funding. The Commission's Ponds Atlas contains information on water quality, depth, bathymetry (where available), recreational uses, types of public access, herring runs, fish stocking and water quality monitoring activities.

Summary of Significant Regional Finds and Results

- 1,032 ponds have been inventoried Cape-wide. Hydrologic information provided by the Cape Cod Commission.
- 170 of these are Great Ponds (10 acres or more in size).
- 191 ponds are considered Coastal Plain Ponds that provide important habitat for several state-listed rare (Special Concern, Threatened or Endangered) plant and animal species.
- 60 percent (615) of the ponds inventoried have further development potential along their shorelines.
- Roughly 40 percent (415) ponds have shorelines that are either completely developed or completely protected.
- 2,672 undeveloped or under-developed pond shore properties have been identified for analysis and ranking purposes.
- Falmouth has the highest number of parcels inventoried at 465 (16 percent of the total) followed by Harwich with 377 (13 percent), and Mashpee and Barnstable with 344 and 343, respectively (12 percent).
- The top 200 parcels contain approximately 2,800 acres around 69 ponds in 13 towns.

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- Sandwich has the most acreage associated with the top 200 parcels with 875 acres, followed by Brewster (482), Barnstable (347), Mashpee (321), Harwich (283), Falmouth (226), Yarmouth, (181). The remaining 133 acres is split nearly evenly by the towns of Chatham, Orleans, Dennis, Truro, Eastham and Provincetown.
- The towns with the highest number of top 200 parcels around ponds are Mashpee (50), Brewster (48), Sandwich (27), Harwich (26), Barnstable (19), and Falmouth (18).

<u>Reiteration of Findings Specific to Barnstable</u>

- Barnstable has the fourth-highest number of parcels inventoried at 343 (12 percent) of the total;
- Barnstable has the third-highest acreage associated with the top 200 parcels with 347 acres;
- Barnstable has the fifth-highest number of top 200 parcels around ponds with 19.

Though the priority ponds maps and parcel lists are not available for public viewing, they should be used to help focus land acquisition efforts, particularly those related to pond protection. Future land acquisition efforts in the Town of Barnstable should incorporate Priority Ponds Project findings into the decision making process and, at a minimum, the 19 high-priority parcels identified in Barnstable, should be added to the proposed master Priority Parcel Acquisition list for the town.

- 4. Priority Areas for Protection of Rare Species and Exemplary Natural Communities
- a. Massachusetts Natural Heritage and Endangered Species Program

The Massachusetts Natural Heritage and Endangered Species Program (MNHESP) regularly updates and publishes its lists and maps of endangered, threatened and special concern species in each town. MNHESP also actively inventories and tracks the distribution and status of uncommon and exemplary natural communities across the state. The location of these habitats and species impacts potential development projects and is often a criteria used when prioritizing parcels for conservation land acquisition⁶¹. MNHESP information relevant to the prioritization of privately owned parcels in discussed below. For further information regarding wildlife habitats and species, see also Section 4E.

b. Cape Cod Wildlife Habitat Conservation Project

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⁶¹ This is, in fact, one of the criteria used in the *Cape Cod Wildlife Conservation Project* and the *Priority Ponds Project*, both produced by the Compact of Cape Cod Conservation Trusts, Inc.

The Cape Cod Wildlife Conservation Project was undertaken to help bring wildlife conservation planning to the forefront in public and private land acquisition and open space management efforts in the region. The results of this analysis are primarily intended to guide the Cape's private land trusts on land acquisition decisions pertaining to habitat protection. This information, however, may also be of general interest and benefit to other conservation-minded organizations involved in wildlife education, protection and habitat management, such as town land bank committees. The most important result of the Cape Cod Wildlife Habitat Conservation Project is the identification of the region's most important wildlife habitat and the prioritization of parcels for protection. This information should be used by the Town of Barnstable to help guide Town's land protection efforts. This project is discussed in depth in Section 4E.

- 5. Private Recreation Lands
- a. Chapter 61B Properties

Chapter 61B properties are discussed in Section 5.A.3, above.

b. Cape Cod Pathways Trail System

Cape Cod Pathways is a growing network of walking trails linking open space in all 15 Cape Cod towns from Falmouth to Provincetown. In November 1993, the Barnstable County Commissioners conceived the Cape Cod Pathways project as a way to:

- enable residents and visitors to enjoy and learn about the natural, recreational, historical and cultural values of Cape Cod;
- enhance access for walkers and hikers to the Cape's woodlands, ponds, beaches and historical villages;
- foster the preservation of open space in order to protect scenic views, wildlife habitat and sensitive natural areas; and,
- serve as a regional amenity, attracting visitors to Cape Cod during all seasons of the year.

Numerous individuals and organizations across Cape Cod have been involved in this effort through the years including the presently dormant organization called Partners for Cape Cod Pathways (Association for the Preservation of Cape Cod, Cape Cod Commission, The Compact of Cape Cod Conservation Trusts, Inc. and The Conservation Fund), as well as trail advocates and local town committees.

A grant from Barnstable County provided funds for Pathways planning work in the Town of Barnstable, which was completed in 2003. The main goal of this trail planning effort was to identify and describe the most feasible east-west route for a dedicated walking trail through Barnstable based on existing environmental and cultural factors. In consideration of this goal,

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Landscape Architecture	Prepared for:
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several Planning objectives were outlined at the inception of the Cape Cod Pathways project, including the following:

- 1. To maximize inclusion of publicly accessible lands and to minimize inclusion of private property.
- 2. To minimize new trail cutting by maximizing use of existing paths, trails, and cartways.
- 3. To provide buffers between the Pathways and private developed areas, such as residential subdivisions, wherever possible.
- 4. To avoid wetlands crossings, steep slopes, and other sensitive natural areas wherever possible.
- 5. To provide a variety of scenes and experiences.
- 6. To minimize road crossings for safe walking; to cross traveled roads only where safe sight distances are available; to avoid walking on road shoulders wherever possible.
- 7. To provide occasional access to rest and refreshment facilities, such as restrooms and markets.
- 8. To provide endpoints near likely inter-town and inter-modal Pathway connections.
- 9. To provide trailheads and parking areas convenient to residents and visitors anywhere in the vicinity.
- 10. To include segments appropriate to coincide with potential disabled access recreational routes.
- 11. To create loop trails off the central trail.

By endorsing this Proposed Cape Cod Pathways Trail Plan and creating a committee charged with its implementation, the Town of Barnstable embraced an opportunity to join the growing number of towns that have dedicated a trans-town walking trail network as part of the Cape Cod Pathways system.

Although existing conservation areas account for the majority of public walking trails in Barnstable, not all of them are connected to each other and hikers do not yet have the option of walking unimpeded across town from one area to another. In order to provide trail linkages between existing conservation area trails, it will be necessary to use some road right of ways and may also be necessary to propose the inclusion of some existing privately owned parcels. To implement these portions of the plan, it will be necessary to acquire legal rights to traverse these properties, through land acquisition/ownership, conservation easements, or other written legal agreements. Implementation of the proposed trail route is being greatly fostered through by an Ad Hoc Pathways Committee, charged with various responsibilities regarding implementation. The proposed charge for this Committee, which outlines the various means through which permission may be acquired from property owners, is included below.

Ad Hoc Barnstable Cape Cod Pathways Committee Charge

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The Ad Hoc Town of Barnstable Cape Cod Pathways Committee is charged with implementing the proposed Cape Cod Pathways walking trail link through Barnstable as part of a regional network of contiguous walking trails. The proposed route is outlined in a 2003 report prepared in cooperation with the town. The Committee's responsibilities shall entail the following:

1. Contacting owners of private land on or abutting the proposed route(s) and seeking permission to walk across or adjacent to their land solely for the purpose of recreational hiking. Options to be pursued include the following, in order of priority:

Easements, restrictions, and other options

- Conservation easements/restrictions (deed restrictions to be held in perpetuity with the land; tailored to meet owners' needs and trail requirements; donated or for fee; provides grantor with substantial tax benefits).
- License (a revocable written agreement between the landowner and the licensee/conservation organization).
- Leases (a simple written agreement between the landowner and the licensee/conservation organization; allows unrestricted and exclusive use of land for a number of years; landowner can seek indemnification from liability if land is for public use; no charitable deductions).
- Access covenants (a simple written agreement between the landowner and the licensee/conservation organization; for limited use and time period).
- Management agreement (a simple written agreement between the landowner and the licensee/conservation organization requiring landowner to manage property in a specific way for a given time; good for landowners who are already managing their land for conservation purposes; designed to suit both parties).
- Verbal agreement (not binding but may be a trial option necessary with some owners who are not ready for more formal agreement).

Donations and Sales

- Outright gift of land (the owner may be interested in donating land to the grantee and receiving federal income, estate and property tax benefits. This has benefits to the town as well as to Pathways).
- Bargain sale (part donation and part sale; may entail seller to income tax charitable contribution, and estate and property tax deductions).
- Fair market value sale (requires an appraisal).
- 2. Establishing access agreements with assistance, as necessary, from local conservation groups such as the Barnstable Land Trust and the Barnstable Conservation Commission.

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CENTERLINE STUDIOS INC. Landscape Architecture Which groups are involved will depend largely on the owners' wishes and the method of permission granted.

- 3. Altering the proposed trail route as negotiations evolve and as necessary or as potential routes are altered by new development.
- 4. Identifying areas in need of trail maintenance and performing necessary tasks with assistance from appropriate groups and individuals, including volunteers.
- 5. Posting trail markers on dedicated Pathways land. In some instances, on publicly owned lands, this will require working with the state and/or town.
- 6. Regularly coordinating with the Barnstable Conservation Commission, Barnstable Town Council, Barnstable Planning Board, the Cape Cod Commission Cape Cod Pathways Coordinator (and other partners, if applicable) on progress to date.

The proposed Pathways Trail route shown on Map 10, *Access*, most effectively accomplishes the objectives of the Cape Cod Pathways program considering existing constraints and opportunities and the trail planning objectives set forth above. However, the alignment of the proposed route may change through time, depending upon the results of the proposed Pathways Committee's implementation efforts.

The proposed Cape Cod Pathways trail network will directly enhance Barnstable's conservation and recreation resources, providing an additional reason for the ongoing acquisition and protection of conservation land, thereby assisting in regional open space conservation efforts. Approximately 20-25 privately owned parcels lie along the proposed Cape Cod Pathways Trail route. Permission to cross these parcels will need to be obtained via conservation restriction, fee ownership or written permission from the owners. The Town of Barnstable should include the privately owned parcels that are necessary to cross to implement the Cape Cod Pathways Plan on the proposed master *Priority Parcel Acquisition List*, with particular emphasis placed on their recreational values.

c. Bike Trails

The Cape Cod Rail Trail runs from Wellfleet to Dennis and is the most popular bike trail on Cape. The Rail Trail runs mostly over the abandoned rail bed of the Old Colony Rail Road. In 1976 the State of Massachusetts purchased the right-of-way for \$1 and started plans for recreational use of the corridor. Beginning in 1978 the first sections of trail were improved for pedestrian, bicycle and equestrian use. In 1994 the Rail Trail was extended from Locust Road in Eastham to LeCount Hollow Road in South Wellfleet. And in 1997, the Town of Harwich built a 3.5 mile spur off the Rail Trail to the Chatham town line. In 2002 the first of two 'bicycle' bridges were built that eliminated most of the areas where one must ride with traffic. In all the

Prepared By:

CENTERLINE STUDIOS INC. Landscape Architecture and Planning Rail Trail and its connections provide more than 30 miles of off-road riding. Nickerson State Park is the official trail head and overseer of the trail⁶².

The Towns of Yarmouth and Sandwich have completed their plans and connectors to the Rail Trail; currently there is no formal plan for the Town of Barnstable to complete its own connectors⁶³, However there is a proposed bike trail route that should be further explored for its feasibility. The location of the proposed route is shown on Map 12, *Action Plan*.

6. Conservation Restrictions and other Less than Fee Interests

It is not commonly known that land purchased or designated and used for conservation purposes is not always protected from development in perpetuity. The best way to ensure a parcel's perpetual protection is to place language in the deed to that effect. Such language is known as a "conservation restriction", and is one of the major land protection tools being used today. This conservation restriction may be owned by a non-profit land trust or another non-profit organization including the town itself; it does not necessarily have to be held by the owner of the land. In many cases, a land trust may hold a conservation restriction on land that is owned by a private landowner or even on land that is owned by the town or state. Conservation restrictions may vary in duration; to ensure *perpetual* protection, a permanent conservation restriction is necessary.

Contrary to popular knowledge, town land used for conservation and recreation is not always protected and can be developed by the town at any time, provided the appropriate legal steps are followed. According to state law, land acquired for the purposes of natural resource protection cannot be converted to any other use without the following actions:

- 1.) the matter must be taken up at town meeting or city council and pass by a 2/3 vote;
- 2.) the town must file an Environmental Notification Form (ENF) with EOEA's MEPA Unit; and,
- 3.) the matter must pass by a 2/3 vote of the Massachusetts Legislature.

Finally, if the land was acquired with assistance from one of the EOEA's Division of Conservation Service's funding programs, the converted land must be replaced with land of equal monetary value and recreational or conservation utility (EOEA DCS Open Space Planner's Workbook).

These steps are meant to ensure that land acquired for conservation and recreation remains protected, however if these steps are adhered to, it is possible to change a parcel's designation and that possibility scares many open space planners. It is conceivable that future politics and

⁶² Much information in this summary has been taken verbatim from the Cape Cod Rail Trail Web site, http://www.ccrailtrail.com/63 According to Lindsey Counsell, Land Bank Committee chairman.

municipal land use needs may change a town's approach to conservation and recreation parcels, and develop them for other purposes. Also, many parcels do not have clear deed language, or even if they do, their land use status not always known by land planners. Therefore, for the purposes of open space planning, these parcels must be perceived and treated as unprotected land until a thorough deed examination is conducted. The Town of Barnstable should research all publicly owned land to establish its land use (conservation and recreation) status. Lands that are not legally protected in perpetuity should have a permanent conservation restriction assigned to their deed and recorded in the Barnstable County Registry of Deeds.

Table 15, Conservation Restrictions in Barnstable, shows there are 34 properties in town with conservation restrictions on them. Most, though not all, of these restrictions are held by the Barnstable Land Trust Inc.

Table 15 Conservation Restrictions in Barnstable								
MAP	BLOCK	LOT	OWNER NAME	LOCATION	SPCL USE	LIN#	USE CODE	ACRES
28	53		BEVRIDGE, BERNARD & MELODIE	577 WAKEBY Road	CON	1	1320	0.47
97	22	1	BUTLER'S HOLE LAND CO, LLC	1635 SOUTH COUNTY ROAD	CON	2	1010	34.69
71	24		CC GREAT COVE LLC	15 PHEASANT PATH	CON	3	1320	8.2
71	24		CC GREAT COVE LLC	15 PHEASANT PATH	CON	1	1320	2
70	17	3	CONOVER, CATHERINE M	350 CARRIAGE ROAD	CON	2	1300	1.22
70	17	3	CONOVER, CATHERINE M	350 CARRIAGE ROAD	CON	1	1300	2
236	13		HAYES, NORMAN W & SUSAN B	MID-CAPE HWY(WEST)RTE 6	CON	1	1320	8.95
157	4	1	HAYES, WILLIAM J & PATRICIA D	ROUTE 6A WB	CON	1	1320	14.1
319	146		HUNSAKER , JAMES P JR ET AL	240 COMMERCE ROAD	CON	2	1060	2.35
319	146		HUNSAKER , JAMES P JR ET AL	240 COMMERCE ROAD	CON	1	106V	2
233	26	1	JONES, ROBERT M & RUTH M	15 NYES NECK ROAD EAST	CON	1	1320	0.45
236	8		KNOTT,	2199 MAIN	CON	3	7170	8

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		WILLIAM D	ST./RTE 6A(BARN.)				
138	1	LEBLANC, GORDON & JANICE	470 SEA VIEW AVENUE	CON	3	1090	7.09
138	1	LEBLANC, GORDON & JANICE	470 SEA VIEW AVENUE	CON	1	1090	1
114	2	LEGHORN, RICHARD & NANCY &	180 WIANNO HEAD ROAD	CON	1	1300	1
114	2	LEGHORN, RICHARD & NANCY &	180 WIANNO HEAD ROAD	CON	2	1300	0.5
80	8	MCHENRY, DOUGLAS BRUCE	354 MISTIC DRIVE	CON	2	1090	0.61
80	8	MCHENRY, DOUGLAS BRUCE	354 MISTIC DRIVE	CON	1	1090	1
80	8	MCHENRY, DOUGLAS BRUCE	354 MISTIC DRIVE	CON	3	1090	5.21
50	2	MELLON, RACHEL L	SAMPSONS ISLAND	CON	1	1320	83.75
15	2	RWL COTUIT LIMITED PARTNERS HIP	140 VINEYARD ROAD	CON	2	1300	0.6
15	2	RWL COTUIT LIMITED PARTNERS HIP	140 VINEYARD ROAD	CON	1	1300	2
258	24	SIMPKINS, JACQUELIN E N	2724 MAIN ST./RTE 6A(BARN.)	CON	6	1010	3.65
258	24	SIMPKINS, JACQUELIN E N	2724 MAIN ST./RTE 6A(BARN.)	CON	3	1010	9.2
34	55	SKOWRONS KI, HELEN E	1090 MAIN STREET (COTUIT)	CON	1	1310	0.83
237	30	TURNER, PAUL & SELMA	2361 MAIN ST./RTE 6A(BARN.)	CON	4	1010	1.1
237	30	TURNER, PAUL & SELMA	2361 MAIN ST./RTE 6A(BARN.)	CON	3	1010	5.95
237	30	TURNER, PAUL & SELMA	2361 MAIN	CON	1	1010	1

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TOT	AT S							215 28
			JEFFRIES JR TR	LANE				
158	5	1	TR WYMAN,		CON	2	132C	1.38
158	5	1	TR WYMAN, JEFFRIES JR		CON	3	132C	1.05
158	5	1	VIRGINIA F & WYMAN, JEFFRIES JR		CON	1	132C	1
138	2		LER,	452 SEA VIEW AVENUE	CON	1	1300	1
138	2		PAUL & SELMA WAGENSEL LER,	6A(BARN.) 452 SEA VIEW	CON	2	1300	0.93
237	30			2361 MAIN	CON	2	1010	1

TOTALS

215.28

Source: Town of Barnstable Assessor

Conservation restrictions are the easiest and most reliable means of ensuring the perpetual protection of land. The town should work in conjunction with land trusts (i.e. the Barnstable Land Trust, The Compact of Cape Cod Conservation Trusts, Inc. Orenda Wildlife Preservation Trusts and the Three Bays Preservation Trust) to acquire conservation restrictions on all unprotected municipal lands even if they are currently designated as conservation and recreation land and on any privately owned land that exhibits conservation values including wetland resource areas.

- 6. Major Institutional Holdings
- a. Cape Cod Community College

Cape Cod Community College (CCCC), part of the state's community college system, covers 116 acres (Cape Cod Community College Web site <u>http://www.capecod.mass.edu/</u>) and boasts extensive athletic fields that are regularly used by the public and are a valuable quasi-public amenity. The property is also included as part of the Proposed Cape Cod Pathways Trail Plan, which would make it part of a regional recreational amenity.

To ensure the continued availability of these fields as a public recreational resource, the town should enter in negotiations with the school (and possibly the state), which is run as part of the State's Community College system, to acquire a permanent conservation/recreation restriction on the property or possibly place in M.G.L. Chapter 61 status. If this is not possible, the town should ask for a right of first refusal should the College ever decide to sell this land.

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b. Cape Cod Academy

Cape Cod Academy in Osterville, a private school for grades K-8, owns approximately 28 acres of land.

c. Cape Cod Hospital

Cape Cod Hospital in Hyannis, the major medical facility for the region, owns approximately 15 acres in downtown Hyannis. Virtually none of this can be considered open space and recreation area as most of it is developed.

d. Catholic Church

The Roman Catholic Bishop of the Diocese of Fall River owns approximately 23 acres of land in Barnstable.

e. Woods Hole Oceanographic Institution

The Woods Hole Oceanographic Institution (WHOI) owns approximately 12 acres of land in Barnstable. There is no notable open space associated with this facility.

There are no other major privately held institutions, except for golf courses, that have notable large open space and recreation resources available to the public.

- 9. Other Resources
- a. Railroad and Utility Rights of Way

As previously noted, sections of the abandoned Cape Cod Railroad right of way have been converted to recreational use as a biking and/or walking trail in other towns. Similarly, the electric power line corridors running through town and some public and private road right of way are used for various open space and recreational purposes including walking, hunting, and nature observation. These major corridors are an extremely valuable conservation and recreational resource. Without them, the town would lose one of its most important but overlooked "borrowed" amenities. To ensure the continued availability of these areas for public use, the town should seek to acquire conservation restrictions or rights of way on private land along these corridors that afford continued public use. As tracts of land become available for purchase, the town should consider buying them.

B. Public and Nonprofit Conservation and Recreation Lands

The Town of Barnstable has cooperated with the Commonwealth of Massachusetts, the Nature Conservancy, the Barnstable Land Trust, The Compact of Cape Cod Conservation Trusts, Inc. and the Association for the Preservation of Cape Cod in establishing large areas dedicated to

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Landscape Architecture	Prepared for:
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	November 15, 2005

conservation in their natural state. Public and nonprofit conservation and recreation parcels are discussed below by category.

1. Public Land

A complete list of the Town of Barnstable's tax exempt land is included as Appendix B, *Town of Barnstable Government and Protected Land*. Subtotals for each ownership category are broken out in that list including municipal conservation and recreation land, and non-profit organizations. This section will discuss lands that are specifically owned and/or managed as conservation and recreation lands.

A. Town of Barnstable Conservation and Recreation Lands

According to FY 2005 records comompiled in Appendix B, *Town of Barnstable Government and Protected Land Publicly*, there are a total of 6,304 acres owned and managed by the Town of Barnstable Conservation Division. An additional 894 acres is listed as Open Space acquired with Land Bank funds equaling a total of 7,198 acres of municipally owned conservation land. By contrast, there are only 111 acres owned and managed by the Town of Barnstable Recreation Division. This amounts to only 1.5 percent of the Conservation total of 7,198 acres. Due to the relative lack of land dedicated for recreation purposes in the Town of Barnstable, and the expressed needs of the Recreation Division for additional facilities, there should be a concerted focus upon identifying and acquiring land for recreation uses in town. In addition to parcels that are clearly dedicated for conservation and recreation uses, there is a large amount of land owned by the town but designated for other uses including those listed below in order of acreage totals:

- General Municipal Use –866 acres;
- Airport 35 parcels totaling 603 acres;
- School Properties 13 parcels totaling 311 acres;
- Beaches 17 parcels totaling 133 acres;
- Cemeteries 19 parcels totaling 166 acres;
- Public Landings 27 parcels totaling more than 12 acres; and,
- Ways to Water 77 ways to water (see Map 11 *Ways to Water*).
- Town Municipal (Lombard Trust) 31 parcels totaling over 50 acres
- Town Municipal (Cobb Trust) 8 parcels totaling 37 acres.

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Beaches and landings could be considered primarily recreational use areas.

• Beach sites which fall under the jurisdiction of the Recreation Division are as follows:

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- Covells
- Craigville
- Dowses
- Hamblin Pond
- Hathaways Pond
- Joshuas Pond
- Kalmus
- Loop
- Lovells Pond
- Millway
- Sea Street (also known as Keyes)
- Veteran's
- Wequaquet Lake

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	Cevelis	iaigville	owses	ta no bilines	Hathaways	Jeshuas	Kalmus	Leap	ovellis	Millwray	Sandy Neck	Sea St (Keyes)	Veterans	W equaquet
Bethhouse (Sem-4:30pm)		r –		± w			×	<u> </u>	┛		box	s xx	<u>></u> xx	<u>55</u> XX
Beach Closes Mid August					XX			x	x	xx				ж
Beach Closes Labor Day	xx	хк	xx				×				xx	ж	x	
Grille		Γ	Γ		хх							ж	ж	
Hendicep Access	хх	хк	xx	ж	хх		x	xx		xx	xx	ж	ж	
Lileguards from Gam-4:30gm	xx	xx	ж	ж	хх	xx	xx	xx		хх	xx	ж	x	x
Open Weekends starting Memorial Day Weekend	xx	xx	×				×					×	xx	
Open at the end of June				ж	ХX	xx		x	xx	XX	xx			xx
Pionic Area			×		XX		ж				xx	xx	x	
Playground (Swings)				×	xx						1		x	
Resident Site (Resident Permit Required)	xx		××	×		xx		×	×	xx				×
Snack Ber		_					ж	<u> </u>	-		XX	ж	×	
Volleyball					XX		XX					ж	XX	

Table 16Public Beach Amenities

Source: Town of Barnstable Web site

All other ponds, beaches and ways to water in the Town of Barnstable fall under the jurisdiction of the Department of Marine and Environmental Affairs or the Town Harbor Master.

Public access to both marine and fresh water ways-to-water, in the Town of Barnstable has been a way of life associated with Cape Cod for several centuries⁶⁴. The developmental and growth access impacts have been documented in previous open space plans, as well as by the Town's Property Management Division. Ways to water can be defined as legally defined public rights of access to shoreline water resources including fresh and salt water beaches, town and state landings, fresh water walkways, boat launches, streams, ponds, etc. Ways to water are owned and managed either by the town or the state.

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⁶⁴ All ways-to-water data according to Town of Barnstable *Town of Barnstable Report on Town Ways to Water*, Property Management Office, 2000 and updated by members of this plan's workgroup.

The most-recent town data lists 77 such ways-to-water. Forty-nine are ways to salt water and include beaches, marinas, boat ramps, and docks (see Map 11 *Ways to Water*). The use of these ways to water varies between frequent to rare. Some of the most popular usage categories include shellfishing, boat launching and fishing, swimming, and passive recreation such as hiking/walking and sitting/birdwatching. Various departments and divisions within the town have responsibility for managing, maintaining and overseeing the ways to water, all with varying degrees of responsibility. The Department of Public Works, Marine and Environmental Affairs, and the Recreation and Conservation Divisions all share responsibility, depending upon various factors including the registered deed title of the parcel and its abutting properties.

Schools also provide an important quasi-public recreation resource.

To ensure that the most important town owned land is protected in perpetuity for public conservation and recreation use, the town should prioritize all town owned parcels for their conservation and recreation value, regardless of category, and pursue their permanent protection through the establishment of conservation restrictions.

For the last five years, the Barnstable Land Bank Committee has been the primary group responsible for prioritizing and pursuing land acquisition at the town level. Under the direction of the committee, since 1999, the town has purchased 32 parcels totaling 1,136.63 acres for a total cost of \$38,890,928 (\$34,216/acre). The majority of acquisition funds were provided by Land Bank revenues. Table 17, *Town of Barnstable Land Bank Acquisitions 1999-2005*, shows actual expenditures for each property and yearly totals.

The Land Bank Committee has done an admirable job of governing land acquisition in the Town of Barnstable for the last five years. However, with the cessation of Land Bank revenue and the demise of the Land Bank Committee, there is no longer a dedicated authority charged with the task of managing land acquisition efforts in town.

For the foreseeable future, the Community Preservation Act will provide the funding for land acquisition in town. As discussed in Section 3 funds can be used to address three core community concerns:

- Acquisition and preservation of open space
- Creation and support of affordable housing
- Acquisition and preservation of historic buildings and landscapes

A minimum of 10 percent of the annual revenues of the fund must be used for each of the three core community concerns. The remaining 70 percent can be allocated for any combination of the allowed uses, or for land for recreational use. This gives each community the opportunity to determine its priorities, plan for its future, and have the funds to make those plans happen (www.communitypreservation.org).

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CENTERLINE STUDIOS INC. Landscape Architecture and Planning Property taxes traditionally fund the day-to-day operating needs of safety, health, schools, roads, maintenance and other municipal needs. The Community Preservation Act can give a community the funds needed to control its future. As these funds become available, an advisory committee should be established (possibly the former Land Bank Committee), charged with the responsibility of identifying, prioritizing and pursuing land acquisition opportunities for the purposes of open space and recreation, historic preservation and affordable housing. Because these three interests may sometimes compete with each other, it may be wise to have a separate group or subcommittee focused exclusively on open space and recreation acquisition, needs and interests. This group should develop the proposed master Priority Parcel Acquisition List and pursue protection of the private parcels included. It should also prioritize all town owned parcels for their conservation and recreation value, regardless of category, and pursue their permanent protection through the establishment of conservation restrictions. Finally, it should establish a strategy for the ongoing management of these properties to ensure healthy ecosystem functioning, sanitation and public safety.

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TOWN OF BARNSTABLE Breakdown of Land Acquisitions - Land Cost Only Open Space Acquisition Fund											
	Fiscal Year								Cost per		
	1999	2000	2001	2002	2003	2004	2005	Acreage	Acre		
Hovey	\$965,188							25.50	\$37,851		
Andrews		\$294,100						12.47	\$23,585		
Hagberg		\$613,264						10.09	\$60,779		
Newton		\$69,810						7.33	\$9,524		
Conant		\$1,718,378						1 22.73	\$75,600		
Mitchell		\$539,858						36.04	\$14,979		
Plummer		\$142,500						7.10	\$20,070		
Childs		\$324,900						4.89	\$66,442		
Fenney		\$134,900						9.00	\$14,989		
Lampi			\$1,142,600					38.09	\$29,997		
Bartell			\$167,240					2.05	\$81,580		
Stapleton			\$119,900					4.90	\$24,469		
Hutchinson			\$62,900					2.51	\$25,060		
Coney			\$97,900					0.52	\$188,269		
Nelson			\$149,970					6.14	\$24,425		
Eldridge			\$349,000					12.53	\$27,853		
Childs				\$2,028,381				40.00	\$50,710		
Jaybird				\$301,200				11.96	\$25,184		
Doe				\$394,900				14.66	\$26,937		
McManus				\$2,597,500				39.39	\$65,943		



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Davenport			\$2,339,900					26.06	\$89,789	
Denisco			\$224,900					12.45	\$18,064	
Cape Club			\$2,987,700	\$25,760			2	297.00	\$10,146	
Gulf Station				\$650,552				1.30	\$500,425	
Dugas				\$1,997,946				29.96	\$66,687	
Danforth					\$11,275,790			217.36	\$51,876	
Small/APCC					\$496,827			29.4	\$16,899	
Furman					\$298,289			56.62	\$5,268	
Dugas						\$178,874		5.3	\$33,750	
Hyannis Golf Course						\$5,500,000	3	125.63	\$43,779	
Bone Hill Farm						\$200,000		1.02	\$196,078	
Subtotal - Closed \$965,188 Accounts	\$3,837,710	\$2,089,510	\$10,874,481	\$2,674,258	\$12,070,906	\$5,878,874		1,110.00	\$ 34,586	
Other Commitments:										
Eldridge						\$1	4	13.43	\$0	
Archibald						\$500,000		13.2	\$37,879	
Grand total - all \$965,188 commitments	\$3,837,710	\$2,089,510	\$10,874,481	\$2,674,258	\$12,070,906	\$6,378,875		1,136.63	\$ 34,216	
Cumulative expenditures	\$4,802,898	\$6,892,408	\$17,766,889	\$20,441,147	\$32,512,053	\$38,890,928		1,136.63	\$34,216	
 Conant land acquisition was offset by \$445,621 of non surtax revenues. Joint purchase with the Town of Mashpee. The number above only reflects the Town of Barnstable's cost. Total acquisition cost is \$9,500,000. Land Bank contribution is \$5,500,000. To be purchased with private funds. 										



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Following are lists and brief descriptions of Barnstable's major conservation and recreation areas.

Conservation Areas

- 1. Hathaways Pond Conservation Area consists of 60 acres in Hyannis and straddles the boundary between moraine deposits to the north and outwash plain deposits to the south. A 1.2 mile walking trail involves an ascent of 70 feet. Some features include a pond overlook, vernal pool and water lily basin.
- 2. Crocker Neck Conservation Area consists of 97 acres in Cotuit which were purchased in 1985, preventing an 18-unit waterfront subdivision. The 1.5 miles of walking trails introduce the visitor to pine/oak forest, salt marsh, freshwater marsh, shrub swamp, beach and estuarine flats.
- 3. Whelan Conservation Area consists of 12.91 acres in Centerville with 1.5 miles of hiking trails. A 0.5 mile interpretive trail meanders through a rare sandplain grassland.
- 4. Long Pond Conservation Area is 37 acres abutting a large pond north of Cotuit. Approximately two miles of trails traverse the site, leading visitors through fields, woodlands and to two observation decks overlooking the pond. There is an interpretive trail with 30 stops. Fishing and picnicking are allowed.
- 5. Sandy Neck Barrier Beach Ecosystem is an intensively managed, multiple-use conservation area 6 miles long and up to 0.5 mile wide consisting of a barrier beach and marshes along the northern Cape Cod Bay coast of Barnstable. It is comprised of vast dune systems, vernal pools, and maritime forests.
- 6. West Barnstable Conservation Area is the town's largest conservation area, encompassing 1,114 acres. It is popular for hiking, horseback riding and mountain biking and hunting.
- 7. Old Jail Lane Conservation Area encompasses 180 acres in Barnstable Village, and is a major terminal moraine representing the limit of glacial advance before its retreat some 15,000 years ago.

Recreation Areas

Following is a comprehensive list of recreation areas provided by the Recreation Division Assistant Director Patti Machado, organized by village.

Hyannis Village

Veteran's Park Beach

<u>History:</u>

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- Part of the Normal School (Camp Howe's),
- Swim Program until 1990
- John F. Kennedy Memorial Sailing Program
- Serving abut 60 kids between the ages of 10 13 since '70s
- Night Band Concerts
- Was under the Park and Recreation Department from beginning

Current Use:

- John F. Kennedy Memorial Sailing Program
 - Serving 150 kids between the ages of 10-13
 - Serving Novice lessons for 12 participants 13-18 yrs
- Playground & picnic area with grills provided
- Open to public, residents (parking permit required)
- Special pass for Yacht Club Member available for parking
- Regatta & Figawi parking area
- Fireworks display site (parking permitted)
- Halloween Special Event
- Family Fun Day Special Event
- Easter Egg Special Event
- Area is used by many non-profits for group picnics
- School use as last day outing sites
- Lifeguard staff provided last week in June until Labor Day
- Weekends beginning Memorial Day Weekend
- Small group of women meet here daily to walk Hyannis roads on a regular basis Passive Recreation with benches along the board walk with flowers Crabbing along the stream from Crabs creek
- Home of the Korean War Vets Memorial
- Softball field available
- Beach volleyball
- Snack bar
- Hass memorial bench on beach itself for passive recreation

John F. Kennedy Memorial

History:

• Site had the cabins for Camp Howe, still footings can be seen in the wooded area

Current Use:

- Staffed and restroom facilities available May 1 to November 1
- Open to public year round
- Passive recreation (sitting on benches & scenic view)
- Fountain collecting coins to help support the Sailing Program

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- Sell hats to assist in raising funds for Memorial Trust Fund
- Many weddings
- Kalmus Park Beach (Dunbar's Point)

History:

- Acquired from Dr. Kalmus the inventor of Techno-color.
- Site of an ice house for community
- Had dances in the summer evening for young people
- Sailboat and windsurfing rentals use to happen on the Lewis bay side 150 yards from swim area
- Spring Barnstable Recreation Road Race for all ages
- Was under the Selectman's Beaches before being combined with the Park and Recreation Beaches

Current Use:

- Swim Program for more than 150 kids
- Sailing Program Dance annually
- Windsurfing area designated Kalmus Board Sailing Association assists in monitoring and self supervising windsurfing activities
- Has numerous windsurfing events
- Hyannis Fire Department uses for training drivers
- Tern nesting area
- Plover nesting area
- Firework display (no parking available)
- Town Swim Meet for kids in program
- Veranda passive recreation
- Walk around the peninsula
- Boats come and go from the back beach on Lewis Bay side
- Wooded picnic area
- Fishing along the jetty
- Lifeguards provided last week in June to Labor Day
- Lifeguards provided weekend only from Memorial Day weekend to Labor Day
- Snack bar
- Has memorial benches on beach for passive recreation
- Baptism site for many churches

Keyes Beach (Sea St.) Beach

History:

• Was a Selectman's Beach before being combined with the Park and Recreation Beaches

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Current Use:

- Site to see Kennedy Compound
- Lifeguards end of June to Labor Day(based on staff availability)
- Lifeguards on weekends Memorial Day Weekend to Labor Day (based on staff availability)
- Picnic area that includes grills
- Snack bar
- Overflow parking for firework display
- Passive recreation with benches placed on hill overlooking Nantucket Sound and Kennedy Jetty
- Has memorial benches along beach for passive recreation
- Weddings and pictures on the hill

Eugenia Fortes Beach

History:

• Was Hyannis East Beach

Current Use:

- Resident-only beach
- No lifeguards
- Gate staff when able on weekends end of June to Mid August
- Passive recreation with benches available
- Many dinghy's to assist boat owners access to boats

Asleton Park & Marine Museum

History:

- Park was resident homes
- Museum was a marina then the lot was used to park cars for a couple of summers and the building was used as a youth center housing many after-school activities, a summer leisure program for older teens and different special events

Current Use:

- Part of the new Walkway to the Sea
- Passive recreation with benches and green open space
- Home of Marine Museum currently being developed

Kennedy Rink/Recreation Office/Skate Park/Little League Field Rink/Warming House

<u>History</u>

- Rink bed donated by Kennedy Family
- Informational fliers available

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- Dances in summer
- Youth Center activities in summer

Current Use

- Skating facility 22 weeks of the year
- Groups ice rental (evenings)
 - o Hyannis Fire
 - o Barnstable Police
 - General (private hockey & open skate)
 - Wianno Club (1x a year)
- Public skating
- Barnstable Youth Hockey (approximately 400 participants)
- Barnstable Recreation Skating Clinic (approximately 600 participants)
- Cape Cod Skating Club (private pay full rental rate)
- Barnstable High School
 - Boys (JV & Varsity approx. 50 kids)
 - o Girls (Varsity approx. 20 kids)
- Snack bar
- Concession is bidded out
- Wooden Floor 12 weeks (program times vary)
- Middle School League (60 kids)
- Open gym (average 30 kids a day)
- Leisure Program site (65 kids)
- Various tournaments including, table tennis, 3-on-3 basketball, pool, air hockey, foosball
- Floor Hockey Program
- Indoor Soccer Program
- Skateboard/Inline skating during inclement weather
- Warming house
- Summer restrooms for Little League
- Some meetings are held when space is needed in Spring & Fall
 Function Room
- Birthday parties
- Registration area
- Resident parking permits sold here
- Night rentals
- Little League
- Barnstable Youth Soccer League
- Barnstable Silver Bullets (Football)
- Cape Cod Carvers
- Bridge groups
- Barnstable Youth Hockey
- BHS Hockey Programs

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- Elections (Precinct 8)
- Office space
- Skate park, including skateboards, in-line
- BMX Bikes
- One week camps for all
- Tournaments for all
- Baseball field
- Maintained and taken care of by Little League

Hyannis East Elementary School

Current Use:

- Field (Lorusso Little League Field)
- Rec. Division is in charge of permitting fields after school use
- Little League both fields (they also maintain them)
- Little League has concessions
- Playground (two sites)
- Basketball courts (which Rec. Division lights in the Summer)
- Soccer field

Old Middle School/Horace Mann Charter School

History:

- There was an outdoor exercise program set up in the wooded area
- Was a non-groomed track around the football field
- Had a leisure program at this site

Current Use:

- Swings
- Recreation permits the field after schools are out
- McKeon Field
 - o Hyannis Mets Field
 - o Concessions
 - o Practice
 - o Baseball camp
 - o Games
 - o Maintained
 - Old Football Field
 - o Barnstable Lacrosse
 - o Sturgis School
 - St. Francis Preparatory School
- Two Baseball/Softball Fields

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- o Barnstable Recreation
- Baseball/Softball
 - St. Francis Preparatory School
 - o Group rentals
- Tennis courts, open to public
- Basketball area open to the public

Lopes Field

Current Use:

- Men's Softball League
- Tournaments
- Swings
- Storage shed
- Ridgewood Park

Current Use:

- Playground
- Open to the public
- Hyannis West Elementary School
- (Rec. Div. in charge of permitting fields after school use)

Current Use:

- Soccer fields
- Barnstable Youth Soccer is a major user in Spring & Fall
- Two Baseball/Softball Fields
- BHS JV team uses 1 field in the spring
- Barnstable Recreation uses the other in Spring
- Basketball court
- Permit to a Men's League in the summer
- Playground

Barnstable Middle School Hyannis

• (Rec. Div. in charge of permitting fields after school use)

Current Use:

- Two Softball/Baseball Fields
- Barnstable Babe Ruth (baseball field)
- Barnstable Recreation (softball field)

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- Evening community groups (softball field)
- Soccer field
- Field hockey field
- Have used lot for Bike Rodeo/Cookout
- Summer Leisure Program more than 120 kids (9 weeks)

Barnstable High School

Current Use:

- Tennis courts
- When high school is not using Rec. Div. permits
- Barnstable Recreation including tennis program
- Open to the public

Centerville Village

Covells Beach

History:

- Was Pendergast's Property
- Was Selectman's Beach

Current Use:

- Resident-only beach
- Has about 100 participants in swim lessons
- Beach open Memorial Day Weekend to Labor Day
- Lifeguards on duty last week in June to Labor Day
- Centerville Road Race
- Additional parking for triathlons
- Mobile concession

Craigville Beach

History:

- Was a Selectman's Beach
- Had a raft at one point

Current Use:

- Public beach
- Open Memorial Day Weekend to Labor Day
- Lifeguards on duty

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- Weekends only Mem. Weekend-last week in June
- Daily last week in June to Labor Day
- Swim program
 - o Junior Guard
 - o Lifeguard Training
- Triathlons
- Road Race
- Old Centerville Home Week Bon-Fire & Concert
- Open evenings until 7 pm when able
- Bike rack
- Vending machine
- Wequaquet Lake

History:

- Was under Park and Recreation Beaches
- Had Raft until 1983

Current Use:

- Resident-only beach
- Swim lessons (100 kids)
- Cape Cod Rowing Club
- Barnstable High School Rowing Club and Barnstable Rowing Club
- Sturgis Rowing Club
 - Lifeguarded end of June to Mid-August
 - Area for boating and jet skis to land
 - State fishing tournaments
 - Mobile concession

Centerville Community Center

Current Use:

- Field of Dreams: Baseball/Softball Field
- Barnstable Recreation
- Playground
- Building uses:
- Senior Services Adult Social Day Care (M-F, daily)
- Child Enrichment:
 Private M-F seasonally (basement)
- MTV (My Teen Voice, Recreation Program)– upstairs
- Night use (main floor)
 - o ECHO

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- Boy Scouts
- Girl Scouts
- o Bridge groups
- Overeaters Anonymous
- Centerville Ball Fields

Current Use:

- Day time Rec. Div. permits the schools to use them
- Barnstable Recreation Softball and Baseball
- Open to public
- Permitted to private groups
- Soccer field is part of Baseball/Softball Field
- Barnstable Youth Soccer
- Centerville Tennis Courts

Current Use:

- Adjacent to fields
- Barnstable Tennis Program (seven weeks in Summer)
- Open to public

Horatio Lane/Centerville Long Pond

Current Use:

- Resident-only beach
- Gate is open & closed daily by residents on street
- Some fishing
- No facilities or staff
- Long Beach

Current Use:

- Resident-only stickers required
- No lifeguards
- No facility
- Rec. Div. promotes for kite surfing

Andrew's Property

Current Use:

- Has a hiking trail developed by an Eagle Scout
- Open to public

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Osterville Village

Dowses Beach

History:

- Dr. Dowses left to the Osterville residents
- Use to use both front and back of the peninsula
- Selectman's Beach

Current Use:

- Resident-only beach
- Swim lessons (278 kids enrolled)
- Lifeguards Memorial Day Weekend-end of June (weekends only)
 End of June to Labor Day daily
- Beach outings for schools
- Fishing off pier and jetty
- Big place for family pictures
- Popular with artists
- Numerous benches for passive recreation
- Picnic area near bathhouse
- Bike rack
- Crabbing on causeway
- Joshuas Pond

History:

- Park & Recreation Beach
- H Dock then a raft until 1983
- Had a swing and basketball set up vandalized
- Graffiti an annual problem

Current Use:

- Swim lessons when able to (40 kids)
- Lifeguarded when able to
- End of June to Mid-August
- Resident-only beach
- Benches
- Mobile concession

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Osterville Community Center & Fields

Building History:

- Was located behind the Baptist Church on Main Street
- Burned down around 1980 and relocated to present site behind Osterville Bay Elm.

School Current Use:

- During the day school use it M-F Sept-June
- Summer 9 Week Leisure Program
- Groups include:
 - Cape Cod Kennel Club
 - o Osterville Rotary
 - o Boy Scouts
 - o Barnstable Recreation
- Field Hockey
- Lacrosse
- Baseball
- Softball
- Friday Night Social
- Saturday Sunshine
 - Girl Scouts
 - Vipers Baseball Club
 - Men's Basketball pick up
 - Men's Volleyball pick up
- <u>Fields</u>
 - o Barnstable Recreation
 - Baseball
 - Softball
 - Lacrosse
 - Field hockey
 - Men's pick-up soccer
 - Cape Cod Academy (was using for soccer)
- Playground
- Tennis Courts
 - Barnstable Recreation (six week program)
 - Open to public

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Osterville Elementary School

• (Fields are permitted by Rec. Div. when not used by schools)

Current Use:

- Two Baseball/Softball Fields
 - o Little League
- Soccer field
 Sometimes for Barnstable Youth Soccer
- Playground
 Barnstable Recreation Summer Leisure Program (nine weeks-65 kids)

Marstons Mills Village

Hamblin's Pond

History:

- Building burned down around 1999
- Cape Cod Rowing Club tried to work out of this site, pond was too small and boats were damaged. Have much vandalism at this site
- Had a small picnic area, vandalism destroyed it

Current Use:

- Residents only
- Swim lessons, about 180 participants
- Portable bathhouse
- Mobile concession
- Lot of fishing here (pond is stocked)
- Burgess Park

History:

- Taken for Recreation and Conservation
- No DPW Support
- Had beautiful gardens
- Had a fenced in croquet area (vandalized)
- Had the Annual Easter Egg Hunt (tough parking and was unable to secure police details so it became too dangerous)

Current Use:

- 18 hole Frisbee Golf Course
- Family Picnic Area
 - o Volleyball

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- o Horseshoe pits
- Currently mowed at overtime rates by Old Barnstable Fairgrounds Golf staff
- Walking area
- Playground
- Fishing at the back of property
- Marstons Mills East Elementary School (Horace Mann Charter School)
- (Fields are permitted by Recreation after School Programs)

Current Use:

- Barnstable Little League currently permitted to put up a shed
- Playground
- Tennis courts
- Barnstable Recreation
- Children's Tennis Program
- Adult Tennis Program
- Round Robin Program
- Open to the public

Horace Mann Charter School Grade 5 & 6

• (Fields are permitted for after-school use)

Current Use:

- Barnstable Recreation
 - Flag football
 - Field hockey
 - Whiffle ball
- Barnstable Youth Soccer
- YMCA Baseball
- Amateur summer football league
- Football field currently under construction
- Adult softball leagues
- Walking/jogging track open to public
- Child's Property

Current Use:

- To be determined
- Possible future site for Barnstable Little League after Hyannis Youth and Community Facility is built

Marstons Mills Elementary School

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(Rec. Div. permits fields after school)

Current Use:

- Barnstable Recreation Leisure Program (9 weeks, 65 participants)
- Barnstable Recreation Novice Softball Program
- Barnstable Recreation Baseball Program
- Cotuit Kettleer's Baseball & Softball Camps
- Use to run a road race from here
- Playground
- Marstons Mills Village Day
- Old Barnstable Fair Grounds Golf Course

Current Use:

- Public course
- Member
- Tournaments
- Junior golf
- Barnstable High girl's & boy's (no fee)
- Concessions
- Past: Road Race
- When snow sledding and snowboarding
- Golf shop
- Driving range
- Ellen McBarron Recreation Facility (not open yet)

Future Use:

- Barnstable Youth Soccer
 - o Maintained by BYS
- Barnstable Lacrosse Program
- Future: Concession by Barnstable Youth Soccer
- Future: Playground proposed for an Eagle Scout Project
- Walking trail around field

Cotuit Village

Lovells Pond

History:

- Vandal problems, Emergency Action Plan had to put a bathhouse in
- Was done in 1985

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- Had a swing set
- Had swim lessons (about 10 kids)

Current Use:

- Residents only
- Lifeguards when able end of June to Mid-August
- Many people park to fish here

Loop Beach

History:

• At one point there must have been a pier at this site as we continue to pull the footings out

Current Use:

- Resident-only beach
- Swim program (about 100 kids)
- Benches (passive recreation)
- Retaining wall is used for passive recreation
- Mobile concession
- Lifeguards end of June to Mid-August or later if possible
- Weddings

Ropes Beach

History:

• Has a problem with a bug called mite that basically closed the site as a guarded beach site

Current Use:

- Resident-only beach
- Passive recreation
- Bath house is closed
- Mostly it is a place that holds dinghy's to allow boat owners access to their boats
- Cotuit Rowing Program

Oregon Beach

Current Use:

- Resident parking only
- No lifeguard provided
- No bathhouse facilities
- Lowell Park

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Current Use:

- Cotuit Kettleer's
- Games
- Practices
- Concession
- Maintenance

Cotuit Elementary School

(Rec. Div. permits outside facilities)

Current Use:

- Barnstable Recreation
 - o Baseball/Softball
- User group
 - o Playground
 - o Basketball hoops
 - o Tennis courts
- Open to public

West Barnstable Village

Lombard Field/Playground

Current Use:

- Barnstable Recreation
- Softball/Baseball
- Many softball tournaments
- Men's softball league
- Women's softball league

West Barnstable Community Building

Current Use:

- Barnstable Recreation
- Leisure program (alternate location)
- Creative arts classes
- Friday Night Social
- West Barnstable Civic Group Meetings
- Historical Society Meetings
- Village Day
- Bridge clubs

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- Cape Cod Carvers
- Boy scouts
- Girl scouts
- Pinewood Derby site
- Dance classes
- Sandy Neck Beach (Bodfish Park) (Not currently under Rec. Div. direction)

History:

- Selectman's Beach
- At one time the beach was under Recreation and the ORV section was under the direction of Sandy Neck Governing Board

Current Use:

- Public beach
- Barnstable Recreation
- Junior Ranger Program
- Adventure Program
- Swim program
- Lifeguards
- Memorial Day Weekend to end of June (weekends only)
- End of June to Labor Day daily
- Swim lessons (about 20 kids, this is to be cut in 2005)
- Passive recreation (deck with projector)
- Concession (bidded out)

Barnstable Village

Millway Beach

Current Use:

- Resident-only beach
- Swim lessons (about 35 kids)
- Benches passive recreation
- Many artists paint here, great view of Sandy Neck
- Had memorial services and weddings

Barnstable Hollow

Current Use:

- Barnstable Recreation
- Softball/Baseball

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- Soccer (not currently)
- User groups
- Barnstable Fourth of July Parade and picnic
- Swing set
- Hathaways Pond

History:

- Had a H deck for lessons
- Selectman's Beach
- Parking fee at ¹/₂ of what charged everywhere else for public beaches

Current Use:

- Public Beach
- Lifeguards (end of June to Mid-August when able)
- Picnic area with grills
- Scuba divers every week come for class and clean the bottom of the pond of debris
- Swim lessons (when able)
- Swing set
- Had volleyball area (needs restoration)
- Barnstable Recreation
 - Hooked on Fishing Derby
 - Patriot's Day Run
 - Barnstable High School
 - Cross Country both boy's and girl's programs
- Fishing
- Hiking around the pond with conservation land in addition
- Many walk their dogs at this site
- Proposed low-impact camp site

Barnstable West Barnstable Elementary School

• (Rec. Div. permits outside facilities when not being used by schools)

Current Use:

- Two Playgrounds
- Two Baseball/Softball Fields
 - o Barnstable Recreation Baseball/Softball
 - o YMCA Soccer/Baseball
 - Barnstable Recreation Leisure Program (nine weeks 65 kids)
 - User groups on the fields
- Tennis courts
- Barnstable Recreation (seven week tennis program)

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• Open to the public

B. Commonwealth of Massachusetts Land

According to Town of Barnstable fiscal year 2005 figures contained in Appendix B *Town of Barnstable Government and Protected Land*, there is a total of 194 acres owned and managed by the Commonwealth of Massachusetts. Of this total, approximately 29 acres are managed by the Division of Fisheries and Wildlife, existing in the large tract of contiguous open space along the eastern boundary of town.

2. Nonprofit Land

A. Barnstable Land Trust

The Barnstable Land Trust (BLT) is a private, non-profit membership organization dedicated to preserving the open spaces and natural resources of the Town of Barnstable. BLT holds wildlife habitat, scenic views, wetlands, sensitive watershed parcels, forests and other valuable open space, in its natural state, in perpetuity for the benefit of the community. BLT believes that as the town steadily grows, a sustainable natural balance is reached only when open space continues to be protected.

Incorporated in the Commonwealth of Massachusetts in 1983, BLT maintains an office in Hyannis. BLT is administered by a 16-member Board of Directors. The Directors, all local citizens, serve overlapping three-year terms, set policy and the annual budget, and oversee the work of a salaried executive director and staff.

BLT is a member of the Compact of Cape Cod Conservation Trusts, Inc., upon whom they rely for technical assistance related to land acquisition. BLT is also a member of the Land Trust Alliance and Massachusetts Land Trust Coalition. BLT is not affiliated with any government agency.

BLT acquires deeded ownership of land through outright gift, "bargain sale" (purchases below market value), or neighborhood-driven fundraising and purchase.

BLT also provides technical assistance to Barnstable neighbors who identify parcels for preservation in our community, to land owners who wish to consider land preservation options, to Town boards and committees on open space issues, and to developers and realtors who wish information about setting aside land as open space.

According to Town of Barnstable fiscal year 2005 figures contained in Appendix B *Town of Barnstable Government and Protected Land*, BLT is the steward of more than 585 acres of land. This includes approximately 465 acres under fee ownership (Town of Barnstable Assessor) and another 120 protected primarily through conservation restrictions held by the BLT.

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B. Three Bays Preservation Trust Inc.

According to Town of Barnstable fiscal year 2005 figures contained in Appendix B *Town of Barnstable Government and Protected Land*, there is a total of 84 acres, consisting of Dead Neck Island, owned and managed by the Three Bays Preservation Trusts Inc.

C. <u>The Nature Conservancy</u>

According to Town of Barnstable fiscal year 2005 figures contained in Appendix B *Town of Barnstable Government and Protected Land*, there is a total of one parcel totaling 12 acres owned and managed by The Nature Conservancy. This parcel is located on the Sandy Neck spit on the north side of Barnstable Harbor.

D. <u>Massachusetts Audubon Society</u>

According to Town of Barnstable fiscal year 2005 figures contained in Appendix B *Town of Barnstable Government and Protected Land*, there is a total of 406 acres owned and managed by the Massachusetts Audubon Society located primarily in wetland areas north or Route 6A and bordering Barnstable Harbor.

E. <u>Association for the Preservation of Cape Cod</u>

According to Town of Barnstable fiscal year 2004 figures there is a total of one parcel totaling 28 acres owned and managed by the Association for the Preservation of Cape Cod Inc.

F. Orenda Wildlife Preservation Trust

According to Town of Barnstable fiscal year 2005 figures contained in Appendix B *Town of Barnstable Government and Protected Land*, there is a total of 17.6 acres owned and managed by the Orenda Wildlife Preservation Trust.

G. <u>Fire District Land</u>

According to Town of Barnstable fiscal year 2005 figures contained in Appendix B *Town of Barnstable Government and Protected Land,* fire districts in the town of Barnstable own and manage over 1,162 acres of open space being used primarily for water supply purposes. The four fire districts are:

- 1. Centerville/Osterville/Marstons Mills
- 2. Cotuit
- 3. Barnstable
- 4. Hyannis

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Private fire district areas represent invaluable resources for Barnstable and should be protected in perpetuity through the establishment of permanent conservation restrictions on their entire undeveloped areas or fee purchase.

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SECTION 6 COMMUNITY VISION



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A. Description of Process

See Section 2B, Planning Process and Public Participation, for a description of the planning process. A major component of this process involved development and distribution of the 2005 *Barnstable Citizen Survey*. Open Space and Recreation questions are discussed further in Section 2B and results of that survey are expected after the writing of this Plan. Results of the 2004 survey, however, have been tabulated and results pertinent to open space and recreation planning are summarized below.

2004 Barnstable Citizen Survey

Bridgewater State College's Institute for Regional Development, contracted by the Town of Barnstable, designed and administered a citizen survey of Barnstable residents in February 2004. The purpose of this survey was to obtain information and citizen perceptions about Barnstable to assist in planning for the future. By means of a random sampling process, the survey gathered data from a diverse group of citizens in Barnstable. A team of trained student interviewers administered the survey during daytime and evening hours. All interviewing was conducted from the Institute for Regional Development's telephone research center at Bridgewater State College. A project director was present at all times to supervise the administration of the survey, monitor for quality control, and handle any other problems. Shifts of interviewers were used during the evenings (6 pm to 9 pm) from February 2-11, 2004. Telephone numbers were selected at random and purged of non-working and business numbers. All telephone numbers in the sample were then called up to three times, using a rotating schedule of callbacks to ensure that a telephone number had been tried on different weekday evenings. Additionally, some callbacks were conducted during daytime hours.

Upon completion of calls, the survey responses were entered into a computer database. Using the latest state-of-the-art statistical software (SPSS for Windows Version 11.5), the data file was analyzed. Complete protection and confidentiality of the survey database was assured during all phases of data analysis. Access to the database is limited to the project directors. The goals and objectives outlined later in this Plan are largely driven by this process and by the results of the 2004 Barnstable Citizen Survey, summarized in Section 2B, above and discussed further in Section 6B, below.

B. Open Space and Recreation Goals

The results of the 2004 Citizen Survey summarized in Section 2B provide publicly supported guidelines for the development of the following broad open space and reaction goals:

1. It is very important for the Town of Barnstable to continue to preserve open space in order to protect the environment, provide recreational opportunities and slow development.

- 2. It is very important to protect the appearance and character of Barnstable in order to maintain and improve the economy and overall quality of life that attracted and keeps people here.
- 3. Beaches and other open space and recreation areas are considered to be one of the most important assets of the town and should be protected and managed as vital natural and cultural resources.
- 4. Open space and recreation planning should strive to combat the increased overdevelopment, population growth and traffic congestion, which are considered by many residents to be the greatest problems facing the town.

These broad brush goals are extrapolated directly from the Citizen Survey results, but they can easily be intuited by even first-time visitors to the town who cannot escape the area's obvious natural beauty, fragile natural resources and intense (particularly during summertime) population pressure.

One of Barnstable's most important assets is its large areas of protected open space, used passively and actively, despite being the region's most populated town. One need only wander through the maze of strip mall developments along Route 28 to appreciate how important "breathing space" can be to a Barnstable resident. Such visual space can still be found at the major beaches, in some of the more rural villages, and in these larger protected areas.

One of Barnstable's most important challenges is to preserve the natural and recreational qualities that make it unique, while improving, developing and promoting these features appropriately to attract tourism and bolster the economy and overall quality of life. It is very clear that providing recreational opportunities for its citizens and visitors is a comprehensive effort. There is a broad need for additional recreational areas and population trends indicate that conservation and recreation resources will need to better serve the fast growing middle aged and elderly population groups for the foreseeable future. With the limited funds that are expected to be available for land acquisition through the Community Preservation Act (approximately \$1.6 million/year are expected for Barnstable⁶⁵), land acquisition strategies will need put more focus on acquisition of the less expensive smaller parcels, providing linkage between existing large conservation areas, acquisition of conservation easements, conservation land management, and more creative ideas such as the "undevelopment" of existing developed parcels. There are also other opportunities to bring open space and recreation to the people, by way of Cape Cod Pathways trails and Rail Trail bikeways, and other locally accessible amenities such as neighborhood pocket parks.

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⁶⁵ This estimate was provided by Lindsey Counsell based on his understanding of the CPA and its expected revenues. Actual figures may be higher or lower depending on circumstances.

SECTION 7 ANALYSIS OF NEEDS



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A. Summary of Resource Protection Needs

The Town of Barnstable's past open space acquisition successes continue to provide its residents and visitors with unparalleled active and passive recreational opportunities. At the same time, however, the community recognizes that its resolve to protect and preserve its open space and recreation assets must be unwavering and that certain needs continue to present themselves.

In implementing the town's prior open space and recreation plans, the emphasis has been placed squarely upon land acquisition, with impressive results. Acquisition has focused on protection of the following resource areas:

- Land within the zones of contribution of public supply wells.
- Waterfront land, both coastal and inland, that provides enhanced recreational opportunities; and land within the recharge areas of surface water bodies.
- Environmentally sensitive areas characterized by marginal development conditions such as steep slopes, high groundwater, poor soils, rare and endangered natural communities, and wetlands; and land adjacent to these areas.
- Land which is important to the visual quality and character of the town.
- Prime wildlife habitat.
- Lands useful for the development of recreational areas including Cape Cod Pathways walking trails and bicycle trails.
- Protection of large congruous open spaces previously used for golf (e.g.; Hyannis Golf Course).

As a result, most of the large blocks of undeveloped land in Barnstable have either been acquired by the town or subdivided for residential development. The town's focus, then, should be to seize opportunities in the margins; that is, to enhance the value and utility of existing landholdings by acquiring or otherwise protecting smaller adjacent parcels or linkage properties. Particular emphasis should be placed on the development of additional recreational resources. Opportunities to acquire additional beachfront, now largely developed, may present themselves after the next vicious hurricane when landowners might be paid not to rebuild, as Falmouth did on its Surf Drive in 1992 after Hurricane Bob, and Dennis did after the 1944 hurricane flattened the Southside beaches (The Compact of Cape Cod Conservation Trusts Inc.). Additional access to water bodies, particularly inland ponds, should be pursued. The town should also stay alert to changes proposed in lands which are quasi-protected now by temporary restrictions, such as current use assessment lands, term conservation restrictions and undesignated-use municipal lands.

Current fiscal constraints require more innovative approaches to preserving open space and natural resources. Some of these techniques have been applied in Barnstable, but perhaps not emphasized. Better education of town officials, landowners, and citizenry about these alternatives may lead to improved implementation.

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Land is the resource base for many natural features, including water quality. Land can be preserved through regulatory or non-regulatory means. Regulatory means include mandatory cluster subdivisions, open space set-asides, and minimum lot size increases. Non-regulatory methods to preserve crucial resource lands in Barnstable should be employed whenever possible and are included in Appendix A.

To determine which of these protection techniques is best suited to each targeted parcel, the following set of circumstances should be evaluated:

- 1. Needs of the community
 - Is the parcel desirable for access and active use, or resource protection and passive use?
 - Are acquisition funds available (cash donations, town appropriation, outside grants?)
 - Is the parcel needed immediately or in the future?
- 2. Needs of the landowner
 - Are income tax or property tax advantages, or cash most important for landowner's financial situation?
 - Is continued privacy an issue?
 - Is the landowner sympathetic to public protection?
- 3. Size and value of parcel
 - Is the parcel large enough to protect what needs protection or serve as a linkage?
 - Is the entire parcel needed or only a portion?
- 4. Development pressures
 - Will the parcel likely be available later if not acquired now?
 - Is the real estate market likely to push prices beyond reach or is the market declining for the foreseeable future?
 - Can the town relieve land development pressure through advantageous tax policy?
- 5. Maintenance
 - Can the community manage the property better than the current landowner, given expected levels and types of use?
 - Does the town have the money and expertise to manage the parcel?

As the town strives to expand its conservation and recreation land holdings, it is imperative that the most valuable remaining lands be identified and prioritized based all relevant criteria so that quick action can be taken when opportunity arises. To this end, the town should develop a master *Priority Parcel Acquisition List* to help prioritize and direct future land protection in town. This list should be compiled from various existing lists developed by public and private conservation groups.

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Following is a list of the town's main resource protection needs, each of which is one of the criteria that should be included when making land protection decisions.

1. Improved Greenway Linkages

The earlier goal of protecting a contiguous wetland or "riparian" corridor along the town's major surface water tributaries has met with appreciable incremental success. The acquisition of wetland tracts in completing such stream-course linkages remains a high priority. Moreover, the continued focus on acquisition of coastal wetland resources will provide an important measure of protection for these fragile resources beyond that provided by local ordinance and state statute. Continued incremental parcel acquisition in the Great Marshes of West Barnstable should continue, as should salt marsh acquisition wherever the opportunity is present. Coastal and inland wetland restoration projects have started at several locations where Federal, State and local agencies have collaboratively undertaken a very ambitious project. These restoration efforts will help to ensure that the protected land in these areas is functioning in a healthy manner.

The priority upland greenway remains the east-west oriented glacial moraine upon which the Route 6 highway traverses. Partially due to the challenging terrain, many of Barnstable's premier conservation parcels are located along this transect as well, including Old Jail Lane, Bridge Creek, Hathaways Pond, Hyannis Ponds, Spruce Pond, Otis Atwood, and West Barnstable. The town's two largest conservation areas exist within moraine boundaries on the eastern and western town boundaries, providing the opportunity for a more regional greenway linkage to the adjacent Towns of Yarmouth and Sandwich. The recent acquisition of the Hyannis Golf Course and the completion of the Cape Cod Pathways trail plan along this corridor have strengthened its status as the conservation and recreation backbone of the town.

Secondary greenway corridors exist by way of major utility lines and the Cape Cod Railroad right-of-way. Major utility lines, totaling 24 miles of open corridors in Barnstable, are estimated to contain 420 acres. The Cape Cod Railroad right-of-way traverses into neighboring Yarmouth and Sandwich. It has a distance of 9.5 miles within Barnstable and links Hyannis with Barnstable Village and West Barnstable⁶⁶.

Utility lines and corridors are in most instances easements over private lands; these public and quasi-public easements link large areas of open public land. The transmission lines and corridors presently are used and do provide linkages between large areas of public open space. In some instances it is the only space remaining that could provide for the interconnection of open lands. The nearly completed Cape Cod Pathways Trail Plan necessarily includes large sections of the utility right of way to accomplish its objectives. It is also important to note that the grassland and forest tree line of their utility ways are creating ecological corridors in the diversity of vegetation and habitat.

66 Town of Barnstable Local Comprehensive Plan Section 6.0 Draft, 2005.

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Landscape Arc and Planning • There is a clear need for improved greenway linkages in town to stitch together the gaps between larger conservation lands. At the same time, however, municipal budgetary constraints have rendered the linkage of certain isolated open space parcels a difficult endeavor. In such cases, effective linkages may be realized by employing one or a combination of non-conventional methods such as bike trails, sidewalks, footpaths (walking easements) and scenic roads. That is, the feasibility of fee acquisition or conservation restriction as exclusive avenues for realizing open space linkages is not optimal in all circumstances. Therein, viable and cost-effective alternatives should be applied.

2. Ground Water Protection

Wellfield protection needs have been served by three primary methods: municipal land acquisition, Fire District/purveyor land acquisition, and Board of Health and Zoning regulations. While continued land acquisition to protect other water supply remains important, reliance on staunch regulatory postures are likely to play a more prominent role in protecting the aquifer in the five year reach of the present open space plan.

The future supply, quantity and quality of ground water is a major concern to the residents of Barnstable due to the sensitivity of the aquifer affected by increases in development. The following needs have been identified:

- Ongoing water testing in the more intensely developed areas of town is needed to determine where existing or potential problems lie.
- More stringent regulations should be adopted within wellhead zones of contribution to provide the degree of groundwater protection necessary. Future development should be focused within non-sensitive areas outside these water protection zones.

3. Waste Disposal

Environmentally sensitive waste disposal is extremely important to the continued health of the town. The following needs have been identified:

- Groundwater pollution due to onsite septic systems is an ongoing problem and may need to be addressed in some areas with the implementation of town sewers and treatment facilities and the use of alternative waste treatment systems.
- The impacts of wastewater disposal methods upon coastal estuaries should be further investigated in order to protect and restore these surface waters. Better wastewater management, involving improved collection and treatment methods, may be required. In concert with this effort, the town will need to develop areas for facilities and effluent disposal.
- There is a need to expand and refine recycling efforts to the extent a market is available.
- There is a need to eliminate roadside and beach litter and illegal dumping.

4. Harbor, Tidal and Open Water Protection⁶⁷

It is necessary to look at the coastal waters and tidal lands as open space and as a recreational and commercial resource. Open space preservation, in concert with efforts for harbor and other natural resource preservation, must address tidal flats, protected waters, bays, coves and estuaries. These resources must be preserved and balanced for recreational and commercial fin and shellfishing, boating, harbor protection, marinas and public enjoyment.

The recreational beach shoreline is over 9.4 miles (publicly controlled), however when Sandy Neck's 5.1 miles are removed from the figure, only 4.3 miles (34 percent) are held in the public interest on the South side. Much of this length, including 1.9 miles on Sampson's Island/Dead Neck, is privately held in the public interest and is not necessarily accessible to the general public due to covenants and restrictions that are protecting sensitive environments.

The tidal lands were recognized statewide in 1868 as a vital natural resource. Today this recognition and protection has evolved into Mass. General Law, Chapter 91 coastal waterways licensing program. This licensing of structures and uses along the tidal lands was developed to ensure that water-dependent uses were preserved and maintained and that the tidal flats remain open and an integral part of the coast. The law also provides for jurisdiction to 1,650 feet from the high water mark to provide for the regulation of uses and activities in close proximity to these environmentally sensitive areas.

In 1989 a *Coastal Zone Management Plan* for the town recognized the inefficient mooring practices and proposed that detail mooring plans be developed for all of the embayments of the town. The recommendations of that plan still need to be implemented.

Over recent years, the number of commercial shellfishing permits sold have fluctuated drastically and the trend in this area is difficult to generalize. The industry hinges on that year's availability and growth rate of shellfish, the frequency and severity of coastal storms and the weather conditions, coastal pollution and human intervention in stocking of the beds as well as the economic climate of that particular year.

Aquaculture, controlled propagation, growth and harvesting of marine life, has been and should be encouraged as suitable activity in the coastal region. This could assure that marine resource is maintained.

Clearly, Barnstable's surface water resources are an extremely important natural and cultural resource and need to be protected. The town's' Local Comprehensive Planning Committee is actively working on encouraging the development of harbor management plans, which will include tidal and shellfish resource management. The following immediate needs have been identified:

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⁶⁷ Much of this section is taken verbatim from the Town's *Local Comprehensive Plan, Section* 6.0, 1997.

• The natural and cultural resources within the town's many harbors need to be better managed and protected. The creation of specific Harbor Management Plans is being discussed and should be strongly pursued to ensure the continued health of these systems as the need to address preservation and management of harbors, tidal areas and open waters for both recreation and business remains critical.

5. Protection of Coastal Resources

All of the town's coastal resources, the lifeblood of the entire region, need continued protection. Intense residential building, including expansion of existing houses, in or adjacent to the buffer zone endangers the coastal banks, barrier beaches and the quality of water in the harbors and estuaries. The following specific needs have been identified:

- There is a need to continue and improve cooperation and coordination between all town agencies to ensure protection of coastal resources.
- The shellfish industry needs to have clean water, space and facilities and these can and should be balanced with the recreational demands of seasonal traffic. Areas that are routinely closed due to pollution need active management plans to address the causes and ensure the viability of these beds for the future.
- There is a need for heightened vigilance in the management of surface water and navigational fairways, if their optimal utility is to be attained.
- Intense seasonal use and erosion of beaches both need to be monitored wisely.
- Anadramous fisheries need better protection through the continued development and enforcement of regulations and active management plans.

6. **Protection of Kettle Ponds**

Kettle ponds represent an abundant open space and recreational resource in Barnstable and need to be protected. The following specific needs have been identified:

- There is a need for protection of fresh water kettle ponds and pond shores, which become overused in the height of the summer through recreational use and groundwater withdrawals, threatening their health and viability.
- Constant monitoring, providing limited and controlled access, and toilet facilities are important needs for these areas.

7. Land Protection

The following land protection needs in Barnstable have been identified:

• There is a need for greater creativity in land protection methods, including the use of conservation restrictions, 'Brownfield' redevelopment and undevelopment.

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- The town needs a master *Priority Parcel Acquisition List* to help prioritize and direct land protection efforts throughout town. This list should be compiled from existing lists being used by conservation groups.
- There is a need to better protect land surrounding surface waters and wetland areas such as ponds, harbors, rivers, and marshes.

8. Wildlife Habitat Protection

The following wildlife protection needs have been identified in Barnstable:

- The town's wildlife habitat is being further fragmented by continued development, thereby threatening the viability of wildlife populations. There is an immediate need for protection of wildlife through the protection of priority wildlife habitat areas identified in state and regional habitat studies.
- There is a need for wildlife habitat management plans in the larger conservation areas in town including the West Barnstable Conservation Area, the Danforth Property, the State Division of Fisheries and Wildlife Land, Santuit Pond Preserve, and Hathway's Pond Park.

B. Summary of Community's Recreation Needs⁶⁸

Barnstable's diverse and well-rounded recreational programs, provided by the Town's Recreation Division (including the Olde Barnstable Fairgrounds Golf Course) have attempted to grow with the increasing population and to meet the needs of the varying groups within the town. However, the rapid increase in population and the unusual shifts in age groups have placed demands on recreational services and the programs these agencies provide. Many programs have been expanded to meet the need. Others still require expansion. See Section 5 for more on specific Recreation Division facilities and uses of sites.

The Recreation Division maintains sites for both active and passive recreation. The majority of the sites are for active recreation, generally consisting of play equipment, field sports and court games. Many of the sites are operated by and associated with elementary schools and middle schools, and Barnstable High School to a degree. The Recreation Division cooperatively utilizes these indoor gymnasium facilities, mainly during non-school hours.

The waterfront sites are generally beach facilities and associated parking. There is generally speaking a lack of adequate parking for these areas.

Besides major beaches, the Recreation Division also operates and maintains several major townwide recreational and leisure time facilities. They include the Kennedy Memorial Skating Rink,

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⁶⁸ Portions of this section are taken verbatim from the most recent approved *Local Comprehensive Plan, Section 6.0.*

the Osterville and Barnstable Community Buildings, the Centerville Community Center, and various fields and parks through town.

The town has an obligation to provide adequate lands for playgrounds and parks and to provide those recreational and leisure time programs for the residents in a democratic and equitable manner.

Revitalizing and improving existing community centers is important to this effort as is the expansion of the recreation, leisure time and community service activities the centers provide. It was discovered that in densely populated areas of the town it is important to residents to have recreation provided close to home and within the local neighborhood.

Barnstable and Hyannis act as the "hub" of Cape Cod and also as its population center. The area has evolved into the Cape's cultural, educational and leisure activity center. Barnstable's private and quasi-public institutions include the Cape Cod Community College, the Cape Cod Conservatory, the YMCA, and numerous museums, community theaters, private health clubs, country and social clubs.

Cultural activities enhance the quality of life on Cape Cod and complement the public sector's commitment to that quality of life. Coordination and cooperation between the public and private sectors should be fostered. These activities enhance the desirability of Barnstable and are important to the cultural, social and economic evolution of the town.

Massachusetts Statewide Comprehensive Outdoor Recreation Plan (SCORP)⁶⁹

An analysis of the Statewide Comprehensive Outdoor recreation Policy (SCORP) publications revealed many of the same needs at the state and regional levels as were shown by town surveys. Supply and demand surveys conducted as part of the Needs Assessment in the SCORP noted that trail-based activities such as walking and biking are at the top of both state and regional needs (SCORP 2000). Field-based and water-based activities follow and are too close in score to accurately rank (Ibid.).

The state analysis has confirmed what many local studies have said: There is a great need to expand the current availability of water-based recreational areas especially for swimming and boating, the need for additional walking and bike trails, and the development, maintenance and expansion of additional active recreational facilities. In order accomplish this, the town must look at the areas where suitable land is available. It may be preferable to expand existing facilities rather than to purchase and develop entirely new areas. A good example of this is at the Kennedy Skating Rink, which has received a major expansion and upgrade to include a new skate park and other badly needed facilities.

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⁶⁹ Massachusetts Division of Conservation Services, *Massachusetts Outdoors 2000!*, the Statewide Comprehensive Outdoor Recreation Plan (SCORP), Executive Office of Environmental Affairs, 2000.

The criteria for evaluation of potential facility locations would be affordability, proximity to an existing facility, availability of adjacent lands, local water quality and temperature, and potential environmental impacts of expansion. This type of expansion need not be accomplished all at once but could be phased in over a period of time. With the development of a long range land acquisition fund (currently CPA) the town could plan for such a program.

Also needed is the expansion of parking available to boat ramps around the town. The Town of Barnstable is blessed with many right-of-ways to water (see Map 11 *Ways to Water*) but a dearth of parking areas to access them⁷⁰. There is little or no provision for parking at many of these facilities and the result is that during the height of the boating season the few available spaces are quickly filled leaving late-comers to park in the streets, on private land or make elaborate plans to store vehicle and trailer.

The third area to which the state study speaks is the maintenance of existing facilities. Except for boat landings, the town's facilities have been well maintained over the years, but time is taking its toll. The skating rink is a prime example of a major recreational operation that is receiving the overhaul it has needed. This plan looks to support that effort in other areas of town where the need still exists. And perhaps most importantly, the town's many acres of protected land need active management to ensure the continued protection of the natural and cultural resource values.

A final need in town is handicap access development and expansion. Although fifth on the state's list, this area needs immediate action. As shown from the demographic data, the population of the town is weighted towards the older generations. Coupled with the inadequacies of the existing facilities, these facts push this area of concentration to a higher priority than the state allots it. In terms of time and money this area could be addressed at an early stage of the open space and recreation plan as this type of improvement requires lesser expenditures of time and money than some of the other areas.

In simple rank order, the 10 most needed or desired facilities statewide by respondents in the SCORP 2000 are:

 Swimming 14.8% Walking 13.8% Road Biking 12.9% Playground Activity 0.0% 	6. Golfing 7.9%7. Hiking 7.1%8. Mountain Biking 6.7%9. Baskotball 6.2%
4. Playground Activity 9.9%5. Tennis 8.0%	 9. Basketball 6.2% 10. Baseball 5.3%

In simple rank order, the 10 most needed or desired facilities on Cape Cod by respondents in the SCORP 2000 are:

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⁷⁰ In order to verify the legal public rights to use these ways, the town needs to conduct deed reviews to determine actual allowed land uses.

- 1. Swimming 17.5%
- 2. Biking (road) 15.5%
- 3. Walking 9.0%
- 4. Playground activity 8.7%
- 5. Tennis 7.3%

- 6. Golfing 5.2%
- 7. Fishing 4.7%
- 8. Hiking 4.6%
- 9. Sunbathing 4.5%
- 10. Roller blading/skating 4.4%

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Table 18, *Need for New Recreational Facilities Across State and Cape Cod*, compares responses for the state and Cape for all recreation activities in the study.

Recreation category	Statewide (percent)	Cape Cod and Islands (percent)
Field-Based Activities		
	5.3	2.2
Basketball	6.2	2.7
Football	1.4	0.0
Golfing	7.9	5.2
Ice skating (rink)	2.4	0.0
Playground activity	9.9	8.7
Soccer	3.0	0.0
Tennis	8.0	7.3
Toddler activity (at tot lots)	1.6	2.1
Volleyball	1.1	0.0
Passive Recreational Activiti	ies	
Photography/painting	0.2	0.0
Picnicking	3.1	2.1
Sightseeing, tours, events	2.3	0.8
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Table 18Need for New Recreational Facilities Across State and Cape Cod
Sunbathing	1.1	4.5
Watch wildlife, nature study	2.2	4.1

Trail-Based Activities

Biking (mountain)	6.7	3.8
Biking (road)	12.9	15.5
Horseback riding	1.2	0.0
Off-road vehicle driving	0.0	0.0
Roller blading/skating	3.0	4.4
Running/jogging	3.0	1.5
Skiing (cross country)	1.3	0.0
Skiing (downhill)	1.3	1.7
Snowmobiling	0.6	0.0
Walking	13.8	9.0

Water-Based Activities		
Boating (motorized)	1.7	4.2
Boating (non-motorized)	1.0	2.4
Canoeing, rafting	1.5	1.0
Fishing	4.3	4.7

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Hockey (natural water bodies)	1.6	0.0
Ice skating (pond, lake, or natural water bodies)	1.0	0.0
Sailing	0.6	0.0
Surfing	0.2	0.0
Swimming	14.8	17.5
Water skiing/jet skiing	0.2	1.2
Wilderness Activities		
Camping	2.9	3.0
Hiking	7.1	4.6
Hunting	0.3	1.0

Source: SCORP 2000

Based on the responses from SCORP 2000 as illustrated in the table above, town surveys and information provided by the Town of Barnstable Recreation Division and Local Comprehensive Plan, there is a large need for the improvement, development and acquisition of recreation facilities in town in order to meet current and future demand, including the following specific recreation needs.

1. Designation and construction of field space through town, especially in Hyannis village.

- Multiple multi-use youth fields, specifically fields designated for softball, baseball, and kickball & whiffle ball;
- Construction of an adult softball complex (with at least three lighted fields);

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- A multi-use field to meet multiple needs, including a field for lacrosse/field hockey/flag football/archery;
- Two or more fields built as part of a youth football field complex.

2. Development, maintenance and expansion of swimming facilities and other waterbased recreation

The following specific beach front facilities are needed:

- Better beach location and Rowing Program site at Wequaquet Lake;
- Additional beach area for Cotuit and Marstons Mills adjacent to Loop Beach;
- Parking lot land for Craigville and Covells Beaches;
- More parking, better access and possible kite surfing location at Long Beach; and,
- Kayaking and canoeing areas along Centerville River or other rivers in town.

3. Development, maintenance and expansion of walking and biking trails

• There is a need to refine the proposed Rail Trail plan and work towards implementation of a trans-town bike path linking up with trails in the neighboring Towns of Sandwich and Yarmouth. Bike trail planning should be well integrated with other major destinations and modes of transportation including vehicular roadways and the Cape Cod Pathways Trail system.

3. Development, maintenance and expansion of active recreational facilities

There is a need for the following active recreation facilities:

- Motocross track
- Tennis courts;
- BMX biking location;
- Sledding facility;
- Golf Driving Range;
- Outdoor Street Hockey Facility;
- Paint Ball Area; and,
- Campground(s) (possible locations at Hathaways Pond or the recently acquired Danforth property.

4. Maintaining present character of town

The attraction of Barnstable both for year round residents as well as seasonal residents and visitors continues to be its charming and historic villages and its abundance of both natural and cultural resources.

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CENTERLINE STUDIOS INC. Landscape Architecture • There is a need for the continue maintenance of the town's character by protecting and enhancing opportunities for affordable recreational opportunities and visual and physical access to open space.

5. Improve Transportation

Traffic congestion and a lack of parking at many destinations continue to be major challenges in Barnstable. Also, over the years the town has had to rely upon the few acres of narrow public rights-of-way to provide public landings for boat access to ocean waters. These roads, which dead-end on the coast or embayments, generally do not provide adequate water access. They lack sufficient maneuvering area, vehicle parking and proper ramp development. Often they must double as local and regional beaches for summer residents, a use which can conflict with boating activities. Some of these landings are affected by the littoral drift and chronic sand accretion that obstruct boat launching⁷¹.

• There is a need to reduce traffic congestion and provide better access to and parking along the town's major roads, intersections and cultural destinations including village business areas, beaches, ways-to-water and town landings.

6. Improve Access for the Disabled and People with Special Needs

The federal Americans with Disabilities Act (ADA) of 1991 states that public facilities, including town lands, should meet federal guidelines for accessibility for handicapped persons. On its open space and recreation properties, the town remains committed to providing full experiential access, wherever environmentally and financially feasible. However, as noted by the Town's Disability Commission, some town-owned properties just are not accessible⁷².

The recreational needs of Barnstable's aging population can perhaps best be met by incorporating sensitive design features into open space and recreation areas, such as handicapped access, resting benches and sidewalks. Simple items like safe crosswalks across busy streets, beach boardwalks and surf chairs are other examples.

Appendix E, *Section 504 Disabled Access*, contains the Town's updated Disabled Access Inventory. Certain open space and recreation areas of town are well accessed, including the Hyannis Golf Course and Veteran's Memorial and Kalmus Beaches. As noted by the Town's Disabilities Commission, the Danforth Property and Sandy Neck Beach are both inaccessible. An immediate goal therefore for both this Plan and the Local Comprehensive Plan update is to document which areas are in most need of accessibility. The town is committed to ensuring that any new recreational facility development will be designed to meet ADA codes.

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⁷¹ Town of Barnstable Local Comprehensive Plan, Section 6.0 Draft.

⁷² Town's Disabilities Commission meeting on April 8, 2005 with members of the OSRP workgroup.

At conservation areas there is generally poor access. Only Long Pond Conservation Area has any designated handicapped parking spaces; most parking lots are hard-packed gravel or paved. The Conservation Division has repeatedly applied for grants to help fund the accessibility improvements of the areas, but have been soundly rejected. The Disabilities Commission has surveyed Barnstable's beaches repeatedly since the last Open Space and Recreation Plan update. There has been no ADA compliance accomplished on any of the properties purchased via the now-defunct Land Bank and there is a clear need to maintain and in many cases improve handicapped accessibility. All ADA survey results are listed in Appendix E.

7. Improve Public Education

• There is a need for improved public education and development of new communication avenues regarding the presence and proper use and management of the town's conservation and recreation facilities, including handicapped accessibility of these facilities.

8. Improve Coordination between Public and Private Sectors

• There is a need for better coordination between the public and private sectors regarding ownership and public use of recreational facilities such as those held by private schools, art/music institutes, and land trust(s).

C. Management Needs

1. Land Use Management

The Conservation Division has developed management plans for each of the following conservation areas:

- Hathaways Pond
- Crocker Neck
- Whelan
- Long Pond
- West Barnstable
- Meetinghouse Farm
- Old Jail Lane
- Bridge Creek

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- Otis Atwood
- Mitchell Property
- Hovey Property
- Child's Property

The plans examine existing site conditions and use patterns and recommend management strategies consistent with appropriate land stewardship objectives. The development of a Scope of Work for a land use feasibility study to be conducted at the recently acquired 217 acre Danforth Property on Route 149 is currently being pursed and a land management subcommittee assembled. This study is expected to be completed by July or August 2005.

Daily maintenance of conservation areas falls to the Conservation Division, with policy guidance from the Conservation Commission and its land management subcommittee. Staff resources are limited and have difficulty keeping up with stewardship needs on the large number of town properties. To help address this, the town may want to deputize other town officials, such as health agents, in addition to police and harbormasters, to bolster enforcement of MGL c. 270 s. 16, which designates fines and vehicle seizure for illegal dumping on public land, which continues to be a serious problem. Other towns have addressed the situation by enlisting volunteer stewards to adopt specific parcels. Making people aware of Barnstable's land holdings might go a long way in making people feel more invested in the lands' stewardship. The publication of trail maps by the Barnstable Conservation Division is a start in the right direction. Cape Cod Pathways can also be a unifying force in rallying practical support.

• There is a need for Land Use Feasibility/Management Plans at the remaining conservation lands in town.

2. Facility Maintenance Funding

Funding for conservation area improvements continue to come from the town's Operating Budget. Projects covered include gates, signs, observation decks, information kiosks, parking lots, maps, miscellaneous maintenance equipment and access trails for the disabled. The projects outlined are basic yet fundamental site improvements which will enhance the town's resources in a most effective and cost-efficient way. However, there is never enough funding to satisfy the facility maintenance and management needs at these properties and additional funding sources are required.

• There is need to identify additional funding sources for open space and recreation facility funding such as user fees and golf course fees.

3. Land Ownership and Use Clarification

The management disposition of many town-owned parcels designated as "Municipal Use" and other non-conservation status needs to be clarified. Without legal clarity, many of these parcels may be subject to use for non-conservation and recreation related purposes. For example, the 80 acre "Darby" property in Osterville has been the subject of political dispute regarding its designated and allowable land uses. Acquired in 1985 for general municipal purposes, until recently the parcel has been relegated to a largely unmanaged status. In the past few years, the town has contracted affordable housing feasibility studies and legal research that have helped to clarify this issue.

- There is a need to clarify the management disposition and official designated allowable uses at many town-owned parcels;
- There is a need to clarify the legal ownership and boundaries of public right of ways in town including ways-to-water and other corridors important as public open space and recreation resources.

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SECTION 8 GOALS AND OBJECTIVES



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The *goals* included in this 2005 Open Space and Recreation Plan are the long-range aspirations of the Town of Barnstable for the protection of natural resources and the provision of recreational opportunities for its citizens and visitors. The *objectives* are conceptual steps to be undertaken to achieve these goals. Specific, tangible *actions* to implement the objectives are found in Section 9.

These goals and objectives listed below were developed by the Open Space and Recreation Plan Workgroup and/or borrowed from the Town's Local Comprehensive Plan (LCP). They are consistent with the LCP, the Cape Cod Commission Regional Policy Plan and the 2000 Massachusetts Statewide Comprehensive Outdoor Recreation Plan (SCORP).

<u>GOAL 1:</u> Acquire, Retain, Preserve and Protect a Maximum Amount of Open Space for the Community and its Natural and Wildlife Habitats, while Balancing this with Practical Needs such as Recreation, Affordable Housing, and Water Supply.

OBJECTIVES:

1A. Develop a *Town of Barnstable Priority Parcel Acquisition List* that includes the following properties:

- Lands within or adjacent to designated protected open space or potential open space areas;
- Lands within or adjacent to fresh and saltwater bodies, beaches, (salt and fresh water), wetlands, (marshes, swamps, bogs, meadows, ponds, and creeks), and floodplains;
- Lands containing vernal pools or which provide refuge to federally or state listed endangered, or threatened species or species listed as of special concern;
- Lands providing wildlife corridors which allow movement and migration of wildlife indigenous to Barnstable including maximum Priority parcels identified by the Cape Cod Wildlife Conservation Project and areas within and abutting Core Habitats identified by the Massachusetts Natural Heritage and Endangered Species Program;
- Lands useful for multiple public purposes or enhancement of Cape Cod Pathways and bike trails;
- Potential Water Supply Areas and land abutting existing water supply areas;
- Lands needed to complete the acquisition of parcels at the Lumbert Mill conservation area, so that the site may be readily enjoyed by the public;
- Maximum priority parcels identified by the Priority Ponds Project;
- Rights of first refusal on Chapter 61 properties;
- Conservation restrictions that are not perpetual;

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- High priority parcels listed by the Town Land Bank Committee (now CPA), the Barnstable Land Trust, and other conservation groups.
- **1B.** The town should continue to seek funds to promote the *acquisition* of prime open space.
- 1C. The town should encourage the use of creative regulatory and non-regulatory land protection tools such as conservation restrictions, tax abatements, gifts and zoning measures.
- 1D. All new residential subdivisions greater than four (4) acres and located within significant resource areas should be designated as Open Space Residential Development in which 50 to 60 percent of the total upland area should be reserved as permanent open space.
- 1E. Regulations and Design Guidelines should be developed for commercial and industrial subdivisions that incorporate the concept of 40 percent of all land as open space, shared parking, entrances and landscape amenities.

GOAL 2: Protect Public Access to, Use and Environmental Health of Barnstable's Surface Water Resources.

OBJECTIVES:

- 2A. All construction and land division along the coastlines shall provide at a minimum the public benefit of view easements to the coast and to tidal lands. All commercial development along the coastline shall provide for public access along the water's edge where possible and practical.
- **2B.** All development, redevelopment and building with possible access to the water's edge should plan for public access.
- 2C. Harbor (and other water-based resource) Management Plans should be developed to ensure a balance between human use and enjoyment and natural resource protection.
- 2D. Regulations governing development within the 100 year coastal flood plain and buffers to other wetland resource areas should be reviewed and strengthened if necessary.
- 2E. Improve pedestrian access, vehicular transportation and parking near the shore.

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GOAL 3: Protect the Town's Present and Future Groundwater Supply.

OBJECTIVES:

- **3A.** Identify and protect future wellfield areas through zoning or acquisition.
- **3B.** Improve waste disposal methods and systems.

GOAL 4: Identify and Coordinate Open Space and Recreation Needs to Benefit Each Simultaneously.

OBJECTIVES:

4A. Update and implement the Town of Barnstable Open Space and Recreation Plan every five years as required.

GOAL 5: Accomplish Open Space and Recreation Goals, Objectives and Actions Expeditiously and at Minimum Expense.

OBJECTIVES:

- 5A. Coordinate cooperative meetings between various groups involved in Barnstable's open space and recreation planning to assign implementation of action items.
- GOAL 6. Protect and Enhance Barnstable's Unique and Fragile Natural and Cultural Resources including Scenic Beauty, Historic Areas and Unique Habitats.

OBJECTIVES:

6A. Existing and proposed development should strive to protect significant natural and fragile areas including critical wildlife and plant habitat, water resources, historic, cultural and archaeological areas, significant scenic roads and views, unfragmented forest and significant landforms.

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CENTERLINE STUDIOS INC. Landscape Architecture and Planning GOAL 7: Acquire, Maintain and Expand Recreational Opportunities throughout Barnstable and Ensure that the Needs of Every User Group and Village are Met Appropriately.

OBJECTIVES:

- 7A. Dedicate appropriate non-sensitive areas of town-owned open space to active recreational use and encourage retention of existing private recreational facilities, particularly equestrian riding areas, Chapter 61B properties and private school fields. Appropriate non-sensitive areas that may be considered should be limited to Land Bank properties with unassigned land use. Other conservation areas are not considered appropriate for active recreational use.
- 7B. Focus more intently on improving the availability of and access to recreational resources.
- 7C. Public recreational facilities and open space areas shall be designed for year-round and be multi-use where appropriate.
- 7D. The town should undertake assessment of all existing recreational facilities and should develop and fund a program for repairs, improvements and rehabilitation of the facilities to meet today's needs and standards. All renewal of facilities should strive to meet national standards.
- 7E. The Recreation Division should undertake a thorough internal needs assessment including plans to fulfill those identified needs.
- 7F. The Recreation Division, in concert with other town agencies, should strive to educate the public on the availability of programs, facilities, and services, and to promote public use.
- 7G. Open space and recreational facilities should be made accessible to handicapped persons and program opportunities should be available to special populations when possible and practical.
- 7H. Town agencies should work cooperatively to ensure that public facilities meet the needs of local and community groups and facilitate nonprofit and social gatherings and events.
- 7I. In all revenue-producing programs and facilities, assurances must be obtained that the opportunity for an individual or family to participate is not closed due to fees or expenses.

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GOAL 8: Design and Develop Aesthetically Pleasing and Pedestrian-Friendly Open Space and Recreation Areas to Enhance Barnstable's Overall Appeal.

OBJECTIVES:

8A. Develop Streetscape/Site Design Plans that promote enhanced visual appeal, improved pedestrian circulation and economic viability of developed village areas, ports, beaches, and other major destinations.

GOAL 9: All Public Properties of the Town Should be Designed and Managed for their Intended Public Benefit and to Protect Open Space and Recreational Resources.

OBJECTIVES:

9A. Existing town-owned properties shall be managed and maintained to ensure appropriate use and public benefit.

GOAL 10: Protect and Increase Wildlife Population and Habitats.

OBJECTIVES:

10A. Identify and preserve wildlife corridors that foster habitat diversity and links to known wildlife resource areas.

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The following actions are designed to implement the Goals and Objectives outlined in Section 8, Goals and Objectives and to address the needs identified in Section 7, Analysis of Needs. They are also intended to conform to the maximum extent practical with the Town of Barnstable's Local Comprehensive Plan and the Cape Cod Commission's Regional Policy Plan. Each specific action is subject to additional directed town approval and/or appropriation. Map 12, *Five Year Action Plan*, provides and illustrative summary of many of the most important goals, objectives and actions.

Table 19, *Open Space and Recreation Plan Action Items*, identifies the proposed group(s) or individual(s) charged with implementing this action and an estimated timeframe for its completion.

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Table 19 Open Space and Recreation Plan Action Items

<u>GOAL 1:</u> Acquire, Retain, Preserve and Protect a Maximum Amount of Open Space for the Community and its Natural and Wildlife Habitats, while Balancing this with Practical Needs such as Recreation, Affordable Housing and Water Supply.

			-
OBJECTIVES	ACTIONS	GROUP(S)	DATE/ FUNDING SOURCES
 1A. Develop a Town of Barnstable Priori Parcel Acquisition List that include the following properties: Lands within or adjacent to designated protect open space or potential open space areas; Lands within or adjacent to fresh and saltwat bodies, beaches, (salt and fresh water), wetland (marshes, swamps, bogs, meadows, ponds, an creeks), and floodplains; Lands containing vernal pools or which provi refuge to federally or state listed endangered, threatened species or species listed as of speci- concern; Lands providing wildlife corridors which allo movement and migration of wildlife indigeno to Barnstable including maximum Priori parcels identified by the Cape Cod Wildlif Conservation Project and areas within an abutting Core Habitats identified by t Massachusetts Natural Heritage and Endanger Species Program; Lands useful for multiple public purposes enhancement of Cape Cod Pathways and bi trails; 	S 1.A.1 Organize an Executive Session between town and private land conservation groups to compare priority land acquisition lists, from which a master <i>Priority Parcel Acquisition List</i> can be compiled for use by all groups. Update this list annually er Acquisition List can be compiled for use by all groups. Update this list annually w w via y er d or or	Town Council, BLT, APCC, CCC, CPA Committee, Planning, Conservation, Recreation, and Marine & Environmental Affairs Divisions, The Compact, etc.	2005/ CPA Funds, Grants (Self-Help or Drinking Water), Partnerships, BLT

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 Potential Water Supply Areas and land abutting existing water supply areas; Lands needed to complete the acquisition of parcels at the Lumbert Mill conservation area, so that the site may be readily enjoyed by the public; Maximum priority parcels identified by the Priority Ponds Project; Rights of first refusal on Chapter 61 properties; Conservation restrictions that are not perpetual; High priority parcels listed by the Town Land Bank Committee (now defunct), the Barnstable Land Trust, and other conservation groups 		
	1.A.2 An advisory Open Space Committee should be established (possibly the former Land Bank Committee), charged with the responsibility of identifying, prioritizing and pursuing land acquisition opportunities for the purposes of open space and recreation, historic preservation and affordable housing. This group should develop the proposed master <i>Priority Parcel Acquisition List</i> and pursue protection of the private parcels included. It should also prioritize all town owned parcels for their conservation and recreation value, regardless of category, and pursue their permanent protection through the establishment of conservation restrictions. Finally, it should establish a strategy for the ongoing management of these	Complete



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			properties to ensure healthy ecosystem functioning, sanitation and public safety.		
1B.	The Town should continue to seek funds to promote the <i>acquisition</i> of prime open space.	1.B.1	In 2005, public open space amounted to approximately 171 acres per 1,000 residents. By comparison, in 1990 public open space amounted to 215 acres per 1,000 residents and in 1995 it was 219.5 acres per 1,000 residents (1997 Open Space and Recreation Plan). Over the next 10 years, by 2,015, the town should strive to reach 225 acres per 1,000 residents Research on the various components of this ratio shall be undertaken to delineate in detail its make-up in terms of open land for recreation, resource protection, fresh water access, ocean beaches, public facilities and the like. In some instances, particular ratios may be changed to assure critical needs are satisfied.	Planning Division	2005/ CPA Funds, Grants (Self-Help or Drinking Water), Partnerships, BLT
		1.B.2	An annual appropriation beyond revenues generated by the CPA is desirable to ensure the continuance of land acquisition. This "seed" fund is necessary to provide sufficient capital to assist in securing independent land appraisals, payment of gift taxes, tax title takings, and to secure options on the purchase of critical land areas.	Town Council, Legal Department, Planning, Conservation and Recreation Divisions	2005/ BLT, Cape Cod Land Fund, Private Fund Raising, County and Town Appropriations are possibilities
		1.B.3	Some predictable amount is necessary to ensure funding will be available for the purchase of large areas and critical linkage parcels. This fund should be established with the ability to "roll	Town Council, Legal Department, Planning, Conservation and Recreation Divisions	2005/ BLT, Cape Cod Land Fund, Private Fund Raising, County and Town Appropriations are



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		over" the unused portion to permit the fund to build for a future acquisition.		possibilities
	1.B.4	Land and Water Conservation Funds have been utilized in the past for acquisition of open space. In the future the town should take a more aggressive role in seeking those funds and other land acquisition funds. Grant funding should include the development of open space and recreational facilities. The State Self- Help and Urban Self-Help grant programs should be given greater focus in this area.	Town Council, Legal Department, Planning, Conservation and Recreation Divisions	2005/ CPA Funds, Grants (Self-Help or Drinking Water), Partnerships, BLT
	1.B.5	New open space and recreational grant sources should be investigated and an aggressive program undertaken for those grants which would benefit the town. The nature of grants sought should include trails and bicycle ways, handicapped accessibility, special needs, cultural and artistic, resource protection, land preservation and other projects.	Town Council, Legal Department, Planning, Conservation and Recreation Divisions	Ongoing/Funding not required
	1.B.6	Due to the relative lack of land dedicated for recreation purposes in the Town of Barnstable, and the expressed needs of the Recreation Division for additional facilities, there should be a concerted focus upon identifying and acquiring land for recreational uses in town.		2005/ CPA Funds, Grants (Self-Help or Drinking Water), Partnerships, BLT
1C. The town should encourage the use of creative regulatory and non-	1.C.1	Wianno and Cummaquid Golf Courses (and the former Hyannis Golf Course now owned by the town) do	Conservation Commission, Legal Department, Town	Ongoing/ Funding not required at this time (they have been
regulatory land protection tools such	-	• / /	-	× •

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as conservation restrictions, tax abatements, gifts and zoning measures.		not have conservation or open space restrictions on the land. Continued pursuit of conservation restrictions is necessary to ensure preservation of their open space and recreational aspects.	Council, CPA Committee and other boards in cooperation with BLT	approached and for the time being want to keep options open)
	1.C.2	Partnerships with private businesses should be forged to foster the improvement and expansion of existing facilities and programs and to secure additional public open space. The town should work in conjunction with land trusts (i.e. the Barnstable Land Trust, The Compact of Cape Cod Conservation Trusts, Inc. and the Three Bays Preservation Trust) to acquire conservation restrictions on all unprotected municipal lands even if they are currently designated as conservation and recreation land and on any privately owned land that exhibits conservation values including wetland resource areas.	Conservation, Planning and Recreation Divisions and BLT	Ongoing/Compact, BLT, Cons Com
	1.C.3	New funding options such as impact fees, payment-in-lieu of land contributions for open space, and off- site contribution of open space should be further explored as to their applicability and usability within Barnstable. If found to be viable options, a process and mechanism should be established to implement these options as they relate to new growth and development.	Conservation, Recreation and Planning Divisions, Town Manager, Legal Department, Assessors, Finance	2005/Cape Cod Commission
	1.C.4	Continue policy to acquire and keep for open space tax title lands except	Conservation Division, Assessor, Legal	2005 and Ongoing/Funding not



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	where such community priorities such as affordable housing or municipal services may arise.	Department	required
1.C.5	Designate the now defunct Land Bank Committee as the official Town of Barnstable Land Acquisition Committee charged with the responsibility of guiding CPA open space and recreation issues and updating the Open Space and Recreation Plan every 5 years. Other possible charges include the implementation of the Cape Cod Pathways plan and the Trans-Town Bicycle path and advising Town Department in the management of Town-owned properties.	Town Council and Manager	2005/Completed
1.C.6	Use cost-effective land protection tools, with tax-incentives, such as donations, conservation restrictions and current use assessment, to retain open space in the community, working in alliance with non-profit organizations, such as the Barnstable Land Trust.	Conservation, Recreation and Planning Divisions, Town Manager and Council, Assessor, BLT	2005/Funding not required
1.C.7	Conduct mailings and hold workshops for large landowners describing tax benefits (income tax, property tax, estate tax) associated with land preservation options, such as the town conservation restriction program.	Conservation and Planning Divisions, Town Manager and Council, Assessors, BLT	2005/BLT and town department funding
1.C.8	The town should periodically review its procedures for approval and assessment of conservation restrictions	Conservation Division, Town Council, Assessor	2005 and Ongoing annually/Funding not required



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1.C.9 Cooperate with nearby jurisdictions to promote protection of regional open space resources and initiatives including water supply protection areas, critical wildlife habitat, Cape Cod Pathways, etc.	Planning and Conservation Divisions	2005 and annually/Funding not required
1.C.10 All redevelopment should strive to preserve existing vegetation and shall enhance the open space impression by incorporation of green buffers. When redevelopment is located in proximity to public open space, trail easements and buffers shall be planned and developed as part of the redevelopment.	Planning Division	Ongoing/Funding not required
1.C.11 The town should continue to promote and enforce regulations which ensure development within Barnstable that is compatible with and protects natural resources.	All regulatory departments	Ongoing/Funding not required
1.C.12 The town should aggressively seek to acquire tax title lands and hold them for community purposes, such as open space, affordable housing or municipal services. Properties of environmental significance such as wetlands and rare species habitat should be placed under the jurisdiction of the Conservation Commission or a nonprofit organization such as BLT. Adopt a policy to acquire tax title lands and evaluate for conservation, open space or recreation significance before deciding to dispose of them	Assessor , CPA and Land Acquisition Committee	2006/Funding not required



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	1.C.13 To ensure the continued protection of all Chapter 61 properties, the Town of Barnstable Conservation and Recreation Divisions in cooperation with the Assessor should conduct an annual review (including interviews with owners) of all Chapter 61 properties to assess which properties should be pursued for potential acquisition.	Recreation Divisions, Assessor , Land Acqusition Committee	Ongoing/Town department budgets, Town budget appropriation
	1.C.14The Town of Barnstable should research all publicly owned land to establish its land use (conservation and recreation) status. Lands that are not legally protected in perpetuity should have a permanent conservation restriction assigned to their deed and recorded in the Barnstable County Registry of Deeds.	Conservation and Recreation Divisions and Assessor	Ongoing/Department budgets and Town budget appopriation
1D. All new residential subdivisions greater than four (4) acres and located within significant resource areas should be designated as Open Space Residential Development in which 50 to 60 percent of the total upland area should be reserved as permanent open space.	1.D.1 The Open Space Residential Development bylaw should be amended to specify that residential subdivision greater than four (4) acres and within identified Significant Resource Areas, will be subject to the provisions of this bylaw. The bylaws should also be amended to include the definition and delineation of so-called Significant Resource Areas.	Zoning Board of Appeals (ZBA), Conservation and Planning Divisions	2006/Funding not required
	1.D.2 The site design recommendations and provisions of the existing <i>Open Space</i> <i>Residential Development</i> bylaw should be encouraged in all types of developments. Consideration should be given to strengthening the site design regulations and guidelines in	Planning Division	2006/Grants or funding not required



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		both commercial and residential		
		developments to maximize the		
		protection of open space.		
	1 D 3	Use the cluster development approach	Planning Division and	2005 and
	1.0.5	for residential subdivisions where	Zoning Board of	Ongoing/Funding not
		possible - preserved open space	Appeals	required
		should be designed to be contiguous	rippeuts	required
		with adjacent open space and should		
		be the subject of permanent		
		conservation restrictions.		
1E. Regulations and Design Guidelines	1.E.1	Performance standards for residential,	Planning, Conservation	2006/Cape Cod
should be developed for commercial		commercial and industrial	and Recreation	Commission, Grants
and industrial subdivisions that		developments should be investigated	Divisions	
		as an additional zoning tool. For open		
incorporate the concept of 40 percent		space and recreation, performance		
of all land as open space, shared		standards can provide a vehicle to		
parking, entrances and landscape		assure that certain open land		
amenities.		characteristics remain and that certain		
		developments provide open areas for		
		recreational use and corridor access.		
		It can provide for the compatibility of		
		unlike land uses that traditionally may conflict with each other.		
	1.E.2	A clear set of illustrated <i>Commercial</i>	Planning Division and	2006/ Cape Cod
	1.E.2	and Industrial Development Design	ZBA	1
		<i>Guidelines</i> should be created that	ZDA	Comission, Grants, Town budget
		outlines the proper implementation of		appropriation
		development. This should be		appropriation
		incorporated into the generalized site		
		guidelines developed through Site		
		Plan Review and/or the Zoning		
		Ordinances.		
	1.E.3	For existing lots within identified	ZBA, Conservation and	2006 and
		Significant Resource Areas, all	Planning Divisions	Ongoing/Funding not
		proposed nonresidential developments	e	required



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	shall retain at least 50 percent open		
	space, which should remain in its natural state and located to		
	supplement the continuity of the		
	Significant Resource Area.		
1.E.4	All redevelopment shall strive to preserve existing vegetation and shall enhance the open space impression by incorporation of green buffers. When redevelopment is located in proximity to public open space, trail easements and buffers shall be planned and	ZBA, Conservation and Planning Divisions	2006 and Ongoing/Funding not required
	developed as part of the redevelopment.		
1.E.5	The town should continue to promote and enforce regulations which ensure development within Barnstable is compatible with and protects natural resources.	Planning and Conservation Divisions, ZBA and all regulatory boards	2005 and Ongoing/Funding not required
1.E.6	The concept that open land creates and frames the skeleton upon which all other land uses hinge is to be implemented in all development. This framework concept shall include consideration for buffering between unlike land uses, tree lined roadways, green corridor linkages, and the continuity in the natural vegetation and environments of Cape Cod. Development within and adjacent to the greenbelt shall be configured so as to minimize adverse impacts and in a manner that maximizes contiguous open space.	Planning and Conservation Divisions, ZBA and all regulatory boards	2005 and Ongoing/Funding not required
1.E.7	The town should strive to employ the	Planning Division and	2005 and



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services of a Registered Landsca Architect to review all propose development site plans and consider requiring the services of Registered Landscape Architect part of the development team.	ed to a	Ongoing/TMown budget appropriation
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GOAL 2: Protect Public Access to, Use and Environmental Health of Barnstable's Surface Water Resources.

OBJE	CCTIVES	АСТ	IONS	GROUP(S)	DATE/ FUNDING
2A.	All construction and land division along the coastlines shall provide at minimum the public benefit of view easements to the coast and to tidal lands. All commercial development along the coastline shall provide for public access along the water's edge where possible and practical.	2.A.1	As large coastal estates and lots are divided, public access to the coast must be secured. New residential building and all associated lot development shall be located, when possible, a minimum of 100 feet from the high water mark and the land shall retain or be restored to its natural state. Public access along the beach shall not be hindered nor shall the public's rights within the tidal waters be limited.	Conservation and Planning Divisions, Town Council and Town Counsel	Ongoing/Funding not required
		2.A.2	Whenever possible, a 100 foot natural edge shall be retained or reestablished along all water bodies, streams, ponds and wetlands. This edge shall preclude any building except for compatible and approved water-dependent uses.	Conservation and Planning Divisions, ZBA and other regulatory boards	Ongoing/Funding not required
		2.A.3	Acquisition of new coastal areas should concentrate on lots that augment existing beaches and town ways to coastal waters and bays. Lots that adjoin existing publicly accessible areas	· · · · ·	Ongoing/Funding not required

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			should be an acquisition priority. Consideration must also be given to those lots in close proximity to public coastal areas to provide for parking and services to improve public access.	regulatory boards	
2B.	All development, redevelopment and building with possible access to the water's edge should plan for public access.	2.B.1.	Proposed site plans for developments adjacent to surface water resources should be required to include water access plans where such access would not threaten the environmental health of that water body. Water access plans should be sensitive to both public recreation needs and environmental concerns.	Conservation, Marine & Environmental Affairs, Planning and Recreation Divisions, ZBA and other regulatory boards	Ongoing/Funding not required
2C.	Harbor (and other water-based resource) Management Plans should be developed to ensure a balance between human use and enjoyment and natural resource protection.	2.C.1.	The planning, design and implementation of efficient mooring plans dealing with the protection of coastal embayments is needed. Those plans should reduce the water area covered by boats while increasing the number of boats moored. The greater use of star-docks and boat moorings by size needs to be planned.	Conservation, Marine & Environmental Affairs, Planning and Recreation Divisions, ZBA and other regulatory boards	Ongoing/CZM, Self- Help, EOEA, Town budget appropriations
		2.C.2.	Inventory and assess shellfish habitats and resources of the town and assure the continuation of this commercial and recreational asset through proper management and propagation.	Conservation, Marine & Environmental Affairs, Planning and Recreation Divisions, ZBA and other regulatory boards	Ongoing/ Department budgets

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2	2.C.3	Human-controlled propagation, growth and harvesting of marine life, should be encouraged. This use in existing areas or other sites is one additional means of protecting the resources of the coast. It may provide for the continued growth of this traditional use of the coastal waters and preserve the shellfish and fishing industry from continued decline.	Conservation, Marine & Environmental Affairs, Planning and Recreation Divisions, ZBA and other regulatory boards	Ongoing/Funding not required
2	2.C.4	Continue to protect, acquire and preserve easements along all herring runs within the town to assure this natural resource for future generations.	Conservation, Marine & Environmental Affairs, Planning and Recreation Divisions, ZBA and BLT	Ongoing/Funding not required
2	2.C.5	Document role of open space in protecting the harbor's ecological balance. Identify and seek acquisition of key open space parcels bordering harbor and continue protection of wetlands.	Conservation, Marine & Environmental Affairs, Planning and Recreation Divisions, ZBA and other regulatory boards	Ongoing/Funding not required
2	2.C.6	to the pollution of the coastal waters should be mitigated. New development and redevelopment that poses an unmitigated threat of pollution should not be permitted.	Conservation, Marine & Environmental Affairs, Planning and Recreation Divisions, ZBA and other regulatory boards	Ongoing/BLT, CPA
2	2.C.7	Identify and certify all vernal pools.	Conservation Division	2006/Department budgets
2	2.C.8	Evaluate and, if necessary, mitigate stormwater drainage patterns into ponds and streams.	Planning and Conservation Divisions	2006 and Ongoing/town department funds, grants, partnerships, state



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			Prohibit direct discharge of untreated stormwater and wastewater into coastal waterways. Mitigate untreated stormwater discharges through the use of vegetated swales, leaching catch basins and other best management practices.	Planning and Conservation Divisions	2006 and Ongoing/town department funds, grants, partnerships, state
			Consider nomination of portions of waterways as federal EPA No Discharge areas for boats. Coordinate with regional health officials on marine head pumping options.	Planning, Conservation and Health Divisions	2006/Funding not required
			Amend local wetlands protection bylaw to protect vernal pools.	Conservation and Planning Divisions	2006/Funding not required
			Evaluate and, if necessary, mitigate stormwater drainage patterns into ponds and streams.	Planning and Conservation Divisions, Department of Public Works (DPW)	2006 and Ongoing// CPA Funds, Grants (Self-Help or Drinking Water), Partnerships, BLT
2D.	Regulations governing development within the 100 year coastal flood plain and buffer to other wetland resource areas should be reviewed and strengthened if necessary.	2.D.1.	Amend zoning bylaw to prohibit new non-water dependent construction in the Federal Emergency Management Area (FEMA) V-flood zones, except where the height of the first floor elevation meets or exceeds the 100-year storm wave height.	Planning and Conservation Divisions	2006/Department budgets
		2.D.2	Strengthen protective regulations within the Barnstable Harbor/Sandy Neck A.C.E.C.	Planning and Conservation Divisions	2006/Funding not required
		2.D.3	Amend local wetlands protection bylaw to accommodate inland migration of saltwater wetlands, where feasible, based on a 2-foot sea level rise.	Planning and Conservation Divisions	2006/Funding not required



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		2.D.4	Augment erosion control measures with beach nourishment at town beaches.	Planning and Conservation Division	2005 and Ongoing/Town budget appropriations, DPW
2E.	Improve pedestrian access, vehicular transportation and parking near the shore.	2.E.1	During peak use, bus shuttle service should be initiated to major public beaches. The services should originate from nearby alternative public and quasi-public parking lots and transport persons to the beaches via village centers where applicable. The regular "B" bus services should also promote the use of the buses for beach goers. Safe and convenient bus drop-off and pick-up areas need to be incorporated into the beach areas.	Community and Economic Development Department, Planning and Recreation Divisions	2005 and Ongoing/Cape Cod Commission, grants, private funding, IceT
		2.E.2	Provide better connections between adjacent beach areas using roadways, walkways and improved pedestrian activity zones.	Planning, Marine & Environmental Affairs, Recreation and Conservation Divisions	2006 and Ongoing/Project grants, Town budget appropriations, private
		2.E.3 2.E.4	Landscape pedestrian use areas with natural dunescape vegetation and provide for bus drop-off and pick up area and overflow parking area where possible. Provide improved accessibility and	Planning, Marine & Environmental Affairs, Recreation and Conservation Divisions Planning, Marine &	2006 and Ongoing/Project grants, Town budget appropriations, private 2006 and Ongoing/
		2.12.7	landscape amenities at all beach areas for better access and aesthetics. Consider relocation of parking lots, construction of boardwalks over fragile areas, (re)construction of concession areas, signage, and the incorporation of	Environmental Affairs, Recreation and Conservation Divisions	CPA Funds, Grants (Self-Help or Drinking Water), Partnerships, BLT



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			interpretative educational exhibits.			
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GOA	GOAL 3: Protect the Town's Present and Future Groundwater Supply.					
OBJI	ECTIVES	ACT	IONS	GROUP(S)	DATE	
3A.	Identify and protect future wellfield areas through zoning or acquisition.	3.A.1	Protect and strengthen regulations governing land uses within water supply protection zones.	Planning and Health Divisions, Water Districts	2006/Funding not required	
		3.A.2	All identified groundwater supply protection zones should be protected using the most stringent regulations. Existing development within these zones should be monitored for potential sources of contamination, required to use the most advanced waste disposal technologies, and where possible retrofitted with cleaner technologies.	Planning, Health, Recreation and Conservation Divisions	Ongoing/Funding not required	
		3.A.3	Large areas of contiguous open space should be studied for their potential to provide clean drinking water and be strictly protected.	Planning, Marine & Environmental Affairs, Recreation and Conservation Divisions	2006 /Funding not required	
		3.A.4	Mitigation measures shall be instituted to remove and lessen potential groundwater pollution and detrimental effects created by human use within recharge areas to public supply wells.	Planning, Health, Recreation and Conservation Divisions	2006 and Ongoing/Funding not required	
3B.	Improve waste disposal methods and systems.	3.B.1	Deputize appropriate town officials, including health agents, in addition to police and natural resource officers, to bolster enforcement of MGL c. 270, s.	Police Department, Marine & Environmental Affairs, Health and	2005 and Ongoing/Funding not required	

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16, preventing illegal dumping on public land.3.B.2 Encourage non-profit groups, such as	Conservation Divisions Conservation and	2005 and
the Barnstable Land Trust, Adopt-A- Beach and Americorps Cape Cod volunteers, to organize land clean-ups of public and private open space.	Recreation Divisions	Ongoing/Funding not required
3.B.3 Evaluate landfill/transfer station fees and collection policies to discourage residents from disposing of bulk items in unauthorized areas. Explore alternative means of legal disposal.	Marine & Environmental Affairs and Finance Divisions	2005/Funding not required
3.B.4 Regulate motorized and non-motorized bicycle use on identified nature trails.	Conservation, Recreation and Marine & Environmental Affairs Divisions and Police Department	2006 and Ongoing/town department budgets
3.B.5 On-site septic systems are a threat to ground water in some areas. Special consideration needs to be given to the more-sensitive areas such as the Hyannis Ponds complex and groundwater supply protection zones. The impacts of wastewater disposal methods upon coastal estuaries should be further investigated in order to protect and restore these surface waters. Better wastewater management, involving improved collection and treatment methods, may be required. In concert with this effort, the town will need to develop areas for facilities and effluent disposal.	Health and Planning Divisions	2006/ CPA Funds, Grants (Self-Help or Drinking Water), Partnerships, BLT
3.B.6 A plan for updating cesspools to Title V should be implemented as soon as possible.	Health Division and Board of Health	2005/Funding not required



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	3.B.8 Expand and refine recycling efforts.	Health Division and Waste Management	2005 and Ongoing/Town department budgets
GOAL 4: Identify and Coordinate O	pen Space and Recreation Needs to	Benefit Each Sim	ultaneously.
OBJECTIVES	ACTIONS	GROUP(S)	DATE
4A. Update and implement the Town o Barnstable Open Space and Recreation Plan every five years a required.	(possibly the former Land Bank Committee) or designate an existing		2006/Town budget appropriations
	4.A.2 Identify all open space areas suitable for recreational use.	Recreation Division	2006/Funding not required
	4.A.3 During the next five years, open space and recreation planning efforts should focus more directly on the acquisition, maintenance and development of recreational resources, which are	Planning and Finance	2006 and Ongoing/ CPA Funds, Grants (Self-Help or Drinking Water), Partnerships, BLT



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2005 and Ongoing/

CPA Funds, Grants

Partnerships, BLT

or

Water),

(Self-Help

Drinking

Council and Town

Recreation Divisions

and

Manager

Conservation

demands.

insufficient to meet current and future

proposed Cape Cod Pathways Plan.

Plan, and possible jogging, walking, and

riding trails with emphasis on linking

conservation and recreation areas.

Install additional bicycle racks at

4.A.4 Work towards completion of the

	beaches, parks and in commercial areas.		
4.A.5	Develop multiple-use areas wherever possible to improve availability and service of open space and recreation areas. Examples include picnic areas that include adjacent playground and other passive use areas or plaguing field that double as fairgrounds.	Conservation and Recreation Divisions	2006 and Ongoing/ CPA Funds, Grants (Self-Help or Drinking Water), Partnerships, BLT
4.A.6	Develop creative solutions for integrating active and passive recreation, especially for children and the elderly.	Conservation and Recreation Divisions	2006 and Ongoing/Funding not required

GOAL 5: Accomplish Open Space and Recreation Goals, Objectives and Actions Expeditiously and at Minimum Expense.

OBJECTIVES	ACTIONS	GROUP(S)	DATE
5A. Coordinate cooperative meetings between various groups involved in Barnstable's open space and recreation planning to assign implementation of action items.	5.A.1 Identify and convene appropriate grou and assign open space and recreati plan action item tasks.	os Twon Manager and a	2005/Town operating budget

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Bays Preservation , Inc. Trust, should be
included. It may also be useful to include all Fire Districts,
Historical Commission and GIS Department.

Goal 6. Protect and Enhance Barnstable's Unique and Fragile Natural and Cultural Resources including Scenic Beauty, Historic Areas and Unique Habitats.

OBJECTIV	VES	ACTIONS	GROUP(S)	DATE
shou natu criti wate arch scen	isting and proposed development buld strive to protect significant cural and fragile areas including tical wildlife and plant habitat, ter resources, historic, cultural and haeological areas, significant nic roads and views, unfragmented est and significant landforms.	 6.A.1. Protect areas particularly along, but not limited to Route 6A and within historic districts, which contribute to the unique Cape Cod character of the town provide historical, prehistoric on educational perspectives, and/or meet the criteria of the National Register of Historic Places or the Massachusetts Historic Commission. Historic landscapes should be preserved, and where and when appropriate, recreated These historic landscapes may be modified to meet modern day needs for recreational purposes. 	and Historic Commission	2006 and Ongoing/CPA, grants, Cape Cod Commission
		6.A.2 Protect and preserve the value of high priority wildlife habitat, rare plants and animals, and historic resources through regulatory and non-regulatory means.	Planning and Marine	2005andOngoing/CapeCodLandFund,IFAWgrants,CapeCommission,CPA,

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		regulatory boards	town department budgets
6.A.3	ensure maximum natural resource protection, while enhancing recreational use.	Conservation and Planning Divisions	2006,2007,2008/Towndepartmentbudgets,grants,CPA,partnerships
	Acquire or protect lands and structures in or near identified sensitive natural and cultural resources.	Historic Commission, Conservation and Planning Divisions	2006 and Ongoing/CPA
6.A.5	The ability for land to support human use is limited by the land's natural and environmental limitations, balanced with the degree of development and control. Measures must be undertaken to ensure that human use does not impact the resource or degrade the human experience. Critical areas of concern include the Ocean Beaches, Sandy Neck and the Great Marshes, all the Great Ponds, herring runs and wetlands.	Conservation, Marine & Environmental Affairs and Planning Divisions, Department of Public Works	2006 and Ongoing/Funding not required
6.A.6	Future land acquisition efforts in the Town of Barnstable should incorporate Priority Ponds Project findings into the decision making process and, at a minimum, the 19 high-priority parcels identified in Barnstable, should be added to the proposed master Priority Parcel Acquisition list for the town.		Ongoing/Funding not required

GOAL 7: Acquire, Maintain and Expand Recreational Opportunities Throughout Barnstable and

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	Ensure that the Needs of Ev	ery U	Jser Group and Village are m	et Appropriately.	
OBJE	CCTIVES	ACT	IONS	GROUP(S)	DATE
7А.	Dedicate appropriate non-sensitive areas of town-owned open space to active recreational use and encourage retention of existing private recreational facilities, particularly equestrian riding areas, Chapter 61B properties and private school fields. Appropriate non-sensitive areas that may be considered should be limited to Land Bank properties with unassigned land use. Other conservation areas are not considered appropriate for active recreational use.	7.A.1	Evaluate designated land uses at all town-owned properties, dedicate portions to recreation use where possible, and develop land use management plans to ensure maximum recreational access while protecting natural resource values.	Legal Department, Recreation and Conservation Divisions	2006, 2007, 2008/CPA, grants, partnerships
7B.	By means of regulatory or non- regulatory methods protect and improve access to lands which meet one or more of the following criteria:	7.B.1	When evaluating and prioritizing land for potential acquisition, the criteria listed should be used at all times and weighted according to the town's current needs.	Proposed Open Space and Recreation Planning Committee and/or CPA Committee	2005 and Ongoing/Funding not required
•	Lands which abut existing public and private recreation and open space lands; Lands which could be designed to promote hiking or bicycle trails;	7.B.2	in all villages to meet the needs of that village and all identified user groups.	Recreation, Finance and Planning Divisions	2007,2008,2009/CPA,grants,CapeCodCommission, private
•	Lands which could allow for expanded recreational facilities in parts of town presently under-supplied including lands within existing densely developed subdivisions;	7.B.3 7.B.4	Seek funds for the development of additional active and passive recreational facilities. The town should seek to fill the	Recreation Division	2007 and Ongoing/Funding not required 2005-2008/ CPA End Counts (Self)
•	Lands providing public access for recreation to		remaining gaps in the proposed Cape	implementation	Funds, Grants (Self-

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				• • 1	H 1 D ' 1 '
	both freshwater and saltwater bodies;		Cod Pathways Trail Plan and the	committee and	Help or Drinking
•	Lands suitable for active recreation where		proposed trans-town Rail Trail by 2008.	Conservation,	Water), Partnerships,
	activities such as ball fields, playgrounds and			Recreation and	BLT
	public swimming areas would not adversely			Finance Divisions	
	affect sensitive resources, as well as lands for	7.B.5	The town's current recreation needs,	Recreation Division,	2005 – 2010/ CPA
	passive or restricted access conservation uses.		identified in Section 7 of this Plan,	Open Space,	Funds, Grants (Self-
			should be a major funding and	Recreation and CPA	Help or Drinking
			implementation priority during the next	Committees	Water), Partnerships,
			five years. High priority needs		BLT
			identified in this Plan are walking and		
			bike trails, tennis courts, swimming		
			areas, extreme sports facilities and		
			activities for the aging population.		
7C.	Public recreational facilities and open	7.C.1	In the acquisition, planning, design and	All Town Divisions	2006 and
	space areas shall be designed for year-		development of open space and	and Committees	Ongoing/Funding not
	round and be multi-use where		recreational facilities, the multi-use		required
			potential of the resource shall be		
	appropriate.		considered. Whenever possible, public		
			investment shall be initiated to satisfy		
			an array of compatible needs.		
		7.C.2	Existing school playgrounds and indoor	Recreation and all	2007/Funding not
			recreational facilities should be looked	schools and School	required
			at for year-round use. These facilities	Committee	
			should be designed in the future as		
			usable entities by both the school and		
			neighboring communities. The cost and		
			expense of developing the facilities and		
			maintaining them may have to be shared		
			between both the schools and the		
			Recreation Division, working		
			cooperatively.		
7D.	The town should undertake	7.D.1	Repairs and improvements to the	DPW, Town	2008/Town budget
	assessment of all existing recreational		structures, grounds and outdoor	Manager, Recreation	appropriations
	facilities and should develop and fund		facilities should be undertaken at all	Division	
	-		recreation facilities (school athletic		
	a program for repairs, improvements				

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and rehabilitation of the facilities to meet today's needs and standards. Al renewal of facilities should strive to		fields, recreation fields, town landings, ways to water, etc.). All new recreation and athletic facilities	Planning and	2006 and
meet national standards.		should be designed to meet minimum design and dimensional standards for the intended use. In rehabilitation, these standards should be met when feasible. All facilities should be developed with a minimum of a 40-year life.	Recreation Divisions	Ongoing/Town budget and project appropriations, private projects
	7.D.3	Community Development Block Grant funds should be considered when new recreational facilities are needed in a densely developed area of the town.	Recreation and Finance Division, CPA Committee	2006 and Ongoing/Community Development Block Grants
	7.D.5	Many of the Town fields re in need of renovation and repair. Because the Town charges a user fee, it has a responsibility to maintain fields in safe and playable condition. In order to reduce the Town's liability, this should be implemented immediately and Town funds should be appropriated immediately under the Capital Improvement Fund to address this problem.	Town Manager, Town Counsel, Recreation Division and School Department	2006/Town Capital Improvement Fund
7E. The Recreation Division should undertake a thorough internal needs assessment including plans to fulfil those identified needs.		The recreation needs identified in Section 7 of this Plan should be expanded and prioritized and specific implementation plans developed for each need.	Recreation Division	2006/Funding not required
7F. The Recreation Division, in concer with other town agencies, should		The Recreation Division should continue advertising programs on the	Recreation Division	2006 and Ongoing/Funding not

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strive to educate the public on the availability of programs, facilities,		Town Web site.		required
and services, and to promote public use.	7.F.2	The Recreation Division should expand and improve signage at its facilities.	Recreation Division and Committee	2007, 2008/Department operating budgets
7G. Open space and recreational facilities shall be made accessible to handicapped persons and program opportunities shall be available to special populations when possible and practical.	7.G.1	All Town buildings and facilities need to ensure convenient handicap accessibility to the greatest degree possible. This is especially critical for town beaches and bath houses (Covells, Dowses, Joshuas Pond, Loop, and Hamblin's Pond). Natural open space and protected land need to provide for some type of suitable handicap access to permit the experience of the natural setting. Old Jail Lane, Sandy Neck, Burgess Park, the Danforth Property, Veteran's Memorial Park and the West Barnstable Conservation Area have been initially identified.	Recreation and Conservation, DPW, Disabilities Commission	2005 and Ongoing with goal of 100 percent accessibility by 2010/CPA, grants, partnerships, federal funding programs, private funding
	7.G.2 7.G.3	Consideration must also be given to ensure that handicap participation is possible in the activities and functions within parks and open space. Swimming (water and pool access), fishing, special playgrounds, boating and other activities should be provided for handicapped individuals whenever feasible or when the demand warrants. Prioritize list of accessibility upgrades	Recreation and Conservation Divisions, DPW, Disabilities Commission Recreation, Planning	2005 and Ongoing with goal of 100 percent accessibility by 2010/CPA, grants, partnerships, federal funding programs, private funding 2006/Funding not
	7.G.4	and determine costs needed for existing facilities, based on inventory conducted as part of this Plan. The ADA Inventory contained in this	and Finance Divisions Proposed Open	required 2006 and annually
		Plan should be updated immediately	Space Committee	after that/.Funding



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7H.	Town agencies should work cooperatively to ensure that public	7.H.1	and then bi-annually to ensure ongoing assessment of accessibility needs at all conservation and recreation facilities. Continued support of the senior center is needed for the ever growing elderly population of the town. Expanded	Recreation and Finance Divisions, Town Manager,	not required 2008, 2009/Town department operating budgets
	facilities meet the needs of local and community groups and facilitate nonprofit and social gatherings and events.		programs, recreational as well as social, are also required to meet the growing demands.	Town Council	C .
			The improvements to and development of expanded cultural facilities and programs are viewed in this Plan as a necessary component for leisure time enjoyment. Cultural facilities and programs provide expanded options for residents and visitors.	Recreation Division, Historic District	2009/Funding not required
71.	In all revenue-producing programs and facilities, assurances must be obtained that the opportunity for an individual or family to participate is not closed due to fees or expenses.	7.I.1.	For select activities user fees should be considered, however the fees should be kept minimal and based on a sliding scale to ensure that no resident would be kept from participation because of the inability to afford the fee.	Recreation and Finance Divisions, Town Manager	Address issue 2006 and revisit each year/Funding not required
		7.I.2	The position of Barnstable, especially Hyannis, should be maintained and improved as the central Cape Cod area for tourists and visitors. Major tourist facilities and services, large coastal beaches, marinas, open space and multi- modal transportation facilities should be encouraged. Quality design standards should be encouraged for all tourist facilities and in all visitor services.	Planning Division and Board	2010/CPA, grants, Cape Cod Commission, private funding, Chamber of Commerce



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UUA	Recreation Areas to Enhance Barnstable's Overall Appeal .					
OBJE	CCTIVES	ACT	IONS	GROUP (S)	DATE
8A.	Develop Streetscape/Site Design Plans that promote enhanced visual appeal, improved pedestrian circulation and economic viability of developed village areas, ports, beaches, and other major	8.A.1.	Complete the open greenway linkage between Hyannis downtown and the Hyannis Harbor including the so-called Harbor Walk and the currently- underway renewal of Main Street Hyannis.	Planning DPW, Manager	Division, Town	2005-2008/CPA, town budget appropriations
	destinations.		Bicycle trails and pathways must be coordinated to facilitate movement to select facilities within the villages and town and must support the Cape-wide network of trails. Bikeways planning should be coordinated with the Town of Yarmouth. Primary planning segments include links between Mary Dunn Rd. and Phinney's Lane and traverse of the DFW land. Any future Route 6 Exit $6^{1/2}$ should be coordinated with this trail.	Planning, Conservati Recreation		2008/CPA, Cape Cod Pathways, grants, Ice-T, partnerhips
			New residential subdivisions should provide suitable recreation and play areas to meet the needs of the residents of that development such as ball fields and courts, playgrounds, walking, bicycling or jogging paths, exercise courses, outdoor sitting areas, swimming pools and other outdoor or indoor recreation and leisure time options as appropriate to the residents and scale of the development.	ZBA	and Divisions,	2006 and ongoing/Funding not required
		8.A.4	The development of high quality regional tourist facilities and services,	Planning D	Division	2006 and ongoing/CPA,

GOAL 8: Design and Develop Aesthetically Pleasing and Pedestrian-Friendly Open Space and

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	large coastal beaches, marinas, open space and multi-modal transportation facilities should be encouraged. Quality design standards shall be encouraged for all tourist facilities and in all visitor services.		private funding, town budget appropriations, town department budgets
8.A.5	Maintain, promote and improve economically productive recreational resources such as beaches, golf courses, harbors and fishing areas employing user fees where appropriate to fund their upkeep.	Recreation, Finance and Marine & Environmental Affairs Divisions, Town Management, Town Council	2007 and ongoing/user fees
8.A.6	1 1	Planning Division and DPW	2008, 2009/town department budgets
8.A.6	5	Planning Division, Community and Economic Development Department	2005 and ongoing/Funding not rquired
8.A.7	Where feasible, require placement of new utility lines underground.	Planning Division, Historic District, DPW	Ongoing/Private developers



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	8.A.8 Implement local recommendations of Route 6A Corridor Management Plan.	Planning Division, Historic District	2008, 2009/CPA, town department funding and operating budget
	8.A.9 Where appropriate, the town should encourage land owners to restore blighted or abandoned areas to open space, whether it be to landscaped parks or natural areas.	PlanningandConservationDivisionsCPACommittee	2005 and ongoing/Funding not required
-	Town Should be Designed and M Space and Recreational Resources ACTIONS	0	Intended Public
9A. Existing town-owned properties shall be managed and maintained to ensure appropriate use and public benefit.	 9.A.1 Land use management plans should be developed for all existing town-owned properties to ensure appropriate use and public benefit The Town Manager should designate the appropriate Town Department to manage each Town owned property, with primary emphasis given to lands purchased under Land Bank. 	Town Manager, Conservation and Planning Divisions	Designate Managing Authorities by 2006; Set goal to complete mgt. plans for all town conservation and recreation areas by 2010./CPA, grants, town department budgets
	9.A.2 The town should also initiate a review of current policy related to all town- owned property (land and buildings). Consideration should be given to the multi-use potential of government property and to the continued maintenance and protection of this resource.	DPW, Planning Division, Historical Commission	2005 and ongoing/Funding not rquired
Drow oned Dru	9.A.3 Continuing efforts are needed to assure that Independence Park, located east of	Planning, Conservation, and	2006 and ongoing/Funding not



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	 Mary Dunn Road is managed and utilized for the protection of the groundwater resources and natural habitat located there as well as for human enjoyment and to provide continuity of natural land within the regional greenbelt. 9.A.4 A standing <i>Open Space Committee</i> needs to be permanently established composed of the former Land Bank Committee and/or representatives of the Conservation, Planning, Recreation, Marine & Environmental Affairs Divisions, DPW, Senior Citizens Services and the School Department. Other private and quasi-public organizations that hold land in the public interest should also be represented on this committee. This committee should be charged with implementation, monitoring of issues, needs and problems, and updating the Open Space and Recreation Plan as required. 	Marine & Environmental Affairs Divisions, Barnstable Water Company (purchased by the town in 2005) Town Council	required 2006/Funding not required
	9.A.5 Complete work on new Open Space and Recreation Plan as required. Submit to state for approval. Create Plan implementation committee.	Proposed Open Space Committee	2009-2010 and every five years/town budget appropration
GOAL 10: Protect and Increase Wildli	-		
OBJECTIVES	ACTIONS	GROUP(S)	DATE
10A. Identify and preserve wildlife corridors that foster habitat diversity	10.A.1 Create development standards and/or regulations that protect the wildlife	Planning, Conservation and	2006/grants, Cape Cod Comission,

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and links to known wildlife resource areas.	habitats, corridors and species identified in the Cape Cod Wildlife Habitat Conservation Project and by MNHESP wildlife protection initiatives.	Marine & Environmental Affairs Divisions with Cape Cod Commission and the BLT	
	10.A.2 In all new developments, including single family dwellings, which are located in identified wildlife corridors and habitats, it should be required to institute measures to ensure the preservation and the continuity of the wildlife corridor/habitat.	Planning, Conservation and Marine & Environmental Affairs Divisions, ZBA	2006 and ongoing/Funding not required
	10.A.3. Develop and implement wildlife protection programs including development design guidelines, performance standards and educational initiatives.	Conservation and Planning Divisions, Town Council with the Cape Cod Commission and BLT	2006/town budget appropriations

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SECTION 10 PUBLIC COMMENTS



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TITLE	NAME	MAILING	EMAIL ADDRESS	PHONE	DISTRIBUTION
		ADDRESS		(508)	DATE
				0.60.464.0	
Town Manager	John C. Klimm	367 Main Street Hyannis, MA 02601	John.Klimm@town.barns table.ma.us	862-4610	5/6/2005
Assistant Town Manager	Paul J. Niedzwiecki	367 Main Street Hyannis, MA 02601	Paul.Niedzwiecki@town. barnstable.ma.us	862-4610	5/6/2005
Cape Cod Commission	Sharon Rooney	PO Box 226 Barnstable, MA 02630	srooney@capecodcommis sion.org	362-3828	5/6/2005
Barnstable Town Council President	Gary Brown	128 Chestnut Street Hyannis, MA 02601			5/6/2005
Town Attorney	Robert Smith	367 Main Street Hyannis, MA 02601	Robert.Smith@town.barn stable.ma.us	862-4620	5/6/2005
Director of Planning, Zoning, & Historic Preservation	Tom Broadrick	200 Main Street Hyannis, MA 02601	tom.broadrick@town.bar nstable.ma.us	862-4703	5/6/2005
Conservation Administrator	Rob Gatewood	200 Main Street Hyannis, MA 02601	conservation@town.barns table.ma.us	862-4092	5/6/2005
Recreation Director	David Curley	141 Basset Lane Hyannis, MA 02601	David.Curley@town.barn stable.ma.us	790-6345	5/6/2005
Recreation Assistant Director	Patti Machado	141 Basset Lane Hyannis, MA 02601	Patti.Machado@town.bar nstable.ma.us	790-6345	5/6/2005
Human Resources Director	William Cole	230 South Street Hyannis, MA 02601	William.Cole@town.barn stable.ma.us	862-4694	5/6/2005
Director of Marine & Environmental Affairs	Dan Horn	1189 Phinney's Lane Centerville, MA 02632	Dan.Horn@town.barnstab le.ma.us	790-6272	5/6/2005





The Town of Barnstable Town Council

367 Main Street, Village of Hyannis MA 02601 508-862-4602 • Fax 508-862-4770 email: Council@town.barnstable.ma.us www.town.barnstable.ma.us

Councilors:

May 16, 2005

Gary R. Brown, President

Henry ⊂. Farnham Vice President

Richard G. Barry Janice L. Barton Ann B. Canedy James H. Crocker, Jr. Leah C. Curtis Janet Joakim J. Gregory Milne James F. Munafo, Jr. Royden C. Richardson Tom Rugo Harold E. Tobey

Administrative Assistant: Donald M. Grissom

Town Council Secretary: Cheryl A. Phillips Ms. Jennifer Soper, Acting Director Division of Conservation Services EOEA 100 Cambridge St. - 9th floor Boston, MA 02114

Dear Ms. Soper:

On behalf of the Barnstable Town Council, I wish to express our strong support for Barnstable's updated Open Space and Recreation Plan. Several Town Departments closely collaborated in the effort: Conservation, Recreation, Planning, and Information Technology. Importantly, we also benefited greatly from key contributions from volunteers Lindsey Counsell, Chair of our Land Bank Committee, David Hendrycks of AmeriCorps and John Parker of the Conservation Commission. Our capable consultant, Jeff Thibodeau provided a wealth of experience and excellent leadership. It proved a big job, but our Committee met the challenge with much enthusiasm and equal determination.

Returning to the product, we believe the updated plan will prove an invaluable resource in guiding our land acquisition efforts going forward. Barnstable has a long history of open space acquisition, and along the way we've been fortunate to receive the generous support (both technical and financial) of your program. Barnstable, through the submittal of this plan, hopes to see the relationship continue.

Thank you for the opportunity to comment, and thank you for your kind consideration of our plan.

Sincerely,

RBran

Gary Brown, President Barnstable Town Council

Prepared By:



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Town of Barnstable

Conservation Commission 200 Main Street, Hyannis, MA 02601 E-mail: conservation@town.barnstable.ma.us

Office: 508-862-4093

Fax: 508-778-2412

May 16, 2005

Ms. Jennifer Soper, Acting Director Division of Conservation Services EOEA 100 Cambridge St. - 9th floor Boston, MA 02114

Dear Ms. Soper:

On behalf of the Conservation Commission, I would like to express our strong support for Barnstable's newly updated Open Space and Recreation Plan. The Commission played a firsthand role in the development of the new Plan, with our Vice Chairman and our Conservation Administrator closely participating. We are indebted to the larger Open Space Planning Committee for their dedication, diligence and team play out of which our Plan emerged . We believe the document will provide the Town with an extremely useful context for evaluating new land acquisition proposals, whether for conservation, recreation or other municipal use. In the future as in the past, we expect to rely heavily on our new Plan to guide our acquisition efforts.

We are hopeful that our new Plan will exceed your expectations, and we very much look forward to the opportunity to once again compete with other municipalities for Self Help funding as administered through your office.

Thank you for the opportunity to comment, and thank you for your past support to our town.

Sincerely,

John aborded

John Abodeely, Chairman Barnstable Conservation Commission.

Prepared By:



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning



Town of Barnstable **Planning Department** 200 Main Street, Hyannis, Massachusetts 02601

(508) 862-4786 Fax (508) 862-4725

May 18, 2005

Ms. Jennifer Soper, Acting Director Division of Conservation Services EOEA 100 Cambridge St. - 9th floor Boston, MA 02114

Dear Ms. Soper:

On behalf of the Planning Board, I would like to express our strong support for Barnstable's newly updated Open Space and Recreation Plan. The Planning Board is in the process of updating the Town of Barnstable's Local Comprehensive Plan adopted by the Town Council October 30, 1997 and approved by the Cape Cod Commission February 12, 1998. We hope to have our update approved by December 2005 and will utilize the new Open Space and Recreation Plan as the basis for our revised Section 6.0 entitled Open Space and Recreation.

We are thankful to the larger Open Space Planning Committee for their dedication and diligence in crafting the plan. We believe the document will provide the Town with an extremely useful context for evaluating new land acquisition proposals for conservation, recreation or other municipal land uses.

We look forward to the opportunity to assist the Town of Barnstable in its competition with other municipalities for Self Help funding.

Thank you for the opportunity to comment, and thank you for your past support to our town.

Sincerely,

A. Roy Fogelgren, Chairman Barnstable Planning Board

Prepared By:



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TOWN OF BARNSTABLE BARNSTABLE RECREATION DIVISION DIVISION MANAGER DAVID CURLEY

DAVID CURLEY 141 Bassett Lane Hyannis, MA 02601 Tel: 508-790-6345 Fax: 508-790-6279 Recreation@town.barnstable.ma.us

To:Jennifer Soper, Executive Office Environmental Affairs
Division of Consumer Service
251 Causeway Street, Boston, Ma. 02114From:David Curley, Director of Recreation
Rereation & Open Space Plan
Date:Date:May 10, 2005

Dear Jennifer Soper,

During the March, 2005, regularly scheduled monthly meeting of the Barnstable Recreation Commission, the board voted unanimously in finalizing their Open Space Recreation Needs in the Town of Barnstable. The Recreation Board discussed this topic in length as the Town Board recognizes the existing outdoor facilities are not adequate in servicing our Town youth through adult population. The Barnstable Recreation prioritized open space needs are:

- Construction of additional field space throughout the Town.
 - 1. Develop multi-use youth fields, specifically designated for baseball and softball.
 - 2. Construction of an adult softball complex (lighted fields).
 - 3. Development of multi-use field to accommodate lacrosse, soccer, and football.
- Development, maintenance and expansion of swimming facilities for our residents and visitors.
 - 1. Develop an appropriate site for the Rowing and Crew Programs.
 - 2. Expand or purchase additional waterfront area in the Marstons Mills/Cotuit areas.
 - 3. Develop additional parking for the Craigville and Covell beach sites.
 - Develop waterfront areas for kite surfing and canoeing.
- Develop, maintain, and expand the Town's bike trails. Provide a connector to other Town bike trails.

The Barnstable Recreation Commission feel strongly the above prioritize needs should and must be met. Additional revenue and recreational services will become a reality if the above needs are accomplished. The Barnstable Recreation Commission has met with local boards, schools, and community organizations in determining the Town's Open Space needs. If you require additional information, please do not hesitate in calling me.

Respectfully submitted,

Clyde Takala

Clyde Takala Recreation Commission Chairperson

Prepared By:

XF.

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CAPE COD COMMISSION

3225 MAIN STREET P.O. BOX 226 BARNSTABLE, MA 02630 (508) 362-3828 FAX (508) 362-3136 E-mail: frontdesk@capecodcommlasion.org

May 16, 2005

Jennifer Soper Executive Office of Environmental Affairs Division of Conservation Services 251 Causeway Street Boston, MA 02114

Re: Barnstable Open Space and Recreation Plan

Dear Ms. Soper:

The Cape Cod Commission staff has reviewed the *Draft 2005 Town of Barnstable Open Space and Recreation Plan* and would like to recommend its approval by the Division o Conservation Services.

This plan provides both a comprehensive analysis of the town's open space and recreational needs and serves as an important framework for implementing the community's land conservation and recreation planning goals. The Barnstable plan incorporates the open space goals of the county's Regional Policy Plan and advances several of its recommended actions. The plan identifies creative strategies to impleme Barnstable's open space needs; this information is particularly useful given the high c of land and the limited funds for acquisition. Future strategies include both the acquisition of smaller "linkage" parcels as well as pursuing various alternatives to fee acquisition. The goals and objectives of the plan, including pursuing connections with the Cape Cod Pathways trail network, have regional as well as local benefit.

We appreciate the opportunity to comment on this plan. Please let me know if you ne any additional information.

Sincerely, argo L. Fenn **Executive** Director

David Ansel, Barnstable representative to the Cape Cod Commission Tom Broadrick, Barnstable Director of Zoning, Planning, and Historic Preservation

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Prepared By:



CC:

<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning



Office: 508-862-4694 FAX: 508-790-6307 **Human Resources**

230 South Street, Hyannis MA 02601 Email: <u>humanresources@town.barnstable.ma.us</u> Website: <u>www.town.barnstable.ma.us</u>

> William E. Cole Director

The Town of Barnstable

May 13, 2005

Jeff Thibodeau, Principal Centerline Studios, Inc. P.O. Box 341 Orleans, MA 02653

Dear Mr. Thibodeau:

I am writing this letter in support of the 2005 Barnstable Open Space and Recreation Plan. I have reviewed the draft and have shared it with Paul Nevosh of the Barnstable Disability Commission.

While I realize that the partial accessibility inventory was included to provide general guidance and establish goals and objectives for the transition plan, I would like to see a more comprehensive inventory undertaken in the immediate future. I know that the Barnstable Disability Commission would be willing to continue their efforts in expanding this inventory.

My only other comment concerns the transition plan outlined in Appendix E-4. I view the plan as an appropriate first step, but it should also be more specific and address more of the long-standing accessibility issues in the Town.

In conclusion, I recommend approval of the 2005 Barnstable Open Space and Recreation Plan and will pledge my continued support of the goal of making Barnstable more accessible to all its citizens and visitors.

Sincerely,

William E. Cole Human Resources Director/ADA Coordinator

cc: David Hendryks, Conservation Al Mecher, Barnstable Disability Commission - Chair Paul Nevosh, Barnstable Disability Commission – Vice-Chair

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SECTION 11



- Barnstable County Department of Health and Environment, *Barnstable Public Bathing Beach Water Quality Report*, 2004.
- Cape Cod Commission, Cape Cod Atlas of Tidally Restricted Salt Marshes: Town of Barnstable, December 2001.
- Institute for Regional Development, Bridgewater College, *Town of Barnstable Citizen Survey* 2004, report authored by Jennifer Reid, M.P.A., March 2004.
- Massachusetts Department of Conservation and Recreation, Areas of Critical Environmental Concern 2003, Executive Office of Environmental Affairs, Boston, MA., 2004.
- Massachusetts Department of Revenue Division of Local Services Property Tax Bureau, "Taxpayer's Guide to Classification and Taxation of Agricultural/Horticultural Land in Massachusetts", brochure dated October 1997.
- Massachusetts Division of Conservation Services, *Massachusetts Outdoors 2000!*, the Statewide Comprehensive Outdoor Recreation Plan (SCORP), Executive Office of Environmental Affairs, Boston, MA., 2000.
- Massachusetts Division of Fisheries and Wildlife, *BioMap and Living Waters Report, Core Habitats of Barnstable*, The Natural Heritage and Endangered Species Program, Executive Office of Environmental Affairs, Boston, MA., 2004.
- Massachusetts Division of Fisheries and Wildlife, *Certified Vernal Pools, Town of Barnstable*, The Natural Heritage and Endangered Species Program, Executive Office of Environmental Affairs, Boston, MA., 2002.

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- Massachusetts Division of Fisheries and Wildlife, Priority Habitats Atlas Massachusetts' Priority Natural Communities and Habitats of State Listed Rare Species, The Natural Heritage and Endangered Species Program, Executive Office of Environmental Affairs, 2003.
- Saad, Dale L. Ph. D., Application for a Federal No Discharge Designation For The Three Bays/Centerville Harbor Area in the Town of Barnstable, Massachusetts, Coastal Health Resource Coordinator, Town of Barnstable Health Division, 2000.
- Swain, Patricia C. and Kearsley, Jennifer B., Classification of the Natural Communities of Massachusetts (Draft), Massachusetts Natural Heritage and Endangered Species Program, Executive Office of Environmental Affairs, Boston, MA., July 2000.
- The Compact of Cape Cod Conservation Trusts, Inc., *Cape Cod Priority Ponds Project: A Land Conservation Guide for Cape Cod's Freshwater Ponds*, 2003.
- The Compact of Cape Cod Conservation Trusts, Inc., *Cape Cod Wildlife Conservation Project:* A Strategy for Preserving Natural Diversity, 1998.
- The Compact of Cape Cod Conservation Trusts, Inc., *Take Back the Cape Discovering Opportunities for Undevelopment*, Sunderland Printing, Hyannis, MA., 2001.

Town of Barnstable, Conservation and Recreation Inventory, Barnstable Assessors Office, 2004.

- Town of Barnstable, *Town of Barnstable Local Comprehensive Plan*, prepared by the Barnstable Local Planning Committee, 1997.
- Town of Barnstable, *Town of Barnstable Local Comprehensive Plan Draft, Section 6.0 Open Space and Recreation*, prepared by the Barnstable Local Planning Committee, 2005
- Town of Barnstable, *The Town of Barnstable Open Space and Recreation Plan*, prepared by the Town Open Space and Recreation Plan Committee, July 1997.
- Town of Barnstable, *Town of Barnstable Report on Town Ways to Water*, Barnstable Property Management Office, Hyannis, MA, 2000.
- Town of Barnstable, *Town of Barnstable Zoning Bylaws*, updated through Special Town Meeting, June 1999.

Web sites:

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CENTERLINE STUDIOS INC. Landscape Architecture and Planning Barnstable County Department of Health and Environment, <u>http://www.barnstablecountyhealth.org/</u>

Cape Cod Commission, http://www.capecodcommission.org/

Massachusetts Bureau of Waste Site Cleanup, *City of Barnstable*, Department of Environmental Protection, February 2005, <u>http://www.mass.gov/dep/bwsc/sites/report.htm</u>

Massachusetts Division of Employment and Training, http://www.detma.org/

Massachusetts Executive Office of Environmental Affairs, http://commpres.env.state.ma.us/community/cmty_main.asp?communityID=20

Metropolitan Area Planning Council, <u>http://www.mapc.org/data_gis/data_center_data.html</u>

Massachusetts Natural Heritage and Endangered Species Program, http://www.mass.gov/dfwele/dfw/nhesp/nhesp.htm

The Compact of Cape Cod Conservation Trusts, Inc., http://www.compact.cape.com/

Town of Barnstable, Massachusetts, <u>http://www.town.barnstable.ma.us/tob02/default.asp</u>

Town of Barnstable, 2004 Citizen Survey, Town Manager's Office, http://www.town.barnstable.ma.us/tob02/depts/TownManager/04survey.pdf

Town of Barnstable, *Affordable Housing Plan*, p.23, <u>http://www.mass.gov/dhcd/ToolKit/PProd/apBarn.pdf</u>

U.S. Census 2000 American Fact Finder, http://factfinder.census.gov/home/saff/main.html

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Appendix A Non Regulatory Land Protection Tools

Following is a descriptive list of non-regulatory tools that may be used to protect land from development. To determine which protection technique is best suited to each targeted parcel, the following set of needs and circumstances should be evaluated:

Needs and Circumstances

- 1. Needs of the community
 - Is the parcel desirable for access and active use, or resource protection and passive use?
 - Are acquisition funds available (cash donations, town appropriation, outside grants?)
 - Is the parcel needed immediately or in the future?
- 2. Needs of the landowner
 - Are income tax or property tax advantages, or cash most important for landowner's financial situation?
 - Is continued privacy an issue?
 - Is the landowner sympathetic to public protection?
- 3) Size and value of parcel
 - Is the parcel large enough to protect what needs protection or serve as a linkage?
 - Is the entire parcel needed or only a portion?
- 4) Development pressures
 - Will the parcel likely be available later if not acquired now?
 - Is the real estate market likely to push prices beyond reach or is market declining for the foreseeable future?
 - Can the Town relieve land development pressure through advantageous tax policy?
- 5) Maintenance
 - Can the community manage the property better than current landowner, given expected levels and types of use?
 - Does the Town have the money and expertise to manage the parcel?

Non Regulatory Land Protection Tools

Fee acquisition (conveying full title to land) by:

1. Donation: to the Town or Barnstable Land Trust

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The landowner gives the entire interest in a property (fee simple title) to the Town or charitable conservation organization, such as the Barnstable Land Trust. The donor is relieved of future property taxes because ownership is relinquished. The donor may receive income tax deductions amounting to the appraised fair market value of the land.

The landowner may impose use restrictions on the deed, such as prohibiting motor vehicles, though these limitations may reduce the value of the gift. The landowner may also donate parts of the property in different years or donate undivided interests in the entire property over successive years, in order to maximize income tax benefits.

Land donations are the easiest, quickest and, obviously, cheapest land acquisition methods for the community. A title exam and hazardous waste survey should be conducted prior to conveyance. Deeds specifying conservation use should read, "to be managed under the authority of MGL Chapter 40, section 8C," to ensure the land cannot be devoted to other municipal use. Land donations are subject to Town Meeting approval, or Town Council approval if accepted by the Conservation Commission. Gifts of land to the Barnstable Land Trust do not require municipal approval.

2. Purchase: friendly sale, eminent domain, bargain sale, installment sale

If funds are available, and the landowner cannot or will not donate the parcel, the Town may wish to purchase the fee simple title to the land. The length of time necessary to complete the transaction depends on negotiations, title research, appraisals and Town Meeting scheduling. If bonds are to be issued, the Town Meeting must approve the purchase by a two-thirds majority and a simple majority of a town-wide election is needed to exempt the bonds from the tax levy limit (Proposition 2 1/2.)

The Town has the right to take a key property for public use by eminent domain, if a negotiated price cannot be reached. Even if the Town bases compensation on an accurate appraisal, landowners often feel aggrieved and sue for additional damage awards. Juries typically side with the landowner. Because takings automatically clear away title defects, friendly negotiated sales are often written as eminent domain takings in the Town Meeting article.

Land purchases can also be structured in installments or at bargain prices to satisfy a landowner's tax needs. A bargain sale is one at a price below fair market value by at least 20 per cent. The difference between appraised value and the sale price qualifies as a tax-deductible gift, which can offset the landowner's capital gains tax on the sale.

Open space purchases by the town can receive approximately 50% in reimbursement from the state Self Help and Urban Self Help Programs (M.G.L. c. 132A, s. 11). Towns across the state annually compete for what has amounted to a total of (in recent years) \$8 million. Property acquired with assistance from these state programs must be kept and used at all times for open space purposes. Self Help lands cannot be disposed of or converted to other uses without approval of town meeting, the state legislature and the governor. Even then,

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<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning converted property must be replaced by the town with land of at least equal fair market value and of reasonably equivalent usefulness.

3. Bequest

Property can be given for public use after the landowner's death if his or her will specifies such a disposition. This technique allows the landowner full use and enjoyment of the land during his of her lifetime, while removing the asset from estate tax obligations at the time of death. There are no income tax or property tax savings using this approach and the community gets no immediate use of the property. There is also no assurance that the will won't be altered before decease.

4. Tax title transfer

Tax title properties are parcels acquired by a municipality through foreclosure owing to nonpayment of property taxes (G.L.C. 60.) People may neglect to pay the minor amount of taxes due on their "worthless" wetland parcels and lose their land through foreclosure by the Town. Land values today are generally high enough to dissuade owners from risking the loss of their land through tax default. In the past, though, many properties were acquired by towns through this method.

Once acquired by the community, tax title lands are general purpose municipal lands, usually under the control of the Town Manager. They can be kept, sold by Town Meeting, or transferred to another town agency for a specific use. The Conservation Commission, for example, could request wetlands and parcels with special resource value. Barnstable and Wellfleet are two Cape towns which have regularly transferred these types of parcels to their Conservation Commissions in the past.

5. Reverter clause

Lands can be transferred to one entity with the stipulation that if the grantee fails to honor the grantor's intent, the title will automatically transfer to a third party who will uphold the grantor's intent. An example of this technique was used in the 1960s when the Thacher/Perera family transferred over 200 acres for use by the Boy Scouts' Camp Greenough in Yarmouthport. The deed requires that title transfer to the Yarmouth Conservation Commission if the Scouts discontinue use of the land for scouting/camping.

Less-than fee protection (conveying partial rights to property)

1. Trail Access and other Use Easements

Many landowners are familiar with positive easements, such as for drainage, driveways or utilities. Easements may also be constructed to link open space parcels or to create viewsheds. Unfortunately, most landowners fear the loss of privacy and liability concerns

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sometimes associated with public use. If privacy loss is significant and fair market value is reduced, the Town should lower the tax assessment on the affected parcel accordingly. Massachusetts General Law (c. 21, s. 17C) protects landowners from liability if they allow public access without charging admission, so liability fears are probably exaggerated.

The Cape Cod Pathways Project, sponsored by Barnstable County, encourages landowners to participate in the creation of a linked system of walking trails throughout the Cape. This network would rely on land donations, easements, licenses and purchases. The Town of Barnstable Proposed Cape Cod Pathways Trail Plan was completed in 2003. Its iplementait0n is likely to require the use of access easements over some privately owned parcels.

The Department of Environmental Management's (DEM) Sea Path program, which would grant public strolling rights below the high tide line (currently, public trust rights in this intertidal zone are limited to fishing, fowling and navigation), is relevant to privately owned parcels on both the north and south sides of Town.

2. Conservation Restrictions (G.L. 184 s. 31-33)

Conservation restrictions, also called conservation easements, are voluntary, yet binding legal agreements between a landowner and the Town or conservation organization, such as the Barnstable Land Trust. The landowner is offered powerful incentives through estate tax and federal income tax deductions and property tax relief, to keep parcels in an undeveloped state. The owner keeps control over the land, while the holder of the restriction promises to enforce the terms of protection. The state Secretary of Environmental Affairs and the Town Council must approve each restriction based on the land's environmental significance or other public benefit.

3. Lease

The Town could lease private land for open space needs, such as for a community garden. Leased are effective in their flexibility and "trial-run" aspects. A landowner who is reassured by the community's responsible management of the leased land may be more willing to cooperate later on a more permanent arrangement, such as a donation in fee or conservation restriction. Leases are recorded in the Registry of Deeds and remain in force until their expiration date, even if the land's title is conveyed. Land leased for public use is typically relieved of property tax obligation. No income or estate tax deduction can be claimed due to the temporary nature of the lease.

4. Remainder interest/reserved life estate

A landowner can give or sell land to a town while retaining the right to live on or use the property for the rest of his or her life. The landowner keeps a "reserved life estate" while transferring the remainder interest to the Town. The landowner receives a charitable

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deduction for the value of the land minus the value of the life estate (based on IRS actuarial tables) and minus any depreciation. The landowner typically must still pay property taxes and maintenance costs.

Reserved life estates are typically used by elderly landowners who still need their home, but not their land. Benefits to the community include immediate access to the property and knowledge that, eventually, full control will result.

5. Option/Rights of first refusal

An option is a right, but not an obligation, to purchase a property at an agreed upon price at a specific time. Options allow a town or land trust the time needed to raise funds for a parcel it knows it wants to acquire. Options are particularly useful in times of development pressure and rising realty markets because they lock in a price and take the land off the market. The Town pays a nominal price for the option itself to indicate genuine intent, and records the option. Landowners derive no tax incentives from this technique, but many landowners would prefer to sell their property for conservation than for development.

Rights of first refusal similarly can buy time for the town to assemble acquisition funds, but are less certain than options. These agreements set neither a purchase price nor an execution date. The town cannot determine when the owner will decide to sell the land - now, later or never - but it gives the public the right to determine the land's fate if and when that time comes. No tax incentives accrue to the landowner from these agreements; civic cooperation may be the only motivation.

6. Tax-deferral programs: MGL 61, 61A, 61B (see Section 5 for further discussion)

Working forests, farms and private recreation lands often receive preferential tax treatment under the current use assessment programs (respectively, under MGL c.61, 61A, 61B.) For an in depth discussion of these land protection options, see Section 5.

7. Differential Assessment Programs (Special Act 797 of 1979)

Private retention of open land could be stimulated by Special Act 797 of 1979, which provides the Town with an option to tax open or vacant land at a rate up to 15 percent less than residentially-developed land. It is based on the premise that developed land requires more municipal services and should generate more taxes than open land. The advantage to this program is that it applies indiscriminately throughout the town; everyone gets a tax break for keeping land undeveloped whether they want it or not. The drawback is that the open space rate reduction of 15 percent is much smaller than the discount offered by other techniques, such as conservation restrictions. In 1990, five Massachusetts communities (Bedford, Concord, Norton, Nantucket and Somerset) used this classification program. It is an equitable conservation option that need not cost the town a penny. The town's total tax revenue remains the same; more of the burden is simply shifted onto developed properties.

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Append	dix B: To	wn of E	Barnstab	le Gov	ernment	and Prote	cted Lar	nd						
From Ba	rnstable GIS	S datalay	ver "govt_a	nd_prot_	_land" 9/16	/2005								
sources i Barnstab	including: T le Open Sp	own of B ace Corr	arnstable F nmittee, To	=Y2005 / wn of Ba	Assessor r arnstable P	compiled from ecords, Town roperty Manag e Land Trust	of							
MAP/ PAR	PARCEL	AC.	OWNER/ MGT. AGEN.	ST. NO.	ST. NAME	TOTAL ASSES. VALUE	CUR- RENT USE	CONDITIO N (GOOD, FAIR, POOR)	REC. POTEN. (Y/N)	PUBLIC ACCESS (Y/N)	PURCHASE GRANT SOURCE	ADA INVENTORY STATUS	ZONING (R,C,I)	PRO- TECTED? (Y/N)
274016X 03	274016X0 3	5.03	Barnstabl e County	0	PHINNE Y'S LANE	\$1,720,300	VACANT	GOOD	N	N	N/A	UNKNOWN	R	N
299024	299024	17.88	Barnstabl e County	3195	MAIN ST./RTE 6A(BAR N.)	\$29,361,200	OFFICE	GOOD	N	Y	N/A	UNKNOWN	R	N
300005	300005	3.34	Barnstabl e County	0	MAIN ST./RTE 6A(W.BA RN.)	\$20,900	DISTILLI NG NBASIN	GOOD	N	N	N/A	UNKNOWN	R	N
313007	313007	6.20	Barnstabl e County	155	SOUTH FLINT ROCK ROAD	\$1,280,600	FIRE ACADE MY	POOR	N	N	N/A	UNKNOWN	I	N
315016	315016	4.74	Barnstabl e County	1225	MARY DUNN ROAD	\$421,600	HALFWA Y HOUSE/ PATHW AYS	GOOD	Y	Y	N/A	UNKNOWN	R	Ν
315017	315017	46.99	Barnstabl e County	0	FLINT ROCK ROAD	\$4,405,300	FARM/W OODS	GOOD	Y	Y	N/A	UNKNOWN	R	N
315018	315018	1.87	Barnstabl e County	0	FLINT ROCK ROAD	\$233,800	FARM	GOOD	Y	Y	N/A	UNKNOWN	R	Ν
316004	316004	31.25	Barnstabl e County	0	FLINT ROCK ROAD	\$2,929,700	FARM	GOOD	N	Y	N/A	UNKNOWN	R	Y/CR
317035	317035	12.93	Barnstabl e County	3675	MAIN ST./RTE 6A(BAR	\$530,000	FARM	GOOD	N	Y	N/A	UNKNOWN	R	Y



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317036	317036	1.66	Barnstabl e County	0	FLINT ROCK ROAD	\$207,500	FARM	GOOD	N	Y	N/A	UNKNOWN	R	Ν
317037	317037	1.08	Barnstabl e County	0	FLINT ROCK ROAD	\$135,000	FARM	GOOD	N	Y	N/A	UNKNOWN	R	Ν
317038	317038	5.98	Barnstabl e County	3675	MAIN ST./RTE 6A(BAR N.)	\$893,100	FARMBL DGS.	GOOD	N	Y	N/A	UNKNOWN	R	Ν
SUBTOT AL		138.95				\$42,139,000								
003001	003001	28.88	Barnstabl e Land Trust	30	BAILEY ROAD	\$14,550,300	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
016005	016005	0.11	Barnstabl e Land Trust	1740	MAIN STREET (COTUIT)	\$22,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
016009	016009	0.31	Barnstabl e Land Trust	1800	MAIN STREET (COTUIT)	\$33,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
023019	023019	5.89	Barnstabl e Land Trust	1765	SANTUI T- NEWTO WN ROAD	\$564,600	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
038001	038001	6.25	Barnstabl e Land Trust	0	SAMPS ONS MILL ROAD	\$224,700	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0380710 02	03807100 2	1.84	Barnstabl e Land Trust	329	LITTLE RIVER ROAD	\$137,100	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
053017	053017	0.92	Barnstabl e Land Trust	11	BELAIR LANE	\$264,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y



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0540020 08	05400200 8	1.99	Barnstabl e Land Trust	277	LITTLE RIVER ROAD	\$141,000	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0540020 09	05400200 9	2.80	Barnstabl e Land Trust	291	LITTLE RIVER ROAD	\$146,100	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
060010	060010	3.77	Barnstabl e Land Trust	0	HI RIVER ROAD	\$126,900	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0700080 02	07000800 2	1.12	Barnstabl e Land Trust	115	INDIAN TRAIL	\$749,300	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0700080 04	07000800 4	1.06	Barnstabl e Land Trust	26	SEAPUI T RIVER ROAD	\$746,400	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0700080 07	07000800 7	1.04	Barnstabl e Land Trust	575	GRAND ISLAND DRIVE	\$745,400	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0700080 08	07000800 8	1.04	Barnstabl e Land Trust	557	GRAND ISLAND DRIVE	\$745,400	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0700080 09	07000800 9	1.04	Barnstabl e Land Trust	541	GRAND ISLAND DRIVE	\$745,400	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0700080 11	07000801 1	1.04	Barnstabl e Land Trust	505	GRAND ISLAND DRIVE	\$745,400	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
070025	070025	1.64	Barnstabl e Land Trust	120	INDIAN TRAIL	\$783,200	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
070026	070026	1.18	Barnstabl e Land Trust	312	OYSTER WAY	\$752,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y



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0710050 01	07100500 1	1.04	Barnstabl e Land Trust	244	OYSTER WAY	\$745,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0710050 02	07100500 2	1.04	Barnstabl e Land Trust	264	OYSTER WAY	\$745,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0710050 03	07100500 3	1.00	Barnstabl e Land Trust	282	OYSTER WAY	\$650,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
0710050 04	07100500 4	1.00	Barnstabl e Land Trust	300	OYSTER WAY	\$650,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
072036	072036	6.00	Barnstabl e Land Trust	475	BRIDGE STREET	\$103,900	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
076008	076008	18.20	Barnstabl e Land Trust	0	MARSH VIEW LANE	\$899,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
076012	076012	1.61	Barnstabl e Land Trust	0	PRINCE AVENUE	\$32,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
076017	076017	2.18	Barnstabl e Land Trust	241	PRINCE AVENUE	\$697,600	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
077025	077025	1.08	Barnstabl e Land Trust	26	ROUTE 149	\$68,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
077039	077039	3.48	Barnstabl e Land Trust	3515	FALMOU TH ROAD/R TE 28	\$121,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
077040	077040	0.27	Barnstabl e Land Trust	12	PRINCE AVENUE	\$75,700	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y



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077044	077044	10.98	Barnstabl e Land Trust	70	PRINCE AVENUE	\$450,900	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
080009	080009	2.00	Barnstabl e Land Trust	0	MISTIC DRIVE	\$112,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
093056	093056	1.50	Barnstabl e Land Trust	0	BAYVIE W ROAD	\$74.300	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
093057	093057	2.00	Barnstabl e Land Trust	0	BAYVIE W ROAD	\$36,800	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
114026	114026	0.78	Barnstabl e Land Trust	22	LEONAR D DRIVE	\$518,100	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
114044	114044	1.09	Barnstabl e Land Trust	520	SEA VIEW AVENUE	\$920,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
1150100 02	11501000 2	1.19	Barnstabl e Land Trust	160	EEL RIVER ROAD	\$583,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
115012	115012	3.38	Barnstabl e Land Trust	270	EEL RIVER ROAD	\$1,173,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
118134	118134	1.88	Barnstabl e Land Trust	0	SEAPUI T ROAD	\$620.800	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
1240040 19	12400401 9	2.33	Barnstabl e Land Trust	0	OLD FALMOU TH ROAD	\$198,100	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
1280040 13	12800401 3	1.02	Barnstabl e Land Trust	25	JENKINS LANE	\$158,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y



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1340180 04	13401800 4	0.69	Barnstabl e Land Trust	0	MEADO W LANE	\$190,100	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
1380020 03	13800200 3	1.57	Barnstabl e Land Trust	450	SEA VIEW AVENUE	\$1,247,500	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
1410980 03	14109800 3	1.06	Barnstabl e Land Trust	15	CAILLO UET LANE	\$265,900	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
141106	141106	0.58	Barnstabl e Land Trust	50	EAST BAY ROAD	\$452,100	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
141107	141107	0.97	Barnstabl e Land Trust	100	EAST BAY ROAD	\$640,200	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
141132	141132	0.48	Barnstabl e Land Trust	138	WIANNO AVENUE	\$287,900	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
150007	150007	0.68	Barnstabl e Land Trust	116	RACE LANE	\$84,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
165072	165072	1.12	Barnstabl e Land Trust	0	SOUTH COUNTY ROAD	\$123,200	OPEN SPACE	GOOD	Z	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
167020	167020	2.00	Barnstabl e Land Trust	0	POWER S DRIVE	\$587,500	OPEN SPACE	GOOD	Z	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
168011	168011	0.50	Barnstabl e Land Trust	217	SCUDDE R BAY CIRCLE	\$86,100	OPEN SPACE	GOOD	Z	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
168061	168061	0.52	Barnstabl e Land Trust	207	SCUDDE R BAY CIRCLE	\$19,000	OPEN SPACE	GOOD	Ν	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y



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175007	175007	1.94	Barnstabl e Land Trust	0	E HGHWY(WEST) RTE 6	\$21,800	OPEN SPACE	GOOD	N	Ν	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
175009	175009	7.74	Barnstabl e Land Trust	0	SPRUCE POND ROAD	\$82,700	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
175012	175012	3.98	Barnstabl e Land Trust	0	MIDCAP E HGHWY(WEST) RTE 6	\$44,800	OPEN SPACE	GOOD	N	Ν	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
175013	175013	6.56	Barnstabl e Land Trust	0	MIDCAP E HGHWY(WEST) RTE 6	\$70,100	OPEN SPACE	GOOD	Ν	Z	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
175015	175015	6.20	Barnstabl e Land Trust	0	MIDCAP E HGHWY(WEST) RTE 6	\$66,300	OPEN SPACE	GOOD	N	Ν	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
1760010 03	17600100 3	2.51	Barnstabl e Land Trust	65	SHAWS LANE	\$115,200	OPEN SPACE	GOOD	N	Ν	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
1780040 01	17800400 1	5.57	Barnstabl e Land Trust	0	MAIN ST./RTE 6A(W.BA RN.)	\$201,500	OPEN SPACE	GOOD	Ν	Ν	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
178017	178017	23.27	Barnstabl e Land Trust	0	MAIN ST./RTE 6A(W.BA RN.)	\$1,745,300	OPEN SPACE	GOOD	Ν	Ν	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
178018	178018	9.95	Barnstabl e Land Trust	0	MAIN ST./RTE 6A(W.BA RN.)	\$16,800	OPEN SPACE	GOOD	Ν	Ν	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
178019	178019	1.10	Barnstabl e Land Trust	0	MAIN ST./RTE 6A(W.BA RN.)	\$3,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y

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					MAIN									
178020	178020	5.03	Barnstabl e Land Trust	0	ST./RTE 6A(BAR N.)	\$6,700	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
178021	178021	14.20	Barnstabl e Land Trust	1247	MAIN ST./RTE 6A(W.BA RN.)	\$536,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
180006	180006	1.90	Barnstabl e Land Trust	0	NAVIGA TION ROAD	\$9,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
187042	187042	0.55	Barnstabl e Land Trust	177	SCUDDE R BAY CIRCLE	\$15,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
1910020 02	19100200 2	1.36	Barnstabl e Land Trust	557	OLD STAGE ROAD	\$267,900	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
1970010 02	19700100 2	7.15	Barnstabl e Land Trust	0	MAIN ST./RTE 6A(W.BA RN.)	\$684,300	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
197002	197002	1.51	Barnstabl e Land Trust	58	PARKER ROAD	\$148,300	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
197030	197030	6.92	Barnstabl e Land Trust	0	LOCUST AVENUE	\$128,100	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
199001	199001	20.50	Barnstabl e Land Trust	0	GREAT MARSH ES	\$57,700	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
199007	199007	41.00	Barnstabl e Land Trust	0	GREAT MARSH ES	\$153,800	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
206073	206073	0.84	Barnstabl e Land Trust	33	WATER MAN FARM ROAD	\$360,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y



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206089	206089	0.27	Barnstabl e Land Trust	1122	CRAIGVI LLE BEACH ROAD	\$14,800	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
206107	206107	1.49	Barnstabl e Land Trust	0	CRAIGVI LLE BEACH ROAD	\$13,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
206119	206119	1.61	Barnstabl e Land Trust	54	CRAIG- TIDE WAY	\$14,100	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
206120	206120	0.41	Barnstabl e Land Trust	46	CRAIG- TIDE WAY	\$6,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
206121	206121	0.39	Barnstabl e Land Trust	40	CRAIG- TIDE WAY	\$6,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
206122	206122	0.35	Barnstabl e Land Trust	28	CRAIG- TIDE WAY	\$6,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
207151	207151	0.71	Barnstabl e Land Trust	319	SOUTH MAIN STREET	\$14,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
217007	217007	15.55	Barnstabl e Land Trust	0	BUTTON WOOD LANE	\$703,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
217021	217021	19.95	Barnstabl e Land Trust	0	MAIN ST./RTE 6A(BAR N.)	\$419,100	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
217023	217023	0.44	Barnstabl e Land Trust	130	JOHN MAKI ROAD	\$83,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
217033	217033	0.82	Barnstabl e Land Trust	1820	MAIN ST./RTE 6A(W.BA RN.)	\$36,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y



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217034	217034	0.80	Barnstabl e Land Trust	19	WATER GATE LANE	\$11,300	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
217035	217035	0.48	Barnstabl e Land Trust	37	WATER GATE LANE	\$9,300	OPEN SPACE	GOOD	N	Ν	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
217042	217042	0.95	Barnstabl e Land Trust	45	BUTTON WOOD LANE	\$121,900	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
217043	217043	0.92	Barnstabl e Land Trust	61	BUTTON WOOD LANE	\$12,000	OPEN SPACE	GOOD	N	Ν	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
219002	219002	2.00	Barnstabl e Land Trust	0	GREAT MARSH ES	\$7,500	OPEN SPACE	GOOD	N	Ν	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
226002	226002	2.18	Barnstabl e Land Trust	0	WATER MAN FARM ROAD	\$19,100	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
226108	226108	0.46	Barnstabl e Land Trust	544	OLD CRAIGVI LLE ROAD	\$8,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
226194	226194	0.46	Barnstabl e Land Trust	18	CIRCUIT AVENUE	\$8,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
228153	228153	0.20	Barnstabl e Land Trust	7	RIVERVI EW LANE	\$3,700	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
2281760 03	22817600 3	0.37	Barnstabl e Land Trust	31	RIVERVI EW LANE	\$4,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
2281760 04	22817600 4	0.13	Barnstabl e Land Trust	21	RIVERVI EW LANE	\$3,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y



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2281780 03	22817800 3	0.96	Barnstabl e Land Trust	151	RIVERVI EW LANE	\$5,600	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
228191	228191	0.33	Barnstabl e Land Trust	241	RIVERVI EW LANE	\$6,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
228192	228192	0.45	Barnstabl e Land Trust	251	RIVERVI EW LANE	\$6,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
228193	228193	0.33	Barnstabl e Land Trust	261	RIVERVI EW LANE	\$3,900	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
233008	233008	0.58	Barnstabl e Land Trust	6	NYES NECK ROAD	\$79,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
235013	235013	2.41	Barnstabl e Land Trust	311	OLD NECK LANE	\$221,700	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
235016	235016	5.00	Barnstabl e Land Trust	0	MIDCAP E HGHWY(WEST) RTE 6	\$33,100	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
237005	237005	0.82	Barnstabl e Land Trust	0	MAIN ST./RTE 6A(W.BA RN.)	\$4,600	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
262008	262008	15.55	Barnstabl e Land Trust	0	SANDY NECK	\$3,106,100	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
268150	268150	1.19	Barnstabl e Land Trust	0	WHIP-O- WILL DRIVE	\$115,800	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
275001	275001	5.95	Barnstabl e Land Trust	0	ATTUCK S LANE	\$163,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y



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275005	275005	1.59	Barnstabl e Land Trust	0	ATTUCK S LANE	\$89,900	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
275008	275008	0.09	Barnstabl e Land Trust	0	PHINNE Y'S LANE	\$60,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
2750580 01	27505800 1	2.21	Barnstabl e Land Trust	116	ATTUCK S LANE	\$97,700	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
277013	277013	5.32	Barnstabl e Land Trust	1909	PHINNE Y'S LANE	\$228,300	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
2790170 01	27901700 1	4.79	Barnstabl e Land Trust	NULL	MAIN ST / RTE 6A(BAR N)	\$755,300	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
280002	280002	0.55	Barnstabl e Land Trust	175	PIN OAKS DRIVE	\$271,200	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
289015	289015	1.17	Barnstabl e Land Trust	25	WHIP-O- WILL DRIVE	\$162,600	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
289155	289155	0.23	Barnstabl e Land Trust	24	WHIP-O- WILL DRIVE	\$64,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
289156	289156	0.26	Barnstabl e Land Trust	35	ELIZABE TH LANE	\$65,400	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
300028	300028	2.72	Barnstabl e Land Trust	51	COMME RCE ROAD	\$30,600	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y
300029	300029	1.40	Barnstabl e Land Trust	21	COMME RCE ROAD	\$15,800	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	Ν	R	Y



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301004	301004	3.75	Barnstabl e Land Trust	196	RENDEZ VOUS LANE	\$93,800	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
303002	303002	35.00	Barnstabl e Land Trust	0	SANDY NECK	\$12,337,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
3180110 02	31801100 2	3.09	Barnstabl e Land Trust	319	COMME RCE ROAD	\$34,800	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
3180150 02	31801500 2	1.29	Barnstabl e Land Trust	155	COMME RCE ROAD	\$262,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
318026	318026	6.00	Barnstabl e Land Trust	370	COMME RCE ROAD	\$57,000	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
319132	319132	2.20	Barnstabl e Land Trust	0	COMME RCE ROAD	\$411,500	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
324110	324110	0.33	Barnstabl e Land Trust	23	GOSNO LD STREET	\$4,700	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
3360130 07	33601300 7	2.18	Barnstabl e Land Trust	NULL	INDIAN TRAIL	\$298,900	OPEN SPACE	GOOD	N	N	PRIVATE DONATIONS/ GRANTS	N	R	Y
SUBTOT AL		465.60				\$61,191,500								
090010	090010	0.47	Common wealth of Massach usetts	0	SEA VIEW AVENUE	\$1,753,500	JETTY	GOOD	N	N	N/A	N	R	Y
090011	090011	0.60	Common wealth of Massach usetts	0	INDIAN TRAIL	\$256,000	STATE	GOOD	Y	Y	N/A	N	R	N
108004	108004	16.12	Common wealth of Massach usetts	0	MIDCAP E HGHWY(WEST) RTE 6	\$1,289,600	STATE	GOOD	Y	Y	N/A	N	R	N



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					MIDCAP									
108012	108012	5.30	Common wealth of Massach usetts	0	E HGHWY(WEST) RTE 6	\$503,500	STATE	GOOD	Y	Y	N/A	Ν	R	N
110010	110010	1.04	Common wealth of Massach usetts	0	SANDWI CH TOWN LINE	\$104,000	STATE	GOOD	Y	Y	N/A	N	R	N
110011	110011	2.00	Common wealth of Massach usetts	0	PERCIV AL DRIVE	\$276,000	STATE	GOOD	Y	Y	N/A	N	R	N
2150270 01	21502700 1	1.72	Common wealth of Massach usetts	2145	IYANNO UGH ROAD/R OUTE13 2	\$1,840,600	STATE	GOOD	Y	Y	N/A	N	R	N
2150270 03	21502700 3	4.07	Common wealth of Massach usetts	2161	IYANNO UGH ROAD/R OUTE13 2	\$409,000	STATE	GOOD	Y	Y	N/A	N	R	N
217051	217051	0.45	Common wealth of Massach usetts	0	MAGGIE LANE	\$164,300	RXR SIDING	GOOD	Y	Y	N/A	N	R	N
217052	217052	0.49	Common wealth of Massach usetts	0	MAGGIE LANE	\$67,100	STATE	GOOD	Y	Y	N/A	Ν	R	N
234055	234055	1.67	Common wealth of Massach usetts	1971	IYANNO UGH ROAD/R OUTE13 2	\$125,300	STATE	GOOD	Y	Y	N/A	Ν	R	N
234058B 00	234058B0 0	7.94	Common wealth of Massach usetts	15	SHOOTF LYING HILL RD	\$198,600	STATE	GOOD	Y	Y	N/A	Ν	R	N
234058W 00	234058W 00	1.22	Common wealth of Massach usetts	15	SHOOTF LYING HILL RD	\$91,500	STATE	GOOD	Y	Y	N/A	Ν	R	N
235004	235004	1.00	Common wealth of Massach usetts	2005	IYANNO UGH ROAD/R OUTE13	\$75,000	STATE	GOOD	Y	Y	N/A	Ν	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

					2									
235009	235009	4.21	Common wealth of Massach usetts	1990	IYANNO UGH ROAD/R OUTE13 2	\$300,000	STATE	GOOD	Y	Y	N/A	N	R	N
235014	235014	4.70	Common wealth of Massach usetts	0	MIDCAP E HGHWY(WEST) RTE 6	\$334,900	STATE	GOOD	Y	Y	N/A	Ν	R	N
236005B 00	236005B0 0	44.00	Common wealth of Massach usetts	2240	IYANNO UGH ROAD/R OUTE13 2	\$76,152,300	CCCC/S TATE	GOOD	Y	Y	N/A	N	R	N
236005W 00	236005W 00	45.23	Common wealth of Massach usetts	2240	IYANNO UGH ROAD/R OUTE13 2	\$2,544,200	CCCC/S TATE	GOOD	Y	Y	N/A	N	R	N
2560010 02	25600100 2	2.83	Common wealth of Massach usetts	0	MIDCAP E HGHWY(WEST) RTE 6	\$84,900	STATE	GOOD	Y	Y	N/A	N	R	N
2560010 03	25600100 3	1.00	Common wealth of Massach usetts	0	MIDCAP E HGHWY(WEST) RTE 6	\$30,000	STATE	GOOD	Y	Y	N/A	N	R	N
274016X 01	274016X0 1	9.01	Common wealth of Massach usetts	0	IYANNO UGH ROAD/R OUTE13 2	\$2,919,200	STATE	GOOD	Y	Y	N/A	N	R	N
274016X 04	274016X0 4	7.05	Common wealth of Massach usetts	0	IYANNO UGH ROAD/R OUTE13 2	\$2,411,100	STATE	GOOD	Y	Y	N/A	N	R	N
276060	276060	3.18	Common wealth of Massach usetts	0	MIDCAP E HGHWY(WEST)	\$95,400	STATE	GOOD	Y	Y	N/A	N	R	N



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					RTE 6									
2901010 02	29010100 2	0.05	Common wealth of Massach usetts	0	WEST MAIN STREET	\$135,700	STATE	GOOD	Y	Y	N/A	N	R	N
292137	292137	1.37	Common wealth of Massach usetts	0	FALMOU TH ROAD/R TE 28	\$10,300	STATE	GOOD	Y	Y	N/A	N	R	N
326004	326004	2.15	Common wealth of Massach usetts	225	SOUTH STREET	\$1,019,900	STATE	GOOD	Y	Y	N/A	N	R	N
3271560 01	32715600 1	9.51	Common wealth of Massach usetts	215	IYANNO UGH ROAD/R TE28	\$4,892,700	STATE	GOOD	Y	Y	N/A	N	R	N
3271560 02	32715600 2	4.93	Common wealth of Massach usetts	252	MAIN STREET (HYANNI S)	\$600,000	STATE	GOOD	Y	Y	N/A	N	R	N
328183	328183	10.26	Common wealth of Massach usetts	0	YARMO UTH ROAD	\$1,329,700	STATE	GOOD	Y	Y	N/A	N	R	N
335077	335077	0.80	Common wealth of Massach usetts	0	MARY DUNN ROAD	\$67,500	STATE	GOOD	Y	Y	N/A	N	R	N
SUBTOT AL		194.37				\$100,081,800								
0090010 01	00900100 1	21.40	Fire District	4936	FALMOU TH ROAD/R TE 28	\$1,203,800	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
021009	021009	2.20	Fire District	9	WEST STREET	\$222,700	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
023023	023023	56.50	Fire District	200	SAMPS ONS MILL ROAD	\$4,237,500	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
024152	024152	0.47	Fire District	26	SAVINEL LI ROAD	\$55,400	WATER AND FIRE	GOOD	N	Ν	N/A	N/A	R	N



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025013	025013	29.56	Fire District	4320	FALMOU TH ROAD/R TE 28	\$1,606,400	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
034030	034030	0.35	Fire District	976	MAIN STREET (COTUIT)	\$792,300	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
035044	035044	0.40	Fire District	64	HIGH STREET	\$661,100	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
036002	036002	9.68	Fire District	705	MAIN STREET (COTUIT)	\$958,300	WATER AND FIRE	GOOD	N	Ν	N/A	N/A	R	N
036014	036014	1.00	Fire District	0	MÁIN STREET (COTUIT	\$275,000	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
038004	038004	158.42	Fire District	414	MAIN STREET (COTUIT	\$11,884,200	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
041003C 00	041003C0 0	17.69	Fire District	0	DEVONS HIRE ROAD	\$424,600	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
041003T 00	041003T0 0	0.40	Fire District	0	DEVONS HIRE ROAD	\$9,600	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
041004C 00	041004C0 0	6.90	Fire District	0	NORMA NDIE DRIVE	\$71,300	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
041004T 00	041004T0 0	15.12	Fire District	0	NORMA NDIE DRIVE	\$300,000	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
041005	041005	18.60	Fire District	0	OLD POST ROAD	\$490,000	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
041007C 00	041007C0 0	0.94	Fire District	0	OLD POST ROAD	\$6,700	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
041007T 00	041007T0 0	12.63	Fire District	0	OLD POST ROAD	\$452,100	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
041008	041008	10.63	Fire District	0	OLD POST ROAD	\$395,800	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N



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	r			r				r	r	1		T	1	
			Fire		OLD		WATER							
041009	041009	6.91	District	0	POST		AND							
			2.00.000		ROAD	\$300,500	FIRE	GOOD	N	N	N/A	N/A	R	N
			Fire		OLD		WATER							
042002	042002	1.10	District	0	POST		AND							
			District		ROAD	\$55,000	FIRE	GOOD	N	N	N/A	N/A	R	N
			Fire		OLD		WATER							
042003	042003	28.60	Fire District	1940	POST		AND							
			District		ROAD	\$1,307,900	FIRE	GOOD	N	Ν	N/A	N/A	R	N
			Fine		OLD		WATER							
042006	042006	7.49	Fire	0	POST		AND							
			District		ROAD	\$317,700	FIRE	GOOD	N	Ν	N/A	N/A	R	Ν
			i		OLD		WATER							
042007	042007	19.45	Fire	0	POST		AND							
			District	-	ROAD	\$586,300	FIRE	GOOD	Ν	Ν	N/A	N/A	R	Ν
			_ ·	1	OLD	<i>+</i> , 	WATER							
042008	042008	9.97	Fire	0	POST		AND							
012000	0.2000	0.01	District	Ŭ	ROAD	\$377,300	FIRE	GOOD	N	Ν	N/A	N/A	R	N
					OLD	<i>\\</i> 011,000	WATER	0000			14/7	14/7		
042009	042009	6.26	Fire	0	POST		AND							
042005	042003	0.20	District	Ū	ROAD	\$281,200	FIRE	GOOD	N	Ν	N/A	N/A	R	Ν
					WINSLO	Ψ201,200	WATER	0000				11/7		
0420100	04201000	5.57	Fire	0	W BOG		AND							
01	1	5.57	District	0	ROAD	\$156,400	FIRE	GOOD	N	Ν	N/A	N/A	R	N
				ł	NORMA	φ130, 4 00	WATER	0000	IN	IN	IN/A	11/7	IX I	IN
0420100	04201000	6.90	Fire	0	NDIE		AND							
02	2	0.90	District	0	DRIVE	\$180,100	FIRE	GOOD	N	Ν	N/A	N/A	R	N
					NORMA	φ100,100	WATER	GOOD	IN	IN	IN/A	IN/A	N	IN
042014C	042014C0	4.81	Fire	89	NDIE									
00	0	4.01	District	69	DRIVE	\$76,300	AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N
						\$70,300		GOOD	IN	IN	IN/A	IN/A	ĸ	IN
042014T	042014T0	0.44	Fire		NORMA		WATER							
00	0	6.11	District	89	NDIE	¢400.000	AND	0000			N1/A	N1/A	_	
					DRIVE	\$166,000	FIRE	GOOD	N	N	N/A	N/A	R	N
050000	050000	5.00	Fire		OLD		WATER							
058008	058008	5.29	District	0	POST	\$ 000 655	AND	0000		. I		N 1/A	_	
					ROAD	\$628,200	FIRE	GOOD	N	N	N/A	N/A	R	N
			Fire		OLD		WATER							
059012	059012	145.86	District	1941	POST	• · · · · ·	AND						_	
			2.000		ROAD	\$4,022,300	FIRE	GOOD	N	N	N/A	N/A	R	N
					CROOK									
065002T	065002T0	12.14	Fire	124	ED		WATER							
00	0	12.17	District	127	CARTW		AND						_	
					AY	\$448,300	FIRE	GOOD	N	N	N/A	N/A	R	N
					CROOK									
065002W	065002W	28.09	Fire	124	ED		WATER							
00	00	20.09	District	124	CARTW		AND							
					AY	\$607,900	FIRE	GOOD	N	N	N/A	N/A	R	N



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							WATER							
078092	078092	1.82	Fire	270	ROUTE		AND							
			District		149	\$1,610,600	FIRE	GOOD	Ν	Ν	N/A	N/A	R	Ν
					POPPLE									
0850010	08500100	76.09	Fire	0	BOTTO		WATER							
01	1	10.00	District	Ŭ	M ROAD		AND							
						\$4,280,100	FIRE	GOOD	N	N	N/A	N/A	R	N
0850010	08500100	~~~~	Fire		CROCK		WATER							
02	2	29.82	District	0	ER	¢4 077 400	AND	0000	N	NI	N1/A	N1/A		N
					ROAD MAIN	\$1,677,400	FIRE WATER	GOOD	N	N	N/A	N/A	R	N
118012	118012	0.65	Fire	1122	STREET		AND							
110012	110012	0.05	District	1122	(OST.)	\$165,000	FIRE	GOOD	Ν	Ν	N/A	N/A	R	Ν
					MAIN	φ100,000	WATER	CCOD			14/7	14/7	I.	
118110	118110	1.61	Fire	999	STREET		AND							
		-	District		(OST.)	\$772,800	FIRE	GOOD	Ν	Ν	N/A	N/A	R	Ν
			Fire		MAIN		WATER							
118120	118120	1.00	Fire District	0	STREET		AND							
			District		(OST.)	\$8,800	FIRE	GOOD	N	N	N/A	N/A	R	N
			Fire		MAIN		WATER							
119002	119002	14.30	District	1317	STREET		AND							
					(OST.)	\$3,622,900	FIRE	GOOD	N	N	N/A	N/A	R	N
110000	110000	44 74	Fire	4400	MAIN		WATER							
119009	119009	11.71	District	1138	STREET (OST.)	\$843,100	AND FIRE	GOOD	Ν	N	N/A	N/A	R	Ν
					· · · · ·	3043,100	WATER	GOOD	IN	IN	IN/A	IN/A	ĸ	IN
119013	119013	8.00	Fire	0	MILNE		AND							
110010	110010	0.00	District	Ŭ	ROAD	\$367,400	FIRE	GOOD	Ν	Ν	N/A	N/A	R	Ν
					WINTER	,	WATER							
119038	119038	1.37	Fire	79	GREEN		AND							
			District		CIRCLE	\$146,800	FIRE	GOOD	Ν	N	N/A	N/A	R	Ν
			Fire		MAIN		WATER							
119039	119039	14.60	District	1240	STREET		AND							
			Diotriot		(OST.)	\$658,000	FIRE	GOOD	N	N	N/A	N/A	R	N
440000	440000	0.55	Fire		MAIN		WATER							
119060	119060	3.55	District	0	STREET	¢444.000	AND	0000	N	N	N1/A	N1/A		N
					(OST.)	\$411,800	FIRE	GOOD	N	N	N/A	N/A	R	N
141024	141024	2.74	Fire	15	LINDEN		WATER AND							
141024	141024	2.14	District	15	LANE	\$479,500	FIRE	GOOD	Ν	N	N/A	N/A	R	Ν
					LUMBER	ψτι 0,000	WATER	0000	11		11/7	11/7		
146001	146001	2.10	Fire	0	T MILL		AND							
			District	ĩ	ROAD	\$157,500	FIRE	GOOD	Ν	Ν	N/A	N/A	R	Ν
			Fire		NYE	. ,	WATER							
148002	148002	2.26	Fire District	485	ROAD		AND							
			District		NOAD	\$192,100	FIRE	GOOD	N	N	N/A	N/A	R	N



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148006	148006	0.70	Fire District	486	NYE ROAD	\$72,200	WATER AND FIRE	GOOD	N	Ν	N/A	N/A	R	N
148008	148008	26.98	Fire District	0	OLD FALMOU TH ROAD	\$1,940,800	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N
148009	148009	2.01	Fire District	0	NYE ROAD	\$170,900	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
148010	148010	5.41	Fire District	465	NYE ROAD	\$436,900	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
148156	148156	1.92	Fire District	0	NYE ROAD	\$163,200	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
154009	154009	1.47	Fire District	2160	MEETIN GHOUS E WAY/RT E 149	\$147,000	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N
169010	169010	29.85	Fire District	0	FALMOU TH ROAD/R TE 28	\$1,967,100	WATER AND FIRE	GOOD	Ν	N	N/A	N/A	R	N
189037	189037	1.36	Fire District	319	OLD STAGE ROAD	\$99,700	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
189058	189058	3.44	Fire District	1875	FALMOU TH ROAD/R TE 28	\$4,173,200	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N
190107	190107	2.98	Fire District	345	OLD STAGE ROAD	\$253,300	WATER AND FIRE	GOOD	Z	Ν	N/A	N/A	R	N
195010	195010	3.97	Fire District	586	OAK STREET	\$148,100	WATER AND FIRE	GOOD	Z	Ν	N/A	N/A	R	N
197039	197039	0.65	Fire District	1633	MAIN ST./RTE 6A(W.BA RN.)	\$294,500	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N
214011	214011	12.50	Fire District	2081	SERVIC E ROAD	\$2,390,600	WATER AND FIRE	GOOD	N	Ν	N/A	N/A	R	N
247115H 00	247115H0 0	9.03	Fire District	351	OLD TOWN ROAD	\$1,028,100	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N



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247115T	247115T0	04.50	Fire		OLD		WATER							
00	0	24.58	District	391	TOWN ROAD	\$2,370,600	AND FIRE	GOOD	N	N	N/A	N/A	R	Ν
248123	248123	4.75	Fire District	190	OLD CRAIGVI LLE ROAD	\$518,900	WATER AND FIRE	GOOD	Ν	N	N/A	N/A	R	Ν
248137	248137	0.26	Fire District	415	OLD TOWN ROAD	\$75,200	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	Ν
248143	248143	0.20	Fire District	411	OLD TOWN ROAD	\$73,000	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
254018	254018	71.77	Fire District	1650	IYANNO UGH ROAD/R OUTE13 2	\$4,282,500	WATER AND FIRE	GOOD	Ν	N	N/A	N/A	R	Ν
256012	256012	3.39	Fire District	0	MIDCAP E HGHWY(WEST) RTE 6	\$101,700	WATER AND FIRE	GOOD	Ν	N	N/A	N/A	R	N
256013	256013	3.54	Fire District	0	MIDCAP E HGHWY(WEST) RTE 6	\$26,600	WATER AND FIRE	GOOD	Ν	N	N/A	N/A	R	N
273123	273123	2.80	Fire District	1174	PITCHE R'S WAY	\$280,000	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	Ν
277001	277001	1.33	Fire District	523	OLD JAIL LANE	\$153,000	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	Ν
277005	277005	11.80	Fire District	0	OLD JAIL LANE	\$1,221,300	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
277006	277006	34.67	Fire District	1841	PHINNE Y'S LANE	\$1,040,100	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
278015	278015	0.23	Fire District	0	UNCLE HOLMES WAY	\$74,100	WATER AND FIRE	GOOD	Ν	N	N/A	N/A	R	Ν
287016	287016	0.51	Fire District	501	SCUDDE R AVENUE	\$251,800	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N



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299019	299019	0.27	Fire District	3249	MAIN ST./RTE 6A(BAR N.)	\$985,000	WATER AND FIRE	GOOD	Ν	N	N/A	N/A	R	Ν
309230	309230	0.95	Fire District	95	HIGH SCHOOL ROAD EXT	\$1,737,100	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N
313005B 00	313005B0 0	53.64	Fire District	0	BARNST ABLE ROAD	\$3,017,300	WATER AND FIRE	GOOD	Ν	N	N/A	N/A	R	N
313005H 00	313005H0 0	0.24	Fire District	0	HYANNI S- BARNST ABLE ROAD	\$64,700	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N
314003	314003	1.24	Fire District	0	SOUTH FLINT ROCK ROAD	\$111,600	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N
315015	315015	3.72	Fire District	520	FLINT ROCK ROAD	\$465,000	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N
315019	315019	0.50	Fire District	0	FLINT ROCK ROAD	\$93,800	WATER AND FIRE	GOOD	Ν	N	N/A	N/A	R	N
349091	349091	10.76	Fire District	175	OAKMO NT ROAD	\$445,500	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	Ν
SUBTOT AL		1162.48				\$79,626,400								
267099	267099	2.20	Hyannis Water Departm ent	132	SMITH STREET	\$175,700	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	N
267105	267105	0.19	Hyannis Water Departm ent	119	SMITH STREET	\$12,600	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	Ν
267190	267190	18.02	Hyannis Water Departm ent	0	OLD SCHOOL HOUSE RD	\$492,900	WATER AND FIRE	GOOD	Ν	Z	N/A	N/A	R	Ν
268099	268099	14.80	Hyannis Water Departm ent	228	STRAIG HTWAY	\$263,000	WATER AND FIRE	GOOD	Ν	Ν	N/A	N/A	R	Ν



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268201	268201	2.07	Hyannis Water Departm ent	51	SUOMI ROAD	\$157,800	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
268202	268202	2.14	Hyannis Water Departm ent	89	SUOMI ROAD	\$264,200	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
268303	268303	13.71	Hyannis Water Departm ent	0	PAWNE E COURT	\$292,000	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
328140	328140	0.32	Hyannis Water Departm ent	301	YARMO UTH ROAD	\$88,100	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
328141	328141	0.96	Hyannis Water Departm ent	300	YARMO UTH ROAD	\$127,400	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
3281420 01	32814200 1	20.90	Hyannis Water Departm ent	47	OLD YARMO UTH ROAD	\$1,679,500	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
3281420 02	32814200 2	1.90	Hyannis Water Departm ent	0	YARMO UTH ROAD	\$277,900	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
3310030 03	33100300 3	13.20	Hyannis Water Departm ent	0	MARY DUNN ROAD	\$403,900	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
331003X 01	331003X0 1	39.04	Hyannis Water Departm ent	0	MARY DUNN ROAD	\$1,054,100	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
331003X 02	331003X0 2	17.46	Hyannis Water Departm ent	0	MARY DUNN ROAD	\$232,600	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
331003X 04	331003X0 4	9.22	Hyannis Water Departm ent	656	MARY DUNN ROAD	\$330,400	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
331003X 05	331003X0 5	5.98	Hyannis Water Departm ent	656	MARY DUNN ROAD	\$51,100	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N



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331004X 01	331004X0 1	11.87	Hyannis Water Departm ent	629	MARY DUNN ROAD	\$392,300	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
331004X 02	331004X0 2	5.23	Hyannis Water Departm ent	629	MARY DUNN ROAD	\$488,000	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	Ν
331005	331005	7.80	Hyannis Water Departm ent	789	MARY DUNN ROAD	\$553,500	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	N
333012	333012	28.72	Hyannis Water Departm ent	0	MARY DUNN ROAD	\$670,100	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	Ν
333015	333015	10.83	Hyannis Water Departm ent	0	MIDCAP E HGHWY(WEST) RTE 6	\$516,900	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	Ν
333016	333016	1.25	Hyannis Water Departm ent	1118	MARY DUNN ROAD	\$132,100	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	Ν
343023	343023	5.70	Hyannis Water Departm ent	55	OLD YARMO UTH ROAD	\$254,000	WATER AND FIRE	GOOD	N	N	N/A	N/A	R	Ν
SUBTOT AL		233.51				\$8,910,100								
176008	176008	6.58	John Jenkins Forestry	0	CHURC H STREET	\$625,100	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
SUBTOT AL		6.58				\$625,100								
036036	036036	1.90	Mary Barton Conserv ation	58	PUTNAM AVENUE	\$285,300	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
0370210 01	03702100 1	1.00	Mary Barton Conserv ation	125	LANDER S LANE	\$175,000	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
0370210 02	03702100 2	2.35	Mary Barton Conserv ation	130	LANDER S LANE	\$215,200	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y



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0370210 03	03702100 3	1.00	Mary Barton Conserv ation	105	LANDER S LANE	\$175,000	OPEN SPACE	GOOD	Y	Ν	GIFT	N/A	R	Y
037022	037022	1.00	Mary Barton Conserv ation	0	LANDER S LANE	\$175,000	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
0540020 03	05400200 3	2.16	Mary Barton Conserv ation	81	LANDER S LANE	\$214,500	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
0540020 10	05400201 0	2.50	Mary Barton Conserv ation	120	LANDER S LANE	\$213,300	OPEN SPACE	GOOD	Y	Ν	GIFT	N/A	R	Y
0540020 11	05400201 1	1.96	Mary Barton Conserv ation	80	LANDER S LANE	\$210,600	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
0540060 02	05400600 2	4.00	Mary Barton Conserv ation	435	CORDW OOD ROAD	\$560,000	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
054023	054023	4.45	Mary Barton Conserv ation	0	CORDW OOD ROAD	\$37,000	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
0540290 01	05402900 1	1.95	Mary Barton Conserv ation	50	LANDER S LANE	\$216,800	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
0540290 02	05402900 2	1.50	Mary Barton Conserv ation	30	LANDER S LANE	\$209,100	OPEN SPACE	GOOD	Y	Ν	GIFT	N/A	R	Y
055001	055001	116.50	Mary Barton Conserv ation	0	PUTNAM AVENUE	\$6,553,100	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
073004	073004	8.24	Mary Barton Conserv ation	850	OLD POST ROAD	\$339,900	OPEN SPACE	GOOD	Y	N	GIFT	N/A	R	Y
SUBTOT AL		150.51				\$9,579,800								



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034038	034038	1.55	Massach usetts Audubon Society	1023	MAIN STREET (COTUIT)	\$920,300	OPEN SPACE	GOOD	Y	N	N/A	Ν	R	Y
050001	050001	27.00	Massach usetts Audubon Society	0	SAMPS ON'S ISLAND	\$6,480,000	OPEN SPACE	GOOD	Y	Ν	N/A	Ν	R	Y
144009	144009	132.57	Massach usetts Audubon Society	0	BUMPS RIVER ROAD	\$9,942,800	OPEN SPACE	GOOD	Y	N	N/A	Ν	R	Y
144031	144031	1.05	Massach usetts Audubon Society	9	FIVE CORNE RS ROAD	\$11,000	OPEN SPACE	GOOD	Y	N	N/A	Ν	R	Y
1670290 01	16702900 1	1.42	Massach usetts Audubon Society	9	FIVE CORNE RS ROAD	\$12,700	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
167057	167057	0.84	Massach usetts Audubon Society	9	FIVE CORNE RS ROAD	\$9,200	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
168091	168091	5.00	Massach usetts Audubon Society	41	FIVE CORNE RS ROAD	\$235,000	OPEN SPACE	GOOD	Y	Ν	N/A	N	R	Y
1680910 01	16809100 1	0.36	Massach usetts Audubon Society	NULL	FIVE CORNE RS ROAD	\$55,500	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
1680910 02	16809100 2	0.05	Massach usetts Audubon Society	NULL	FIVE CORNE RS ROAD	\$47,200	OPEN SPACE	GOOD	Y	Ν	N/A	N	R	Y
237021	237021	10.19	Massach usetts Audubon Society	2450	MAIN ST./RTE 6A(BAR N.)	\$272,800	OPEN SPACE	GOOD	Y	Ν	N/A	Ν	R	Y
237044	237044	1.34	Massach usetts Audubon Society	2444	MAIN ST./RTE 6A(BAR N.)	\$304,100	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
2380050 02	23800500 2	73.33	Massach usetts Audubon	2452	MAIN ST./RTE 6A(BAR	\$981,800	OPEN SPACE	GOOD	Y	Ν	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			Society		N.)									
			Coolory		,									
258017	258017	18.90	Massach usetts Audubon Society	89	SHEPER DS WAY	\$590,100	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
300020	300020	13.40	Massach usetts Audubon Society	0	RENDEZ VOUS LANE	\$267,700	OPEN SPACE	GOOD	Y	Z	N/A	N	R	Y
300030	300030	0.60	Massach usetts Audubon Society	250	COMME RCE ROAD	\$180,000	OPEN SPACE	GOOD	Y	Z	N/A	N	R	Y
300031	300031	1.08	Massach usetts Audubon Society	216	MILLWA Y	\$97,200	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
318010	318010	1.23	Massach usetts Audubon Society	335	COMME RCE ROAD	\$276,800	OPEN SPACE	GOOD	Y	Ν	N/A	N	R	Y
3191450 02	31914500 2	8.65	Massach usetts Audubon Society	281	INDIAN TRAIL	\$619,500	OPEN SPACE	GOOD	Y	Ν	N/A	N	R	Y
3360500 03	33605000 3	1.02	Massach usetts Audubon Society	106	BONE HILL ROAD	\$239,600	OPEN SPACE	GOOD	Y	Z	N/A	N	R	Y
336095	336095	1.00	Massach usetts Audubon Society	137	BONE HILL ROAD	\$175,000	OPEN SPACE	GOOD	Y	Z	N/A	Ν	R	Y
336096	336096	1.00	Massach usetts Audubon Society	109	BONE HILL ROAD	\$175,000	OPEN SPACE	GOOD	Y	Ν	N/A	N	R	Y
336097	336097	1.02	Massach usetts Audubon Society	87	BONE HILL ROAD	\$153,000	OPEN SPACE	GOOD	Y	Ν	N/A	N	R	Y
336101	336101	7.00	Massach usetts Audubon Society	345	BONE HILL ROAD	\$1,280,100	OPEN SPACE	GOOD	Y	Ν	N/A	N	R	Y



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3370100 01	33701000 1	5.98	Massach usetts Audubon Society	345	BONE HILL ROAD	\$768,600	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
3370100 02	33701000 2	3.86	Massach usetts Audubon Society	345	BONE HILL ROAD	\$591,300	OPEN SPACE	GOOD	Y	Ν	N/A	N	R	Y
3370100 03	33701000 3	1.47	Massach usetts Audubon Society	255	BONE HILL ROAD	\$283,000	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
3370100 04	33701000 4	1.51	Massach usetts Audubon Society	241	BONE HILL ROAD	\$290,700	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
3370100 05	33701000 5	2.02	Massach usetts Audubon Society	347	BONE HILL ROAD	\$47,500	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
3370100 07	33701000 7	8.83	Massach usetts Audubon Society	283	BONE HILL ROAD	\$540,700	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
337016	337016	2.10	Massach usetts Audubon Society	340	BONE HILL ROAD	\$49,400	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
337020	337020	15.96	Massach usetts Audubon Society	0	BONE HILL ROAD	\$3,561,100	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
340001	340001	4.28	Massach usetts Audubon Society	0	EGG ISLAND	\$81,300	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
3510070 02	35100700 2	10.04	Massach usetts Audubon Society	0	STONEY COVE LANE	\$531,000	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
3510070 03	35100700 3	12.02	Massach usetts Audubon Society	0	MAIN ST./RTE 6A(BAR N.)	\$491,900	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
351064	351064	2.44	Massach usetts Audubon Society	0	STONEY COVE LANE	\$42,700	OPEN SPACE	GOOD	Y	Ν	N/A	N	R	Y



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			Massach usetts		STONEY									
352021	352021	10.00	Audubon Society	0	COVE LANE	\$211,500	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
352032	352032	4.37	Massach usetts Audubon Society	0	HARBO R POINT ROAD	\$322,400	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
352066	352066	7.17	Massach usetts Audubon Society	0	HARBO R POINT ROAD	\$431,400	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
352067	352067	4.30	Massach usetts Audubon Society	0	STONEY COVE LANE	\$714,900	OPEN SPACE	GOOD	Y	N	N/A	N	R	Y
SUBTOT AL		405.95				\$32,285,800								
102177	102177	0.33	Massach usetts Departm ent of Environm ental Manage ment	136	WILLIMA NTIC DRIVE	\$75,300	Parkin g lot for boat ramp	GOOD	Y	Y	N/A	UNKNOWN	R	Y
171002	171002	21.90	Massach usetts Departm ent of Environm ental Manage ment	0	SKUNKN ET ROAD	\$2,047,500	STATE FOREST	GOOD	Y	Y	N/A	UNKNOWN	R	Y
194017	194017	0.36	Massach usetts Departm ent of Environm ental Manage ment	576	OAK STREET	\$275,200	STATE FOREST	GOOD	Y	Y	N/A	UNKNOWN	R	Y
215019	215019	32.00	Massach usetts Departm ent of Environm ental	0	MIDCAP E HGHWY(WEST) RTE 6	\$917,300	WOODL OT	GOOD	Ν	Y	N/A	UNKNOWN	R	Y



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			Manage ment											
301064	301064	2.78	Massach usetts Departm ent of Environm ental Manage ment	307	MILLWA Y	\$1,306,600	OPEN SPACE	GOOD	Y	Y	N/A	UNKNOWN	R	Y
SUBTOT AL		57.37				\$4,621,900								
233014	233014	0.22	Massach usetts Division of Fisheries & Wildlife	44	NYES POINT WAY	\$208,300	OPEN SPACE	GOOD	Y	Ν	N/A	UNKNOWN	R	Y
233070	233070	5.88	Massach usetts Division of Fisheries & Wildlife	30	NYES NECK ROAD	\$447,000	OPEN SPACE	GOOD	Y	Ν	N/A	UNKNOWN	R	Y
3300080 01	33000800 1	2.46	Massach usetts Division of Fisheries & Wildlife	523	MARY DUNN ROAD	\$196,500	OPEN SPACE	GOOD	Y	Ν	N/A	UNKNOWN	R	Y
3300080 02	33000800 2	2.51	Massach usetts Division of Fisheries & Wildlife	110	AIRPOR T WAY	\$197,000	OPEN SPACE	GOOD	Y	Ν	N/A	UNKNOWN	R	Y
3300080 03	33000800 3	2.58	Massach usetts Division of Fisheries & Wildlife	60	AIRPOR T WAY	\$197,800	OPEN SPACE	GOOD	Y	Ν	N/A	UNKNOWN	R	Y

Prepared By:



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331007	331007	13.04	Massach usetts Division of Fisheries & Wildlife	0	MARY DUNN ROAD	\$540,300	OPEN SPACE	GOOD	Y	N	N/A	UNKNOWN	R	Y
332015	332015	5.00	Massach usetts Division of Fisheries & Wildlife	885	MARY DUNN ROAD	\$247,500	OPEN SPACE	GOOD	Y	N	N/A	UNKNOWN	R	Y
333010	333010	1.65	Massach usetts Division of Fisheries & Wildlife	0	MIDCAP E HGHWY(WEST) RTE 6	\$37,100	OPEN SPACE	GOOD	Y	N	N/A	UNKNOWN	R	Y
347002	347002	356.27	Massach usetts Division of Fisheries & Wildlife	0	MARY DUNN ROAD	\$7,696,300	OPEN SPACE	GOOD	Y	N	N/A	UNKNOWN	R	Y
348016	348016	0.37	Massach usetts Division of Fisheries & Wildlife	0	MIDCAP E HGHWY(WEST) RTE 6	\$27,900	OPEN SPACE	GOOD	Y	N	N/A	UNKNOWN	R	Y
SUBTOT AL		389.98				\$9,795,700								
1330050 02	13300500 2	9.66	Orenda Wildlife Land Trust	0	MEADO W LANE	\$442,300	OPEN SPACE	GOOD	Ν	N	PRIVATE FUNDING	N	R	Y
134025	134025	0.52	Orenda Wildlife Land Trust	0	MEADO W LANE	\$9,800	OPEN SPACE	GOOD	Ν	N	PRIVATE FUNDING	N	R	Y
1580050 02	15800500 2	5.20	Orenda Wildlife Land Trust	210	MEADO W LANE	\$179,900	OPEN SPACE	GOOD	Ν	N	PRIVATE FUNDING	N	R	Y
187004	187004	2.20	Orenda Wildlife Land Trust	0	BAY LANE	\$51,700	OPEN SPACE	GOOD	Ν	N	PRIVATE FUNDING	N	R	Y



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SUBTOT AL		17.58				\$683,700	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
015002	015002	2.60	Private Land with BLT CR	140	VINEYA RD ROAD	\$719,200	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
0700170 03	07001700 3	3.22	Private Land with BLT CR	350	CARRIA GE ROAD	\$859,600	OPEN SPACE	GOOD	Ν	N	PRIVATE FUNDING	N	R	Y
070018	070018	5.07	Private Land with BLT CR	38	INDIAN TRAIL	\$5,363,700	OPEN SPACE	GOOD	Ν	N	PRIVATE FUNDING	N	R	Y
070022	070022	3.88	Private Land with BLT CR	370	CARRIA GE ROAD	\$2,816,700	OPEN SPACE	GOOD	Ν	N	PRIVATE FUNDING	N	R	Y
071024	071024	10.20	Private Land with BLT CR	15	PHEASA NT PATH	\$495,100	OPEN SPACE	GOOD	Ν	N	PRIVATE FUNDING	N	R	Y
080008	080008	6.82	Private Land with BLT CR	354	MISTIC DRIVE	\$619,100	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
0980230 04	09802300 4	12.28	Private Land with BLT CR	1825	SOUTH COUNTY ROAD	\$3,175,900	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
114002	114002	1.50	Private Land with BLT CR	180	WIANNO HEAD ROAD	\$76,600	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
138001	138001	8.84	Private Land with BLT CR	470	SEA VIEW AVENUE	\$1,756,700	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
138002	138002	1.93	Private Land with BLT CR	452	SEA VIEW AVENUE	\$128,900	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
1690930 03	16909300 3	5.84	Private Land with BLT CR	502	SKUNKN ET ROAD	\$334,500	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y



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236008	236008	15.17	Private Land with BLT CR	2199	MAIN ST./RTE 6A(BAR N.)	\$3,100	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
236013	236013	8.95	Private Land with BLT CR	0	MIDCAP E HGHWY(WEST) RTE 6	\$57,400	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
237030	237030	9.05	Private Land with BLT CR	2361	MAIN ST./RTE 6A(BAR N.)	\$336,500	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
2450980 03	24509800 3	0.69	Private Land with BLT CR	159	FIFTH AVENUE	\$27,500	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
258024	258024	14.85	Private Land with BLT CR	2724	MAIN ST./RTE 6A(BAR N.)	\$1,963,600	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
2590010 02	25900100 2	1.59	Private Land with BLT CR	71	CALVES PASTUR E LANE	\$555,300	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
319146	319146	7.38	Private Land with BLT CR	240	COMME RCE ROAD	\$505,400	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
SUBTOT AL		119.86				\$19,794,800								
028053	028053	0.47	Private Land with Town CR	577	WAKEB Y ROAD	\$14,400	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
051009	051009	5.40	Private Land with Town CR	0	WINDS WEPT WAY	\$219,000	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
0710040 01	07100400 1	134.07	Private Land with Town CR	145	GRAND ISLAND DRIVE	\$8,944,000	OPEN SPACE	GOOD	N	Ν	PRIVATE FUNDING	N	R	Y
226001	226001	4.97	Private Land with Town CR	68	WATER MAN FARM ROAD	\$1,337,800	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y



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2330260 01	23302600 1	0.47	Private Land with Town CR	15	NYES NECK ROAD EAST	\$14,300	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	Ν	R	Y
SUBTOT AL		145.38				\$10,529,500								
321001	321001	12.00	The Nature Conserv ancy	0	SANDY NECK	\$703,800	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	Ν	R	Y
SUBTOT AL		12.00				\$703,800								
050002	050002	83.75	Three Bays Preserva tion Inc.	0	SAMPS ON'S ISLAND	\$2,512,500	OPEN SPACE	GOOD	N	N	PRIVATE FUNDING	N	R	Y
SUBTOT AL		83.75				\$2,512,500								
295016	295016	2.35	Town Airport	0	HYANNI S- BARNST ABLE ROAD	\$235,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N
295018B 03	295018B0 3	2.31	Town Airport	780	ATTUCK S LANE	\$369,600	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	Ν
295018B 04	295018B0 4	0.11	Town Airport	0	ATTUCK S LANE	\$97,300	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	Ν
295018H 03	295018H0 3	0.18	Town Airport	780	ATTUCK S LANE	\$100,600	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	Ν
295018H 04	295018H0 4	1.99	Town Airport	0	ATTUCK S LANE	\$318,400	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	Ν
295022	295022	16.63	Town Airport	0	INDEPE NDENCE DRIVE	\$2,128,600	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N
295030	295030	2.18	Town Airport	0	INDEPE NDENCE DRIVE	\$348,800	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N



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311015	311015	0.81	Town Airport	606	IYANNO UGH ROAD/R OUTE13 2	\$434,400	AIRPOR	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N
311016	311016	0.26	Town Airport	604	IYANNO UGH ROAD/R OUTE13 2	\$314,800	AIRPOR	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N
311029	311029	0.36	Town Airport	499	IYANNO UGH ROAD/R TE28	\$249,800	AIRPOR T	GOOD	Ν	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
311102	311102	2.41	Town Airport	600	BARNST ABLE ROAD	\$815,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
311103	311103	0.23	Town Airport	490	BARNST ABLE ROAD	\$374,300	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
312032	312032	1.00	Town Airport	206	AIRPOR T ROAD	\$195,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
312033	312033	1.26	Town Airport	212	AIRPOR T WAY	\$113,400	AIRPOR T	GOOD	Ν	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
313001B 01	313001B0 1	0.51	Town Airport	0	HYANNI S- BARNST ABLE ROAD	\$75,500	AIRPOR T	GOOD	Ν	Ν	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
313001B 02	313001B0 2	0.88	Town Airport	0	HYANNI S- BARNST ABLE ROAD	\$94,000	AIRPOR T	GOOD	Ν	Ν	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
313001H 00	313001H0 0	1.29	Town Airport	0	HYANNI S- BARNST ABLE ROAD	\$129,000	AIRPOR T	GOOD	N	Ν	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N



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					HYANNI				1				T	
313003B 00	313003B0 0	1.09	Town Airport	0	S- BARNST ABLE ROAD	\$109,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
313003H 00	313003H0 0	2.50	Town Airport	0	HYANNI S- BARNST ABLE ROAD	\$250,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
313008B 00	313008B0 0	29.37	Town Airport	0	SOUTH FLINT ROCK ROAD	\$1,982,500	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
313008H 01	313008H0 1	8.18	Town Airport	0	AIRPOR T WAY	\$662,600	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N
313008H 02	313008H0 2	4.07	Town Airport	0	AIRPOR T WAY	\$348,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
3130120 01	31301200 1	0.77	Town Airport	0	BREED' S HILL ROAD	\$141,600	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
3130120 02	31301200 2	0.23	Town Airport	0	BREED' S HILL ROAD	\$103,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
313013	313013	2.80	Town Airport	29	BREED' S HILL ROAD	\$448,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
313014	313014	2.34	Town Airport	844	HYANNI S- BARNST ABLE ROAD	\$234,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
314022	314022	2.07	Town Airport	15	BREED' S HILL ROAD	\$331,200	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
3140270 05	31402700 5	0.60	Town Airport	45	BREED' S HILL ROAD	\$128,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	Ν



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328108	328108	0.71	Town Airport	280	IYANNO UGH ROAD/R TE28	\$248,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N
329003	329003	450.73	Town Airport	480	BARNST ABLE ROAD	\$88,211,400	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
329004	329004	0.65	Town Airport	94	MARY DUNN WAY	\$74,200	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	Ν	R	N
329008	329008	1.50	Town Airport	0	BROOK S ROAD	\$234,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N
330009	330009	16.51	Town Airport	520	MARY DUNN ROAD	\$437,300	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N
345003	345003	0.39	Town Airport	629	YARMO UTH ROAD	\$91,800	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N
346002	346002	43.50	Town Airport	0	YARMO UTH TOWN LINE	\$5,220,000	AIRPOR T	GOOD	N	N	PRIVATE.PU BLIC/FAA FEDERAL	N	R	N
SUBTOT AL		602.77				\$105,648,100								
033021	033021	0.55	Town Beach	281	OCEAN VIEW AVENUE	\$2,330,900	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
079012	079012	7.28	Town Beach	415	ROUTE 149	\$1,567,400	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
137001	137001	1.02	Town Beach	0	SANDY NECK ROAD	\$17,900	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
137002	137002	8.08	Town Beach	0	SANDY NECK ROAD	\$127,300	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
142039	142039	4.40	Town Beach	290	TOWER HILL ROAD	\$969,300	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N



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163013	163013	14.90	Town Beach	348	EAST BAY ROAD	\$37,615,100	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
206013	206013	10.70	Town Beach	997	CRAIGVI LLE BEACH ROAD	\$17,561,300	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
213008	213008	0.78	Town Beach	460	SHOOTF LYING HILL RD	\$527,000	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
225006	225006	7.23	Town Beach	857	CRAIGVI LLE BEACH ROAD	\$6,799,800	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
287132	287132	4.30	Town Beach	40	IYANOU GH AVENUE	\$5,055,200	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
301009	301009	0.45	Town Beach	329	MILLWA Y	\$420,000	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
301010	301010	0.61	Town Beach	330	MILLWA Y	\$378,400	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
305001	305001	0.95	Town Beach	121	OCEAN AVENUE	\$1,206,600	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
306191	306191	10.00	Town Beach	465	SEA STREET	\$1,336,300	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
323001	323001	0.44	Town Beach	11	HAWES AVENUE	\$453,800	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
324038	324038	13.00	Town Beach	480	OCEAN STREET	\$9,261,700	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
324041	324041	48.06	Town Beach	670	OCEAN STREET	\$21,325,200	BEACH	GOOD	Y	Y	N/A; TOWN FUNDS	YES, LIMITED	R	N
SUBTOT AL		132.75				\$106,953,200								
037009	037009	70.95	Town Cemeter y	280	PUTNAM AVENUE	\$5,450,500	CEMETE RY	GOOD	N	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
037013	037013	11.00	Town Cemeter y	285	PUTNAM AVENUE	\$990,000	CEMETE RY	GOOD	N	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
079013	079013	5.75	Town Cemeter y	437	ROUTE 149	\$414,300	CEMETE RY	GOOD	N	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N

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142058	142058	9.87	Town Cemeter y	0	OLD MILL ROAD	\$1,111,600	CEMETE RY	GOOD	Ν	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	Ν
142103	142103	2.00	Town Cemeter y	0	OLD MILL ROAD	\$156,300	CEMETE RY	GOOD	N	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
153002	153002	8.71	Town Cemeter y	9	PINE STREET	\$587,900	CEMETE RY	GOOD	N	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
153003	153003	5.22	Town Cemeter y	0	CHURC H STREET	\$495,900	CEMETE RY	GOOD	N	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
155034	155034	5.03	Town Cemeter y	0	MEETIN GHOUS E WAY/RT E 149	\$477,900	CEMETE RY	GOOD	N	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
156027	156027	2.55	Town Cemeter y	905	MAIN ST./RTE 6A(W.BA RN.)	\$138,800	CEMETE RY	GOOD	Ν	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	Ν
209051	209051	0.73	Town Cemeter y	61	PHINNE Y'S LANE	\$108,100	CEMETE RY	GOOD	Ν	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
209088	209088	10.30	Town Cemeter y	1705	FALMOU TH ROAD/R TE 28	\$695,300	CEMETE RY	GOOD	Ν	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	Ν
216036	216036	0.58	Town Cemeter y	0	MAIN ST./RTE 6A(BAR N.)	\$113,000	CEMETE RY	GOOD	Ν	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	Ν
279060	279060	4.50	Town Cemeter y	2801	MAIN ST./RTE 6A(BAR N.)	\$855,000	CEMETE RY	GOOD	Ν	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	Ν
299038	299038	1.00	Town Cemeter y	0	MILLWA Y	\$125,000	CEMETE RY	GOOD	Ν	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
299040	299040	0.41	Town Cemeter y	0	MILLWA Y	\$89,200	CEMETE RY	GOOD	Ν	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
307185	307185	5.40	Town Cemeter y	0	OAK NECK ROAD	\$443,000	CEMETE RY	GOOD	Ν	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
307189	307189	15.00	Town Cemeter y	0	SEA STREET	\$1,275,000	CEMETE RY	GOOD	Ν	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	Ν



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308165	308165	0.83	Town Cemeter y	509	SOUTH STREET	\$114,400	CEMETE RY	GOOD	N	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
335055	335055	6.24	Town Cemeter y	1460	MARY DUNN ROAD	\$503,900	CEMETE RY	GOOD	N	Y	N/A/; TOWN FUNDS	YES, LIMITED	R	N
SUBTOT AL		166.07				\$14,145,100								
005017	005017	30.00	Town Conserv ation	9999	CRAWF ORD ROAD	\$9,000,000	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
005018	005018	34.48	Town Conserv ation	9999	TRACEY ROAD	\$10,344,000	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
005019	005019	15.00	Town Conserv ation	9999	COTUIT COVE ROAD	\$1,912,500	OPEN SPACE	GOOD	Y	Y	N/A	N/A	R	Y
006012	006012	0.33	Town Conserv ation	0	SANTUI T ROAD	\$99,600	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
006049	006049	16.00	Town Conserv ation	0	SANTUI T ROAD	\$523,400	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
019008	019008	0.72	Town Conserv ation	0	SANTUI T ROAD	\$118,700	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
019014	019014	0.43	Town Conserv ation	429	SANTUI T ROAD	\$99,600	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
019015	019015	0.58	Town Conserv ation	409	SANTUI T ROAD	\$109,000	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
019074	019074	0.53	Town Conserv ation	138	POPON ESSETT ROAD	\$105,600	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
019144	019144	0.67	Town Conserv ation	124	POPON ESSETT ROAD	\$115,200	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
019145	019145	0.53	Town Conserv ation	150	POPON ESSETT ROAD	\$5,300	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
019166	019166	0.42	Town Conserv ation	421	SANTUI T ROAD	\$99,100	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
020114	020114	0.96	Town Conserv ation	0	SCHOOL STREET	\$98,000	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

021001	021001	6.11	Town Conserv ation	0	SANTUI T ROAD	\$580,500	OPEN SPACE	GOOD	Y	Y	N/A	N/A	R	Y
021015	021015	4.58	Town Conserv ation	0	CEDAR GROVE LANE	\$21,800	OPEN SPACE	GOOD	Y	Y	N/A	N/A	R	Y
021016	021016	4.60	Town Conserv ation	0	OLD OYSTER ROAD	\$437,000	OPEN SPACE	GOOD	Y	Y	N/A	N/A	R	Y
021105	021105	15.00	Town Conserv ation	0	OXFOR D DRIVE	\$79,700	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
0250490 02	02504900 2	6.58	Town Conserv ation	270	SANDAL WOOD DRIVE	\$625,100	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
027120C 00	027120C0 0	3.30	Town Conserv ation	140	LAURIE S LANE	\$28,100	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
027120T 00	027120T0 0	1.11	Town Conserv ation	140	LAURIE S LANE	\$9,400	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
029008	029008	37.50	Town Conserv ation	425	SANTUI T- NEWTO WN ROAD	\$4,926,900	OPEN SPACE	GOOD	Y	Y	N/A	N/A	R	Y
039001	039001	19.75	Town Conserv ation	0	FALMOU TH ROAD/R TE 28	\$1,185,000	OPEN SPACE	GOOD	Y	Y	N/A	N/A	R	Y
039057	039057	0.85	Town Conserv ation	32	THANKF UL LANE	\$87,900	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
039068	039068	0.81	Town Conserv ation	524	SAMPS ONS MILL ROAD	\$90,500	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
039069	039069	0.59	Town Conserv ation	542	SAMPS ONS MILL ROAD	\$79,500	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
039070	039070	0.61	Town Conserv ation	558	SAMPS ONS MILL ROAD	\$80,500	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
039071	039071	0.69	Town Conserv ation	570	SAMPS ONS MILL	\$84,500	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

					ROAD									
047001	047001	1.65	Town Conserv ation	1636	RACE LANE	\$165,000	OPEN SPACE	GOOD	Y	Y	N/A	N/A	R	Y
047002	047002	1.65	Town Conserv ation	1612	RACE LANE	\$165,000	OPEN SPACE	GOOD	Y	Y	N/A	N/A	R	Y
047003	047003	1.03	Town Conserv ation	1590	RACE LANE	\$103,000	OPEN SPACE	GOOD	Y	N	N/A	N/A	R	Y
060003	060003	0.62	Town Conserv ation	400	RIVER ROAD	\$81,000	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
0790020 01	07900200 1	5.36	Town Conserv ation	288	LOVELL' S LANE	\$381,900	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
086001	086001	1114.30	Town Conserv ation	875	SERVIC E ROAD	\$62,679,400	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
107001	107001	0.69	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$63,400	OPEN SPACE	GOOD	Ν	N	N/A	N/A	R	Y
108003	108003	9.63	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$866,700	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
108010	108010	3.44	Town Conserv ation	542	MAPLE STREET	\$395,600	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
110008	110008	2.00	Town Conserv ation	0	WAYSID E LANE	\$73,800	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
112003	112003	3.72	Town Conserv ation	0	MAIN ST./RTE 6A(W.BA RN.)	\$18,600	OPEN SPACE	GOOD	N	N	N/A	N/A	R	Y
126026	126026	0.52	Town Conserv ation	28	BRANCH TERRAC E	\$64,600	OPEN SPACE	GOOD	N	Y	N/A	N/A	R	Y
127025	127025	0.81	Town Conserv ation	79	CHRIST MAS WAY	\$90,500	OPEN SPACE	GOOD	Y	N	N/A	N/A	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			Town		COACH									
127041	127041	13.24	Conserv	240	MAN		OPEN							
12/011	127011	10.21	ation	210	LANE	\$360,100	SPACE	GOOD	N	Y	N/A	N/A	R	Y
100004T	40000470		Town		OST	+								
128001T 00	128001T0 0	6.22	Conserv	0	W.BARN		OPEN							
00	0		ation		. RD	\$236,400	SPACE	GOOD	Y	Y	N/A	N/A	R	Y
128001W	128001W		Town		OST									
00	00	48.97	Conserv	0	W.BARN		OPEN							
			ation		. RD	\$1,248,700	SPACE	GOOD	Y	N	N/A	N/A	R	Y
128013	128013	10.99	Town Conserv	0	OST W.BARN		OPEN							
120013	120013	10.99	ation	0	. RD	\$840,700	SPACE	GOOD	Ν	N	N/A	N/A	R	Y
			Town		OST	ψ0+0,700	OF AGE	0000			IN/ <i>F</i> A	11/73	IX.	
128015	128015	16.86	Conserv	1730	W.BARN		OPEN							
			ation		. RD	\$1,348,800	SPACE	GOOD	Ν	Ν	N/A	N/A	R	Y
			Town		ROUTE	·								
129001	129001	11.46	Conserv	0	149		OPEN							
			ation			\$1,031,400	SPACE	GOOD	Y	Y	N/A	N/A	R	Y
400005	100005	7.04	Town	4000	OST		ODEN							
129005	129005	7.64	Conserv ation	1926	W.BARN . RD	\$616,900	OPEN SPACE	GOOD	Y	Y	N/A	N/A	R	Y
			Town			\$010,900	SFACE	GOOD	T	T	IN/A	IN/A	ĸ	T
129007	129007	2.13	Conserv	0	SANDY		OPEN							
120007	120007	2.10	ation	Ū	STREET	\$159,800	SPACE	GOOD	Y	N	N/A	N/A	R	Y
					MIDCAP	+,								
			Town		E									
129008	129008	0.83	Conserv	0	HGHWY(
			ation		WEST)		OPEN						-	
					RTE 6	\$27,400	SPACE	GOOD	N	Y	N/A	N/A	R	Y
129009	129009	0.87	Town Conserv	0	ROUTE		OPEN							
129009	129009	0.87	ation	0	149	\$70,100	SPACE	GOOD	Y	Ν	N/A	N/A	R	Y
			Town			<i>φ1</i> 0,100	SI ACL	0000			IN/A	IN/A	IX.	
129010	129010	6.25	Conserv	0	ROUTE		OPEN							
			ation	÷	149	\$445,300	SPACE	GOOD	Y	Y	N/A	N/A	R	Y
					MIDCAP									
			Town		E									
130001	130001	2.01	Conserv	0	HGHWY(
			ation		WEST)	A A A A A A A A A A	OPEN							
			Tarra		RTE 6	\$93,900	SPACE	GOOD	N	N	N/A	N/A	R	Y
132012	132012	7.60	Town Conserv	111	MAPLE		OPEN							
132012	132012	7.00	ation	111	STREET	\$541,500	SPACE	GOOD	Y	Y	N/A	N	R	Y
					MAIN	ψ0+1,000	SINCE	0000		- ·	1 1/7 1			
101000	10,1000	00 50	Town	•	ST./RTE									
134006	134006	23.50	Conserv	0	6A(W.BA		OPEN			1				
			ation		RN.)	\$1,762,500	SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

	1		1	1					1	1			1	
134010	134010	14.25	Town Conserv ation	0	MAIN ST./RTE 6A(W.BA RN.)	\$1,211,300	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
134011	134011	9.50	Town Conserv ation	0	MEADO W LANE	\$64,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
134012	134012	5.25	Town Conserv ation	0	MEADO W LANE	\$37,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
135001	135001	9.50	Town Conserv ation	0	MAIN ST./RTE 6A(W.BA RN.)	\$42,800	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
135002	135002	13.50	Town Conserv ation	0	MAIN ST./RTE 6A(W.BA RN.)	\$57,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
135003	135003	46.00	Town Conserv ation	0	MAIN ST./RTE 6A(W.BA RN.)	\$172,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
136013	136013	0.17	Town Conserv ation	401	SANDY NECK ROAD	\$11,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
143011	143011	9.90	Town Conserv ation	0	JOSH LUMBER T ROAD	\$668,300	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
143012	143012	7.40	Town Conserv ation	0	JOSH LUMBER T ROAD	\$1,581,800	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
143014	143014	14.60	Town Conserv ation	0	POND STREET	\$3,490,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
143018	143018	0.11	Town Conserv ation	0	POND STREET	\$8,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
143025	143025	3.84	Town Conserv ation	63	JOSH LUMBER T ROAD	\$864,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
146004	146004	20.37	Town Conserv ation	0	LUMBER T MILL ROAD	\$802,200	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning
1460100 01	14601000 1	1.46	Town Conserv	464	LUMBER T MILL	¢100 500	OPEN	0005	X	X	21/2	N	5	
1460100 02	14601000 2	0.69	ation Town Conserv ation	446	ROAD LUMBER T MILL ROAD	\$109,500 \$63,400	SPACE OPEN SPACE	GOOD	Y Y	Y	N/A N/A	<u> </u>	R R	Y Y
1460100 03	14601000 3	0.70	Town Conserv ation	9	NYE ROAD	\$72,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
1460100 09	14601000 9	1.00	Town Conserv ation	65	NYE ROAD	\$85,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
1460100 10	14601001 0	1.00	Town Conserv ation	41	NYE ROAD	\$85,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
1460100 11	14601001 1	1.05	Town Conserv ation	31	NYE ROAD	\$62,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
146022	146022	1.07	Town Conserv ation	492	LUMBER T MILL ROAD	\$80,300	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
146023	146023	1.00	Town Conserv ation	43	HARJU ROAD	\$75,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
146094	146094	3.20	Town Conserv ation	511	LUMBER T MILL ROAD	\$244,700	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
147003	147003	16.08	Town Conserv ation	0	LUMBER T MILL ROAD	\$964,800	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
147005	147005	25.30	Town Conserv ation	0	NYE ROAD	\$472,300	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
147043	147043	1.43	Town Conserv ation	67	WEATH ERVANE WAY	\$88,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
147044	147044	1.45	Town Conserv ation	66	WEATH ERVANE WAY	\$88,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
147080	147080	1.04	Town Conserv ation	97	HARJU ROAD	\$86,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
147120	147120	1.04	Town Conserv ation	95	NYE ROAD	\$97,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
150087	150087	3.09	Town Conserv ation	0	TREE TOP CIRCLE	\$112,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			Taura											
150096	150096	11.14	Town Conserv	1350	OLD STAGE		OPEN							
150096	120090	11.14	ation	1350	ROAD	\$278,900	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		OLD	ψ210,300	SI ACL	0000	1	-	IN/A	IN	IX.	1
151001	151001	9.96	Conserv	0	STAGE		OPEN							
131001	131001	3.30	ation	0	ROAD	\$761,900	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		OLD	\$701,900	SFACE	GOOD	I	1	IN/A	IN	N	1
151003T	151003T0	17.85	Conserv	1675	STAGE		OPEN							
00	0	17.00	ation	10/5	ROAD	\$485,500	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		OLD	ψ+00,000	OFACE	0000	1	-	IN/73		IX I	I
151003W	151003W	3.53	Conserv	1675	STAGE		OPEN							
00	00	0.00	ation	10/5	ROAD	\$120,000	SPACE	GOOD	Y	Y	N/A	Ν	R	Y
			Town		OLD	ψ120,000	OFACE	0000	1		IN/73		IN IN	I
151009	151009	1.60	Conserv	1623	STAGE		OPEN							
101000	101000	1.00	ation	1020	ROAD	\$136,000	SPACE	GOOD	Y	Y	N/A	Ν	R	Y
			Town		OLD	ψ100,000	OI NOL	0000	· ·	<u> </u>	17/7			· ·
152002T	152002T0	36.95	Conserv	1785	STAGE		OPEN							
00	0	00.00	ation		ROAD	\$1,108,500	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		OLD	\$1,100,000	01710E	0002	•					
152002W	152002W	30.04	Conserv	1785	STAGE		OPEN							
00	00	00101	ation		ROAD	\$766,000	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		OLD	+)								
152038	152038	0.27	Conserv	1784	STAGE		OPEN							
		•	ation		ROAD	\$55,900	SPACE	GOOD	Y	Y	N/A	N	R	Y
					MIDCAP									
			Town		E									
153019	153019	1.25	Conserv	0	HGHWY(
			ation		WEST)		OPEN							
					RTE 6	\$93,800	SPACE	GOOD	Y	Y	N/A	N	R	Y
					MEETIN									
			Town		GHOUS									
154002	154002	91.63	Conserv	0	E									
			ation		WAY/RT		OPEN							
					E 149	\$6,872,300	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		CHURC									
154006	154006	6.55	Conserv	106	Н		OPEN			1				
			ation		STREET	\$622,300	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		MAIN									
156013	156013	1.68	Conserv	0	ST./RTE		00- ···			1				
100010	100010	1.00	ation	Ĭ	6A(W.BA		OPEN						_	
					RN.)	\$168,000	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		MAIN									
157006	157006	8.00	Conserv	0	ST./RTE		0051			1				
			ation	-	6A(W.BA	¢700.000	OPEN	0000	V	V	N1/A	N		V
					RN.)	\$720,000	SPACE	GOOD	Y	Y	N/A	N	R	Y
457000	457000	25.40	Town	0	MAIN		ODEN			1				
157009	157009	35.12	Conserv	0	ST./RTE	¢0 604 000	OPEN	0000	v	Y	NI/A	N	P	Y
			ation	L	6A(W.BA	\$2,634,000	SPACE	GOOD	Y	Ϋ́	N/A	N	R	Ŷ



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

					RN.)									
158002	158002	5.42	Town Conserv ation	0	MEADO W LANE	\$38,600	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
158004	158004	6.75	Town Conserv ation	0	MEADO W LANE	\$48,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
1580050 03	15800500 3	6.44	Town Conserv ation	0	MEADO W LANE	\$343,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
158006	158006	10.50	Town Conserv ation	9999	GREAT MARSH ES	\$35,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
158007	158007	33.50	Town Conserv ation	9999	GREAT MARSH ES	\$94,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
159001	159001	12.01	Town Conserv ation	9999	GREAT MARSH ES	\$38,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
159002	159002	9.24	Town Conserv ation	9999	GREAT MARSH ES	\$31,200	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
159003	159003	7.45	Town Conserv ation	9999	GREAT MARSH ES	\$26,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
159004	159004	10.34	Town Conserv ation	9999	GREAT MARSH ES	\$34,900	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
159005	159005	4.40	Town Conserv ation	9999	GREAT MARSH ES	\$15,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
159006	159006	5.45	Town Conserv ation	9999	GREAT MARSH ES	\$19,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
159007	159007	11.36	Town Conserv ation	9999	GREAT MARSH ES	\$38,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
159008	159008	4.67	Town Conserv ation	9999	GREAT MARSH ES	\$16,600	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
159009	159009	6.21	Town Conserv ation	9999	GREAT MARSH ES	\$22,100	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
159010	159010	7.29	Town Conserv ation	0	GREAT MARSH ES	\$26,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

159011	159011	5.85	Town Conserv ation	9999	GREAT MARSH ES	\$20,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
159012	159012	3.21	Town Conserv ation	9999	GREAT MARSH ES	\$12,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
159013	159013	6.54	Town Conserv ation	9999	GREAT MARSH ES	\$23,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
159014	159014	5.64	Town Conserv ation	9999	GREAT MARSH ES	\$20,100	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
159015	159015	10.47	Town Conserv ation	9999	GREAT MARSH ES	\$35,300	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
160001	160001	5.00	Town Conserv ation	9999	SANDY NECK	\$655,500	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
160003	160003	10.33	Town Conserv ation	9999	SANDY NECK	\$1,283,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
160004	160004	37.50	Town Conserv ation	9999	SANDY NECK	\$1,940,600	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
168005	168005	4.50	Town Conserv ation	0	BUMPS RIVER ROAD	\$393,300	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
168087	168087	0.37	Town Conserv ation	68	EVSUN DRIVE	\$69,800	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
168088	168088	1.05	Town Conserv ation	74	EVSUN DRIVE	\$105,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
168090	168090	6.64	Town Conserv ation	0	FALMOU TH ROAD/R TE 28	\$473,100	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
169019	169019	21.10	Town Conserv ation	0	FALMOU TH ROAD/R TE 28	\$1,186,900	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
169020	169020	6.30	Town Conserv ation	0	FALMOU TH ROAD/R TE 28	\$1,150,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
170006	170006	7.78	Town Conserv ation	400	AMES WAY	\$739,100	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y



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1740010 01	17400100 1	26.70	Town Conserv ation	0	JOE THOMP SON ROAD	\$1,001,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
175005	175005	2.07	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$23,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
175006	175006	2.33	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$26,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
176024	176024	11.29	Town Conserv ation	0	PARKER ROAD	\$497,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
177001	177001	133.00	Town Conserv ation	0	HINCKL EYS LANE	\$7,481,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
177004	177004	4.28	Town Conserv ation	1340	MAIN ST./RTE 6A(W.BA RN.)	\$428,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
1770050 02	17700500 2	4.63	Town Conserv ation	150	PARKER ROAD	\$659,800	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
178001	178001	0.12	Town Conserv ation	0	MAIN ST./RTE 6A(W.BA RN.)	\$61,100	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
178016	178016	3.69	Town Conserv ation	1194	MAIN ST./RTE 6A(W.BA RN.)	\$369,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
178025	178025	0.73	Town Conserv ation	1150	MAIN ST./RTE 6A(W.BA RN.)	\$86,500	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
179010	179010	0.37	Town Conserv ation	99	PACKET LANDIN G WAY	\$41,900	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
179011	179011	77.84	Town Conserv ation	89	PACKET LANDIN G WAY	\$1,140,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			1		1							1		1
179045	179045	0.35	Town Conserv ation	167	PACKET LANDIN G WAY	\$69,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
179046	179046	0.36	Town Conserv ation	155	PACKET LANDIN G WAY	\$69,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
180005	180005	1.16	Town Conserv ation	335	NAVIGA TION ROAD	\$5,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
180008	180008	9.50	Town Conserv ation	252	NAVIGA TION ROAD	\$42,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
180009	180009	3.28	Town Conserv ation	248	NAVIGA TION ROAD	\$81,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
180011	180011	42.00	Town Conserv ation	0	GREAT MARSH ES	\$118,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
180012	180012	14.50	Town Conserv ation	0	GREAT MARSH ES	\$46,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
180013	180013	47.28	Town Conserv ation	0	GREAT MARSH ES	\$133,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
181001	181001	2.39	Town Conserv ation	0	GREAT MARSH ES	\$9,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
181003	181003	8.82	Town Conserv ation	0	GREAT MARSH ES	\$29,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
181004	181004	8.19	Town Conserv ation	0	GREAT MARSH ES	\$27,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
181005	181005	9.07	Town Conserv ation	0	GREAT MARSH ES	\$30,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
181006	181006	5.62	Town Conserv ation	0	GREAT MARSH ES	\$20,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
181007	181007	5.70	Town Conserv ation	0	GREAT MARSH ES	\$20,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
181008	181008	21.25	Town Conserv ation	0	GREAT MARSH ES	\$59,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

182001	182001	4.83	Town Conserv ation	0	SANDY NECK	\$2,156,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182002	182002	12.37	Town Conserv ation	0	SANDY NECK	\$4,941,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182003	182003	8.38	Town Conserv ation	0	SANDY NECK	\$3,544,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182004	182004	5.64	Town Conserv ation	0	SANDY NECK	\$739,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182005	182005	5.30	Town Conserv ation	0	SANDY NECK	\$694,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182006	182006	5.76	Town Conserv ation	0	SANDY NECK	\$755,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182007	182007	3.03	Town Conserv ation	0	SANDY NECK	\$1,424,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182008	182008	4.11	Town Conserv ation	0	SANDY NECK	\$1,835,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182009	182009	8.31	Town Conserv ation	0	SANDY NECK	\$3,515,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182010	182010	7.50	Town Conserv ation	0	SANDY NECK	\$983,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182011	182011	5.60	Town Conserv ation	0	SANDY NECK	\$125,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182012	182012	6.31	Town Conserv ation	0	SANDY NECK	\$2,817,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182013	182013	12.40	Town Conserv ation	0	SANDY NECK	\$790,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182014	182014	3.54	Town Conserv ation	0	SANDY NECK	\$1,663,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
182015	182015	9.53	Town Conserv ation	0	SANDY NECK	\$4,031,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
183002	183002	12.50	Town Conserv ation	0	SANDY NECK	\$1,466,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

183003	183003	20.50	Town Conserv ation	0	SANDY NECK	\$2,121,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
183006	183006	5.92	Town Conserv ation	0	SANDY NECK	\$776,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
185036	185036	3.50	Town Conserv ation	0	LONG BEACH ROAD	\$3,217,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
186024	186024	0.65	Town Conserv ation	230	BAY LANE	\$144,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
1870800 01	18708000 1	0.62	Town Conserv ation	59	BEECH LEAF ISLAND ROAD	\$93,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
190070	190070	0.19	Town Conserv ation	0	OLD STAGE ROAD	\$53,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
190184	190184	0.43	Town Conserv ation	0	WOODV ALE LANE	\$54,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
191234	191234	0.44	Town Conserv ation	32	CHEQU AQUET WAY	\$72,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
195002	195002	3.51	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$26,300	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
195003	195003	3.58	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$26,900	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
195004	195004	15.27	Town Conserv ation	0	SPRUCE POND ROAD	\$146,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
195009	195009	8.21	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$203,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
195026	195026	0.19	Town Conserv ation	8	PLUM STREET	\$5,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
195027	195027	2.97	Town Conserv	640	OAK STREET	\$126,900	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			ation											
					0001105									
405000	405000	45.00	Town	0	SPRUCE		OPEN							
195033	195033	15.66	Conserv ation	0	POND ROAD	\$698,900	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		SPRUCE	\$696,900	SPACE	GOOD	ř	ř	IN/A	IN	ĸ	ř
195034	195034	9.55	Conserv	0	POND		OPEN							
190004	199094	9.00	ation	0	ROAD	\$451,200	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		SPRUCE	ψ+31,200	OF AGE	0000		•	IN/74	in in	IX.	1
195042	195042	11.59	Conserv	0	POND		OPEN							
100012	100012	11.00	ation	Ũ	ROAD	\$625,900	SPACE	GOOD	Y	Y	N/A	Ν	R	Y
					MAIN	<i>+</i> ,				-				-
407040	407040	4.00	Town		ST./RTE									
197010	197010	1.62	Conserv	1401	6A(W.BA		OPEN							
			ation		ŘN.)	\$162,000	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREÁT									
198001	198001	4.91	Conserv	0	MARSH		OPEN							
			ation		ES	\$17,500	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT									
198002	198002	55.50	Conserv	0	MARSH		OPEN							
			ation		ES	\$156,100	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT		0000							
198003	198003	25.00	Conserv	0	MARSH	*7 0,000	OPEN	0000	Ň	Ň	N1/A	N		N/
			ation		ES	\$70,300	SPACE	GOOD	Y	Y	N/A	N	R	Y
100001	100001	E 40	Town	0	GREAT									
198004	198004	5.42	Conserv ation	0	MARSH ES	\$19,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT	\$19,300	SFACE	GOOD	I	T	IN/A	IN	ĸ	I
198005	198005	10.00	Conserv	0	MARSH		OPEN							
100000	100000	10.00	ation	Ū	ES	\$33,800	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT	\$00,000	017102	0000	·					
199002	199002	16.84	Conserv	0	MARSH		OPEN							
			ation	-	ES	\$50,500	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT	, <i>)</i>								
199003	199003	18.88	Conserv	0	MARSH		OPEN							
			ation		ES	\$1,132,800	SPACE	GOOD	Y	Y	N/A	Ν	R	Y
			Town		GREAT									
199004	199004	6.82	Conserv	0	MARSH		OPEN							
			ation		ES	\$24,300	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT									
199005	199005	16.53	Conserv	0	MARSH	• • • •	OPEN						_	
			ation		ES	\$49,600	SPACE	GOOD	Y	Y	N/A	N	R	Y
400000	400000	0.00	Town	<u> </u>	GREAT									
199006	199006	3.88	Conserv	0	MARSH	¢44.000	OPEN	0000	V	V	N1/A	N		V
			ation		ES	\$14,600	SPACE	GOOD	Y	Y	N/A	N	R	Y
100008	100008	10.75	Town	0	GREAT		OPEN							
199008	199008	10.75	Conserv ation	0	MARSH ES	\$36,300	SPACE	GOOD	Y	Y	N/A	N	R	Y
		1	alion		ES	aso,300	SPACE	GOOD	Ť	T	IN/A	IN	ĸ	Ť



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

200001	200001	9.55	Town Conserv ation	0	GREAT MARSH ES	\$32,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
200002	200002	17.27	Town Conserv ation	0	GREAT MARSH ES	\$51,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
200003	200003	11.01	Town Conserv ation	0	GREAT MARSH ES	\$37,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
200004	200004	12.75	Town Conserv ation	0	GREAT MARSH ES	\$40,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
200005	200005	9.00	Town Conserv ation	0	GREAT MARSH ES	\$190,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
200006	200006	20.31	Town Conserv ation	0	GREAT MARSH ES	\$57,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
200007	200007	12.58	Town Conserv ation	0	GREAT MARSH ES	\$40,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
200008	200008	11.25	Town Conserv ation	0	GREAT MARSH ES	\$38,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
201001	201001	43.50	Town Conserv ation	0	GREAT MARSH ES	\$122,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
201002	201002	4.34	Town Conserv ation	0	GREAT MARSH ES	\$15,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
201003	201003	15.58	Town Conserv ation	0	GREAT MARSH ES	\$49,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
201004	201004	11.36	Town Conserv ation	0	GREAT MARSH ES	\$38,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
201005	201005	11.72	Town Conserv ation	0	GREAT MARSH ES	\$39,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
201006	201006	9.90	Town Conserv ation	0	GREAT MARSH ES	\$33,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
201007	201007	11.00	Town Conserv ation	0	GREAT MARSH ES	\$37,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
201008	201008	11.19	Town Conserv ation	0	GREAT MARSH ES	\$236,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			Taura	1	ODEAT					1				
201009	201009	12.55	Town Conserv ation	0	GREAT MARSH ES	\$250,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
201010	201010	13.59	Town Conserv ation	0	GREAT MARSH ES	\$271,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
201011	201011	12.50	Town Conserv ation	0	GREAT MARSH ES	\$249,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
202001	202001	5.00	Town Conserv ation	0	GREAT MARSH ES	\$17,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
202002	202002	2.75	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$64,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
202003	202003	3.49	Town Conserv ation	0	GREAT MARSH ES	\$82,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
202004	202004	3.07	Town Conserv ation	0	GREAT MARSH ES	\$72,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
202005	202005	17.26	Town Conserv ation	0	GREAT MARSH ES	\$324,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
202006	202006	12.60	Town Conserv ation	0	GREAT MARSH ES	\$251,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
202007	202007	15.06	Town Conserv ation	0	GREAT MARSH ES	\$300,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
202008	202008	13.25	Town Conserv ation	0	GREAT MARSH ES	\$264,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
202009	202009	21.50	Town Conserv ation	0	GREAT MARSH ES	\$60,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
203001	203001	11.00	Town Conserv ation	0	SANDY NECK	\$1,366,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
203002	203002	3.75	Town Conserv ation	0	SANDY NECK	\$1,762,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
203003	203003	8.50	Town Conserv ation	0	SANDY NECK	\$3,595,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

				1	0041014						-		1	
206051	206051	0.90	Town Conserv ation	0	CRAIGVI LLE BEACH ROAD	\$19,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
206052	206052	0.41	Town Conserv ation	0	CRAIGVI LLE BEACH ROAD	\$14,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
206074	206074	0.71	Town Conserv ation	29	WATER MAN FARM ROAD	\$213,800	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
206075	206075	0.34	Town Conserv ation	23	WATER MAN FARM ROAD	\$171,500	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
206076	206076	1.21	Town Conserv ation	68	WATER MAN FARM ROAD	\$211,800	OPEN SPACE	GOOD	Y	Y	N/A	Ζ	R	Y
206086	206086	5.47	Town Conserv ation	47	WATER MAN FARM ROAD	\$489,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
207081	207081	1.00	Town Conserv ation	1312	CRAIGVI LLE BEACH ROAD	\$138,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
215018	215018	7.22	Town Conserv ation	0	OAK STREET	\$685,900	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
215025	215025	1.20	Town Conserv ation	2279	SERVIC E ROAD	\$90,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
216059	216059	0.47	Town Conserv ation	55	BOXWO OD DRIVE	\$73,800	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
216060	216060	0.40	Town Conserv ation	41	BOXWO OD DRIVE	\$71,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
218001	218001	152.00	Town Conserv ation	0	GREAT MARSH ES	\$427,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
219001	219001	10.00	Town Conserv ation	0	GREAT MARSH ES	\$33,800	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			Town		GREAT					1			1	
219003	219003	64.00	Conserv	0	MARSH		OPEN							
210000	210000	01.00	ation	0	ES	\$2,376,000	SPACE	GOOD	Y	Y	N/A	Ν	R	Y
			Town		GREAT	<i><i>q</i>_<i>q</i>,<i>e</i>,<i>e</i>,<i>e</i>,<i>e</i>,<i>e</i>,<i>e</i>,<i>e</i>,<i>e</i>,<i>e</i>,<i>e</i></i>								
219004	219004	14.12	Conserv	0	MARSH		OPEN							
			ation		ES	\$594,100	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT									
219005	219005	9.36	Conserv	0	MARSH		OPEN							
			ation		ES	\$417,000	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town	_	GREAT									
219006	219006	9.07	Conserv	0	MARSH	• • • • • • • •	OPEN						_	
			ation		ES	\$404,100	SPACE	GOOD	Y	Y	N/A	N	R	Y
040007	040007	44 74	Town	0	GREAT		OPEN							
219007	219007	11.71	Conserv	0	MARSH ES	¢504 700	SPACE	GOOD	Y	Y	N/A	N	Р	Y
			ation Town		GREAT	\$521,700	SPACE	GOOD	ř	Ť	IN/A	IN	R	ř
219008	219008	5.00	Conserv	0	MARSH		OPEN							
210000	210000	0.00	ation	U	ES	\$17,800	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT	<i></i>	01710E	0002	•					
219009	219009	14.97	Conserv	0	MARSH		OPEN							
		-	ation	-	ES	\$629,900	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT									
219010	219010	7.00	Conserv	0	MARSH		OPEN							
			ation		ES	\$24,900	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT									
220001	220001	8.00	Conserv	0	MARSH		OPEN						_	
			ation		ES	\$356,400	SPACE	GOOD	Y	Y	N/A	N	R	Y
000000	000000	40.00	Town	0	GREAT		ODEN							
220002	220002	10.03	Conserv ation	0	MARSH ES	\$446,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT	\$440,000	SFACE	GOOD	T	T	IN/A	IN	ĸ	T
220003	220003	3.75	Conserv	0	MARSH		OPEN							
220003	220003	5.75	ation	0	ES	\$185,600	SPACE	GOOD	Y	Y	N/A	Ν	R	Y
			allori		BARN.	\$100,000	01710E	0000						
			Town		HARBO									
220004	220004	16.00	Conserv	0	R									
			ation		ISLAND		OPEN							
					S	\$633,600	SPACE	GOOD	Y	Y	N/A	N	R	Y
			Town		GREAT									
220005	220005	9.52	Conserv	0	MARSH		OPEN						_	
			ation		ES	\$424,100	SPACE	GOOD	Y	Y	N/A	N	R	Y
004004	004004	F 05	Town	~	GREAT		0051							
221001	221001	5.05	Conserv	0	MARSH	¢440.700	OPEN	0000	Ň	Ň	N1/A			Ň
			ation		ES	\$112,700	SPACE	GOOD	Y	Y	N/A	N	R	Y
221002	221002	6.02	Town	0	GREAT		OPEN							
221002	221002	6.03	Conserv ation	U	MARSH ES	\$134,600	SPACE	GOOD	Y	Y	N/A	N	R	Y
			aliun		ES	\$154,000	SFAUE	6000	I	I	IN/A	IN	Л	I



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			Taura											
221003	221003	4.13	Town Conserv ation	0	GREAT MARSH ES	\$92,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
222001	222001	21.25	Town Conserv ation	0	SANDY NECK	\$7,490,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
222002	222002	13.20	Town Conserv ation	0	SANDY NECK	\$1,548,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
222003	222003	33.98	Town Conserv ation	0	SANDY NECK	\$3,516,900	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
222004	222004	23.12	Town Conserv ation	0	SANDY NECK	\$8,149,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
222005	222005	17.95	Town Conserv ation	0	SANDY NECK	\$6,749,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
222006	222006	20.45	Town Conserv ation	0	SANDY NECK	\$7,208,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
223001	223001	54.25	Town Conserv ation	0	SANDY NECK	\$19,123,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
223002	223002	0.50	Town Conserv ation	0	SANDY NECK	\$83,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
223008	223008	0.25	Town Conserv ation	0	SANDY NECK	\$89,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
226100	226100	0.21	Town Conserv ation	545	OLD CRAIGVI LLE ROAD	\$8,900	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
229052	229052	3.03	Town Conserv ation	258	PINE STREET	\$339,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
229130	229130	1.12	Town Conserv ation	43	HORATI O LANE	\$252,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
230092	230092	0.15	Town Conserv ation	371	PHINNE Y'S LANE	\$34,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
230157	230157	0.94	Town Conserv ation	0	PHINNE Y'S LANE	\$58,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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232019	232019	0.51	Town Conserv ation	0	LAKESID E DRIVE WEST	\$98,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
232065	232065	0.35	Town Conserv ation	6	VINE STREET	\$120,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
232066	232066	0.39	Town Conserv ation	14	VINE STREET	\$123,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
2330260 02	23302600 2	1.34	Town Conserv ation	190	NYES NECK ROAD	\$53,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
235015	235015	4.90	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$349,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
236009	236009	8.96	Town Conserv ation	121	OLD NECK LANE	\$322,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
236010	236010	3.48	Town Conserv ation	160	OLD NECK LANE	\$160,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
238001	238001	8.40	Town Conserv ation	0	GREAT MARSH ES	\$28,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
238002	238002	18.50	Town Conserv ation	0	GREAT MARSH ES	\$55,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
238003	238003	6.50	Town Conserv ation	0	GREAT MARSH ES	\$23,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
239001	239001	5.00	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$235,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
239002	239002	50.50	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$1,874,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
239003	239003	1.75	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$86,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



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240001	240001	22.00	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$816,800	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
240002	240002	27.10	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$1,006,100	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
241001	241001	13.77	Town Conserv ation	0	SANDY NECK	\$5,501,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
241002	241002	13.64	Town Conserv ation	0	SANDY NECK	\$5,449,200	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
241003	241003	11.25	Town Conserv ation	0	SANDY NECK	\$4,758,800	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
241004	241004	7.44	Town Conserv ation	0	SANDY NECK	\$975,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
241005	241005	11.46	Town Conserv ation	0	SANDY NECK	\$4,847,600	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
241006	241006	7.44	Town Conserv ation	0	SANDY NECK	\$975,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
241007	241007	9.30	Town Conserv ation	0	SANDY NECK	\$1,155,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
241008	241008	5.00	Town Conserv ation	0	SANDY NECK	\$2,232,500	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
241009	241009	5.29	Town Conserv ation	0	SANDY NECK	\$2,362,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
242004	242004	84.00	Town Conserv ation	0	SANDY NECK	\$8,694,000	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
248291	248291	0.69	Town Conserv ation	87	ELLIOTT ROAD	\$97,200	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
248293	248293	1.38	Town Conserv ation	74	TRINITY PLACE	\$158,700	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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251096	251096	1.66	Town Conserv	0	LONGVI EW		OPEN							
201090	251096	1.00	ation	0		\$166,000	SPACE	GOOD	Y	Y	N/A	N	R	Y
251098	251098	0.48	Town Conserv ation	471	OLD STRAW BERRY HILL ROAD	\$74,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
2560010 01	25600100 1	172.75	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$3,886,900	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
256003	256003	3.51	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$105,300	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
256005	256005	11.75	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$317,300	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
257009	257009	6.50	Town Conserv ation	0	MAIN ST./RTE 6A(W.BA RN.)	\$247,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
257019	257019	11.72	Town Conserv ation	70	AUNT HATCH LANE	\$1,054,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
260001	260001	25.50	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$1,434,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
261001	261001	2.13	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$79,900	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
261002	261002	1.63	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$61,100	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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261003	261003	1.97	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$73,900	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
261004	261004	2.64	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$99,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
261005	261005	2.68	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$100,500	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
261006	261006	2.41	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$90,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
261007	261007	3.01	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$112,900	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
261008	261008	1.15	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$43,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
261009	261009	1.11	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$41,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
261010	261010	1.43	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$53,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
261011	261011	1.26	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$47,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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261012	261012	0.62	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$30,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
262001	262001	5.21	Town Conserv ation	0	SANDY NECK	\$1,163,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
262002	262002	5.68	Town Conserv ation	0	SANDY NECK	\$1,268,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
262003	262003	8.93	Town Conserv ation	0	SANDY NECK	\$1,888,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
262004	262004	5.84	Town Conserv ation	0	SANDY NECK	\$1,303,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
262005	262005	22.67	Town Conserv ation	0	SANDY NECK	\$1,173,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
262006	262006	6.59	Town Conserv ation	0	SANDY NECK	\$432,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
262007	262007	4.96	Town Conserv ation	0	SANDY NECK	\$1,107,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
263001	263001	1188.31	Town Conserv ation	425	SANDY NECK ROAD	\$25,513,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
270007	270007	4.85	Town Conserv ation	11	DUNN'S POND ROAD	\$391,600	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
270182	270182	0.25	Town Conserv ation	215	LINCOL N ROAD	\$55,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
270242	270242	0.28	Town Conserv ation	85	OLANDE R DRIVE	\$56,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
275009	275009	0.09	Town Conserv ation	0	PHINNE Y'S LANE	\$60,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
275042	275042	0.21	Town Conserv ation	0	PHINNE Y'S LANE	\$6,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
276002	276002	66.90	Town Conserv ation	0	POND LIJAH ROAD	\$3,763,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

276029	276029	0.41	Town Conserv ation	85	OLD PHINNE Y'S LANE	\$71,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
278001	278001	15.50	Town Conserv ation	0	OLD JAIL LANE	\$606,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
280051	280051	3.44	Town Conserv ation	171	HARRIS MEADO W LANE	\$107,500	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
282002	282002	18.00	Town Conserv ation	0	SANDY NECK	\$3,384,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
283001	283001	7.00	Town Conserv ation	0	SANDY NECK	\$1,562,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
283004	283004	1.50	Town Conserv ation	0	BARN. HARBO R ISLAND S	\$5,600	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
290081	290081	0.12	Town Conserv ation	0	WEST MAIN STREET	\$140,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
290172	290172	0.64	Town Conserv ation	130	HAMDE N CIRCLE	\$82,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
291138	291138	0.28	Town Conserv ation	52	HAMPS HIRE AVENUE	\$66,200	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
292288	292288	0.70	Town Conserv ation	0	FALMOU TH ROAD/R TE 28	\$6,400	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
2990590 01	29905900 1	7.74	Town Conserv ation	64	BRAGG' S LANE	\$1,014,700	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
2990590 03	29905900 3	1.17	Town Conserv ation	3475	MAIN ST./RTE 6A(BAR N.)	\$146,300	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y
300044	300044	1.04	Town Conserv ation	0	MAIN ST./RTE 6A(W.BA RN.)	\$6,500	OPEN SPACE	GOOD	Y	Y	N/A	Ν	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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301005	301005	0.50	Town Conserv ation	0	RENDEZ VOUS LANE	\$217,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
302003	302003	17.00	Town Conserv ation	0	SANDY NECK	\$3,196,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
302004	302004	15.25	Town Conserv ation	0	SANDY NECK	\$1,523,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
302005	302005	8.25	Town Conserv ation	0	SANDY NECK	\$872,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
303001	303001	1.10	Town Conserv ation	0	SANDY NECK	\$517,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
303005	303005	9.07	Town Conserv ation	0	SANDY NECK	\$563,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
306011	306011	2.27	Town Conserv ation	83	STUDLE Y ROAD	\$25,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
306219	306219	0.21	Town Conserv ation	77	MARSH LANE	\$79,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
307036	307036	2.60	Town Conserv ation	0	SEABRO OK ROAD	\$221,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
307277	307277	0.24	Town Conserv ation	13	JANICE LANE	\$55,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
307278	307278	0.24	Town Conserv ation	5	JANICE LANE	\$55,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
309243	309243	0.27	Town Conserv ation	19	HAMDE N CIRCLE	\$65,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
309245	309245	0.27	Town Conserv ation	184	HAMDE N CIRCLE	\$65,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
309250	309250	0.25	Town Conserv ation	162	HAMDE N CIRCLE	\$65,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
309251	309251	0.24	Town Conserv ation	140	HAMDE N CIRCLE	\$64,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
309252	309252	0.24	Town Conserv ation	150	HAMDE N CIRCLE	\$64,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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000070	000070	0.40	Town	00	ASTORI		ODEN							
309273	309273	0.46	Conserv	20	A	*7 0,400	OPEN	0000	X	Ň	N1/A			N
			ation		CIRCLE	\$73,400	SPACE	GOOD	Y	Y	N/A	N	R	Y
315003	315003	0.03	Town Conserv ation	0	MIDCAP E HGHWY(WEST) RTE 6	\$9,300	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
3170280 02	31702800 2	2.26	Town Conserv ation	3742	MAIN ST./RTE 6A(BAR N.)	\$164,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
317057	317057	0.38	Town Conserv ation	0	STONEH EDGE DRIVE	\$80,700	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
317074	317074	0.52	Town Conserv ation	0	STONEH EDGE DRIVE	\$87,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
317075	317075	0.60	Town Conserv ation	24	STONEH EDGE DRIVE	\$92,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
318016	318016	1.20	Town Conserv ation	139	COMME RCE ROAD	\$270,000	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
320001	320001	16.74	Town Conserv ation	0	SANDY NECK	\$3,147,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
322001	322001C ND	159.66	Town Conserv ation	0	SANDY NECK	\$76,500	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
324035	324035	0.59	Town Conserv ation	26	GOSNO LD STREET	\$13,400	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
324058	324058	8.70	Town Conserv ation	45	FOLSOM AVENUE	\$88,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
325126	325126	0.23	Town Conserv ation	59	HARBO R BLUFFS ROAD	\$20,900	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
325127	325127	0.10	Town Conserv ation	58	HARBO R BLUFFS ROAD	\$12,100	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
325162	325162	6.40	Town Conserv ation	0	OCEAN STREET	\$53,200	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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339003	339003	41.56	Town Conserv ation	0	SANDY NECK	\$2,337,800	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
353002	353002	3.10	Town Conserv ation	0	HARBO R POINT ROAD	\$72,900	OPEN SPACE	GOOD	Y	Y	N/A	N	R	Y
SUBTOT AL		6303.89				\$380,084,400						N		
009002	009002	4.94	Town Land Bank	4788	FALMOU TH ROAD/R TE 28	\$116,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
011001C 00	011001C0 0	0.08	Town Land Bank	9999	HOLLO W ROAD	\$2,200	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
011001T 00	011001T0 0	0.50	Town Land Bank	9999	HOLLO W ROAD	\$45,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
011002C 00	011002C0 0	8.17	Town Land Bank	9999	HOLLO W ROAD	\$187,700	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
011002T 00	011002T0 0	0.24	Town Land Bank	9999	HOLLO W ROAD	\$1,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
011003	011003	7.25	Town Land Bank	9999	HOLLO W ROAD	\$171,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
012008	012008	46.15	Town Land Bank	0	WAKEB Y ROAD	\$1,520,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
020004	020004	25.00	Town Land Bank	0	SCHOOL STREET	\$3,520,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
026001	026001	5.93	Town Land Bank	0	SANTUI T- NEWTO WN ROAD	\$147,800	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
0260400 01	02604000 1	1.86	Town Land Bank	22	WIMBLE DON WAY	\$67,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
026041	026041	1.00	Town Land Bank	1229	SANTUI T- NEWTO WN ROAD	\$60,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y



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026042	026042	6.10	Town Land Bank	1215	T- NEWTO WN ROAD	\$204,800	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
026046	026046	5.90	Town Land Bank	0	SANTUI T- NEWTO WN ROAD	\$164,100	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
044013	044013	4.89	Town Land Bank	931	RIVER ROAD	\$147,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
059004	059004	7.10	Town Land Bank	0	RIVER ROAD	\$269,800	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
059010	059010	14.53	Town Land Bank	0	SHORE ROAD	\$463,200	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
061010	061010	5.27	Town Land Bank	0	FLUME AVENUE	\$7,500	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
083007	083007	23.50	Town Land Bank	970	RACE LANE	\$1,867,500	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
084001X 01	084001X0 1	10.36	Town Land Bank	0	CROCK ER ROAD	\$310,600	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
084001X 02	084001X0 2	23.97	Town Land Bank	0	CROCK ER ROAD	\$1,797,800	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
084001X 03	084001X0 3	3.76	Town Land Bank	0	CROCK ER ROAD	\$526,400	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
084002T 00	084002T0 0	16.20	Town Land Bank	0	CROCK ER ROAD	\$440,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
084002W 00	084002W 00	46.80	Town Land Bank	0	CROCK ER ROAD	\$1,866,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
0990280 01	09902800 1	27.98	Town Land Bank	0	FALMOU TH ROAD/R TE 28	\$944,700	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
104002T 00	104002T0 0	84.00	Town Land Bank	1000	RACE LANE	\$6,636,600	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
104002W	104002W	47.36	Town	0	ROUTE	\$888,000	OPEN	GOOD	Y	Y	LAND BANK	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

00	00		Land Bank		149		SPACE							
1220080 01	12200800 1	12.54	Town Land Bank	0	OST W.BARN . RD	\$514,700	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
127004	127004	5.00	Town Land Bank	0	OST W.BARN . RD	\$348,400	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
1280040 17	12800401 7	0.73	Town Land Bank	0	JENKINS LANE	\$6,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
128004X 01	128004X0 1	5.31	Town Land Bank	0	PIONEE R PATH	\$279,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
128004X 02	128004X0 2	1.65	Town Land Bank	0	PIONEE R PATH	\$166,500	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
130012	130012	14.76	Town Land Bank	2135	MEETIN GHOUS E WAY/RT E 149	\$782,200	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
130014	130014	1.03	Town Land Bank	0	MEETIN GHOUS E WAY/RT E 149	\$1,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
130030	130030	6.97	Town Land Bank	0	CEDAR STREET	\$662,200	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
146002	146002	28.10	Town Land Bank	0	LUMBER T MILL ROAD	\$79,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
1460030 02	14600300 2	0.36	Town Land Bank	443	LUMBER T MILL ROAD	\$81,800	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
1460030 03	14600300 3	0.34	Town Land Bank	431	LUMBER T MILL ROAD	\$81,100	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
1460030 04	14600300 4	0.34	Town Land Bank	417	LUMBER T MILL ROAD	\$81,100	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
149027	149027	2.62	Town Land Bank	0	OLD FALMOU TH ROAD	\$119,400	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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149029	149029	6.09	Town Land Bank	940	OLD FALMOU TH ROAD	\$366,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
156004	156004	0.22	Town Land Bank	842	MAIN ST./RTE 6A(W.BA RN.)	\$6,400	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
156039	156039	0.82	Town Land Bank	82	SALT MEADO W LANE	\$9,100	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
156041	156041	0.86	Town Land Bank	118	SALT MEADO W LANE	\$9,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
156042	156042	0.96	Town Land Bank	130	SALT MEADO W LANE	\$9,800	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
156043	156043	0.99	Town Land Bank	146	SALT MEADO W LANE	\$10,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
156044	156044	1.06	Town Land Bank	64	SALT MEADO W LANE	\$15,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
156047	156047	1.22	Town Land Bank	83	SALT MEADO W LANE	\$16,400	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
156048	156048	0.86	Town Land Bank	97	SALT MEADO W LANE	\$9,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
156049	156049	0.91	Town Land Bank	167	SALT MEADO W LANE	\$9,600	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
156050	156050	0.88	Town Land Bank	129	SALT MEADO W LANE	\$9,400	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Ŷ



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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156051	156051	0.90	Town Land Bank	145	SALT MEADO W LANE	\$9,500	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
156052	156052	0.88	Town Land Bank	161	SALT MEADO W LANE	\$9,400	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
156053	156053	0.84	Town Land Bank	177	SALT MEADO W LANE	\$9,200	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
168004	168004	6.14	Town Land Bank	0	FALMOU TH ROAD/R TE 28	\$559,500	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
175011	175011	7.33	Town Land Bank	0	PARKER ROAD	\$375,500	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
180015	180015	1.11	Town Land Bank	178	SALT MEADO W LANE	\$16,100	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
180016	180016	1.13	Town Land Bank	196	SALT MEADO W LANE	\$16,100	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
180017	180017	1.17	Town Land Bank	212	SALT MEADO W LANE	\$16,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
180018	180018	1.35	Town Land Bank	295	SALT MEADO W LANE	\$16,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
180019	180019	0.83	Town Land Bank	230	SALT MEADO W LANE	\$9,100	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
180020	180020	0.81	Town Land Bank	197	SALT MEADO W LANE	\$9,100	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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180021	180021	0.80	Town Land Bank	213	SALT MEADO W LANE	\$9,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
180022	180022	0.97	Town Land Bank	229	SALT MEADO W LANE	\$16,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
180023	180023	1.35	Town Land Bank	296	SALT MEADO W LANE	\$16,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
180024	180024	1.04	Town Land Bank	280	SALT MEADO W LANE	\$15,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
180025	180025	1.00	Town Land Bank	264	SALT MEADO W LANE	\$10,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
180026	180026	0.98	Town Land Bank	248	SALT MEADO W LANE	\$9,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
180027	180027	29.84	Town Land Bank	0	SALT MEADO W LANE	\$111,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
190144	190144	4.00	Town Land Bank	521	OLD STAGE ROAD	\$340,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
190166	190166	1.80	Town Land Bank	511	OLD STAGE ROAD	\$190,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
190167	190167	6.67	Town Land Bank	511	OLD STAGE ROAD	\$638,700	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
196031	196031	12.45	Town Land Bank	30	FALCON ROAD	\$286,600	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
234052	234052	4.40	Town Land Bank	1900	IYANNO UGH ROAD/R OUTE13 2	\$138,800	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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235006	235006	17.97	Town Land Bank	1910	IYANNO UGH ROAD/R OUTE13 2	\$329,600	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
235008	235008	0.30	Town Land Bank	1950	IYANNO UGH ROAD/R OUTE13 2	\$9,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
235021	235021	15.85	Town Land Bank	1860	IYANNO UGH ROAD/R OUTE13 2	\$370,700	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
236012	236012	4.80	Town Land Bank	0	MIDCAP E HGHWY(WEST) RTE 6	\$34,200	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 01	253017X0 1	0.13	Town Land Bank	1585	IYANNO UGH ROAD/R OUTE13 2	\$9,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 02	253017X0 2	0.89	Town Land Bank	1585	IYANNO UGH ROAD/R OUTE13 2	\$94,500	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 03	253017X0 3	0.03	Town Land Bank	1591	IYANNO UGH ROAD/R OUTE13 2	\$10,200	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
253017X 04	253017X0 4	2.05	Town Land Bank	1591	IYANNO UGH ROAD/R OUTE13 2	\$220,900	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 05	253017X0 5	0.04	Town Land Bank	1595	IYANNO UGH ROAD/R OUTE13 2	\$10,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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253017X 06	253017X0 6	1.22	Town Land Bank	1595	IYANNO UGH ROAD/R OUTE13 2	\$203,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 07	253017X0 7	0.47	Town Land Bank	1601	IYANNO UGH ROAD/R OUTE13 2	\$29,500	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 08	253017X0 8	0.53	Town Land Bank	1601	IYANNO UGH ROAD/R OUTE13 2	\$30,600	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 09	253017X0 9	0.73	Town Land Bank	1615	IYANNO UGH ROAD/R OUTE13 2	\$86,500	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 10	253017X1 0	0.27	Town Land Bank	1615	IYANNO UGH ROAD/R OUTE13 2	\$26,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 11	253017X1 1	0.10	Town Land Bank	1631	IYANNO UGH ROAD/R OUTE13 2	\$10,600	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 12	253017X1 2	1.57	Town Land Bank	1631	IYANNO UGH ROAD/R OUTE13 2	\$209,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
253017X 13	253017X1 3	0.55	Town Land Bank	1635	IYANNO UGH ROAD/R OUTE13 2	\$9,800	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
253017X 14	253017X1 4	0.83	Town Land Bank	1635	IYANNO UGH ROAD/R OUTE13 2	\$91,500	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			Taura		IYANNO									
254016	254016	125.86	Town Land Bank	1800	UGH ROAD/R OUTE13 2	\$4,027,700	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
254030	254030	1.49	Town Land Bank	1651	IYANNO UGH ROAD/R OUTE13 2	\$118,600	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
255001	255001	10.21	Town Land Bank	0	MIDCAP E HGHWY(WEST) RTE 6	\$230,400	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
256006	256006	9.00	Town Land Bank	0	AUNT HATCH LANE	\$210,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
257015	257015	36.04	Town Land Bank	2509	MAIN ST./RTE 6A(BAR N.)	\$1,081,200	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
267098	267098	0.52	Town Land Bank	130	CRAIGVI LLE BEACH ROAD	\$76,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
290091	290091	2.05	Town Land Bank	80	BETTY'S POND ROAD	\$126,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
292081	292081	2.51	Town Land Bank	56	GARDE N LANE	\$276,200	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
298031	298031	27.60	Town Land Bank	0	MARASP IN ROAD	\$1,224,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
2980310 03	29803100 3	1.30	Town Land Bank	341	BRAGG' S LANE	\$134,300	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
2980310 04	29803100 4	1.06	Town Land Bank	365	BRAGG' S LANE	\$132,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
308143	308143	1.30	Town Land Bank	725	MAIN STREET (HYANNI S)	\$299,000	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
315008	315008	2.05	Town Land Bank	135	BOULDE R ROAD	\$145,200	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

315014	315014	5.24	Town Land	0	FLINT ROCK		OPEN							
			Bank		ROAD	\$622,300	SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
315020	315020	0.42	Town Land Bank	0	FLINT ROCK ROAD	\$89,700	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
315026	315026	6.95	Town Land Bank	0	FLINT ROCK ROAD	\$301,600	OPEN SPACE	GOOD	Y	Y	LAND BANK	N	R	Y
3360500 02	33605000 2	1.02	Town Land Bank	NULL	BONE HILL ROAD	\$165,400	OPEN SPACE	GOOD	Y	Y	LAND BANK	Ν	R	Y
SUBTOT AL		894.20				\$39,926,800						Ν		
006014	006014	0.45	Town Landing	755	SANTUI T ROAD	\$266,400	BOAT LAUNCH ING	FAIR	Y	Y	N/A	Ν	R	Ν
025012	025012	0.80	Town Landing	1444	SANTUI T- NEWTO WN ROAD	\$50,400	BOAT LAUNCH ING	GOOD	Y	Y	N/A	Ν	R	N
026038	026038	0.14	Town Landing	1290	SANTUI T- NEWTO WN ROAD	\$34,600	BOAT LAUNCH ING	GOOD	Y	Y	N/A	Ν	R	Z
035072	035072	1.04	Town Landing	85	OLD SHORE ROAD	\$1,308,000	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	N
035089	035089	0.32	Town Landing	37	OYSTER PLACE ROAD	\$1,400,700	BOAT LAUNCH ING	GOOD	Y	Y	N/A	Ν	R	N
053011	053011	0.05	Town Landing	2	LITTLE RIVER ROAD	\$58,400	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	Ν
054012	054012	0.07	Town Landing	590	CORDW OOD ROAD	\$59,000	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	N
076019	076019	0.25	Town Landing	230	PRINCE AVENUE	\$951,600	BOAT LAUNCH ING	GOOD	Y	Y	N/A	Ν	R	Ν
080006	080006	0.39	Town Landing	374	MISTIC DRIVE	\$63,500	BOAT LAUNCH ING	FAIR	Y	Y	N/A	N	R	N
094001	094001	0.12	Town Landing	240	BAY STREET	\$155,000	BOAT LAUNCH ING	GOOD	Y	Y	N/A	Ν	R	Ν



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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101002	101002	0.39	Town Landing	671	ROUTE 149	\$39,700	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	N
116119	116119	0.50	Town Landing	71	BRIDGE STREET	\$297,000	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	N
124007	124007	0.10	Town Landing	580	OLD FALMOU TH ROAD	\$24,200	BOAT LAUNCH ING	GOOD	Y	Y	N/A	Z	R	Ν
158003	158003	0.10	Town Landing	260	MEADO W LANE	\$4,500	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	Ν
162028	162028	0.35	Town Landing	560	WIANNO AVENUE	\$491,800	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	Ν
163007	163007	0.25	Town Landing	230	EAST BAY ROAD	\$64,400	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	N
186056	186056	0.40	Town Landing	40	HAYWA RD ROAD	\$537,800	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	Ν
215011	215011	0.83	Town Landing	780	OAK STREET	\$205,900	BOAT LAUNCH ING	FAIR	Y	Y	N/A	N	R	Ν
227046	227046	0.11	Town Landing	0	RED LILY POND ROAD	\$8,500	BOAT LAUNCH ING	GOOD	Y	Y	N/A	Ν	R	Ν
229051	229051	0.92	Town Landing	85	HORATI O LANE	\$216,000	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	Ν
259009	259009	0.79	Town Landing	210	SCUDDE R'S LANE	\$354,400	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	Ν
300022	300022	2.97	Town Landing	110	FREEZE R ROAD	\$1,277,100	BOAT LAUNCH ING	GOOD	Y	Y	N/A	Ν	R	N
300027	300027	0.18	Town Landing	0	MILLWA Y	\$270,500	BOAT LAUNCH ING	GOOD	Y	Y	N/A	Ν	R	N
325075	325075	0.17	Town Landing	86	BAY SHORE ROAD	\$397,500	BOAT LAUNCH ING	GOOD	Y	Y	N/A	Ν	R	N
326118	326118	0.62	Town Landing	147	LEWIS BAY ROAD	\$1,645,200	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	N



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326139	326139	0.07	Town Landing	0	BAY SHORE ROAD	\$112,000	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	N
326146	326146	0.01	Town Landing	190	PLEASA NT STREET	\$43,400	BOAT LAUNCH ING	GOOD	Y	Y	N/A	N	R	N
SUBTOT AL		12.39				\$10,337,500						N		
010016	010016	0.10	Town Municipal	101	SANDAL WOOD DRIVE	\$3,000	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
013052	013052	16.66	Town Municipal	810	WAKEB Y ROAD	\$261,000	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
017006	017006	0.60	Town Municipal	35	PINQUIC KSET COVE CIR	\$280,000	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
018015	018015	0.18	Town Municipal	96	PINE RIDGE ROAD	\$86,800	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
018024	018024	0.18	Town Municipal	39	CHERRY TREE ROAD	\$34,700	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
018049	018049	0.09	Town Municipal	125	OAKWO OD STREET	\$8,300	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
018050	018050	0.09	Town Municipal	117	OAKWO OD STREET	\$8,300	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
018052	018052	0.09	Town Municipal	63	PINE RIDGE ROAD	\$8,300	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
0180550 02	01805500 2	0.09	Town Municipal	121	OAKWO OD STREET	\$8,300	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
0201150 01	02011500 1	4.45	Town Municipal	430	SANTUI T ROAD	\$189,400	GENERA L MUNICIP AL	GOOD	N	Ν	N/A	N	R	Ν



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021018	021018	0.50	Town Municipal	0	OLD OYSTER ROAD	\$75,000	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
026036	026036	0.41	Town Municipal	1274	SANTUI T- NEWTO WN ROAD	\$112,500	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
034028	034028	0.20	Town Municipal	0	MAIN STREET (COTUIT)	\$101,600	GENERA L MUNICIP AL	GOOD	N	N	N/A	Ν	R	N
042012C 00	042012C0 0	15.13	Town Municipal	0	BRITTA NY DRIVE	\$494,100	GENERA L MUNICIP AL	GOOD	Ν	Ν	N/A	Ν	R	N
042012T 00	042012T0 0	0.19	Town Municipal	0	BRITTA NY DRIVE	\$4,400	GENERA L MUNICIP AL	GOOD	Ν	Ν	N/A	Ν	R	N
046137	046137	0.96	Town Municipal	31	WHISTL EBERRY DRIVE	\$98,000	GENERA L MUNICIP AL	GOOD	Ν	Ν	N/A	Ν	R	N
047014	047014	1.67	Town Municipal	0	RACE LANE	\$60,900	GENERA L MUNICIP AL	GOOD	Ν	Ν	N/A	Ν	R	N
054022	054022	0.01	Town Municipal	485	OLD POST ROAD	\$7,200	GENERA L MUNICIP AL	GOOD	Ν	Ν	N/A	Ν	R	N
065018	065018	0.24	Town Municipal	0	LITTLE POND ROAD	\$13,000	GENERA L MUNICIP AL	GOOD	Z	Ν	N/A	Ν	R	N
076024	076024	1.58	Town Municipal	235	CEDAR TREE NECK ROAD	\$3,087,200	MARINA	GOOD	Y	Y	N/A	Ν	R	N
077017	077017	0.29	Town Municipal	69	HILLTOP DRIVE	\$40,000	GENERA L MUNICIP AL	GOOD	Z	Ν	N/A	Ν	R	N
077027	077027	0.80	Town Municipal	0	FALMOU TH ROAD/R	\$67,500	GENERA L MUNICIP	GOOD	N	N	N/A	Ν	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

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					12 20		AL							
			_				GENERA							
078008	078008	1.40	Town Municipal	125	RIVER ROAD		L MUNICIP							
			wunicipal		RUAD	\$117,800	AL	GOOD	Ν	N	N/A	N	R	N
						ψΠ7,000	GENERA	0000			IN/A			
070005	070005	0.00	Town	•	MISTIC		L							
079005	079005	0.08	Municipal	0	DRIVE		MUNICIP							
			-			\$4,500	AL	GOOD	N	N	N/A	N	R	N
			_				GENERA							
079051	079051	0.11	Town	0	MISTIC		L							
			Municipal		DRIVE	\$4,600	MUNICIP AL	GOOD	Ν	Ν	N/A	N	R	N
						φ4,000	GENERA	GOOD	IN	IN	IN/A	IN	ĸ	IN
			Town		BOURG		L							
099062	099062	1.68	Municipal	0	EOIS		MUNICIP							
			-		LANE	\$90,800	AL	GOOD	Ν	N	N/A	N	R	Ν
					FALMOU		GENERA							
099063	099063	2.78	Town	0	TH		L							
			Municipal	-	ROAD/R TE 28	\$208,500	MUNICIP AL	GOOD	Ν	N	N/A	N	R	N
						\$206,500	GENERA	GOOD	IN	IN	IN/A	IN	ĸ	Ν
			Town	_	BOURG		L							
099064	099064	1.99	Municipal	0	EOIS		MUNICIP							
			•		LANE	\$93,700	AL	GOOD	Ν	N	N/A	N	R	Ν
					WILLIMA		GENERA							
102178	102178	0.09	Town	140	NTIC		L							
			Municipal	-	DRIVE	\$10,500	MUNICIP AL	GOOD	Ν	N	N/A	N	R	N
						\$10,500	GENERA	GOOD	IN	IN	IN/A	IN	ĸ	IN
			Town		WEBSTE		L							
103022	103022	0.46	Municipal	75	R ROAD		MUNICIP							
			-			\$73,400	AL	GOOD	N	N	N/A	N	R	Ν
104003T	104003T0	143.68	Town	1460	ROUTE									
00	0	110.00	Municipal	1100	149	\$14,078,800	GOLF	GOOD	Y	Y	N/A	N	R	N
104000144	104002\\		Tour		ROUTE		GENERA							
104003W 00	104003W 00	11.00	Town Municipal	1500	149		L MUNICIP							
00	00		municipal		143	\$1,107,800	AL	GOOD	Ν	Ν	N/A	N	R	N
						<i>\\\</i> ,\\\\\\\\\\\\\\\\\\\\\\\\\\\	GENERA	0000						
108005	108005	7.43	Town	0	MAPLE		L							
100005	106003	1.40	Municipal	U	STREET		MUNICIP							
						\$267,600	AL	GOOD	Ν	N	N/A	N	R	N
1110110	11101100	0.50	Town	0	KALWEI		GENERA							
03	3	0.58	Municipal	0	T DRIVE	\$7,900	L MUNICIP	GOOD	Ν	N	N/A	N	R	Ν
			-			φ1,900	WUNU	GOOD	IN	IN	IN/A	IN	Л	IN



CENTERLINE STUDIOS INC. Landscape Architecture and Planning
					I		AL							
							OFNEDA							
			Town		WIANNO		GENERA L							
117179	117179	1.05	Municipal	9	AVENUE		MUNICIP							
						\$540,000	AL	GOOD	N	N	N/A	N	R	N
			Town		POND		GENERA L							
119031	119031	0.31	Municipal	249	STREET		MUNICIP							
			'			\$37,200	AL	GOOD	N	N	N/A	N	R	N
			Taura		GUNST		GENERA							
121103	121103	0.35	Town Municipal	108	OCK		L MUNICIP							
			manneipai		ROAD	\$79,300	AL	GOOD	Ν	Ν	N/A	N	R	Ν
			T		OST		GENERA							
123001	123001	14.43	Town Municipal	655	W.BARN		L MUNICIP							
			manioipai		. RD	\$931,200	AL	GOOD	Ν	Ν	N/A	N	R	Ν
123002	123002	58.00	Town	45	FLINT		LANDFIL							
120002	120002	00.00	Municipal	10	STREET	\$3,742,600	L GENERA	GOOD	N	Y	N/A	N	R	N
			Town	_	FLINT		GENERA L							
123027	123027	1.48	Municipal	5	STREET		MUNICIP							
						\$137,700	AL	GOOD	N	N	N/A	N	R	N
1230280	12302800		Town		FLINT		GENERA L							
01	1	4.62	Municipal	77	STREET		MUNICIP							
						\$147,800	AL	GOOD	N	N	N/A	N	R	N
			Town		FLINT		GENERA L							
123045	123045	0.20	Municipal	0	STREET		MUNICIP							
						\$47,600	AL	GOOD	N	N	N/A	N	R	N
126004	126004	11.01	Town	450	RACE	\$000 000	HORSE	C00D	N	N	N1/A	N		N
			Municipal		LANE	\$990,900	FARM GENERA	GOOD	N	N	N/A	N	R	N
106064	126061	2.84	Town	1445	OST		L							
126061	120001	2.04	Municipal	1445	W.BARN . RD	• • • • • •	MUNICIP						_	
						\$545,400	AL GENERA	GOOD	N	N	N/A	N	R	N
400000	400000	0.04	Town	<u>^</u>	WHITE		GENERA L							
128029	128029	0.34	Municipal	0	BIRCH WAY		MUNICIP							
						\$6,900	AL	GOOD	N	N	N/A	N	R	N
			Town		SANDY		GENERA L							
136012	136012	0.11	Municipal	393	NECK ROAD		MUNICIP							
			-		RUAD	\$10,600	AL	GOOD	Ν	N	N/A	N	R	Ν



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning

			1											
142048	142048	57.18	Town Municipal	0	OLD MILL ROAD	•	GENERA L MUNICIP						_	
					110/12	\$5,360,600	AL	GOOD	N	N	N/A	N	R	N
142149	142149	0.53	Town Municipal	60	STONE HORSE		GENERA L MUNICIP							
			wunicipai		ROAD	\$478,900	AL	GOOD	Ν	Ν	N/A	N	R	N
					OAKVILL	* -,	GENERA							
143003	143003	2.06	Town	30	E		L							
			Municipal		AVENUE	\$257,500	MUNICIP	GOOD	Ν	N	NI/A	N	D	N
						¢257,500	AL GENERA	GOOD	IN	N	N/A	N	R	N
110015	4 400 4 5	0.00	Town	•	POND		L							
143015	143015	3.98	Municipal	0	STREET		MUNICIP							
						\$549,200	AL	GOOD	N	N	N/A	N	R	N
			Tourn		POND		GENERA							
143017	143017	2.07	Town Municipal	0	STREET		L MUNICIP							
			Municipai		OTILET	\$285,700	AL	GOOD	Ν	Ν	N/A	Ν	R	N
						+ ,	GENERA							
143020	143020	7.49	Town	0	POND		L							
110020	110020	1.10	Municipal	Ũ	STREET	\$0,004,000	MUNICIP	0000			N1/A		5	
						\$2,001,300	AL GENERA	GOOD	N	N	N/A	N	R	N
			Town		OLD		L							
143040	143040	1.55	Municipal	449	MILL ROAD		MUNICIP							
			_		ROAD	\$149,100	AL	GOOD	N	N	N/A	N	R	N
			-				GENERA							
144032	144032	0.35	Town Municipal	181	OLDHA M ROAD		L MUNICIP							
			wuncipai		IN ROAD	\$86,300	AL	GOOD	Ν	Ν	N/A	N	R	N
						\$00,000	GENERA				,			
146064	146064	0.21	Town	221	EBENEZ ER		L							
140004	140004	0.21	Municipal	~~ '	ROAD	¢ 47 000	MUNICIP	0005	N1	N1	N1/A		D	N
					-	\$47,900	AL GENERA	GOOD	N	N	N/A	N	R	N
			Town		NYE		L							
148011	148011	1.39	Municipal	464	ROAD		MUNICIP							
						\$145,000	AL	GOOD	Ν	N	N/A	N	R	N
					NORTH		GENERA							
148130	148130	0.34	Town	39	PRECIN		L							
			Municipal		CT ROAD	\$27,400	MUNICIP AL	GOOD	N	Ν	N/A	N	R	N
					NOAD	φ∠ <i>1</i> ,400	GENERA	GOOD	IN	IN	IN/A	IN	Л	IN
450050	450050	0.40	Town	00	FIELD		L							
150052	150052	0.48	Municipal	29	ROAD		MUNICIP							
						\$63,100	AL	GOOD	Ν	Ν	N/A	N	R	N



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning

-					1		GENERA						1	
150053	150053	0.48	Town Municipal	17	FIELD ROAD									
			wunicipai		RUAD	\$63,100	AL	GOOD	Ν	Ν	N/A	N	R	Ν
						····	GENERA							
150059	150059	0.46	Town Municipal	26	FIELD ROAD		L MUNICIP							
			municipai		RUAD	\$62,400	AL	GOOD	Ν	Ν	N/A	N	R	Ν
					TREE	+- ,	GENERA							
150060	150060	0.53	Town Municipal	297	TOP		L MUNICIP							
			municipai		CIRCLE	\$65,000	AL	GOOD	Ν	Ν	N/A	N	R	Ν
			_		TREE		GENERA							
150061	150061	0.59	Town Municipal	17	TOP		L MUNICIP							
			Marilopa		CIRCLE	\$67,600	AL	GOOD	Ν	Ν	N/A	N	R	Ν
			-		MAIN									
156012	156012	1.35	Town Municipal	694	ST./RTE 6A(W.BA		GENERA							
			manopa		RN.)		L MUNICIP							
						\$135,000	AL	GOOD	Ν	Ν	N/A	Ν	R	Ν
			Taura		MAIN ST./RTE		GENERA							
156014	156014	0.71	Town Municipal	710	6A(W.BA		L MUNICIP							
					RN.)	\$85,500	AL	GOOD	N	N	N/A	N	R	N
			Town		MAIN ST./RTE		GENERA L							
157010	157010	8.79	Municipal	0	6A(W.BA		MUNICIP							
			-		RN.)	\$39,600	AL	GOOD	Ν	N	N/A	N	R	N
160002	160002	15.25	Town Municipal	9999	SANDY NECK	\$1,788,800	BEACH	GOOD	Y	Y	N/A	N	R	Ν
			Marilopa		NEON	φ1,700,000	GENERA	0000			10/7			
167030	167030	2.25	Town	0	POWER									
			Municipal		S DRIVE	\$616,900	MUNICIP AL	GOOD	Ν	N	N/A	N	R	Ν
					GUILDF	<i>4010,000</i>	GENERA	0002						
172079	172079	0.20	Town	139	ORD		L MUNICIP							
			Municipal		ROAD	\$63,500	AL	GOOD	Ν	N	N/A	N	R	Ν
			_		GUILDF	· · · · · · · · · · · · · · · · · · ·	GENERA	-						
172080	172080	0.52	Town Municipal	0	ORD		L MUNICIP							
			municipal		ROAD	\$76,000	AL	GOOD	N	N	N/A	N	R	Ν
17010/	470404	0.05	Town	4.4.0	ASHLEY		GENERA							
172121	172121	0.35	Municipal	110	DRIVE	\$69,000	L MUNICIP	GOOD	N	N	N/A	N	R	Ν
	1		1		1	ψ00,000		0000			1 1/7 1			14



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning

	[1		AL		[1			1]
							AL							
			Taura		ASHLEY		GENERA							
172154	172154	0.53	Town Municipal	0	DRIVE		L MUNICIP							
			Marilopa		DIAVE	\$76,500	AL	GOOD	Ν	Ν	N/A	Ν	R	Ν
					MAIN		GENERA							
177002	177002	32.50	Town	0	ST./RTE		L							
			Municipal		6A(W.BA RN.)	\$2,437,500	MUNICIP AL	GOOD	N	N	N/A	Ν	R	Ν
					MAIN	ψ2,437,300	GENERA	0000			N/A		IX I	
178014	178014	0.01	Town	0	ST./RTE		L							
170014	178014	0.01	Municipal	0	6A(W.BA	• • • • • • •	MUNICIP						_	
					RN.)	\$11,600	AL	GOOD	N	N	N/A	N	R	N
			Town		PACKET		GENERA L							
180001	180001	0.36	Municipal	268			MUNICIP							
			-		G WAY	\$5,200	AL	GOOD	N	N	N/A	N	R	N
			-		PACKET		GENERA							
180010	180010	13.76	Town Municipal	261	LANDIN		L MUNICIP							
			wunicipai		G WAY	\$87,700	AL	GOOD	N	N	N/A	N	R	Ν
					DAOKET	<i>\</i> 0.,	GENERA							
180014	180014	0.36	Town	238	PACKET LANDIN		L							
100014	100014	0.50	Municipal	200	G WAY		MUNICIP						_	
						\$5,200	AL	GOOD	N	N	N/A	N	R	N
			Town		SOUTH		GENERA L							
185019	185019	1.67	Municipal	0	COUNTY		MUNICIP							
			-		ROAD	\$82,700	AL	GOOD	N	N	N/A	N	R	N
			-		SCUDDE		GENERA							
187015	187015	1.15	Town Municipal	197	R BAY		L MUNICIP							
			wunicipai		CIRCLE	\$184,000	AL	GOOD	N	N	N/A	Ν	R	Ν
						+ - ,,,,,,	GENERA							
189147	189147	0.01	Town	300	FULLER		L							
			Municipal		ROAD	\$32,500	MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
						φ32,300	GENERA	GOOD	IN		IN/A		n.	11
189155	189155	0.78	Town	0	BIRCHIL		L							
109100	109100	0.78	Municipal	U	L ROAD	A a a c - -	MUNICIP							
						\$89,000	AL GENERA	GOOD	N	N	N/A	N	R	N
			Town		HIGHLA		GENERA L							
190059	190059	0.21	Municipal	0			MUNICIP							
					DRIVE	\$29,300	AL	GOOD	Ν	Ν	N/A	N	R	Ν



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning

			1	1			OFNEDA			1		1	1	
190257	190257	0.53	Town Municipal	116	FOX HILL		GENERA L MUNICIP							
					ROAD	\$7,700	AL	GOOD	N	N	N/A	N	R	N
193007	193007	0.51	Town Municipal	685	SHOOTF LYING HILL RD	\$56,600	GENERA L MUNICIP AL	GOOD	Ν	N	N/A	N	R	N
193027	193027	0.18	Town Municipal	567	SHOOTF LYING HILL RD	\$25,200	GENERA L MUNICIP AL	GOOD	Ν	N	N/A	N	R	N
193030	193030	0.04	Town Municipal	544	SHOOTF LYING HILL RD	\$12,500	GENERA L MUNICIP AL	GOOD	Ν	Ν	N/A	N	R	Ν
194035	194035	0.14	Town Municipal	0	CAP'N CROSBY ROAD	\$61,700	GENERA L MUNICIP AL	GOOD	Ν	Ν	N/A	N	R	Ν
197011	197011	3.30	Town Municipal	0	MAIN ST./RTE 6A(W.BA RN.)	\$137,500	GENERA L MUNICIP AL	GOOD	Ν	N	N/A	N	R	N
214039	214039	0.87	Town Municipal	355	PLEASA NT PINES AVE	\$93,500	GENERA L MUNICIP AL	GOOD	Ν	Ν	N/A	N	R	N
215023	215023	8.25	Town Municipal	2245	IYANNO UGH ROAD/R OUTE13 2	\$2,064,000	ҮМСА	GOOD	Y	N	N/A	N	R	Ν
215026	215026	0.64	Town Municipal	2301	SERVIC E ROAD	\$61,500	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
215028	215028	4.08	Town Municipal	2239	IYANNO UGH ROAD/R OUTE13 2	\$268,500	AFFORD ABLE HOUSIN G	GOOD	Ν	N	N/A	N	R	N
217002	217002	0.39	Town Municipal	1809	MAIN ST./RTE 6A(W.BA RN.)	\$56,500	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning

			1		1				1	1		1		1
223004	223004	0.25	Town Municipal	0	SANDY NECK		GENERA L MUNICIP							
			Manopa		NEOK	\$92,300	AL	GOOD	Ν	Ν	N/A	Ν	R	Ν
						· · ·	GENERA							
223007	223007	1.00	Town	0	SANDY									
			Municipal		NECK	\$138,000	MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
						ψ130,000	GENERA	0000	IN		N/A		N.	
226031	226031	1.00	Town	7	OCEAN		L							
220031	220031	1.00	Municipal	1	AVENUE	* 4 4 0 0 0 0	MUNICIP	0000					_	
						\$110,900	AL GENERA	GOOD	N	N	N/A	N	R	N
			Town	_	LAKESID		L							
231001	231001	0.05	Municipal	0	E DRIVE WEST		MUNICIP							
					WEST	\$100,300	AL	GOOD	N	N	N/A	N	R	N
			Town		OLD		GENERA L							
235019	235019	0.24	Municipal	150	NECK									
			manopa		LANE	\$74,400	AL	GOOD	Ν	Ν	N/A	Ν	R	Ν
					OLD		GENERA							
236011	236011	8.67	Town Municipal	250	NECK		L MUNICIP							
			wunicipai		LANE	\$358,900	AL	GOOD	N	N	N/A	Ν	R	Ν
					SEVENT	<i>\</i>	GENERA							
245045	245045	1.00	Town	217	H		L							
			Municipal		AVENUE	\$18,300	MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
						φ10,300	GENERA	GOOD	IN	IN	N/A		n.	
247147	247147	0.25	Town	82	GINGER		L							
247147	247147	0.25	Municipal	02	LANE		MUNICIP						_	
						\$81,300	AL GENERA	GOOD	N	N	N/A	N	R	N
			Town		CARLOT		L							
248232	248232	0.41	Municipal	65	TA AVENUE		MUNICIP							
					AVENUE	\$82,100	AL	GOOD	N	N	N/A	N	R	N
			Taura		WEST		GENERA							
249051	249051	0.12	Town Municipal	695	MAIN		L MUNICIP							
			Manicipai		STREET	\$14,100	AL	GOOD	Ν	N	N/A	N	R	N
					WEST		GENERA							
249052	249052	0.11	Town	685	MAIN									
			Municipal		STREET	\$14,000	MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
					OLD	ψ14,000	GENERA	0000	IN I	IN I	11/7	11		
2500660	25006600	0.12	Town	203	STRAW		L							
01	1	0.12	Municipal	203	BERRY	•.	MUNICIP							
					HILL	\$600	AL	GOOD	N	N	N/A	N	R	N



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning

					ROAD									
2500660 06	25006600 6	0.90	Town Municipal	0	OLD STRAW BERRY HILL ROAD	\$9,500	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
251095	251095	0.26	Town Municipal	45	LONGVI EW DRIVE	\$65,400	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
252044	252044	0.67	Town Municipal	133	GOOSE POINT ROAD	\$1,500	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
253007	253007	4.27	Town Municipal	0	HUCKIN S NECK ROAD	\$318,100	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
256004	256004	5.96	Town Municipal	0	MIDCAP E HGHWY(WEST) RTE 6	\$42,500	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
266002	266002	6.10	Town Municipal	0	OCEAN DRIVE	\$1,089,500	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
267177	267177	0.44	Town Municipal	0	WEST HYANNI SPORT CIR	\$72,600	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
268097	268097	0.55	Town Municipal	248	STRAIG HTWAY	\$77,500	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
269018	269018	0.08	Town Municipal	59	TEVYAW ROAD	\$44,900	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
269062	269062	1.30	Town Municipal	122	PONTIA C STREET	\$130,000	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	Ν



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning

	r				г – т				r	г	-		r	
269140	269140	0.31	Town Municipal	355	PITCHE R'S WAY		GENERA L MUNICIP							
			manopa			\$67,400	AL	GOOD	N	Ν	N/A	Ν	R	Ν
			Точир		FAWCET	· · · · · ·	GENERA L							
269164	269164	0.33	Town Municipal	142	TLANE		MUNICIP							
			Marilopa			\$68,200	AL	GOOD	N	Ν	N/A	N	R	Ν
					DUNN'S	· · ·	GENERA							
270008	270008	1.05	Town	202	POND		L							
2.0000	2.0000		Municipal		ROAD	#00 500	MUNICIP	0000			N1/A			
						\$80,500	AL GENERA	GOOD	N	N	N/A	N	R	N
			Town		PITCHE		L							
270115	270115	8.75	Municipal	571	R'S WAY		MUNICIP							
						\$787,500	AL	GOOD	N	Ν	N/A	Ν	R	Ν
							GENERA							
270116	270116	0.88	Town	575	PITCHE		L							
			Municipal		R'S WAY	\$94,000	MUNICIP AL	GOOD	N	N	N/A	N	R	N
						φ 94,000	GENERA	GOOD	IN	IN	IN/A	IN	ĸ	IN
			Town		WAGON		L							
270218	270218	0.18	Municipal	139	LANE		MUNICIP							
						\$6,300	AL	GOOD	N	N	N/A	Ν	R	N
			_				GENERA							
270243	270243	0.27	Town Municipal	93			L MUNICIP							
			iviunicipai		R DRIVE	\$55,900	AL	GOOD	N	N	N/A	N	R	Ν
						\$55,500	GENERA	0000			IN/A	IN		IN IN
070044	070044	0.40	Town	97	OLANDE		L							
270244	270244	0.40	Municipal	97	R DRIVE		MUNICIP							
						\$60,400	AL	GOOD	N	N	N/A	N	R	N
			T				GENERA							
270245	270245	0.38	Town Municipal	98	OLANDE R DRIVE		L MUNICIP							
			Municipai		IN DIVIVE	\$59,700	AL	GOOD	N	Ν	N/A	Ν	R	N
			1		FALMOU	<i>400,00</i>	GENERA	0002						
271096	271096	1.58	Town	767	TH		L							
211090	2/1090	1.00	Municipal	101	ROAD/R		MUNICIP							
					TE 28	\$80,800	AL	GOOD	N	N	N/A	N	R	N
			Town		ARROW		GENERA L							
271121	271121	0.21	Municipal	118	HEAD		MUNICIP							
			maniopu		DRIVE	\$63,800	AL	GOOD	N	Ν	N/A	N	R	Ν
							AL GENERA			1				
271237	271237	2.05	Town	800	PITCHE		L							
211201	211201	2.00	Municipal	000	R'S WAY	#500700	MUNICIP	0005			N1/A			
						\$590,700	AL	GOOD	N	N	N/A	N	R	N



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning

							GENERA							
274030	274030	1.41	Town	1189	PHINNE Y'S		L							
274030	274030	1.41	Municipal	1109	LANE	A	MUNICIP						_	
						\$759,300	AL GENERA	GOOD	N	N	N/A	N	R	N
			Town		PHINNE		L							
274031	274031	8.71	Municipal	1200	Y'S LANE		MUNICIP							
			-		LAINE	\$11,224,900	AL	GOOD	N	N	N/A	N	R	N
			Tours		PHINNE		GENERA							
274038	274038	0.53	Town Municipal	1411	Y'S		L MUNICIP							
			manopa		LANE	\$30,600	AL	GOOD	N	N	N/A	N	R	N
			_				GENERA							
275059	275059	1.57	Town Municipal	5	GRAVEL PLACE		L MUNICIP							
			wunicipai		FLACE	\$74,700	AL	GOOD	N	N	N/A	Ν	R	Ν
						¢,. 00	GENERA							
278027	278027	0.99	Town	30	CHOLE		L							
			Municipal		COURT	\$364,000	MUNICIP AL	GOOD	N	N	N/A	Ν	R	Ν
						\$304,000	GENERA	GOOD	IN		N/A	IN	N	IN
283002	283002	7.53	Town	0	SANDY		L							
203002	203002	7.55	Municipal	0	NECK	.	MUNICIP	0005					_	
						\$1,681,100	AL GENERA	GOOD	N	N	N/A	N	R	N
000047	000047		Town		FOREST		L							
290017	290017	0.59	Municipal	85	GLEN ROAD		MUNICIP							
					КОЛЬ	\$31,800	AL	GOOD	N	N	N/A	N	R	N
			Town		FOREST		GENERA L							
290118	290118	0.48	Municipal	73	GLEN		MUNICIP							
					ROAD	\$29,700	AL	GOOD	N	N	N/A	N	R	N
			-		SAINT		GENERA							
291031	291031	6.70	Town Municipal	0	FRANCI S		L MUNICIP							
			municipai		CIRCLE	\$216,400	AL	GOOD	N	N	N/A	Ν	R	Ν
					SAINT		GENERA				-			
291032	291032	0.33	Town	38	FRANCI		L							
20.002		0.00	Municipal		S CIRCLE	\$23,200	MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
						φ23,200	GENERA	GOOD	IN	IN	IN/A	IN	П	IN
291111	291111	0.31	Town	68	COUNTY SEAT		L							
231111	231111	0.31	Municipal	00	STREET		MUNICIP	0000						
					SAINT	\$67,400	AL	GOOD	N	N	N/A	N	R	N
			Town		FRANCI		GENERA L							
291226	291226	0.34	Municipal	166	S		MUNICIP							
					CIRCLE	\$46,600	AL	GOOD	N	Ν	N/A	N	R	N



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning

							GENERA			1			1	
			Town		JENNIFE		L							
292289	292289	0.23	Municipal	57	R LANE		MUNICIP							
			Maniopai			\$4,800	AL	GOOD	Ν	N	N/A	Ν	R	Ν
						¢ 1,000	GENERA	0002						
			Town	05	JENNIFE		L							
292290	292290	0.22	Municipal	65	R LANE		MUNICIP							
						\$4,800	AL	GOOD	N	N	N/A	N	R	N
							GENERA							
292291	292291	0.22	Town	71	JENNIFE		L							
202201	202201	0.22	Municipal		R LANE	• · · · ·	MUNICIP						_	
						\$4,800	AL	GOOD	N	N	N/A	N	R	N
			-				GENERA							
292292	292292	0.22	Town	79	JENNIFE R LANE		L MUNICIP							
			Municipal		R LANE	\$4,800	AL	GOOD	N	N	N/A	N	R	Ν
						\$4,800	GENERA	GOOD	IN	IN	IN/A	IN	ĸ	IN
			Town		JENNIFE		L							
292293	292293	0.22	Municipal	85	R LANE		MUNICIP							
			manioipai			\$4,800	AL	GOOD	N	N	N/A	N	R	Ν
						+)	GENERA							
000004	000004	0.00	Town	05	JENNIFE		L							
292294	292294	0.22	Municipal	95	R LANE		MUNICIP							
			-			\$4,800	AL	GOOD	N	N	N/A	N	R	N
							GENERA							
292295	292295	0.21	Town	101	JENNIFE		L							
_000	202200	0.2.	Municipal		R LANE	A (000	MUNICIP	0000					_	
					-	\$4,800	AL	GOOD	N	N	N/A	N	R	N
			Town		JENNIFE		GENERA L							
292296	292296	0.20	Municipal	107	R LANE		MUNICIP							
			Municipai			\$4,800	AL	GOOD	Ν	N	N/A	N	R	Ν
						ψ+,000	GENERA	0000			10/73			
			Town		JENNIFE		L							
292297	292297	0.22	Municipal	128	R LANE		MUNICIP							
						\$4,800	AL	GOOD	N	N	N/A	N	R	N
			1				GENERA							
292298	292298	0.22	Town	122	JENNIFE		L							
232230	232230	0.22	Municipal	122	R LANE		MUNICIP							
						\$4,800	AL	GOOD	N	N	N/A	N	R	N
			-		FALMOU									
293001	293001	82.38	Town	382	TH		WASTE							
			Municipal		ROAD/R TE 28	¢20 012 400	WATER PLANT	GOOD	N	N	NI/A	N	R	N
					FALMOU	\$30,913,400	GENERA	GOOD	N	N	N/A	N	ĸ	N
			Town		TH		L							
293032	293032	0.06	Municipal	252	ROAD/R		MUNICIP							
			manopa		TE 28	\$4,400	AL	GOOD	Ν	N	N/A	Ν	R	Ν
L	L	l	1		1220	ψ-,00	,	0000			1 1// 1	1 1		



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			r		1				1	r			1	
295028	295028	1.37	Town Municipal	0	INDEPE NDENCE DRIVE	\$11,000	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
297004	297004	0.16	Town Municipal	1331	HYANNI S- BARNST ABLE ROAD	\$62,300	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
297014	297014	0.20	Town Municipal	1344	HYANNI S- BARNST ABLE ROAD	\$63,500	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
299045	299045	1.00	Town Municipal	3365	MAIN ST./RTE 6A(BAR N.)	\$431,300	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
299046	299046	0.32	Town Municipal	3353	MAIN ST./RTE 6A(BAR N.)	\$534,000	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
300018	300018	0.91	Town Municipal	0	FREEZE R ROAD	\$214,900	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
302001	302001	17.30	Town Municipal	0	SANDY NECK	\$6,504,800	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
302002	302002	19.51	Town Municipal	0	SANDY NECK	\$366,800	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
306118	306118	0.06	Town Municipal	16	OLD COLONY ROAD	\$81,800	GENERA L MUNICIP AL	GOOD	N	N	N/A	Ν	R	N
307226	307226	0.01	Town Municipal	0	CHASE STREET	\$2,500	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N
307282	307282	7.50	Town Municipal	0	OLD COLONY ROAD	\$819,400	GENERA L MUNICIP AL	GOOD	N	N	N/A	N	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

388072 308072 1.52 Town Municipal 245 NRTH STREP L STREP L Stable of AL COOD AL N N NA NA NA N	1			1		1							1	1	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	308072	308072	1.52		245										
3080810 02 3080810 2 0.64 Town Municipal 1 300 SOUTH STREET GENERA L MUNICIP S125,000 Image: Color of the stress				wunicipal		SIREEI	\$485,000		GOOD	Ν	Ν	N/A	N	R	N
30808100 30608100 30.64 Town Municipal Mun							<i>\</i> 100,000	GENERA	0000						
0.2 2 Municipal $STREP$ STREP STREP STREP GOOD N N N/A N N/A N R N 3082650 1 0.08 Town Municipal 56 $RCRROAD GOOD N N N/A N N/A $			0.64	Town	300	SOUTH									
3082650 01 3082650 1 0.08 Town Municipal 56 OAK NECK NECK NECK GAN S47,900 GOOD AL N N NA N N NA NA N NA	02	2	0.01	Municipal	000	STREET	¢405.000			N	N	N1/A	N		N
							\$125,000		GOOD	IN	IN	N/A	N N	ĸ	N
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	3082650	30826500	0.00	Town	50										
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	01		0.08	Municipal	50										
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						NOAD	\$47,900	AL	GOOD	N	N	N/A	N	R	N
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	2092720	20827200		Town											
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			0.43		35										
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $						WAY	\$72,200	AL	GOOD	Ν	Ν	N/A	N	R	Ν
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						MITCHE									
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			0.45	Town	45	LL'S									
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	02	2		wunicipal		WAY	\$73,000		GOOD	N	Ν	N/A	Ν	R	N
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$							<i></i>		0002						
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	309027	309027	0.27		42			L							
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	000027	000027	0.21	Municipal	72	AVENUE	¢cr 000		0000	NI	N	N1/A	N	_	N
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$							\$65,800		GOOD	N	N	N/A	N	ĸ	N
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	3092220	30922200	0.74	Town	•	NORTH									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			0.74	Municipal	0										
$\begin{array}{c c c c c c c c c c c c c c c c c c c $							\$227,100	AL	GOOD	N	N	N/A	N	R	N
$ \frac{310431}{10220} = \frac{310431}{10220} = \frac{0.23}{10} = 0$				Town											
$\frac{1}{10200} \left[\begin{array}{cccccccccccccccccccccccccccccccccccc$	310431	310431	0.23		285										
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				manopa		CIRCLE	\$64,400	AL	GOOD	Ν	Ν	N/A	N	R	N
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						BARNST									
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			0.12	Town	0										
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	01	I		wunicipal		ROAD	\$4 600		GOOD	N	Ν	N/A	N	R	N
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						SOUTH	÷ 1,500	GENERA	0000						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			6.83		246	FLINT		L							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	03	3	0.00	Municipal	240	ROCK	MEQ 4 0005		0005	N	N 1	N1/A		_	N
31402700 17.00 Town Municipal 145 BREED S HILL S HILL ROAD L MUNICIP MUNICIP N N N/A N R N 3140270 1 1 145 SHILL ROAD SUPH GOOD N N N/A N R N 314029 314029 0.55 Town Municipal 0 SOUTH FLINT ROCK GENERA L							\$584,000		GOOD	N	N	N/A	N	к	N
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	3140270	31402700	47.00	Town											
314029 0.55 Town Municipal 0 SOUTH FLINT ROCK GENERA L L Image: Constraint of the second se			17.00		145			MUNICIP							
314029 314029 0.55 Town 0 FLINT L Municipal 0 ROCK MUNICIP							\$2,176,000	AL	GOOD	Ν	N	N/A	N	R	N
314029 314029 0.55 Municipal 0 ROCK MUNICIP				Town											
	314029	314029	0.55		0										
							\$69,800	AL	GOOD	Ν	Ν	N/A	N	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

		-	-				OFNEDA			1			-	
317052	317052	1.31	Town Municipal	92	SALT ROCK ROAD		GENERA L MUNICIP							
			-		RUAD	\$150,700	AL	GOOD	N	N	N/A	N	R	Ν
			_				GENERA							
318004	318004	2.39	Town Municipal	0	REDWIN G LANE		L MUNICIP							
			Municipai		GLANE	\$38,100	AL	GOOD	Ν	N	N/A	Ν	R	Ν
						<i>\</i> \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	GENERA	0000						
321003	321003	75.00	Town	0	SANDY		L							
021000	021000	10.00	Municipal	0	NECK	\$00 407 500	MUNICIP	0000	N	N	N1/A	N		N
						\$26,437,500	AL GENERA	GOOD	N	N	N/A	N	R	N
			Town		OCEAN		L							
324042	324042	2.44	Municipal	0	STREET		MUNICIP							
						\$30,200	AL	GOOD	N	N	N/A	N	R	N
			Tourn		OCEAN		GENERA L							
325046	325046	0.11	Town Municipal	292	STREET									
			Manicipai		OTTEL	\$106,400	AL	GOOD	Ν	Ν	N/A	N	R	N
					ISLAND	· · ·	GENERA							
325108	325108	0.18	Town	32	VIEW		L							
			Municipal	-	ROAD	\$50,300	MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
						φ50,500	GENERA	GOOD	IN	IN	N/A	IN	n.	IN IN
3260010	32600100	5.51	Town	365	OLD COLONY		L							
01	1	5.51	Municipal	305	ROAD		MUNICIP						_	
			-			\$602,000	AL GENERA	GOOD	N	N	N/A	N	R	N
3260010	32600100		Town		OLD		GENERA L							
02	2	0.06	Municipal	0	COLONY		MUNICIP							
			•		ROAD	\$68,200	AL	GOOD	N	N	N/A	N	R	N
			_				GENERA							
3260090 02	32600900 2	0.15	Town Municipal	0	PEARL STREET		L MUNICIP							
02	2		wunicipai		SIKELI	\$46,500	AL	GOOD	Ν	N	N/A	N	R	Ν
<u> </u>					MAIN	\$ 10,000		2202						
326021	326021	4.09	Town	367	STREET									
020021	520021	4.00	Municipal	507	(HYANNI	\$0.705.000	TOWN	0000	N	Ň	N1/A			
					S)	\$6,795,300	HALL GENERA	GOOD	N	Y	N/A	N	R	N
		0.07	Town	100	SOUTH		L							
326022	326022	0.27	Municipal	198	STREET		MUNICIP							
						\$82,300	AL	GOOD	Ν	N	N/A	N	R	N
			Town		OCEAN		GENERA L							
326023	326023	0.29	Town Municipal	67	STREET		L MUNICIP							
			manioipui		U.L.L.	\$116,600	AL	GOOD	Ν	Ν	N/A	N	R	Ν
t										•		•		•



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			1							1			r	
326024	326024	0.20	Town Municipal	63	OCEAN STREET		GENERA L MUNICIP							
			-			\$111,100	AL	GOOD	N	N	N/A	N	R	N
			Town		SOUTH		GENERA L							
326061	326061	2.91	Municipal	135	STREET		MUNICIP							
					_	\$2,538,200	AL	GOOD	N	N	N/A	N	R	Ν
							GENERA							
326127	326127	0.16	Town	91	SOUTH		L							
			Municipal		STREET	\$78,700	MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
						ψ/0,/00	GENERA	0000			IN/A	IN		IN IN
000404	000404	0.00	Town	400	PLEASA		L							
326131	326131	0.20	Municipal	182	NT STREET		MUNICIP							
					SIREET	\$1,629,200	AL	GOOD	N	N	N/A	N	R	N
0004050	00040500		T				GENERA							
3261350 01	32613500 1	0.11	Town Municipal	192	SOUTH STREET		L MUNICIP							
01	1		wunicipai		SIREEI	\$76,000	AL	GOOD	Ν	N	N/A	N	R	Ν
						<i></i>	GENERA	0002						
3261350	32613500	0.05	Town	0	SOUTH		L							
02	2	0.05	Municipal	0	STREET		MUNICIP						_	
					NAAINI	\$7,400	AL	GOOD	N	N	N/A	N	R	N
			Town		MAIN STREET		GENERA L							
326138	326138	3.41	Municipal	397	(HYANNI		MUNICIP							
					S)	\$1,987,500	AL	GOOD	N	N	N/A	N	R	Ν
					DAISY		GENERA							
326143	326143	0.25	Town	13	HILL		L							
			Municipal		ROAD	\$103,400	MUNICIP AL	GOOD	N	N	N/A	N	R	N
						\$103,400	GENERA	GOOD	IN	IN	IN/A	IN	ĸ	IN
			Town		WILLOW		L							
327067	327067	0.22	Municipal	58	AVENUE		MUNICIP							
						\$196,300	AL	GOOD	N	N	N/A	N	R	N
			-		005		GENERA							
327101	327101	0.41	Town Municipal	30	OCEAN STREET		L MUNICIP							
			wunicipal		SIREEL	\$125,000	AL	GOOD	N	N	N/A	N	R	Ν
					MAIN	ψ120,000	GENERA	0000	1 1	11	11/7	1.1		
3271650	32716500	1.33	Town	200	STREET		L							
01	1	1.33	Municipal	200	(HYANNI		MUNICIP							
					S)	\$1,448,000	AL GENERA	GOOD	N	N	N/A	N	R	N
			Town		OCEAN		GENERA L							
327261	327261	0.62	Municipal	25	STREET		MUNICIP							
			manioipui		J.I.L.	\$164,300	AL	GOOD	Ν	N	N/A	N	R	N
			1			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1		1	1		•	1	



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	R	NN
327271 327271 1.09 Town Municipal 0 NORTH STREET GENERA L MUNICIP S293,000 NORTH STREET MUNICIP GOOD N N N/A N 328114 328114 1.64 Town Municipal 0 MARY DUNN WAY GENERA L MUNICIP N <td></td> <td></td>		
327271 327271 1.09 Town Municipal 0 NORTH STREET L MUNICIP 328114 328114 1.64 Town Municipal 0 MARY DUNN MUNICIP GENERA L - - - - - - - -	R	N
32/2/1 32/2/1 1.09 Municipal 0 STREET MUNICIP MUNICIP N N/A N 328114 328114 1.64 Town Municipal 0 MARY DUNN MUNICIP GENERA L N N N/A N	R	Ν
328114 328114 1.64 Town Municipal 0 MARY DUNN MUNICIP GENERA L MUNICIP Image: Comparison of the second se	R	Ν
328114 328114 1.64 Town 0 MARY DUNN GENERA L Municipal 0 DUNN MUNICIP	- R	
328114 328114 1.64 Town 0 DUNN Municipal 0 DUNN MUNICIP		
5475,600 AL GOOD N N N/A N	R	N
MARY GENERA		
328118 328118 2.02 Town 0 DUNN LL Municipal 0 DUNN MUNICIP		
WAY \$181,800 AL GOOD N N/A N	R	Ν
GENERA GENERA	IX III	
200424 200424 Town of BROOK L		
\$24,700 AL GOOD N N/A N	R	N
GENERA L		
328127 328127 2.38 Town 23 BROOK L Municipal 23 BROOK MUNICIP		
\$214,200 AL GOOD N N/A N	R	Ν
OLD GENERA		
220422 220422 0.48 Town 20 MARY L		
ROAD \$56,600 AL GOOD N N/A N	R	N
220124 220124 0.22 Town 24 DUNN GENERA L		
320134 320134 U.32 Municipal 24 DUININ MUNICIP		
WAY \$61,000 AL GOOD N N/A N	R	Ν
XARMO GENERA		
ROAD \$81,000 AL GOOD N N/A N OLD GENERA GENERA GOOD GENERA G	R	Ν
328234 328234 0.17 Town 24 DUNN L MUNICIP		
ROAD \$94,500 AL GOOD N N/A N	R	Ν
IYANNO GENERA		
329002 329002 0.09 Town 0 UGH L		
	R	N
TE28 \$1,300 AL GOOD N N/A N	к	N
329005 329005 0.44 Municipal 28 A ROAD MUNICIP		
\$65,300 AL GOOD N N/A N	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

							GENERA							
329006	329006	0.32	Town	60	BROOK		L							
329000	329000	0.32	Municipal	00	S ROAD	\$ 24,222	MUNICIP	0005			N 1/A		_	
						\$61,000	AL GENERA	GOOD	N	N	N/A	N	R	N
000007	000007	0.75	Town		BROOK		L							
329007	329007	0.75	Municipal	62	S ROAD		MUNICIP							
						\$31,500	AL GENERA	GOOD	N	N	N/A	N	R	N
			Town		BROOK		GENERA L							
329009	329009	0.50	Municipal	0	SROAD		MUNICIP							
						\$146,300	AL	GOOD	N	N	N/A	N	R	N
			Town		YARMO		GENERA L							
329010	329010	0.50	Municipal	0	UTH		MUNICIP							
			·		ROAD	\$97,500	AL	GOOD	N	N	N/A	N	R	N
			Town		BRENT		GENERA L							
333014	333014	0.23	Municipal	61	WOOD									
			manopai		LANE	\$74,100	AL	GOOD	Ν	Ν	N/A	Ν	R	Ν
			-		MARY		GENERA							
335079	335079	1.35	Town Municipal	0	DUNN		L MUNICIP							
			Manopa		ROAD	\$114,800	AL	GOOD	N	N	N/A	N	R	Ν
			-		STONEY		GENERA							
336102	336102	4.92	Town Municipal	NULL	POINT		L MUNICIP							
			Municipai		ROAD	\$13,700	AL	GOOD	N	Ν	N/A	N	R	Ν
					OLD		GENERA							
344043	344043	0.21	Town Municipal	227	YARMO UTH		L							
			municipai		ROAD	\$76,600	MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
						\$70,000	GENERA	0000			14/7			
348003	348003	0.58	Town	474	MARST ONS		L							
			Municipal		LANE	\$90,900	MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
			1			ψ00,000	GENERA				11/17			
348005	348005	2.95	Town	71	HAMSTE AD		L							
010000	0.0000	2.00	Municipal		LANE	\$339,300	MUNICIP AL	GOOD	N	N	N/A	N	R	Ν
					MIDCAP	ψυυθ,υθθ		6000	IN	IN I	IN/A		n n	11
			Town		E		GENERA							
348008	348008	0.96	Municipal	0	HGHWY(WEST)		L MUNICIP							
					RTE 6	\$112,700	AL	GOOD	N	N	N/A	N	R	Ν
			Town		OAKMO	,,. 	GENERA		-					
349013	349013	3.36	Municipal	105	NT	¢450.000		0000	N	NI	N1/A	NI		N
	1				ROAD	\$159,900	MUNICIP	GOOD	N	N	N/A	N	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

			1		T		AL			[[
			Taura		COUNT RY		GENERA L							
350036	350036	0.49	Town Municipal	179	CLUB		MUNICIP							
			Manopa		DRIVE	\$102,900	AL	GOOD	Ν	Ν	N/A	N	R	Ν
					MIDCAP	· · /· ·								
			Town		E		GENERA							
354002	354002	1.23	Municipal	0	HGHWY(
					WEST) RTE 6	\$56.600	MUNICIP AL	GOOD	Ν	N	N/A	Ν	R	N
					MIDCAP	\$30,000		0000	IN		IN/A			
			Town		E		GENERA							
354003	354003	5.36	Municipal	0	HGHWY(L							
			manicipai		WEST)	\$004.000	MUNICIP	0000		N	N1/A	N		
SUBTOT					RTE 6	\$234,200	AL	GOOD	N	N	N/A	N	R	N
AL		865.84				\$156,769,300						N		
			Town		IYANNO	, , ,	TRUST							
311028	311028	0.36	Municipal	491	UGH		FUNDS							
011020	011020	0.00	(Cobb	101	ROAD/R	¢ 470 400	SCHOOL	0000		N	N1/A			
			Trust) Town		TE28 IYANNO	\$470,100	S TRUST	GOOD	N	N	N/A	N	R	Ν
			Municipal		UGH		FUNDS							
311082	311082	0.32	(Cobb	451	ROAD/R		SCHOOL							
			Trust)		TE28	\$246,800	S	GOOD	Ν	N	N/A	N	R	N
			Town		FLINT		TRUST							
315025	315025	0.23	Municipal (Cobb	0	ROCK		FUNDS SCHOOL							
			Trust)		ROAD	\$74,100	S	GOOD	Ν	Ν	N/A	N	R	Ν
			Town		MARY		TRUST							
332005	332005	0.59	Municipal	864	DUNN		FUNDS							
002000	002000	0.00	(Cobb	001	ROAD	Ф 74 БОО	SCHOOL	0000	N	N	N1/A	N	D	N
			Trust) Town			\$71,500	S TRUST	GOOD	Ν	N	N/A	N	R	N
3320100	33201000	44.00	Municipal		INDEPE		FUNDS							
01	1	14.32	(Cobb	770	NDENCE DRIVE		SCHOOL							
			Trust)		DRIVE	\$746,200	S	GOOD	Ν	N	N/A	N	R	N
0000400	00004000		Town		INDEPE		TRUST							
3320100 02	33201000 2	12.87	Municipal (Cobb	755	NDENCE		FUNDS SCHOOL							
02	2		Trust)		DRIVE	\$1,643,500	SCHOOL	GOOD	Ν	Ν	N/A	Ν	R	Ν
					MIDCAP	¢.,510,000								
			Town Municipal		E		TRUST							
348036	348036	1.20	(Cobb	0	HGHWY(FUNDS							
			Trust)		WEST) RTE 6	\$192,000	SCHOOL S	GOOD	N	N	N/A	N	R	Ν
L	ļ		· ·		RIEO	\$192,000	3	GOOD	IN	IN	IN/A	IN IN	71	IN



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

r			Town				TRUST							
349012	349012	7.05	Municipal (Cobb Trust)	87	OAKMO NT ROAD	\$308,100	FUNDS SCHOOL S	GOOD	N	N	N/A	N	R	N
SUBTOT AL		36.94	,			\$3,752,300						N		
155002	155002	6.33	Town Municipal (Lombar d)	2331	MEETIN GHOUS E WAY/RT E 149	\$726,200	TRUST BENEFIT S POOR	GOOD	N	Ν	N/A	Ν	R	N
155014	155014	8.34	Town Municipal (Lombar d)	96	LOMBAR D AVE/ST	\$935,800	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
155017	155017	0.30	Town Municipal (Lombar d)	2455	MEETIN GHOUS E WAY/RT E 149	\$349,100	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
155018A 01	155018A0 1	1.11	Town Municipal (Lombar d)	2415	MEETIN GHOUS E WAY/RT E 149	\$403,600	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
155019	155019	0.58	Town Municipal (Lombar d)	2401	MEETIN GHOUS E WAY/RT E 149	\$335,200	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
155020	155020	0.44	Town Municipal (Lombar d)	2429	MEETIN GHOUS E WAY/RT E 149	\$208,500	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
155021	155021	0.67	Town Municipal (Lombar d)	9999	MEETIN GHOUS E WAY/RT E 149	\$83,500	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
155022	155022	0.58	Town Municipal (Lombar d)	2465	MEETIN GHOUS E WAY/RT E 149	\$171,700	TRUST BENEFIT S POOR	GOOD	Ν	N	N/A	N	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

155023	155023	0.13	Town Municipal (Lombar d)	0	MEETIN GHOUS E WAY/RT E 149	\$6,100	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
155035	155035	0.11	Town Municipal (Lombar d)	2461	MEETIN GHOUS E WAY/RT E 149	\$82,500	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
155037	155037	3.32	Town Municipal (Lombar d)	24	LOMBAR D AVE/ST	\$29,900	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
155038	155038	0.41	Town Municipal (Lombar d)	2439	MEETIN GHOUS E WAY/RT E 149	\$258,600	TRUST BENEFIT S POOR	GOOD	Ν	N	N/A	N	R	N
155039	155039	0.92	Town Municipal (Lombar d)	2481	MEETIN GHOUS E WAY/RT E 149	\$228,300	TRUST BENEFIT S POOR	GOOD	Ν	Ν	N/A	N	R	N
155040	155040	4.60	Town Municipal (Lombar d)	2377	MEETIN GHOUS E WAY/RT E 149	\$730,700	OFFICE S AND SOFTVA LL	GOOD	Y	Y	N/A	N	R	N
155043	155043	0.48	Town Municipal (Lombar d)	2469	MEETIN GHOUS E WAY/RT E 149	\$262,900	TRUST BENEFIT S POOR	GOOD	Ν	Ν	N/A	N	R	N
155048A 00	155048A0 0	2.00	Town Municipal (Lombar d)	48	LOMBAR D AVE/ST	\$500,600	TRUST BENEFIT S POOR	GOOD	Ν	N	N/A	Ν	R	N
155049	155049	0.10	Town Municipal (Lombar d)	2463	MEETIN GHOUS E WAY/RT E 149	\$60,500	TRUST BENEFIT S POOR	GOOD	Ν	Ν	N/A	Ν	R	N
155050	155050	0.50	Town Municipal (Lombar d)	2449	MEETIN GHOUS E WAY/RT E 149	\$30,000	TRUST BENEFIT S POOR	GOOD	Ν	N	N/A	N	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

		1											1	1
1560350 01	15603500 1	9.29	Town Municipal (Lombar d)	0	NAVIGA TION ROAD	\$83,600	TRUST BENEFIT S POOR	GOOD	N	N	N/A	Ν	R	N
1560350 02	15603500 2	1.32	Town Municipal (Lombar d)	55	NAVIGA TION ROAD	\$13,200	TRUST BENEFIT S POOR	GOOD	N	Ν	N/A	Ν	R	N
156036	156036	0.31	Town Municipal (Lombar d)	918	MAIN ST./RTE 6A(W.BA RN.)	\$128,400	TRUST BENEFIT S POOR	GOOD	N	Ν	N/A	Ν	R	N
156054	156054	0.38	Town Municipal (Lombar d)	902	MAIN ST./RTE 6A(W.BA RN.)	\$70,200	TRUST BENEFIT S POOR	GOOD	N	Ν	N/A	Ν	R	N
156055	156055	1.16	Town Municipal (Lombar d)	21	NAVIGA TION ROAD	\$116,000	TRUST BENEFIT S POOR	GOOD	N	Ν	N/A	Ν	R	N
156056	156056	1.37	Town Municipal (Lombar d)	35	NAVIGA TION ROAD	\$259,200	TRUST BENEFIT S POOR	GOOD	N	Ν	N/A	Ν	R	N
156064	156064	0.01	Town Municipal (Lombar d)	0	MAIN ST./RTE 6A(W.BA RN.)	\$5,800	TRUST BENEFIT S POOR	GOOD	N	Ν	N/A	Ν	R	N
1800020 01	18000200 1	0.34	Town Municipal (Lombar d)	225	NAVIGA TION ROAD	\$165,000	TRUST BENEFIT S POOR	GOOD	N	Ν	N/A	Ν	R	N
1800020 02	18000200 2	0.89	Town Municipal (Lombar d)	215	NAVIGA TION ROAD	\$94,500	TRUST BENEFIT S POOR	GOOD	Ν	Ν	N/A	Ν	R	N
180003	180003	0.98	Town Municipal (Lombar d)	239	NAVIGA TION ROAD	\$9,900	TRUST BENEFIT S POOR	GOOD	Ν	Z	N/A	Ν	R	N
180007	180007	0.25	Town Municipal (Lombar d)	344	NAVIGA TION ROAD	\$3,300	TRUST BENEFIT S POOR	GOOD	N	Ν	N/A	Ν	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

-		-	-											
180031	180031	1.25	Town Municipal (Lombar d)	261	NAVIGA TION ROAD	\$6,300	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
180032	180032	2.00	Town Municipal (Lombar d)	0	NAVIGA TION ROAD	\$10,000	TRUST BENEFIT S POOR	GOOD	N	N	N/A	N	R	N
SUBTOT AL		50.47				\$6,369,100								
035051	035051	1.19	Town Recreati on	889	MAIN STREET (COTUIT)	\$327,300	PARK	GOOD	Y	Y	N/A	VARIES	R	N
036038	036038	4.78	Town Recreati on	10	LOWELL AVENUE	\$626,100	PARK	GOOD	Y	Y	N/A	VARIES	R	N
038009	038009	0.11	Town Recreati on	0	PUTNAM AVENUE	\$42,600	PARK	GOOD	Y	Y	N/A	VARIES	R	N
077006	077006	0.32	Town Recreati on	6	FALMOU TH ROAD/R TE 28	\$67,800	PARK	GOOD	Y	Y	N/A	VARIES	R	N
079015	079015	29.33	Town Recreati on	559	ROUTE 149	\$2,161,300	BURGES S PARK	GOOD	Y	Y	N/A	VARIES	R	N
117080	117080	0.22	Town Recreati on	818	MAIN STREET (OST.)	\$352,600	PARK	GOOD	Y	Y	N/A	VARIES	R	N
165086	165086	0.15	Town Recreati on	29	SPICE LANE	\$7,000	PARK	GOOD	Y	Y	N/A	VARIES	R	N
186063	186063	0.07	Town Recreati on	0	SOUTH MAIN STREET	\$13,400	PARK	GOOD	Y	Y	N/A	VARIES	R	N
187026	187026	7.50	Town Recreati on	625	BAY LANE	\$1,246,900	PARK	GOOD	Y	Y	N/A	VARIES	R	N
187078	187078	0.02	Town Recreati on	0	BEECH LEAF ISLAND ROAD	\$3,300	PARK	GOOD	Y	Y	N/A	VARIES	R	N
187081	187081	0.14	Town Recreati on	0	BEECH LEAF ISLAND ROAD	\$3,500	PARK	GOOD	Y	Y	N/A	VARIES	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

	r		1	1	5011								1	
187082	187082	9.44	Town Recreati on	104	BEECH LEAF ISLAND ROAD	\$48,900	PARK	GOOD	Y	Y	N/A	VARIES	R	N
207043	207043	2.71	Town Recreati on	524	MAIN STREET (CENT.)	\$1,215,400	PARK AND PLAYGR OUND	GOOD	Y	Y	N/A	Y	R	N
207063	207063	0.05	Town Recreati on	284	SOUTH MAIN STREET	\$81,400	PARK	GOOD	Y	Y	N/A	VARIES	R	N
208122	208122	0.05	Town Recreati on	400	MAIN STREET (CENT.)	\$13,300	PARK	GOOD	Y	Y	N/A	VARIES	R	N
209047	209047	0.74	Town Recreati on	20	PHINNE Y'S LANE	\$108,800	PARK	GOOD	Y	Y	N/A	VARIES	R	N
228138	228138	0.26	Town Recreati on	20	SOUTH MAIN STREET	\$90,300	PARK	GOOD	Y	Y	N/A	VARIES	R	N
229053	229053	4.00	Town Recreati on	0	CHILDS STREET	\$393,800	PARK	GOOD	Y	Y	N/A	VARIES	R	N
251114	251114	0.23	Town Recreati on	5	LAURA ROAD	\$64,400	PARK	GOOD	Y	Y	N/A	VARIES	R	N
270040	270040	0.38	Town Recreati on	255	LINCOL N ROAD	\$59,700	PARK	GOOD	Y	Y	N/A	VARIES	R	N
274005	274005	1.14	Town Recreati on	0	PHINNE Y'S LANE	\$114,000	PARK	GOOD	Y	Y	N/A	VARIES	R	N
275002	275002	35.90	Town Recreati on	1431	PHINNE Y'S LANE	\$1,077,000	PARK	GOOD	Y	Y	N/A	VARIES	R	Ν
299039	299039	1.00	Town Recreati on	0	MILLWA Y	\$125,000	PARK	GOOD	Y	Y	N/A	VARIES	R	Ν
309264	309264	7.78	Town Recreati on	141	BASSET T LANE	\$3,333,100	PARK	GOOD	Y	Y	N/A	VARIES	R	N
310242	310242	0.44	Town Recreati on	0	MAPLE STREET	\$83,500	PARK	GOOD	Y	Y	N/A	VARIES	R	N
310247	310247	0.17	Town Recreati on	52	MAPLE STREET	\$72,000	PARK	GOOD	Y	Y	N/A	VARIES	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

	1				1						1	1		
310252	310252	0.44	Town Recreati on	0	LINDEN STREET	\$33,400	PARK	GOOD	Y	Y	N/A	VARIES	R	N
326068	326068	1.74	Town Recreati on	180	OCEAN STREET	\$4,575,000	PARK	GOOD	Y	Y	N/A	VARIES	R	N
327237	327237	0.31	Town Recreati on	0	MAIN STREET (HYANNI S)	\$8,100	PARK	GOOD	Y	Y	N/A	VARIES	R	N
327265	327265	0.01	Town Recreati on	0	MAIN STREET (HYANNI S)	\$6,900	PARK	GOOD	Y	Y	N/A	VARIES	R	N
327266	327266	0.01	Town Recreati on	0	MAIN STREET (HYANNI S)	\$6,900	PARK	GOOD	Y	Y	N/A	VARIES	R	N
SUBTOT AL		110.63				\$16,362,700								
021008	021008	13.50	Town School	140	OLD OYSTER ROAD	\$2,982,700	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
077026	077026	13.11	Town School	2095	MAIN STREET (M.MILL S)	\$2,229,500	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
116053	116053	4.66	Town School	93	WEST BAY ROAD	\$1,962,900	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
123014	123014	36.80	Town School	730	OST W.BARN . RD	\$35,435,300	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
144004	144004	36.20	Town School	418	BUMPS RIVER ROAD	\$6,859,400	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
187030	187030	13.50	Town School	658	BAY LANE	\$6,021,300	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
249094	249094	68.70	Town School	744	WEST MAIN STREET	\$65,277,900	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
250044	250044	17.12	Town School	895	FALMOU TH ROAD/R TE 28	\$17,220,600	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
257012	257012	36.91	Town School	2463	MAIN ST./RTE 6A(BAR	\$6,214,800	SCHOOL	GOOD	Y	Y	N/A	Y	R	N



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

					N.)									
269002	269002	22.14	Town School	549	WEST MAIN STREET	\$8,821,700	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
271097	271097	8.87	Town School	825	FALMOU TH ROAD/R TE 28	\$2,107,400	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
309008	309008	18.22	Town School	171	BEARSE' S WAY	\$7,494,300	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
326001	326001	21.33	Town School	120	HIGH SCHOOL ROAD	\$7,603,600	SCHOOL	GOOD	Y	Y	N/A	Y	R	N
SUBTOT AL		311.06				\$170,231,400								
0970220 01	09702200 1	40.98	Trustees of Reservati ons	1635	SOUTH COUNTY ROAD	\$2,855,600	CR	GOOD	N	N	N/A	N	R	Y
157004	157004	4.19	Trustees of Reservati ons	620	MAIN ST./RTE 6A(W.BA RN.)	\$423,300	CR	GOOD	N	N	N/A	N	R	Y
SUBTOT AL		45.17				\$3,278,900								



CENTERLINE STUDIOS INC. Landscape Architecture and Planning

ADA ACCESS SELF-EVALUATION AND THE OPEN SPACE AND RECREATION PLAN

Under Federal Law, no qualified handicapped person shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subject to discrimination under any program or activity that receives Federal financial assistance. With regard to funding for Open Space and Recreational programs, a key mechanism for ensuring compliance with this requirement is the ADA (Americans with Disabilities Act) Self Evaluation, which is a required component of all final Open Space and Recreation Plans.

The ADA Self Evaluation provides an assessment of the overall degree of accessibility of a community's recreation programs and properties to people with disabilities. In addition to ensuring compliance with Federal ADA requirements, it can be a useful diagnostic tool for the community to recognize any shortcomings of the existing programs and develop a plan to remedy them. Many communities also find that in addition to the benefits of ensuring access for people with disabilities, the ADA guidelines can result in more comfortable and safer parks, trails, and recreation programs.

The Massachusetts Office on Disability is a tremendous resource. They are located at One Ashburton Place, Room 1305, Boston, MA 02108, phone(617) 727-7440, V/TTY (800) 322-2020 or Fax at (617) 727-0965, or visit them online at <u>www.state.ma.us/mod</u>.

General Overview

1) What is a handicap?

• A physical or mental impairment that substantially limits a major life activity such as caring for oneself, performing manual tasks, walking seeing, speaking, hearing, breathing, learning is a handicap. In addition, people who have a history of a handicap or are regarded as having a handicap are also protected under the law.

2) Who is a qualified handicapped person?

• Terminology: The preferred term is "people with disabilities. Please use this term in the plan.

Prepared By:



<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning

⁷³ Information in this appendix comes from the Massachusetts Office on Disability's Web site, www.state.ma.us/mod

- Employment: The individual can perform the essential job functions with or without reasonable accommodation.
- Programs, Activities: The individual meets essential eligibility requirements.

3) What is a reasonable accommodation?

• Reasonable accommodations can include renovating a building to make it accessible, restructuring a job by changing the work schedule, buying specialized equipment, and hiring others as readers or interpreters.

4) What is an "ADA Self-Evaluation"?

• The self-evaluation is a detailed assessment of the administrative and employment practices of the recreation department and conservation commission. It also includes a site-by-site inventory of all recreation and conservation areas and buildings, programs or services and a transition plan if any changes are necessary to make these public facilities, programs, or services accessible.

5) What is included in the inventory?

- This inventory only involves properties under the jurisdiction of the recreation department or conservation commission. (This is not for the town hall, library, etc.) Included are the buildings, recreation facilities and equipment (swimming areas, tot lots, etc), programs, and services. Programming may include a learn-to-swim program, guided hikes or tours, etc. Services include technical assistance for permitting process administered by the conservation commission.
- A key phrase is that the programs offered must be accessible when "viewed in their entirety." This means that not every existing facility or part of it has to be made accessible. Perhaps your park and recreation department offers swimming, hiking, picnic areas, and play equipment. Not all facilities may be accessible but some pools, trails, picnic areas and play equipment must be made accessible within your system. Changes can include:
 - structural changes;
 - relocating services to accessible buildings;
 - providing auxiliary aids such as audio tapes and sign language interpreters for your presentations;
 - providing home visits; and
 - > delivering services to an alternate site that is accessible.

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- 6) How do we make improvements?
 - A transition plan is required if structural changes are necessary. The plan must: (1) identify physical obstacles; (2) describe necessary changes; (3) schedule those changes; and (4) identify the responsible individual.
 - The self-evaluation and transition plan must be written with the assistance of individuals with disabilities or an organization representing the disabled community.

TIPS FOR COMPLIANCE

- 1. <u>New techniques and technologies are being developed and approved all the time.</u> New playground equipment or surfacing materials, lift technologies, devices for the visually or hearing impaired, and the like offer the combined benefits of expanding access to an ever widening group of people, providing choices in developing a transition plan, and reducing the cost of compliance and retrofitting.
- 2. <u>Consult the experts.</u> Many State and Federal agencies and non-profit advocacy groups exist to work with you to provide access. Work with them whenever possible. Treat yourself, and fellow volunteers, to a field trip to DEM's Dunn Park in Gardner, Massachusetts to enjoy accessible trails, playground, fishing, boating and swimming facilities.
- 3. <u>Keep a positive attitude.</u> Many communities adopt an antagonistic perspective towards ADA requirements, and view them as forcing costly and unnecessary improvements to retrofit existing facilities, when the money could be "better spent" elsewhere. Keep in mind that the goal is to expand access and provide recreational opportunities to all of the community's residents, so that all may enjoy the "common wealth." An additional benefit of this approach is that it expands the pool of recreational users of the facilities, thereby increasing the overall community support for them.
- 4. <u>Be creative.</u> If cost is a problem, look for "low-tech" solutions. Often, program-based solutions may provide inexpensive fixes in place of costly structural retrofits. Alternatively, additional sources of funding may be available for ADA compliance projects.
- 5. <u>Adopt a long-term perspective.</u> Even if improvements are expensive now, the community will benefit from them for many generations. Amortized over this extended timeframe, the cost of most ADA requirements becomes quite reasonable.

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REFERENCES AND RESOURCES

Organizations

- Adaptive Environments, 374 Congress Street, Suite 310, Boston, MA 02210. (800) 949-4232 (v/tty). Online at <u>www.adaptenv.org</u>.
- American National Standards Institute, 1819 L Street, NW, Washington, DC 20036. (202) 293.8020; Fax: (202) 293.9287. Online at <u>www.ansi.org</u>.
- Massachusetts Architectural Access Board, One Ashburton Place, Room 1310, Boston, MA 02108. Online at <u>http://www.magnet.state.ma.us/aab</u>.
- Massachusetts Office on Disability, One Ashburton Place, Room 1305, Boston, MA 02108. (617) 727-7440 or (800) 322-2020 (voice and TTY). Online at www.magnet.state.ma.us/mod.
- National Center on Accessibility, Indiana University, 2805 East 10th St, Suite 190, Bloomington, IN 47408-2698. (812) 856-4422 (Voice), (812) 856-4421 (tty), (812) 856-4480 (Fax). Online at <u>ncaonline.org</u>.
- U.S. Architectural and Transportation Barriers Compliance Board ("The Access Board"), 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111. (800) 872-2253, (800) 993-2822 (tty), (202) 272-5447 (fax). Online at <u>www.access-board.gov</u>.

Publications

- 36 CFR Part 1191: Americans with Disabilities Act Accessibility Guidelines; Recreation Facilities. U.S. Architecture and Transportation Compliance Board. Federal Register (July 9, 1999). Washington, D.C.
- 36 CFR Part 1191: Americans with Disabilities Act Accessibility Guidelines; Play Areas. U.S. Architecture and Transportation Compliance Board. Federal Register (April 30, 1998). Washington, D.C.
- ADA Transition Plan Workbook. Massachusetts State House Bookstore, State House, Room 116, Boston, MA 02133.
- Americans With Disabilities Act Resource Guide for Park, Recreation, and Leisure Service Agencies, First Edition. Lynn M. Casciotti, Editor. National Recreation and Park Association, Arlington VA, 1992.
- Americans with Disabilities Act, Public Law 226, 101st Congress. U.S. Government Printing Office, July 26, 1990.

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- Designing Sidewalks and Trails for Access: Review of Existing Guidelines and Practices. Barbara McMillen (editor). U.S. Department of Transportation, 1999.
- *Everyone's Nature: Designing Interpretation to Include All.* Carol Hunter. Falcon Press Publishing Co., Inc., Helena, Montana, 1994.
- Play for All Guidelines: Planning, Designing and Management of Outdoor Play Settings for All Children. Robin Moore et al. MIG Communications, 1992.
- *Reasonable Accommodation: Profitable Compliance with the Americans with Disabilities Act.* Jay W. Spechler. St. Lucie Press, Delray Beach FL, 1996.
- The Americans with Disabilities Act: A Review of Best Practices. Timothy Jones. American Management Association Membership Publications Division, New York, 1993.
- Universal Access to Outdoor Recreation: A Design Guide. PLAE, Inc., Berkeley CA, 1993.
- Universal Trail Assessment Coordinator Training Guide. P. Axelson et al. Pax Press, Santa Cruz, 1997.



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Appendix D Undevelopment Examples in Barnstable

A recent publication produced by The Compact of Cape Cod Conservation Trusts Inc., entitled *Take Back the Cape – Discovering Opportunities for Undevelopment*, defines undevelopment as *"the removal of existing manmade structures and influence upon the land followed by site restoration to a more natural state"*. The Town of Barnstable has completed several successful Undevelopment projects. Two of these are highlighted below, including one at East Bay Road and Parker Pond (Osterville) and the other at Cobb Boat House (Barnstable Village). Detailed descriptions of these projects are included below.

The truth is that undevelopment possibilities exist wherever one encounters land that has been built upon. Every lot across Cape Cod and the Islands has the potential to be reclaimed for a variety of purposes. The ideas and enduring visions for such projects are endless. Inventive undevelopment ideas include ecological restoration, active parks with trails and playgrounds, sanctuaries for quiet reflection, revitalization of historic homes and properties, and in some cases, removing existing structures to reveal a dramatic view of the world extending far beyond the site itself.

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CASE STUDY #1: EAST BAY ROAD AND PARKER POND

Project Name:	East Bay Road & Parker Pond
Project Location:	Osterville, Massachusetts
Project Sponsor(s):	Barnstable Land Trust, Inc. (BLT)
Property Size:	1 acre
Developed Use:	Single family home
Undeveloped Use:	Meadow and wetland habitat restored for active use by
_	wildlife and vegetation. Passive use sanctuary.

BACKGROUND:

With many undevelopment projects, the process of reclaiming a site for conservation purposes quite often begins with a unique set of circumstances that transform a seemingly gloomy situation into a golden opportunity. The Barnstable Land Trust (BLT) found this to be true with a one acre lot bordering Parker Pond in Osterville.

The Parker Pond property was the location of "Willow Bank," a large, stately home built in 1900 by Eliza Wright Halliday. This house, which overlooked the pond, was listed as a historic resource by the Town of Barnstable, and was fronted by a designated "Scenic Road." Willow Bank maintained its vigil over Parker Pond until 1995, when a major fire swept through the house, completely destroying it. A subsequent investigation of the incident led to the conclusion that the fire was intentionally set by Willow Bank's most recent owner, who was later convicted of arson.

By the spring of 1996, the property was entangled in a legal mess that involved bankruptcy, foreclosure, resale, rebuild and auction possibilities. A few weeks before a bank auction seemed inevitable, a new option emerged.

VISION:

"At that point, a major donor stepped forward and expressed an interest in seeing this property preserved," explained Jaci Barton, BLT's Executive Director. This anonymous preservationist offered to help the land trust purchase the site for conservation purposes. The burnt out building would be bulldozed, an undamaged building relocated, other debris disposed of and the natural habitat's ecological integrity restored.

ACTION:

Time was short, so BLT staff and members acted swiftly, putting together a plan to purchase the property. BLT's anonymous donor agreed to give \$215,000 in appreciated securities to the land trust to go toward the purchase price. At the same time, BLT developed a management plan to bring the Parker Pond site back to a more natural state. After negotiations with the bank, BLT acquired the property in August 1996.

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<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning The Trust now owned a site that consisted of an ecological mix of mature trees, an open field and wetland frontage along nearly 700 feet of Parker Pond, plus 600 feet of direct open vista along scenic East Bay Road. The lot conveniently abutted a 0.36 acre parcel of land previously given to BLT.

Yet, to help the property reach its full potential, the land trust still had quite a bit of work remaining. The task before them, as Barton put it, was to "give Mother Nature a hand." A small studio not damaged by the fire still stood on the site. This problem was solved when BLT was approached by an area resident who agreed to take the building off the lot and bear all of the moving costs.

Less easy to resolve were the needed repairs on the crumbling stone walls surrounding the property, removal of the charred remains of the original house, and removal of the foundations and septic systems of both buildings. BLT sent out mailings to the Osterville community and, through its appeal, was able to raise the approximately \$15,000 necessary for removal of the debris and for reseeding and landscaping plans.

Before any of the physical on-site labor could take place, BLT had to work with the appropriate state and local regulatory agencies, including the conservation commission, the board of health, the building department, and the various utility companies. Each had its own filing requirements and coordination procedures that needed to be followed.

<u>RESULTS</u>:

The land was brought back as close as possible to its natural, pre-development condition. The undeveloped site provides habitat for wildlife, and protects the area's ground and surface water, while still maintaining harmony with the character of the surrounding neighborhood.

As with the mythical phoenix, what was once consumed by fire has been reawakened into a thing of beauty. "In taking down a house," said Barton, "we reclaimed a view many people didn't even know was there."

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CASE STUDY #2: COBB BOAT HOUSE

Project Name:	Cobb Boat House
Project Location:	Barnstable Village
Project Sponsor(s):	Barnstable Land Trust; The Rendezvous Lane and Acres Homeowners Association
Property Size:	3.75 acres
Developed Use:	Boat house
Undeveloped Use:	Primary use for wildlife, shellfish and indigenous vegetation. Provides vista of marshes for area residents and visitors.

BACKGROUND:

The Cobb Boat House project in Barnstable Village is an example of what can be accomplished when a community works together to solve a problem.

This particular "problem" started with the "No Name Storm of 1991," a strong Halloween Eve northeaster that hit Cape Cod and the Western Atlantic. In the storm's bag of tricks was a tidal surge that flooded much of the coastal area, including the rivers and salt marshes located on Cape Cod Bay. One of the casualties of the surge was the 100 year old Cobb Boat House, which was located on a salt marsh next to the banks of Rendezvous Creek. The flood lifted the structure from its foundation, then carried the shaky frame and deposited it in the woods next to 13 acres of marsh owned by the Massachusetts Audubon Society.

Even before this event, the dilapidated condition of the boat house had been a source of controversy. The original site at one time contained a 19th century wharf that was used to offload cargo from schooners. In the mid to late 1800s, a storage house was built along side the wharf to store lumber and other materials. The wharf was eventually abandoned, but the storage house took on a new life as Francis D. Cobb's boat house in the early part of this century. More recently, the boat house was owned by the Dale family and had not been actively used except as a painter's motif. Quaint and picturesque to some, it was an eyesore to others as year by year it slowly fell into disrepair.

After the 1991 northeaster, the boat house owners assumed they were covered by Department of Environmental Protection (DEP) guidelines for emergency reconstruction after storms. They began to rebuild, but in a fashion that opened the door for the boat house to become a habitable structure on stilts above the marsh, connected to the town sewer line abutting the property. The Barnstable Conservation Commission stepped in and stopped the construction work. The Dales appealed their case to the southeastern office of the DEP, who overturned the local Conservation Commission's decision. The Conservation Commission countered by appealing to the DEP's Boston office, where the DEP then ordered a local hearing.

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VISION:

While the Dales, the Barnstable Conservation Commission and the DEP were embroiled in this regulatory nightmare, the local homeowners' association came up with their own solution. "Once the building was gone, the neighborhood saw the view that was left," explained Jaci Barton, Executive Director for the Barnstable Land Trust (BLT).

The Rendezvous Lane and Acres Homeowners Association had created one of the first wildlife sanctuaries on Cape Cod in the late 1950s when they bought the 13 acre salt marsh adjacent to the Cobb Boat House site and donated it to the Massachusetts Audubon Society. After seeing the view that was otherwise obscured by the boat house, it made perfect sense to them that this site should be similarly protected. In January 1993, while the boat house question was still caught in legal limbo, leaders of the homeowner association approached BLT to provide what they hoped would be the answer to satisfy all parties.

ACTION:

Following many months of in-depth negotiations with the property owners and the neighborhood group, BLT signed an agreement to buy the sensitive 3.75 acre salt marsh site for \$20,000. BLT estimated an additional \$10,000 was needed to dismantle and remove the building. The purchase would not have been possible without the assistance of the neighborhood association. Most of the purchase price was raised by the association, and supplemented by a \$5,000 grant from Cape Cod Five Cents Savings Bank. BLT provided staff and technical assistance for the purchase and coordinated removal of the structure.

<u>RESULTS</u>:

"It was a situation with a landowner who was tired and weary of trying to get through the regulatory process, *and* a neighborhood which was willing to help us buy the parcel rather than fight," said Barton. Both parties saw an opportunity to reach a solution that benefited everybody. At the time of the purchase, Barton stated, "The sale to BLT looks like quite a favorable outcome for everyone involved. It illustrates, I think, another way that a private, non-profit land trust can serve a range of people and interests, inside and outside of government, on behalf of preservation."

Today, the Cobb Boat House site is an area everyone can appreciate. Says Barton, "It is a historic site with a wide open view. It's one of the few places where you can drive down to the end of the road and have a picnic lunch while enjoying the view. That's pretty important to people."

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APPENDIX E-1 SECTION 504 COORDINATION

The Town of Barnstable has established a <u>Barnstable Disability Commission</u> as provided for by the attached by-laws. The current Chairperson is Alfred Melcher, 37 Thankful Lane, Cotuit, MA, 508-428-9461. In addition to Mr. Melcher, the following members are currently serving on the Committee:

<u>Name</u> <u>Address</u> <u>Pl</u>	hone
Jean Boyle P.O. Box 624, W. Hyannisport, MA 02672 (5	508) 775-6671
5 5 1 7	/
William Cole 230 South Street, Hyannis, MA 02601 (5	508) 862-4694
Raye Kaddy P.O. Box 531, Hyannisport, MA 02647 (5	508) 778-0382
Frank Maioli 111 Lothrop's Lane, W. Barnstable, MA 02668 (5	508) 362-7610
Paul Nevosh 30 Frazier Way, Marstons Mills, MA 02648 (5	508) 428-4463
Paul Sullivan 209 Longview Drive, Centerville, MA 02632 (5	508) 771-5251

⁷⁴§ 241-20. Disability Commission. [Amended 9-23-1993 by Order No. 93-130]

- A. Term of office. There shall be a Disability Commission consisting of not more than 11 members. A majority of the persons appointed shall consist either of persons with disabilities or persons in an immediate family of a person with a disability or persons who have extensive experience in the field of disabilities, and one member shall be an employee of the Town. The Commission may appoint two alternates.
- B. Authorities and responsibilities. The Disability Commission seeks to research local problems of people with disabilities; advise and assist municipal officials and employees in ensuring compliance with state and federal laws and regulations that affect people with disabilities; coordinate or carry out programs designed to meet the problems of people with disabilities in coordination with programs of the Massachusetts Office on Disability; review and make recommendations about policies, procedures, services, activities and facilities of departments and boards of the Town as they affect people with disabilities; provide information, referrals, guidance and technical assistance to individuals, public agencies, businesses and organizations in all matters pertaining to disability; and coordinate the activities of other local groups organized for similar purposes. The Commission may draft rules and regulations concerning disabled persons needs and issues, for adoption by the Town Manager and Town Council. The Commission may receive gifts of property, both real and personal, in the name of the Town, subject to approval of the Town Manager, such gifts to be managed and controlled by the Commission. The Disability Commission is an advisory committee of the Town.
- C. Interrelationships.

⁷⁴ From Town of Barnstable's Ordinances.

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- (1) Town Council: The Disability Commission interacts with the Town Council to advise the Council on policies designed to meet the needs of the disabled. The Commission interacts primarily with the Council Committees on Human Resources and Planning and Development.
- (2) Town Manager: The Disability Commission interacts with the Manager to ensure that Town programs and activities, as well as facilities, seek to improve and enhance service to the disabled, as well as come into compliance with state and federal standards concerning same. The Commission receives administrative support through the Human Resource Department.
- (3) Other boards: The Disability Commission interacts with the Planning Board, Zoning Board of Appeals, Conservation Commission, Board of Health, Historical Commission, Old King's Highway Historic District Committee, Public Works Commission, Housing Authority, and to ensure compliance with relevant laws, rules and regulations concerning disabled persons⁷⁵.

APPENDIX E-2 GRIEVANCE PROCEDURES, PUBLIC NOTIFICATION, ETC

TOWN OF BARNSTABLE

EQUAL ACCESS TO FACILITIES AND ACTIVITIES

GRIEVANCE POLICY

Maximum opportunity will be made available to receive citizen comments, complaints and/or resolve grievances or inquires.

STEP 1: The Human Resource Director/ADA Coordinator will be available to meet with citizens and employees during business hours.

When a complaint, grievance, request for program policy interpretation or clarification is received either in writing or through a meeting or telephone call, every effort will be made to create a record regarding the name, address and telephone number of the person making the complaint, grievance, program policy interpretation or clarification. If the person desires to remain anonymous they may.

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⁷⁵ Editor's Note: Amended at time of adoption of Code (see Ch. 1, General Provisions, Art. III).

Copies of the complaint, grievance, request for program policy interpretation or clarification and response will be forwarded to the responsible town operating division/department. If the issue is not resolved at by the Division Supervisor it will be progress to the Department Manager.

A complaint, grievance, request for program policy interpretation or clarification will be responded by the Division Manager within ten (10) working days (if the person making the complaint is identified) in a format that is sensitive to the needs of the recipient, (i.e. verbally, enlarged type face, etc.). Copies of all responses either by the Division Supervisor or Department Manger will be forwarded to the Human Resources Director.

- STEP 2: A written grievance will be submitted to the Human Resource Director. Assistance in writing the grievance will be available to all individuals. All written grievances will be responded to within ten (10) working days by the Human Resource Director in a format that is sensitive to the needs of the recipient, (i.e. verbally, enlarged type face, etc.). If the grievance is not resolved at this level it will be progressed to the next level.
- STEP 3: If the grievance is not satisfactorily resolved after progressing through Steps 1 and 2, citizens will be informed of the opportunity to meet and speak with the Town Manager, with whom local authority for final grievance resolution lies.

DISCRIMINATION COMPLAINT PROCEDURE. All discrimination complaints shall be handled in accordance with the following procedure.

<u>Step 1</u>. An employee who feels that she/he has been discriminated against should report it to her/his supervisor. If the issue is not resolved to the satisfaction of the employee, or if the employee for any reason does not feel comfortable reporting said compliant to her/his supervisor, she/he should submit a written statement of the discrimination complaint within 10 working days of the date he/she becomes cognizant of the discrimination. The complaint must be submitted to the appointing authority or designee. The complaint must state the basis of the discrimination, the actions giving rise to the discrimination.

An applicant who believes she/he has been discriminated against should report her/his complaint to the appointing authority or designee.

<u>Step 2</u>. The appointing authority or designee is authorized to conduct the investigation and to require all employees of the department to cooperate with the investigation. Every attempt shall be made to complete the investigation within 15 work days of receipt of the complaint.

The investigation shall include a thorough review of (a) the circumstances under which the alleged discrimination occurred, (b) the treatment of members of the complainant's group identified by his/her complaint as compared with the treatment of other employees in the

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<u>CENTERLINE STUDIOS INC.</u> Landscape Architecture and Planning organizational segment in which the alleged discrimination occurred, and \mathbb{C} any policies and practices related to the work situation which may constitute, or appear to constitute, discrimination even though they have not been expressly cited by the complainant.

Sufficient information should be gathered through a survey of the general environment out of which the complaint arose so that (a) any improper discrimination in the organizational segment involved in the complaint can be detected, wherever possible, so that remedial action can be taken and (b) any allegation of discrimination not supported in any way by the facts be identified as such so that the alleged discriminatory official can be exonerated.

The scope of this survey may vary from case to case, depending on the circumstances encountered. Some cases may point up the need for a broad survey, covering the full range of significant personnel actions with which the alleged discriminatory official was involved (such as appointments, details, disciplinary actions, performance evaluations, promotions, and training assignments) in, for example, the 2 year period immediately preceding the complaint. As a general rule, when the results of the investigation are inconclusive, additional investigation should be undertaken where this is feasible.

<u>Step 3</u>. The Equal Employment Officer will receive and consider the results of investigation and will render a written decision to the complainant and other involved parties within 5 work days of receipt of the investigator's findings.

<u>Step 4</u>. If the complaint is not resolved, the complainant may appeal to the Massachusetts Commission Against Discrimination and/or the Equal Employment Opportunity Commission, in accordance with approved procedures of such agency.

APPENDIX E-3A PROGRAM ACCESSIBILITY AND INVENTORIES RECREATION FACILITIES

A survey of recreation facility accessibility characteristics by the Disability Commission is ongoing, and is included as part of Appendix E. In addition, Sections 8 & 9 of this Plan included objectives for various improvements in handicapped accessibility. A proposed recreational deck for Dowses Beach will be completely accessible to all Barnstable residents. It is being funded by the Barnstable Disability Handicap Patrol Volunteers, Police Department and Consumer Affairs Officers.

The following is a brief survey of a handful of the town's recreation facilities and areas, taken in April 2005, by Paul Nevosh, Vice Chairman of the Barnstable Disabilities Commission. While this list is by no means comprehensive, it does offer initial guidance and immediate goals

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It is safe to say the <u>Marstons Mills Airport/Danforth Property</u> is in no way Handicap Accessible. In as much as this is a town owned facility I believe it needs immediate attention and action by the town. In simple form, the facility has no handicap parking. The path of travel to the main entrance does not meet requirements nor does the door itself or the 1.75-inch rise. There is no signage and the only bathroom facility could not be used as a public facility and is NOT accessible. Two suggestions for immediate action are the erection of a HP parking sign close to the main entrance and the purchase or rental of a handicap-accessible porta potti. Please keep in mind this facility has an open house scheduled for May and these issues need to be addressed immediately. A written plan for addressing the needs of handicap patrons needs to be developed. The five people I spoke with are all anxious and eager to assist with all of these issues to improve the facility and even to the level of wishing to cater to handicapped customers.

While on the surface, <u>the Old Barnstable Fairgrounds Golf Course</u> is in excellent ADA compliance, there are some issues of concern. Most are minor such as the height of placement of several bathroom appliances seems to be excessive and the only public telephone has obstructed access and maybe also be too high. A more significant issue may be the path of travel to the driving range. An elevator does not connect the first and second floors and proper signage needs to be provided directing guests to the proper locations for the banquet facilities, restaurant and bar, pro shop and golf. A written plan for employee education also needs to be written. I strongly urge the town to do this on a town wide basis and to include employee education and sensitivity training to the needs of the handicapped. It has been my experience the town has much to be proud of in the dedication of its employees to serving handicapped citizens.

The <u>Elizabeth Lowell Park</u> is the town-owned field where the Kettleer's play. Unfortunately, this new facility is a monument to doing things the wrong way. The store, office, kitchen and rest rooms do not meet ADA requirements. Sadly, even the handicap parking signs do not meet town code.

The <u>Cotuit Town Landing</u> is long recognized by those of us who are mobility impaired as one of our town jewels. With its two handicap parking spots and wheelchair accessible pier it is simply "the best". All it needs to be perfect is the delivery of the handicap porta potti that we spoke of.

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⁷⁶ Summary from email correspondence on April 14, 2005.

The <u>Cotuit Memorial Park</u> needs to be reviewed for handicap parking and path of travel issues.

The <u>Edwin Wharlow Landing</u> has handicap parking only but is acceptable. This is another spot that the town might consider for increased handicap access and use.

I further suggest that review and determination be made on all <u>Town Ways to Water</u> as to <i>intent and what might be required of them to make them handicap accessible.

I stand by to help in any additional way I can.

Sincerely,

Paul Nevosh, Vice Chairman Barnstable Disability Commission

The following Recreation Areas and beaches_have been tallied by the Disabilities Commission and are available both in this Plan and via the Town Conservation Commission.

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BARNSTABLE DISABILITY COMMISSION

230 South Street, 4th Floor, Hyannis, MA 02601



Office: 508-862-4914 FAX: 508-300-02 862-4914

CONSERVATION

BARNSTABLE

-

Al Melcher, Chairman Paul Nevosh, Vice Chair

BEACHES REVIEW MEETING SUMMARY

A meeting was held on Tuesday, February 17, 2004 at the Kennedy Skating Rink offices. In attendance were: David Curley, Recreation Director; Joseph Slominski, Supervisor Structures and Grounds and Rae Kaddy and Jean Boyle of the Barnstable Disability Commission.

Jean submitted the beach surveys which were completed in the summer of 2003 and came to the following conclusions:

-Since the flyers regarding surf chairs are not handed out at the gates, decision made to eliminate this process. Dave Curley had several good signs which state "Handicap Accessible" and they will be mounted to the gatehouses at accessible beaches.

-Flyers (which have instructions for surf chair use), will be laminated and somehow attached to the chairs.

-Surf chairs will be placed in visible spots so that beachgoers will be able to see them.

Since most of the beaches are partially accessible, and in view of budget constraints, we agreed to have Veteran's Beach designated a "model beach" for handicapped accessibility, and the following changes/improvements will be made before the summer of 2004:

-Veteran's Beach: The walkway parallel to the parking lot will be graded and 5 benches will be added. There will be a new curb cut from parking lot in area of the Snack Bar. "Handicap Accessible" signage will be added to already existing signs leading to rest rooms.

-Old telephone poles will be added into pavement in front of snack bar where cars tend to illegally park, blocking the existing ramp. The poles will be situated in a position that will result in too narrow an area to park a car, which has been an on-going problem.

-Dumpster at times blocks entrance to picnic area. Joe will address this with his workers. HP picnic tables will be tied down, possibly as they are at Sea St.

-Other necessary changes/improvements will be made by appropriate departments

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-page 2 Beaches Meeting:

<u>Craigville Beach:</u> HP sign will be added to ladies' dressing room door. Signage will be added where necessary outside.

Dowse's Beach: Joe will be certain that <u>handicapped</u> porta potties are leased, a unisex unit which is large enough to be also used as a dressing room.

A private citizen in the Osterville area will be donating the construction of a shower on the ground level of existing bath house.

Hathaway's Pond: All the graffiti has been painted over. Dave C. said that the beach will be back on to full staff this year.

-Joe S. will check on "washed out" area leading to water and accessibility to men's room.

-Dave will check on whether or not there is a surf chair since this pond was closed last summer.

Kalmus Beach: Joe S. will add a handicapped accessible shower to the ramp side of the bath house.

Sandy Neck: This beach is no longer under the management of the Barnstable Recreation Department. It is under the Department of Natural Resources, Marine and Environmental Affairs. Contact person is Dan Horn.

Wequaquet Lake: Joe S. said they will repair "step down" at end of ramp. -HP slot's painted lines which are in two parts on either side of parking slot, are done that way to keep others from parking there, since there are so few regular slots at this beach.

Joe S. said that at a beach in Harwich there is a wooden ramp to the water, connected by cables, which can be rolled up each day.

In conclusion, we asked Joe S. to review the beaches survey report; list any items needed with approximate cost and submit to the Barnstable Disability Commission for our review, since commissioners have indicated willingness to assist in funding these projects. Mr. Slominski said he would send this to the office by E-mail and a hard copy by regular mail to Jean Boyle.

Respectfully submitted,

Jean Boyle, Beach Survey Chairperson

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<u>SURF CHAIRS -</u> Flyers are not being handed out at gates. We suggest signage at gates next to the \$10 parking sign stating "Wheelchair accessible Beach - Surf Chair available - 20 minute limit". Sign should be large, have large print and show international symbol. If dumpsters are town owned, why not paint on them "This is a wheelchair accessible beach".

-Each Surf Chair should be checked at end of season, and repaired during winter. Loop Beach has been without their chair for <u>three</u> summers.

-Each Surf Chair should have rules posted, laminated, and attached to rear of chair. Rules should also be posted in HP rest rooms.

-Surf Chairs should be kept in a visible spot during the day.

- <u>SIGNAGE:</u> There is no signage posted on outer doors of bath houses/ rest rooms, nor inside on HP rest rooms. There is no signage leading people to HP rest rooms at larger beaches. There is no Braille anywhere. This is at all the beaches.
- <u>RAMPS:</u> Staff at Dowses do an excellent job of keeping walkways clear of sand. Other beaches should follow their example. -It appears that all ramps need wooden or cement grading at end.
- **REST ROOMS:** We recommend the purchase or lease of unisex porta potties which are handicapped accessible (large enough for a wheelchair), in beaches where rest rooms are not accessible. -Relocating dispensers, grab bars, paddle handles on sinks, longer pull strings on outside showers, signage and obstacles in pathways seem to be the most common and easily corrected violations in rest rooms that <u>are</u> fairly accessible.

Prepared By:



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-Page 2 BEACH SURVEY RECOMMENDATION:

PICNIC TABLES:

Steel picnic tables would be ideal since they are pretty much vandal proof and not easy to move from accessible areas, which continues to happen at Veterans. At Keyes Beach, tables were tied to trees and were not tampered with.

BEACH STAFF:

Improvement noted overall in discussion with lifeguards and supervisors. At each beach there appears to be more awareness regarding disabilities, accessibility, etc. They are cooperative and extremely helpful to people with special needs.

FUTURE CONSTRUCTION:

We should be involved in any future construction and closely supervise any new or remodeled facilities.

IN CONCLUSION:

This is the fourth summer that the beaches have been surveyed. We would like to suggest that the town concentrate on 3 or 4 beaches that are nearly totally accessible, and that these beaches be from different areas of town, with one being fresh water.

We would strongly suggest that all town publications include information on accessibility at all beaches.

Our final recommendation is that the Barnstable Disability Commission consider funding some of these projects.

Survey Committee: Jean Boyle, Raye Kaddy and Paul Nevosh Submitted: February 2004

Prepared By:

XP

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<u>COVELL'S BEACH</u> <u>Accessibility Review - Summer 2003</u>

PARKING/DROP OFF AREAS:

-There are 6 accessible spaces; 3 are van accessible.

SURF CHAIRS:

-Yes; kept next to lifeguard station during the day.

RAMPS:

-There is a ramp leading to water, but ends far before edge of water.

USABILITY OF REST ROOMS:

-Not accessible; there is a high step up.

DRINKING FOUNTAIN:

-Not accessible.

<u>PUBLIC TELEPHONE:</u> -Yes; accessible with the exception of hearing aid compatible.

RECOMMENDATIONS:

-Current bath house needs to be replaced by an accessible one or add on accessible rest room/dressing room similar to one at Millway Beach in Barnstable.

-Hopefully, something will be found to replace the beach rings which were used unsuccessfully in the past, to extend the ramp to the water.

Prepared By:



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CRAIGVILLE BEACH Accessibility Review - Summer 2003

PARKING/DROP OFF AREAS:

-There are 4 signs, but 3 spaces; at van accessible slot yellow lines should be painted. To the left of the bathhouse, all is in order.

SURF CHAIR:

-It is kept on beach side of bath house, visible from parking lot.

RAMPS:

-Ramps leading to Men's and Ladies' Rooms are on beach side and street side of bath house.

-There is no ramp leading to the beach from bath house.

USABILITY OF REST ROOMS:

-Signs needed directing people to the accessible entrance on street side of building.

-There is a separate HP ladies' changing/bathroom.

-Signage needed on changing room door (sign was painted over).

-Outside shower needs longer pull string.

-Soap and towel dispensers need to be lowered.

DRINKING FOUNTAIN:

-Not accessible. -New cold drink/water machine outside of bath house is accessible.

PUBLIC TELEPHONE:

-Accessible; not hearing aid compatible.

RECOMMENDATIONS:

-See all above -Need ramp to water. -Signage needed.

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DOWSES BEACH Accessibility Review - Summer 2003

PARKING/DROP OFF AREAS:

-There are 7 HP spots; one van accessible. All are in area near boardwalk. When fishing deck is completed, at least 2 should be moved to far end of beach, and one should be van accessible.

SURF CHAIR:

-There is one which is used often. Staff will deliver chair to parking lot or gate, if gate calls ahead.

-Chair is kept at lifeguard station during day, and at night is stored in bottom level of bath house.

RAMPS:

-There is cement walk leading from parking lot to a wooden ramp which ends close to the beach. Access to beach is excellent, with the exception of a "step down" at end of wooden ramp. Cement walk is kept clear of sand, thanks to dedicated staff who sweep it each day.

-There is no access to bath house which sits on a hill. However, there is a handicap porta potty on ground level near HP parking. -Hand rail needed at door to bath house (an elderly gentleman was observed trying to negotiate stairs.)

USABILITY OF REST ROOM:

-Porta Potty on ground level should be handicapped accessible One Unisex unit is acceptable, rather than separate men's and Ladies' which are not HP accessible.

-There is no sink, but there is container of hand cleaner on wall. -Needs signage.

-There is no accessible shower.

DRINKING FOUNTAIN & PUBLIC TELEPHONE:

-None

RECOMMENDATIONS:

-Cement an area on side of bathhouse next to walkway, to accommodate HP picnic table(s).

-See all above.

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HAMBLIN'S POND Accessibility Review - July 2001

PARKING/DROP OFF AREAS: No HP spaces.

SURF CHAIRS: -None

RAMPS:

-Ramp going rest rooms/dressing rooms, but have to "step-up at the beginning of ramp. Needs to be leveled.

USABILITY OF REST ROOMS:

Since a fire destroyed previous bath house, a trailer-type portable is on the property. This has both a men's and ladies' room, but the men's rooms has to be used as as office, and a file is partially blocking the doorway, making it inaccesible.
Ladies room, however, is used as a unisex room and is large enough for wheelchairs and dressing room. It is accesible but sink is not.

DRINKING FOUNTAIN:

-None

PUBLIC TELEPHONE: -None

RECOMMENDATIONS:

-See all above. -Add signage. -No picnic tables in area; handicapped picnic table should be added as well.

Prepared By:



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HATHAWAY POND Accessibility Review - Summer 2003

PARKING/DROP OFF AREA:

-There is one HP spot. Sign is posted, but this is an all-dirt parking lot, with an HP sign, but no markings. Vandals painted a large "X" covering entire sign, thereby eliminating lone HP slot.

SURF CHAIR:

-None was visible; however there was no lifeguard present.

RAMPS:

-Previous survey noted "hard-surface terrain to bath house and sand". This has changed since rain has washed out area, and tree roots are exposed. Impossible to walk or negotiate surf chair. -Ramp from men's room also has "washed out" at end and is a step-up.

USABILITY OF REST ROOMS:

-Vandals defaced bathhouse and other signs.

-Ladies Room has curtained door; will accommodate wheelchair. -Men's room is not accessible from outside.

-Ladies' room needs towel and soap dispensers lowered.

-Ladies' room sink is too shallow.

-In Men's Room, move wall partition approx. 7" so that it abuts urinal. Relocate existing door into this wall. Doing this will utilize existing "dead" space and provide a HP facility. -Add grab bar to Men's Room.

DRINKING FOUNTAIN:

-None visible. <u>PUBLIC TELEPHONE:</u> -None

RECOMMENDATIONS:

-Signage needed.

- See all above.

-Handicapped picnic table should be added next to a grille. -Loud music, drinking while we were there in August '01.

> tion Plan bared for: November 15, 2005

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<u>KALMUS BEACH</u> <u>Accessibility Review - Summer 2003</u>

PARKING/DROP OFF AREAS:

-There are 7 HP spots; 3 on both sides, nearest bath house; one near entrance to parking lot.

-The left side of parking lot HP spaces need yellow markings.

SURF CHAIRS:

-Yes, kept at end or ramp leading to beach. Arm rests do not "swing out" making transfers difficult.

-Chair is kept at end of ramp to beach. Visible location.

-There is a 2nd chair kept in the bathhouse.

RAMPS:

-Great ramp leading to beach (water quite a distance away). Hopefully this can be extended if something more successful than beach rings is available. Good ramps at bath house.

USABILITY OF REST ROOMS:

-Rest rooms/dressing rooms are new. HP stall is not as large as it should be. Difficult to "turn around" in a wheelchair. -No backs on toilets. Tissue dispenser should be lowered. -Soap and towel dispensers should be lowered.

-Outside shower should be ramped or have curb cut to access. -Rubbish barrel in doorway.

DRINKING FOUNTAIN: Good

PUBLIC TELEPHONE: Good

<u>RECOMMENDATIONS:</u>

-See all above.

We are pleased to see the accessible picnic table in snack bar area.

Prepared By:

XP

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<u>KEYES BEACH (SEA STREET)</u> Accessibility Review - Summer 2003

PARKING/DROP OFF AREAS:

-No improvement needed. There are 5 HP spots; one is van accessible.

SURF CHAIR:

-Not visible at life guard station. Should be kept at end of parking lot near entrance, or at entrance.

RAMPS:

-There is a great ramp, recently built from parking lot to bath house and picnic area.

-Beach is on same level as parking lot, but there is no ramp to water.

USABILITY OF REST ROOMS:

-Toilets should have backs (lid of toilet seat)

-Grab bars should be added to both Men's and Ladies'.

-Towel and soap dispensers should be lowered.

-Paddle handles needed on sinks.

-Large wastebasket blocking door of Ladies' Room.

-Signage needed on HP door.

-Handicapped accessible sink needed.

-Chair blocking doorway for wheelchair access.

PUBLIC TELEPHONE:

-None

<u>RECOMMENDATIONS:</u> -See all above.

Happy to see completed ramp and HP picnic table tied down.

Prepared By:

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LOOP BEACH Accessibility Survey - Summer 2003

PARKING/DROP OFF AREAS:

-One HP slot, and is not van accessible (12 ft. is entire slot) -Slot should be moved next to ramp, and sand should be cleared periodically off ramp.

SURF CHAIRS:

-This is the 3rd season that surf chair has not been available. In 2001 and 2002 it was "being repaired", but has not been returned.

RAMPS:

-There is a ramp to the beach; however there is a step down needs to be leveled off. -Sand needs to be cleared off ramp periodically. -There is no ramp to rest rooms.

USABILITY OF REST ROOMS:

-Not accessible; needs a ramp. -Entrance to rest rooms 28-1/2"; not accessible. -Stalls not accessible at 22-1/2".

DRINKING FOUNTAIN:

-Fair

PUBLIC TELEPHONE:

-None

RECOMMENDATIONS:

-See all of the above -New surf chair should be made available.

Prepared By:

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MILLWAY BEACH Accessibility Review - Summer 2003

PARKING/DROP OFF AREA:

-There are 2 HP slots including one van accessible.

SURF CHAIR:

-None was visible.

RAMPS:

-Steep ramp has no railings and is unsafe. Should be replaced with a switch-back ramp (same as reviews of '99, '00 and '01.

USABILITY OF REST ROOMS:

-Unisex bathroom separate from Men's and Ladies' rooms. At time of our visit, Men's and Ladies' rooms were open, but HP accessible room was not. -There is no signage on HP rest room.

-Shower to rear of bath house is accessible.

DRINKING FOUNTAIN: -None

PUBLIC TELEPHONE: -None

<u>RECOMMENDATIONS:</u> -See all of the above.

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SANDY NECK BEACH Accessibility Review - July 2001

PARKING/DROP OFF AREAS:

-There are 4 HP slots; we recommend that one be placed nearer the snack bar and rest rooms.

SURF CHAIRS:

-They have been waiting all summer for repair of surf chair since it is missing foot rests.

-Chair is too wide for office storage; should be stored in rest rooms overnight, and kept by lifeguard station or end of ramp during the day.

RAMPS:

-Ramp needs to be graded at end of ramp. -Sand is covering last leg of ramp.

USABILITY OF REST ROOMS:

-Ladies Room is accessible, but men's room has a stall wall facing entrance, making access difficult.

-Both Ladies and Men's Room need a HP sink with levers.

-Need signage.

-Need lowered mirrors, towel and soap dispensers.

-Need grab bars and backs to toilets and benches for changing in HP bathrooms.

DRINKING FOUNTAIN: None

PUBLIC TELEPHONE:

-None at beach area; only at Ranger Station.

RECOMMENDATIONS:

-See all above (also surveys of 8/00 and 7/99) -Accessible picnic table should be added to picnic area. To rear of snack bar is a ramp and cement area which would be ideal (near men's room). Weeds should be cleared and table could be added here.

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<u>VETERANS BEACH</u> Accessibility Review - Summer 2003

PARKING/DROP OFF AREAS:

-There are 4 accessible spaces; 2 near snack bar and 2 near entrance to beach. 1 is van accessible. All need re-painting. -Ramp in front of snack bar still needs yellow marking and "no parking" sign since cars park in this space blocking entrance to ramp/snack bar.

SURF CHAIR:

-It is kept next to lifeguard station, far from entrance to beach. A curb cut is needed to access beach at this location. -Surf chair is older model; works well and is more desirable than new model (such as the one at Kalmus).

RAMPS:

-Ramp or curb cut is needed to access beach (near snack bar). -Ramp on Yacht Club side of beach is thick with sand. -Dumpster is at end of ramp entering picnic area.

USABILITY OF REST ROOMS:

-Road must be used to travel to bath house since there are no curb cuts for sidewalk use.

-Toilets should have backs (lid of toilet seat).

-Grab bars should be moved to side of toilet instead of the back.

-Towel dispensers should be lowered.

-Post signage indicating availability of handicapped rest rooms/ dressing rooms throughout area; beginning at snack bar and extended to walkway at JFK Memorial including rest rooms.

DRINKING FOUNTAINS:

-Is 40" high; should be no higher than 36". PUBLIC TELEPHONE:

-None available.

RECOMMENDATIONS:

-Handicapped picnic tables were pushed together along with other tables. Also located in full sun, far from the ramp. Tie down necessary to keep in place, near ramp. -See all above.

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LAKE WEQUAQUET Accessibility Review - Summer 2003

PARKING/DROP OFF AREAS:

-One HP slot; van access slot has yellow lines in two parts (on either side of vehicle spot). Neither is wide enough.

SURF CHAIR:

-Does not have one.

RAMPS:

-Excellent, well-built switch back ramp which is used by all. However, end of ramp needs to be graded. It now is a step-down. -Ramp is kept clear of sand.

USABILITY OF REST ROOMS:

-Ladies HP bathroom needs a longer slide lock. -Ladies Room needs soap relocated & lowered to side wall. -Men's Room is missing soap dish; need new one & lowered. -Dressing rooms need benches. -Need singage on HP bathrooms. -Vandals have defaced the outside of bathhouse with paint.

DRESSING ROOMS:

-Both Men's and Ladies' Rooms can be used.

DRINKING FOUNTAIN:

-Disconnected

PUBLIC TELEPHONE:

-None

RECOMMENDATIONS:

-Need HP parking space; van accessible and painted.

-Need surf chair.

-Ramp needs exit at end.

-Re-connect drinking fountain.

-See "Usability of Rest Rooms" for other recommendations.



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tion Plan Prepared for: Town of Barnstable, Massachusetts November 15, 2005

APPENDIX E-3B PROGRAM ACCESSIBILITY AND INVENTORIES CONSERVATION AREAS

Long Pond Conservation Area in 2004 was witness to better accessibility via installation of a paved path around the entrance gate connecting the parking lot to the trail. This was brought to the attention of the Conservation Commission through a citizen's inquiry. The Commission shall be receptive to and solicit such inquiries from public citizens, especially concerning improving such connecting paths at all conservation areas.

The following <u>Conservation Areas</u> have been tallied by the Conservation Division and are available both in this Plan and via the Town Conservation Commission.

- 8. Crocker Neck Conservation Area Two parking lots, one hard-packed dirt, one grass lot, 6 total car spaces, no HP spaces.
- 9. Whelan Conservation Area 10-car gravel hard-packed parking lot, no HP spaces.
- 10. Long Pond Conservation Area 10-car, paved parking lot, one (1) HP space, paved path around the gate.
- 11. West Barnstable Conservation Area No HP spaces, all four (4) parking lots with hard packed gravel.
- 12. Old Jail Lane Conservation Area 10-car hard-packed parking lot, no HP spaces.
- 13. Otis Atwood Conservation Area 7-car lot, no HP spaces, gravel/dirt mix parking lot.
- 14. Bridge Creek Conservation Area Two parking lots, one paved, one dirt, seven (7) total spaces, no HP spaces.
- 15. Meetinghouse Farm Conservation Area Crushed shell driveway to grass-area parking lot for five (5) cars, no HP spaces.

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Sectio	n Parking	
23	PARKING OTIS ATWOOD CONSERVATI	
. 4	Parking lot or garage	X Comments
	<pre># OI total spaces</pre> # of hp spaces	
	Total Spaces	Required HP Spaces
	26 - 40 41 - 100 101 - 200 201 - 500 501 - 1,000 1,001 - 2,000 2,001 - 5,000 5,001 or more	5% but not less than 2 spaces 4% but not less than 3 spaces 3% but not less than 4 spaces 2% but not less than 6 spaces 1.5% but not less than 10 spaces 1% but not less than 15 spaces .75% but not less than 20 spaces .50% but not less than 30 spaces
23.2	HP spaces closest in lot to access entrance.	ible NA
	Where hp spaces cannot be located a 200 ft. of accessible entrance, dra area is provided within 100 feet	ui bh i n
5 •ر	Min. width 12 ft. (or two 8 ft. wit 4 ft. wide striped aisle between)	th MA
23.7	Sign with international symbol of accessibility at each space or pair of spaces	· NA
	Sign min. 5 ft., max. 8 ft. to top of sign	
23.9	(no cracks)	a X gravel/dist mix
	" slope less than 1:20 (5%)	
23.6	Curbcut to pathway from parking lo each space or pair of spaces, if s (curb) is present (complies with 2)	idewalk
21.1	 a. Min. width 3 ft. excluding slo sides b. Sloped sides c. All slopes not to exceed 1:12 d. Textured or painted yellow 	oped
-рмм	ENTS	

Prepared By:

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Sectio	n Parking	2	7	10+5
	CROCKER NECK CONSER	VATION AREA	-	
23	PARKING	Yes		ments
: j4	Parking lot or garage	<u></u>		1, dirt lot 6 Cans
	# of total spaces6		2 Grass	lot at beginning
	# of hp spaces0			terpretive trail
	Total Spaces	Required 1 sp		2 Cans
	26 - 40 41 - 100 101 - 200 201 - 500 501 - 1,000 1,001 - 2,000 2,001 - 5,000 5,001 or more	4% but 3% but 2% but 1.5% but 1% but .75% but	not less not less not less not less not less not less	than 2 spaces than 3 spaces than 4 spaces than 6 spaces than 10 spaces than 15 spaces than 20 spaces than 30 spaces
23.2	HP spaces closest in lot to acces entrance.	ssible <u>NA</u>		
	Where hp spaces cannot be located 200 ft. of accessible entrance, of area is provided within 100 feet	iron-off		
^_ ,5	Min. width 12 ft. (or two 8 ft. w 4 ft. wide striped aisle between	vith		
23.7	Sign with international symbol of accessibility at each space or part of spaces	E Air NA		
	Sign min. 5 ft., max. 8 ft. to to of sign			
23.9	Surface evenly paved or hard-pact (no cracks)	kedx	На	ard-packed dirt lot
	" slope less than 1:20 (5%)	20		
23.6	Curbcut to pathway from parking each space or pair of spaces, if (curb) is present (complies with	lot at sidewalk 21.1) <u>NA</u>		
21.1	a. Min. width 3 ft. excluding s sides			
	b. Sloped sides			
	 c. All slopes not to exceed 1:1 d. Textured or painted yellow 	2		
ммс	IENTS			I

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Sectio	Parking		
23	PARKING LONG POND CONSERVATION ARE		
		Yes No Comments	
4	Parking lot or garage	X Dirt base covered wit	h
	# of total spaces 10	stone-dust. Paved	
	# of hp spaces 1		
	Total Spaces	Required HP Spaces	
	26 - 40	1 space	
	41 - 100	5% but not less than 2 spaces 4% but not less than 3 spaces	
	101 - 200 201 - 500	3% but not less than 4 spaces 2% but not less than 6 spaces	
	501 - 1,000	1.5% but not less than 10 space	S
	1,001 - 2,000 2,001 - 5,000	1% but not less than 15 space .75% but not less than 20 space	S
	5,001 or more	.50% but not less than 30 space	
23.2	HP spaces closest in lot to accessifient	ble x	
	Where hp spaces cannot be located wire 200 ft. of accessible entrance, drop	ithin	
	area is provided within 100 feet	NA	
3.5	Min. width 12 ft. (or two 8 ft. with 4 ft. wide striped aisle between)	h NA	
23.7	Sign with international symbol of accessibility at each space or pair of spaces	. x	
	Sign min. 5 ft., max. 8 ft. to top of sign	<u>x</u>	_
23.9	Surface evenly paved or hard-packed (no cracks)		
	" slope less than 1:20 (5%)	X Relatively level lot	t
23.6	Curbcut to pathway from parking lot each space or pair of spaces, if si (curb) is present (complies with 21,	idewalk New poved por	
21,1	 Min. width 3 ft. excluding slop sides 	ped 🙀 🗙 🗙	
	b. Sloped sides c. All slopes not to exceed 1:12		_
	d. Textured or painted yellow		_
OMM	IENTS		

Prepared By:



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Sectió	n	Parking	g				
23	PARKING	OLD JAIL LANE CONSE	ERVATION AREA Yes	No	Com	ments	
2.4	Parking lot or ga # of total spaces # of hp spaces	10	<u>x</u>		-		
	Total Spaces		Require 1	d <u>HP</u> space		Ê.	
	26 - 40 41 - 100 101 - 200 201 - 500 501 - 1,000 1,001 - 2,000 2,001 - 5,000 5,001 or more	× .	4% bu 3% bu 2% bu 1.5% bu 1% bu .75% bu	t not t not t not t not t not t not	less less less less less less	than than than than than than	2 spaces 3 spaces 4 spaces 6 spaces 10 spaces 15 spaces 20 spaces 30 spaces
23.2	200 ft. of acces	t in lot to acces cannot be located sible entrance, o within 100 feet	NA_ d within drop-off				
.5	Min. width 12 ft	. (or two 8 ft. v ed aisle between	vith				
23.7	Sign with intern accessibility at of spaces	ational symbol of each space or pa					
	Sign min. 5 ft., of sign	max. 8 ft. to to					
23.9	Surface evenly p (no cracks) " slope les	aved or hard-packs than 1:20 (5%)	ked <u>x</u>		Har	d-packe	d dirt lot
23.6	each space or pa	vay from parking ir of spaces, if it (complies with	sidewalk				
	d. Textured or		loped .				
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Prepared By:

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Sectió	Parking	
23	PARKING Bridge Creek Conserval	Yes No Comments
4	Parking (lot) or garage	X 2 parking lots;
-	# of total spaces7	Behind Fire Station 1 paved (4 vehicles);
	# of hp spaces	Church St 1 dirt (3 vehicles)
	Total Spaces Re	quired HP Spaces 1 space
	1,001 - 2,000 2,001 - 5,000	5% but not less than 2 spaces 4% but not less than 3 spaces 3% but not less than 4 spaces 2% but not less than 6 spaces 5% but not less than 10 spaces 1% but not less than 15 spaces 75% but not less than 20 spaces 50% but not less than 30 spaces
23.2	HP spaces closest in lot to accessible entrance.	NA
	Where hp spaces cannot be located with 200 ft. of accessible entrance, drop-c area is provided within 100 feet	in
. 5	Min. width 12 ft. (or two 8 ft. with 4 ft. wide striped aisle between)	NA
23.7	Sign with international symbol of accessibility at each space or pair of spaces	NA
	Sign min. 5 ft., max. 8 ft. to top of sign	
23.9	Surface evenly paved or hard-packed (no cracks)	x paved - 1 of behind west Bornstell
	" slope less than 1:20 (5%)	behind west Barnstell
23.6	Curbcut to pathway from parking lot at each space or pair of spaces, if sidev (curb) is present (complies with 21.1)	File strong
21.1	 a. Min. width 3 ft. excluding sloped sides b. Sloped sides c. All slopes not to exceed 1:12 d. Textured or painted yellow 	<u></u>
bmm	1ENTS	

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23	PARKING Meeting house F	line line and
4		Yes No Comments
	Parking lot or garage	X crushed sheet driveway
	# of total spaces	grass area wear free standing
	# of hp spaces	gampe to park 5 cans
	Total Spaces	Required HP Spaces 1 space
	26 - 40 41 - 100 101 - 200 201 - 500 501 - 1,000 1,001 - 2,000 2,001 - 5,000 5,001 or more	5% but not less than 2 spaces 4% but not less than 3 spaces 3% but not less than 4 spaces 2% but not less than 6 spaces 1.5% but not less than 10 spaces 1% but not less than 15 spaces .75% but not less than 20 spaces .50% but not less than 30 spaces
23.2	HP spaces closest in lot to accessifent entrance.	ble NA
	Where hp spaces cannot be located wi 200 ft. of accessible entrance, drop area is provided within 100 feet	ithin p-off
-3.5	Min. width 12 ft. (or two 8 ft. with 4 ft. wide striped aisle between)	NA
23.7	Sign with international symbol of accessibility at each space or pair of spaces	
	Sign min. 5 ft., max. 8 ft. to top of sign	
23.9	Surface evenly paved or hard-packed (no cracks)	*
1	" slope less than 1:20 (5%)	
23.6	Curbcut to pathway from parking lot each space or pair of spaces, if si (curb) is present (complies with 21	dewalk
21.1	 a. Min. width 3 ft. excluding slop sides b. Sloped sides c. All slopes not to exceed 1:12 d. Textured or painted yellow 	ed
COM	MENTS	
-	~ 1 !	



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Sectio	n Parking	g				
23	PARKING	Yes	No	Con	ments	
4	Parking lot or garage	X	_	- 1	O can	s-gravel
	# of total spaces					lot
	# of hp spaces					
	Total Spaces	Require	<u>d HP</u> space		2	ī
	26 - 40 41 - 100 101 - 200 201 - 500 501 - 1,000 1,001 - 2,000 2,001 - 5,000 5,001 or more	4% bu 3% bu 2% bu 1.5% bu 1% bu .75% bu	t not t not t not t not t not t not	less less less less less less	than than than than than	2 spaces 3 spaces 4 spaces 6 spaces 10 spaces 15 spaces 20 spaces 30 spaces
23.2	HP spaces closest in lot to acce entrance.	ssible NA	ł			
	Where hp spaces cannot be locate 200 ft. of accessible entrance, area is provided within 100 feet	drop-off				
-3.5	Min. width 12 ft. (or two 8 ft. v 4 ft. wide striped aisle between) vith	<u>+</u>			
23.7	Sign with international symbol of accessibility at each space or parts of spaces	f air	A			
	Sign min. 5 ft., max. 8 ft. to t of sign	op				
23.9	Surface evenly paved or hard-pac (no cracks)	ked 🖌			Grave	1 had
	" slope less than 1:20 (5%)	_			pa	cked
23.6	Curbcut to pathway from parking each space or pair of spaces, if (curb) is present (complies with	sidewalk	,A			
21.1	 a. Min. width 3 ft. excluding s sides b. Sloped sides c. All slopes not to exceed 1:1 d. Textured or painted yellow 	12	<u>A</u>			
	IENTS				ŀ	

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APPENDIX E-4 TRANSITION PLANS

TOWN OF BARNSTABLE CONSERVATION LANDS DISABLED ACCESS ACTION PLAN

FY 2006

Review conservation parking areas for impediments to walking paths. Correct any impediments found.

FY 2007

Assess conservation area to determine best potential for disabled access amenity/improvement. Retain consultant if expertise is needed.

FY 2008

Seek funding for implementation of the identified improvement.

FY 2009

If funded, implement the identified improvement.

FY 2010

Evaluate success of improvement project; seek comments from users and suggestions for future improvements elsewhere on conservation properties.

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TOWN OF BARNSTABLE RECREATION LANDS DISABLED ACCESS ACTION PLAN

Assess the following recreation facilities and areas by FY 2010

- Asleton Park & Marine Museum
- John F. Kennedy Memorial
- Lopes Field
- Ridgewood Park
- Centerville Community Center
- Centerville Ball Fields
- Centerville Tennis Courts
- Horatio Lane/Centerville Long Pond
- Osterville Community Center & Fields
- Burgess Park
- Ellen McBarron Recreation Facility
- Lowell Park
- Lombard Field/Playground
- West Barnstable Community Building
- Barnstable Hollow

FY 2005-2010

Work towards conclusions in Barnstable Disabilities Commission accessibility recommendations as found in Appendix E.

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Appendix FDetailed Priority Habitat Percentages in Barnstable

Appendix F Detailed Priority Habitat Percentages in Barnstable

-		<5acr	5≤x	<10		x<25			· · · ·	x<100		≤x<250	250	≤x<500	500	≤x<1000		0≤x<1000	overal	1		
	es		acre	es	acre	es	acre	s	acre	es	acre	es	acre			0 acre	es					
Habitat Type (initials)	#	sum (ac)	#	sum (ac)	#	sum (ac)	#	sum (ac)	#	sum (ac)	#	sum (ac)	#	sum (ac)	#	sum (ac)	#	sum (ac)	#	sum (ac)	% Barn.	% Cape
XX (Developed Areas)	596	482.5	51	359.5	27	414.2	13	474.3	7	461.8	4	640.2	2	652.2	3	2140.1	3	12140.0	706	17765	44.42	17.30
Salt Marsh (SM)	156	159.5	19	139.8	16	221.4	8	282.0	3	165.1	0	0.0	0	0.0	0	0.0	1	2849.5	203	3817	9.54	27.37
Barrier Beach/Dune System (BB/DS)	25	41.9	0	0.0	2	34.1	0	0.0	1	58.9	0	0.0	0	0.0	1	797.5	0	0.0	29	932	2.33	19.36
Pond/Lake (P/L)	178	137.5	20	146.9	16	221.3	1	27.9	5	298.2	1	115.4	1	253.6	1	667.4	0	0.0	223	1868	4.67	16.59
Shrub Swamp (SS)	375	336.5	17	118.8	1	11.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	393	467	1.17	11.51
Bog (BG)	6	5.1	0	0.0	1	12.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7	17.1	0.04	10.90
Freshwater Marsh (FM)	156	169.1	9	59.8	3	35.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	168	264.6	0.66	11.38
Sandplain Grassland (SG)	1	3.1	1	9.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	12.4	0.03	0.48
Coastal Heathland (CH)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.00
Cultural Field (CF)	1	2.1	2	14.4	6	97.8	2	72.9	0	0.0	1	112.4	1	382.2	0	0.0	0	0.0	13	681.7	1.70	56.73
Pitch Pine-Oak Woodland (PP)	0	0.0	0	0.0	0	0.0	1	47.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	47.2	0.12	8.11
White Pine- Hardwood Woodland (WP- H)	1	3.4	2	15.2	0	0.0	1	26.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	44.7	0.11	17.27
American Beech Woodland (AB)	1	4.1	1	9.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	13.9	0.03	4.58
Oak-Hickory Woodland (O-H)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.00
Pitch Pine-Scrub Oak Barrens (POB)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.00
Cranberry Bog (CB)	42	98.1	9	62.9	6	80.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	57	241.8	0.60	20.32
Barrier Beach (BB)	102	80.0	8	56.2	2	36.3	3	118.5	1	83.5	1	220.1	0	0.0	0	0.0	0	0.0	117	594.5	1.49	15.46
Grassy Heath (GH)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.00	0.00
Uncategorized Forest (UF)	349	535.8	50	365.2	44	683.4	29	962.4	13	970.7	10	1699.2	4	1543.4	5	3601.9	1	1743.8	505	12106	30.27	11.60
Significant Woodland Community (WC)	12	6.5	2	14.9	6	115.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	20	136.4	0.34	58.42
Wooded Swamp Deciduous (WSD)	219	243.2	16	104.5	3	40.6	1	33.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	239	421.7	1.05	17.95
Wooded Swamp	48	63.1	3	19.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	51	82.2	0.21	12.20

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Coniferous																						
(WSC)																						
Wooded Swamp Mixed Trees (WSM)	61	97.0	1	6.5	1	16.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	63	119.9	0.30	15.29
Tidal Flat (TF)	334	85.4	5	34.0	2	40.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	341	159.9	0.40	1.35
Coastal Beach (COB)	76	79.2	3	19.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	79	98.8	0.25	5.46
Coastal Dune (COD)	72	48.0	4	27.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	76	75.5	0.19	4.56
Coastal Bank Bluff or Sea Cliff (COBB)	34	28.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	34	28.3	0.07	4.08
Rocky Intertidal Shore (RIS)	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2	0.00	0.27
TOTALS	2846	2710	223	1584	136	2061	59	2045	30	2038	17	2787	8	2831	10	7207	5	16733	3334	39996	100.0	NaN

Source: Cape Cod Wildlife Habitat Conservation Project



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Appendix G Maps

List of Maps

Mar 1	Zanina Man ⁷⁷	Dequired Mar 1
Map 1	Zoning Map	– Required Map 1

- Map 2 Soils Required Map 2
- Map 3 Geology Required Map 2
- Map 4 Unique Features Required Map 3
- Map 5 Wells and Zones of Contribution Required Map 4
- Map 6 Wetlands Required Map 4
- Map 7A Cape Cod Wildlife Conservation Project Optional Map
- Map 7B Mass. NHESP Barnstable Biomap Core Habitats Optional Map
- Map 7C Mass. NHESP Barnstable Wildlife Habitats Optional Map
- Map 8 Fisheries and Vernal Pools Required Map 4
- Map 9 Conservation and Recreation Land Required Map 5
- Map 10 Access Optional Map
- Map 11 Ways to Water Optional Map
- Map 12 Five Year Action Plan Required Map 6

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⁷⁷ The Zoning Map include in Appendix G is not labeled Map 1 or altered in any way per direction of Barnstable Town Counsel and Planning Division so as not to alter a legal document.