SECTION 7 ANALYSIS OF NEEDS

Chatham Lighthouse
Photo by Jeff Thibodeau, Helios Land Design

PUBLIC REVIEW DRAFT

A. Summary of Resource Protection Needs

Chatham's open space, conservation and recreation needs reflect the problems of a town that has grown rapidly over the last few decades. Issues including the pace and form of development, congestion of roads and lack of parking, the need for new facilities and infrastructure improvements (especially wastewater), and the drive for continued economic growth, are at the forefront of the Town's efforts. Problems that were once seasonal have become more prevalent throughout the year. The need for open space, conservation and recreation is as strong as ever but due to a lack of available space and finances may conflict with each other or needs in other areas, particularly affordable housing and historic preservation. Although cooperation is strong between Town boards, there is inevitable competition for limited funding. A cohesive vision of resource protection is needed to ensure that the maximum number of needs is met.

In implementing the town's prior open space and recreation plan, 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; and,
- Protection of large contiguous open spaces used for golf (e.g.; Seaside Links).

As a result, most of the large blocks of undeveloped land in Chatham have either been acquired by the town, trust or federal government or subdivided for residential development. In addition to continued efforts to preserve the remaining high priority parcels for conservation and recreation, the town must also focus on seizing opportunities in the margins. Limited land and financial resources require more innovative approaches to preserving open space and natural resources than ever before. Some of these techniques have been applied in Chatham, but perhaps not emphasized. Better education of town officials, landowners, and citizenry about these alternatives may lead to improved implementation. Examples include the protection of lands that provide links between or buffers to larger parcels, and lands that can be undeveloped and/or cleaned up and reused (i.e.; landfill). 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.

Land is the resource base for many natural features, including water quality. It 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 Chatham should be employed whenever possible and are included in Appendix D, *Non-Regulatory Land Protection Tools.*

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 on all relevant criteria so that quick action can be taken when opportunity arises. To this end, as part of the town Comprehensive Open Space Acquisition Strategy, Helios Land Design has prepared the *Town of Chatham Open Space Acquisition Strategy Update: A Confidential Technical Appendix to the 2008 Town of Chatham Open Space and Recreation Plan*, which involves the identification, mapping and prioritization of parcels for their land acquisition value.

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

1. Improved Greenway Linkages

There is a clear need for improved greenway linkages in town to stitch together the gaps between larger conservation lands. Effective linkages may be realized by employing fee acquisition or a combination of non-conventional methods such as bike trails, sidewalks, footpaths (walking easements) and scenic roads. Aerial photos clearly reveal two main contiguous vegetated areas in Chatham. The first is in west central Chatham and comprises the Water Supply Protection District, spreading east to encompass several ponds in that area. This area is also directly connected to large forested areas in the adjacent town of Harwich and many of Chatham's largest conservation and recreation lands fall within this area. The second area includes the outlands of Nauset barrier beach (North and South), Tern Island, and Monomoy Island. Due to the extensive development in Chatham, the opportunities for adding to these areas are few and far between and those that exist are insubstantial. Future land acquisition priorities should focus on lands adjacent to existing greenways, no matter how small. Perhaps a greater opportunity exists to protect lands in and around surface waters including the multiple ponds, inlets, rivers, streams and coastlines in Chatham. The town should focus on connecting these dots by enhancing land protection measures around and between all surface waters in town. Special care should be taken to reduce impacts from the airport upon the surrounding natural resources. Additional protective measures such as bylaws and land management guidelines should be considered.

Utility lines and corridors are another creative way to link resources. These public and quasi-public easements often link larger relatively undisturbed areas. In some instances it is the only space remaining that could provide for the interconnection of open lands.

2. Ground Water Supply Protection

Wellfield protection needs have thus far been met through intelligent land acquisition, primarily in the western portions of town, and through Board of Health and Zoning regulations. While continued land acquisition to protect these and other potential water supply areas remains important, reliance on staunch regulatory postures and on the

implementation of the Comprehensive Wastewater Management Plan are likely to play a more prominent role in protecting the aquifer in the five year reach of this Plan.

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 is being addressed with the preparation of a Comprehensive Wastewater Management Plan. Swift completion and implementation of this Plan is needed in order to address this growing problem;
- The impacts of wastewater disposal methods upon coastal estuaries should be further investigated in accordance with the Massachusetts Estuaries Project findings and recommendations (discussed in Section 4) in order to protect and restore impacted embayments;
- There is a need to expand and refine recycling efforts to the extent a market is available; and,
- There is a need to eliminate roadside and beach litter and illegal dumping.

4. Harbor, Tidal and Open Water Protection[48]

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, harbors, 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. Aquaculture, controlled propagation, growth and harvesting of marine life, has been and should continue to be encouraged. There is a need to resolve the current question regarding the permissibility of commercial shellfishing the waters in the Wilderness Area around Monomoy National Wildlife Refuge. The resolution of this question will have a large socioeconomic impact on the town.

Clearly, Chatham's surface water resources are an extremely important natural and cultural resource and need to be protected. The Town's South Coastal Harbor Management Plan, completed in 2005, provides strong guidelines for optimum functioning of the south facing waters on Nantucket Sound. This Plan addresses the following needs, which are relevant to the entire town:

- improve and maintain access opportunities to the town's landings;
- improve mooring administration;
- improve and expand marina facilities;
- assess and correct the impacts of piers and shoreline structures;
- continue environmentally sustainable dredging;
- ensure boating safety;
- continue protection and restoration of wetlands;
- protection and enhancement of shellfisheries including its propagation program;
- protection of views;
- wildlife protection;
- erosion prevention and beach renourishment;
- maintenance and management of public beaches; and
- water quality management.

In addition, the Massachusetts Estuaries Project identified Nitrogen impaired embayments and recommends strategies for mitigation. This report, in concert with the town's Comprehensive Wastewater Management Plan, should address current needs for the protection of Chatham's harbors and other tidal waters

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

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.
- 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 Chatham and need to be protected. Many kettle ponds support a coastal plain pond ecology which is a globally threatened and rare habitat. These coastal plain ponds commonly support rare plant and animal species. The following specific needs have been identified:

- There is a need for protection of fresh water kettle ponds and pond shores, some of 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 Chatham have been identified:

- There is a need for greater creativity in land protection methods, including the use of conservation restrictions, purchase of development rights, 'Brownfield' redevelopment and undevelopment;
- The town needs a master *Priority Parcel Acquisition List* to help prioritize and direct land protection efforts throughout town. This list will result largely from a current effort to prioritize all town parcels for the open space and recreation value;
- There is a need to better protect land surrounding surface waters and wetland areas such as ponds, harbors, rivers, and marshes and to link these together; and,
- There is a need for closer management conservation and recreation lands through the development Resource Management Plans, use guidelines and improvements.

8. Wildlife Habitat Protection

The town's wildlife habitat has been largely fragmented by continued development, thereby threatening the viability of wildlife populations. The following wildlife protection needs have been identified in Chatham:

- There is a need for wildlife inventories and habitat management plans in the larger conservation areas in town; and,
- There is a need for the acquisition and/or increased protection of particularly sensitive wildlife habitat and species, identified by the Massachusetts Natural Heritage Program, The Compact of Cape Cod Conservation Trusts, Inc., the National Fish and Wildlife Service and the Massachusetts Audubon Society.

9. Protection of Scenic and Unique Resources

There is a need for improved protection of the town's archaeological, scenic, historic and other unique resources.

10. Improved Public Education

There is a need for improve public education regarding current threats to natural resources and what can be done to mitigate impacts of development.

B. Summary of Community's Recreation Needs

Recreational needs in Chatham have been determined through public surveys, discussions with the Parks and Recreation Department Director, the use of National Park Service standards and comparison with the Statewide Comprehensive Outdoor Recreation Plan (SCORP).

1. Public Survey

The public survey identified the following general recreation needs:

- More recreational facilities, the top 5 being:
  1. Conservation Areas
  2. Public Access to Waterbodies
  3. Bike Trails
  4. Children's Play Areas
  5. Hiking and Skiing Trails

- Increased amount and quality of recreation areas for all age groups.

2. Parks and Recreation Department

The town's Parks and Recreation Department did a needs assessment several years ago. One of the major needs identified in that assessment was for an improved Community Center, which has been addressed with the renovation of the Main St. School. The town is currently in a holding pattern in order to assess how the new facility will impact the town and a new needs assessment will not be conducted until after these changes have been integrated.

The town's Director of Parks and Recreation, Dan Tobin, has identified the following general needs:

- Development of additional programs and services to serve the adult and senior populations;
- Greater feedback from the community regarding their specific desires for programs and services (the survey is expected to address this need to some extent);
- Improved public education regarding the Parks and Recreation Department services and facilities; and,
- Improved access for people with disabilities.

There currently seems to be a sufficient supply of field space, swimming areas and programs for kids. The new Community Center, opened in the fall of 2007, will address the need for space to house these programs and services. The need for additional hiking trails should be addressed by recent land acquisitions and the construction of the new bike trail.

3. NPS Standards

The National Park Service has created standards to assist municipalities in determining whether or not their facilities meet presumed demand of the population.

Chatham's 2005 population was 6,832. Assuming a tripling of the population during summer months, this would bring Chatham's peak population to 20,496. Table 26, *National Park Service Standard Recreational Needs Analysis*, uses this estimated peak population figure and rounds results to the nearest whole number to determine the expected demand for facilities. The estimated need is the difference between presumed demand and existing facilities.

Table 26: National Park Service Standards Recreational Needs Analysis[49]

National Park Service Standards
Recreational Needs Analysis

	Activity	Seasonal Standard	Presumed Demand	Presumed Need/Shortage
I	Trails	(mile per person)	5 miles	0
	Hiking	1/4000	5 miles	UNK
	Nature	1/2500	8 miles	UNK
	Equestrian	1/6250	3 miles	UNK
	Bicycle	1/2000	10 miles	5
	Jogging	1/2000	10 miles	5
II	Family Play (Developed children's play apparatus areas & open space)	1 area/1000	21 areas	9 areas
III	Picnic Areas	1 table/300	60 tables	48 tables
IV	Court Games	(court per person)	(courts)	(courts)
	Tennis	1/1500	14	7
	Basketball	1/1000	21	18
	Volleyball	1/3000	7	7
	Shuffleboard	1/2000	10	10
	Horseshoes	1/2000	10	10
V	Diamond Sports	(diamonds per person)	(diamonds)	(diamonds)
	Baseball	1/3000	7	3
	Softball	1/3000	7	3
VI	Field Sports			
	Soccer	1 field/4000	5 fields	2 fields
VII	Golf Course	18 holes/125,000 0	0	0
VIII	Boat Ramps	1 ramp/10 miles	13	UNK
IX	Swimming	1 sq. ft./person	6,832 s.f.	0

Source: 1985 Open Space and Recreation Plan, wwww.greenfuture.org – current inventory provided by Chatham Parks and Recreation Department

Based on this analysis, almost every recreation category indicates a shortfall. However, in general, the town's Director of Parks and Recreation indicates that facilities are sufficient. One reason for the apparent discrepancy is that Chatham's population is heavily weighted towards retirement age and most of the facilities listed above are related to active recreation, an area that does not currently present a pressing demand. Secondly, much of Chatham's' recreational interest is at the beach and on the water, where resources are plentiful.

49 Presumed Need/Shortage is based on a rough estimate provided by the Parks and Recreation Department of the number of facilities in town at the time of this report,including School properties

4. Massachusetts Statewide Comprehensive Outdoor Recreation Plan (SCORP)[50]

An analysis of the Statewide Comprehensive Outdoor recreation Policy (SCORP) publications revealed some of the same needs at the state and regional levels as were shown by town surveys and staff interviews. 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). These two needs have been recently addressed in Chatham through land acquisition that will include opportunities for trail development and the construction of a new bike trail. Field-based and water-based activities follow in the SCORP, however these are not currently a pressing need in Chatham, which currently has an abundance of both. In simple rank order, the 10 most needed or desired facilities statewide by respondents in the SCORP 2000 are:

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

Table 27, *Need for New Recreational Facilities Across the State and Cape Cod*, compares responses for the state and Cape for all recreation activities in the study.

Table 27: Need for New Recreational Facilities Across the State and Cape Cod

Recreation category	**Statewide** (percent)	**Cape Cod and Islands** (percent)
Field-Based Activities		
Baseball	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 Activities		
Photography/painting	0.2	0.0
Picnicking	3.1	2.1
Sightseeing, tours, events	2.3	0.8
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

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

Recreation category	**Statewide** (percent)	**Cape Cod and Islands** (percent)
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
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

C. Management Needs

1. Land Use Management

The Conservation Commission has been designated as an advisory agency for the management of conservation lands and has promulgated rules and regulations for their use. It is recommended that all lands designated under this plan as Conservation/Passive Recreation lands be monitored by the Conservation Commission and that recommendations be made as deemed necessary by the Commission for management of these lands in keeping with the provisions of this plan.

In spite of many accomplishments, a lack of funding and time has led to the following ongoing management needs:

- To identify, assess and address management of the town's conservation areas -particular issues to contend with include parking and access, unauthorized use of motorized vehicles, illegal dumping, interpretive education, and habitat management including control of invasive species.
- Wildfire Management Planning- continued development and implementation
- Increased funding for land management and land acquisition

The town has recently hired a consultant to address many of these issues in a *Comprehensive Lands Management Plan*, of which a draft was completed in 2007. This plan presents some of the issues to be addressed town wide and that more in depth work will be needed on specific properties. Previously, the Conservation Department has developed management plans for the Goose Pond (lower) Property, but this is now over 25 years old and need to be updated.

There was also a report completed in 1996 and 1997 by Nick Wilkoff, an intern working with the then Town Planner Margaret Swanson, which examined resource management issue on the following properties:

- Town Forest
- Goose Pond and Town Disposal Area
- Golden Triangle
- Sam Ryder Property

- Harding's Beach
- Cedar Swamp
- George Ryder Rd., Old Queen Anne Rd., and Lover's Lake Properties
- Frost Fish Creek Properties
- Red River Properties
- Strong Island

This report includes brief though informative summaries of the properties, inventories existing conditions and identifies management issues. The report made a number of recommendations:

- Limit access of motorized vehicles into town lands.
- Clean up illegal dump piles.
- Design a set of trail maps.
- Mark trail entrances and town properties with signs.
- Provide trail maps, benches, picnic areas, etc. along trails.
- Define parking areas at major trail entrances.
- Create a list of recommendations for a forest management plan.

Subsequent to these recommendations, a number of projects have been undertaken such as the clean up of debris on several parcels, the development and improvement of trails, removal of invasive vegetation on two parcels at Ryder's Cove, the publication of a trail map on two parcels, and the installation of barriers to control vehicular access to three parcels. In the fall of 2000, Americorps volunteers removed debris and cut back encroaching vegetation on trails on town and Conservation Foundation lands in the Mary's and Barclay's Pond area and on the Training Field Triangle. This work should be built upon, updated and perhaps expanded into more formal Management Plans that can be implemented.

Similarly a report entitled "Inventory of Town Parks Properties" was also prepared by the same intern and addressed the following areas:

- Kate Gould Park
- Chase Park
- Veteran's Park
- Oyster Pond Beach
- Nickerson Park
- South Chatham Tennis Court

It is informative though the issues identified are somewhat outdated and should be updated.

With the completion of this Open Space and Recreation Plan and the completion of a *Comprehensive Conservation Lands Management Plan*, the prospects of more comprehensive management have increased.