



Town of Hanover, Massachusetts

Open Space and Recreation Plan 2008-2012



Presented to:
Open Space Committee
Town of Hanover
550 Hanover Street
Hanover, Massachusetts

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*Photos from top: Town Center Ballfield,
Hanover Cemetery, Colby Phillips, King Street*

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Section 1.0 Plan Summary



Photo by Mary McCrann, Playground in Hanover

1.0 PLAN SUMMARY

It is noted in the 1997 Open Space and Recreation Plan that Hanover's vision to guide the future growth and development of the Town in the next twenty years is for:

A Town that retains and improves the pleasing character of its civic, historic, economic, and residential areas in a manner that is sensitive to its natural and built environments.

The 2008 Open Space and Recreation Plan (OSRP) update final report is the culmination of nearly ten months of data gathering, public input and research. The document has been prepared to serve the Town of Hanover in the future in terms of what the various committees, boards, commissions and volunteer groups can do to support open space and recreation in town. As in 1997, the OSRP is designed to inform the reader about natural resources, open space, recreational amenities and other related topics that exist in Hanover and neighboring communities. Mentioned throughout the OSRP update process by participants was the fact that Hanover has changed significantly through the years from a rural, charming bedroom community to a more suburban, developed town that still has pockets of its original character spread throughout. Maintaining that character and ensuring that open space, natural resources and recreation continues to stay on the forefront of everyone's mind as the town continues to manage its growth is essential to those that live in Hanover.

The OSRP illustrates how important it is to continue to protect and preserve existing sensitive environmental areas and it also provides an inventory of existing recreational facilities. In terms of the future, suggestions are provided regarding what Hanover should be protecting and adding how the Town can continue to make recreational opportunities available for both residents and visitors. Other sections of the Open Space and Recreation Plan update include a discussion of the most recent demographic information available (population and housing data), an environmental inventory and analysis, a discussion of goals and objectives and also a needs analysis. Perhaps one of the most significant sections is the Action Plan which details suggested steps that different boards, commissions and committees in Hanover can take to achieve the stated goals and objectives. The Action Items are ambitious, but can be accomplished through cooperation and collaboration.

The final Open Space and Recreation Plan, in addition to serving as a guide for the town, once approved by the Massachusetts Division of Conservation Services (DCS) will allow Hanover to apply for specific types of grant funding for projects related to open space and recreation.

Hanover is a charming community that is deep in history and valued as a wonderful place to live. The overall goal of this entire planning effort has been to provide another tool for the town and residents to use to help understand the community and how to improve its open space and recreation in the future while protecting what currently exists.

Section 2.0 Introduction



Photo by Mary McCrann, Luddams Ford

2.0 INTRODUCTION

2.1 Statement of Purpose

The Town of Hanover is a community that resonates with character from its history, open spaces, scenic views and people who live there. As a semi-rural suburban community to the City of Boston, it is an attractive place to many. Land is a finite resource, so competing needs of the development community and the efforts of planning projects such as the Open Space and Recreation Plan (OSRP) update become evident. Continuing to manage and guide growth while protecting open space and natural resources and providing meaningful recreational opportunities will continue to be a challenge in the future. The OSRP update serves to provide guidance towards that effort. More specifically, the purpose of this project is to:

- ✓ Review and update the 1997 Hanover Open Space and Recreation Plan with the goal of identifying what action items have been completed and what work is still left to do as well as detail local open spaces, natural resources and recreational amenities to help guide the Town during the next five years on how best to enhance and protect those resources.
- ✓ Inventory existing open space and recreational resources and recommend additional opportunities for acquisition, additional protection or amenities to consider adding for the future.
- ✓ Inform and educate local residents about their community and existing open space, natural resources and recreational amenities and why they are important and obtain their input.
- ✓ Create the momentum for the implementing committee that is needed to begin implementation of the **key element** to the plan, the Action Items detailed in Section 9.0.

The OSRP update has been prepared as a document that will be educational and informative to those who read it.

2.2 Former Open Space and Recreation Planning Efforts

OSRPs were prepared for the Town of Hanover in 1979, 1987 and 1997, which is approximately every ten years. The 1979 plan was prepared by the Conservation Commission and it detailed a history of the Town as well as conservation efforts that were taking place at the time. Goals at the time included:

- Protect the integrity of wetlands, watersheds, existing and potential aquifers, groundwater recharge areas, ponds, streams and floodplains,
- Fulfill current and future needs for recreation programs and facilities,
- Preserve known historic sites,

- Plan for the integration of open space uses with urban development,
- Prepare for the continued growth of the community in a planned fashion that can accommodate the citizens' needs and maintain the resources that are attractive to residents, and
- Establish cooperation among all town boards and departments in preparing for future growth demands.

The 1987 Hanover Open Space Plan was updated by the Metropolitan Area Planning Council and it detailed that since the 1979 plan was written, the Conservation Commission acquired more land, enacted a local wetlands protection bylaw and established several protective zoning districts. The goals established for the 1987 plan included the goals identified in the 1979 plan, but further emphasized the need for recreational programs and facilities as well as improving public access to open space.

2.3 1997 Open Space and Recreation Plan Action Items

Since 1997, the Town of Hanover has made progress in accomplishing a number of tasks listed in the Section 9 (Action Plan) of the 1997 Open Space and Recreation Plan prepared by Beals and Thomas, Inc. The recommended action items were organized by responsible party and year in which the item should be completed or initiated. Since 1997, the following has been accomplished:

Goal 1: Identify, preserve and protect those historic, cultural and natural resources that contribute to the character of the town.

The Open Space Committee has taken several steps towards identifying key parcels for acquisition such as sending letters to landowners who have property that is ten acres or larger and they have conducted site walks. In addition, the Committee was very active and vocal about helping to have the Community Preservation Act (CPA) passed in Hanover (in 2005). The CPA serves as an additional funding source for open space and recreation projects.

In May of 2003, the Town adopted a Bylaw for the Preservation of Historically Significant Buildings. In summary, the Bylaw requires that if an applicant wishes to demolish any building seventy five (75) years or older the project be reviewed. The Town of Hanover has also prepared a Historic Preservation Plan.

Goal 2: Protect and enhance the quality of Hanover's surface and groundwater.

In the past ten years, the Town of Hanover has worked on identifying vacant lands to target for acquisition or other means of protection, particularly properties near or adjacent to town wells and public drinking water supplies. The local Aquifer Protection District serves to help monitor businesses and homes conducting certain activities in the area by requiring that Water Quality Compliance Certificates be obtained from the Public Works Department.

Goal 3: Enhance appropriate public access to and use of existing conservation lands and establish continuous greenways.

Several bridges and boardwalks have been built on conservation lands and the greenway by Boy scouts, AmeriCorps participants, Open Space Committee Members and volunteers. Properties where these bridges and boardwalks have been built include Colby Philips, Fireworks, French's Stream, Myrtle Street and Drinkwater. The 1999 trails map that was produced is being updated as a part of the 2007 OSRP project.

Activities that have taken place in Hanover to educate residents about existing conservation lands include vernal pool walks with high school students, and Open Space Committee sponsored walks on local conservation areas. In addition, the Open Space Committee also works with the local newspaper regarding articles of interest.

Goal 4: Improve and increase recreational opportunities in Hanover.

The Open Space Committee frequently works with Local Scout Troops who help out tremendously with trail work and signage for conservation areas and trail heads. In addition, the OS Committee helped to create a new trail along Forge Pond and a boardwalk that allows access into the Colby Phillips property while preserving wildlife habitat.

Goal 5: Increase environmental awareness among all sectors of the community.

The Open Space Committee has been working to increase environmental awareness in the community. The Committee was instrumental in advocating for Community Preservation Act funds which allowed the Town to purchase the Cervelli Property (now known as King Street Property) in May 2007.

The Committee also supports guided walks through open space properties. More specifically, naturalists have led several guided walks.

2.4 Planning Process and Public Participation

In the spring of 2007, the Town of Hanover issued a request for proposals to hire a consultant to assist the Open Space Committee and update the Town's Open Space and Recreation Plan. Beals and Thomas, Inc. was selected and began working on the project in April 2007.

Beals and Thomas, Inc. put together a team of qualified professionals that included a Project Manager, Environmental Planner, Environmental Specialist and ADA Accessibility surveyor. The team met monthly with the Hanover Open Space Committee which consisted of local residents who volunteer their time to serve their community on a local committee. The Town Planner, Andrew R. Port, AICP was also a part of the team working on the update. In 1999, the Open Space Committee (OSC) initiated the Hanover Greenway project to establish a continuous walking trail from Hanover High School to

Luddam's Ford Conservation area. The OSC has built trails, bridges and boardwalks, using volunteer labor and grants that have given Hanover resident's greater access to the outdoors.

Beals and Thomas, Inc. conducted a site visit in May 2007. The visit consisted of partnering with the Town Planner, Andrew R. Port and two Open Space Committee members, Hal Thomas, Co-Chair and Wallace Kemp to travel around Hanover, get a feel for the community and take photographs of open space, natural resources, playgrounds, water resources, ballfields, walking trails, scenic viewsapes and other recreational amenities. Beals and Thomas, Inc. also conducted a well attended public forum on June 19, 2007 at the Hanover Town Hall to inform local residents about the project and ask for their input regarding goals and objectives and to better understand what they felt significant issues are in terms of open space, recreation and natural resources. The Public Forum included a component where participants broke into small groups and using a map that was provided, mapped out a "Tour of Hanover" that they would take someone on who is new to the community, or a first time visitor. The exercise proved to be very successful and is summarized in Appendix C.

Hanover Day

The Open Space Committee took the initiative to further the public process for this project by setting up a booth at Hanover Day. Hanover Day is an annual celebration of the community that includes booths of civic organizations, an arts and crafts tent, restaurant establishments providing "a taste of Hanover," and access to local historical resources like the Stetson House. The booth set up by the OS Committee included a large map where event participants could identify their "favorite place" in town and could also receive more information about the Public Forum, volunteer opportunities and land conservation in general. The booth was visited by approximately 50 people and was very well received. Hanover Day attendees that stopped by the booth identified the following areas as their "favorite place," they include:

- The North River, Factory Pond, Luddams Ford, Briggs Stable, Melzer Hatch Reservation, Town Center, Bonney Conservation Parcel, Colby Phillips, Bird Sanctuary off of Broadway, Willow Road Site, Sylvester Field, Cervelli Property, the Cranberry Bogs, Myrtle Field, Hiking on the trail behind the old Fire Station and Ellis Field.

A full summary of Hanover Day is provided in Appendix C.

Citizen Survey

Public outreach for the project was continued by preparing an Open Space and Recreation survey. The survey was conducted in August and September 2007 and was made available through a link on the Town website. A copy of the survey was also mailed to every household in the community. In total, 246 responses were received. The purpose of the survey was to provide another opportunity for local

residents to offer their thoughts and ideas regarding open space, natural resources and recreational amenities in Town. Many of the survey results are discussed in Section 7.0 of this report, and the full survey summary is included in Appendix C.

Additional Public Forum

A second Public Forum for this project was held on November 8, 2007 (World Town Planning Day), in conjunction with the other master planning efforts going on simultaneously in Hanover. All five of Hanover's long range plans were discussed, including:

- Master Plan (Comprehensive Plan)
- Open Space & Recreation Plan
- Parks & Recreation Facilities Master Plan
- Affordable Housing Plan
- Historical Preservation Plan

As part of the Public Forum each consultant charged with completing one of the plans noted above presented key findings of each plan to date. Specifically, the consultants were asked to discuss:

1. The major issues, problems, challenges, or concerns identified in the plan which the Town should address over the next ten (10) Years, and
2. The major recommendations or actions identified in the plan which the Town should undertake over the next ten (10) years to address these issues.

In addition, the Town encouraged residents to visit the Town website during the next few months to view the Community Preservation Plans in draft and final format, and to answer final survey questions for the new Master Plan. Executive Summaries of each plan posted will be made available as well as comment forms to provide feedback to the Town. Overall, the Community Preservation Plans are expected to be finalized by January 2008. The new Master Plan will be completed by May of 2008.

The update of Hanover's Open Space and Recreation Plan was a collaborative and collective effort of many. The Open Space Committee's main goal was to prepare a plan that would be easily understood and implemented after the actual planning process is finished. The final OSRP is interesting, unique to the community of Hanover and proactive regarding recommendations, goals, objectives and action items.

**Section 3.0
Community Setting**



Photo by Mary McCrann, Tindale Bog

3.0 COMMUNITY SETTING

3.1 Regional Context

3.1.1 Location and Physical Context

The Town of Hanover is located within the coastal region of southeastern Massachusetts within the North River watershed. Hanover is bounded by Norwell to the north and east, Pembroke and Hanson to the south, and Rockland to the west and northwest. The Town is located approximately seventeen (17) miles north of Plymouth and twenty-three (23) miles southeast of Boston. The Indian Head and North Rivers form the southern town line with the Towns of Hanson and Pembroke, while the Third Herring Brook serves as the eastern boundary between Hanover and Norwell.

Hanover occupies approximately 15.7 square miles in area, and when regionally compared, is one of the smaller towns in Plymouth County. Located within 25 miles of Boston, many Hanover residents commute to the city for employment. Expansion of metropolitan Boston southeastward along the “South Shore” has been rapid since 1940, when towns consisted of small centers with a business zone along the principal road network. The regional map on the next page illustrates the region in which Hanover is located. This trend towards “suburban sprawl” and the resultant increase in population has also increased the demand for water, while the amount of land available for water supply has decreased to the point where many local water agencies are having difficulty in locating and developing additional water supplies¹.

State highway Routes 3, 53, 123 and 139 traverse through the Town of Hanover. Route 3, a limited access highway located north to south, traverses the northeastern corner of the Town and provides convenient access to both Cape Cod and the Boston metropolitan area. Route 53 (also known as Washington Street and Columbia Street) intersects with Route 3 at Interchange 13 in the northeastern section of Town and it extends in a southeasterly direction in the eastern quadrant of the Town. The entire length of Route 53 is commercially zoned, with the exception of the southeastern portion that is business zoned.

Route 123 (also known as Webster Street) traverses in an east-west direction through the northern portion of Hanover. The majority of the land abutting Route 123 is zoned as residential with the exception of the areas adjacent to Route 3 which is zoned commercial. Route 139 (also known as Rockland Street and Hanover Street), traverses in an east-west direction through the mid section of the Town. Smaller pockets along Route 139 are presently business zoned and one area is industrial zoned. The remainder of the roadway is currently zoned residential.

¹ Williams, John R. and Gary D. Tasker, 1974. Water Resources of the Coastal Drainage Basins of Southeastern Massachusetts, Weir River, Hingham to Joes River, Kingston. United States Geological Survey.

Town of Hanover Regional Context



Source Data: MAGIS, 2007

3.1.2 Water Supply

Hanover has four (4) existing water supply areas, with nine (9) wells (see Table 3-1). The Pond Street Wells are situated at the southerly end of Old Pond Meadow Swamp, and border the Third Herring and Silver Brooks. The land is predominantly wetland and during periods of excessive rainfall or rapid thaw, the area is subject to flooding. The Hanover Street Wells are located approximately 4,000 feet south of and 30 feet higher in elevation than the Pond Street Well area. Again, the land is characterized as wetland. Although testing has shown that bedrock or ledge rises to the west and north, no connection has been found between the groundwater at Hanover Street and Pond Street. (See 1997 OSRP note). This discrepancy suggests that there is an intrusion into the small aquifer from a substantial yet unidentified groundwater source. The Broadway Well area lies approximately 3,600 feet south of the Hanover Street Well area. The land, formerly an active cranberry bog, is characterized by its high water yield. The area of surface runoff to these wells is insufficient to provide the amount of water being pumped, indicating an intrusion from another groundwater source beyond the surficial watershed area². The Riverside Drive Well area is located at the southeastern corner of the Town in a wetland area to the north of the intersection of Indian Head and North Rivers and is believed to be the first bedrock well in Massachusetts. In 1993, the Beal Wells were

² Town of Hanover, 1997. Hanover Open Space Plan. Hanover, Massachusetts.

constructed and installed. The Beal Wells are located off Riverside Drive. The two wells have a total capacity of 1,238,400 gallons per day. Treatment in these wells consists of iron, manganese, and turbidity.

**Table 3-1
Existing Wells in Hanover**

Location	Well	Year Installed	Capacity (gpd)	Treatment
Pond St	Pond St #1	1940's	432000	Iron/Manganese/Color/Turbidity
Pond St	Pond St #2	1973	864000	Iron/Manganese/Color/Turbidity
Pond St	Pond St #3	1973	864000	Iron/Manganese/Color/Turbidity
Hanover St	Hanover St #1	1960's	360000	Iron/Manganese//Turbidity
Hanover St	Hanover St #2	1960's	201600	Iron/Manganese/Color/Turbidity
Broadway	Broadway #1	1960's	468000	Iron/Manganese
Broadway	Broadway #2	1960's	403200	Iron/Manganese
Riverside Dr	Beal #1	1993	216000	Iron/Manganese/Turbidity
Riverside Dr	Beal #2	1993	1022400	Iron/Manganese/Turbidity

Source: Email from Mr. Victor Diniak, August 2, 2007

Potential Water Supply Issues

The Pond Street wells face contamination threats from a leaking gasoline tank at the corner of Old Washington Street and Route 53. The gas station has been decommissioned but there is a plume of pollution in the ground. The Broadway wells also face contamination threats from a leaking gasoline tank at Columbia Road. The gas station (Sunoco) is currently still in operation and there is a pump and treat system cleaning up the pollution that is in the ground. All of the wells in Hanover face threats from encroachment of development that continues to get closer and closer.

The gallons per day capacity of all of the wells in Hanover is deceptively small. The Town does not have a sustainable capacity that summing up the total capacity of all of the wells would imply. If the wells were pumped at their rated capacity for a length of time the usage would run the ground dry.

Four (4) well protection zones are incorporated into the Town's Zoning Bylaw and are located within the designated Aquifer Protection Zone. These four (4) zones correspond to the Pond Street, Hanover Street, Broadway and Beal Well Fields. The Broadway well protection zone is the largest of the four (4) zones with an approximate area of 129 acres.

Also, wells that are not presently treated, if treated in the future, could potentially yield additional water flows.

3.1.3 Scenic Resources

The Town of Hanover has a wealth of scenic resources and view sheds. A map titled Scenic Resources and Unique Environments, Map 5, is located in Appendix A, which depicts scenic corridors, scenic landscapes, scenic views, parks and fields and historic villages. Hanover has several historic villages, including Four Corners, South Hanover, West Hanover, North Hanover, Assinippi and Hanover Center. The Old Colony Rail Line is located in the southern portion of the town traversing from west to east.

Scenic Resources

Scenic resources need not be a specific view or location, but may be a combination of features that come together to create an aesthetically pleasing situation, such as a tree lined street, a rolling meadow, a hilltop, or an old farmhouse. The following places were identified as treasured scenic resources by the participants in the Open Space Public Forum on June 19, 2007 (see Map 5, Appendix A):

- Town Center
- Briggs Stable/Field
- Four Corners
- Luddams Ford
- Sylvester Field
- Cardinal Cushing Property
- Trail along the Indian Head River
- Slave Grave in the Town Cemetery on King Street
- Hanover's designated Scenic Roads
- Old Stone Bridge on the Hanover/Pembroke line over the North River
- Forge Pond

Scenic Roads

The Scenic Roads Act (M.G.L. Chapter 40, Section 15C) allows a municipality to designate any non-numbered route or state highway as a "scenic road." Once designated, any proposed repair, maintenance, reconstruction or paving work that involves the cutting of trees or destruction of stone walls requires prior approval by the Planning Board. Designating a road as "scenic" allows for the preservation of existing rural and natural aesthetic qualities, and thereby contributing to the overall rural character of the community. The Town of Hanover has designated the following roads as "Scenic Roads" (See Map 5, Appendix A):

According to the Town of Hanover's Scenic Roads Map, prepared by the Planning Department there are seven designated Scenic Roads in Hanover include:

- Broadway
- Center Street
- Main Street

- Silver Street
- Union Street
- Washington Street (*from the bridge into Pembroke to Route 53*)
- Whiting Street

3.2 History of the Community³

Early Settlement

The land area which comprises the present Town of Hanover is bounded by the North River, extending to the Indian Head and Drinkwater Rivers on the south, and the Third Herring Brook which forms the natural border to the east. Numerous small brooks feed these streams. These natural water ways are among the town's greatest natural resources. Prior to 1649, the area served as hunting and fishing grounds for the local Native Americans whose permanent villages were located around the ponds in Hanson and Halifax.

In the early 1600's, woodlands comprised 90% of Hanover's land area. Oak, upland and swamp cedar, elm, hornbeam, hickory, birch, sassafras, maple, poplar, beech, hemlock, spruce, and pine were commonly found in the woodlands. Wildlife such as deer, wildcat, bear and wolves, as well as smaller woodland animals and birds, were found throughout the woodlands in the days of early settlement. Deer were protected by law in Hanover as early as 1739. Swampland and salt marshes occupied a sizable portion of the natural acreage. Marshes occupied a sizable portion of the natural acreage. A granite boulder in North Hanover, known as Absolum's Rock, is said to be the largest free-standing boulder in Plymouth County.

Hanover's abundance of large oak trees and its proximity to the North River made the Town desirable to the shipbuilding industry. In 1649, William Barstow, the first settler, came to Hanover to build his house in the area now called "Four Corners". He was a carpenter or shipwright by trade, and used the river and natural oak to begin a shipyard on the banks of the North River. He later constructed the first bridge across the river and laid out the way from the river to Hugh's Cross and beyond "towards the bay so as to avoid Rocky Hill and the Swamp" (Colony Records 3, p. 78). Later he operated an ordinary (tavern) where refreshments were sold to travelers.

Other settlers soon followed Mr. Barstow. They cleared the woodlands for their farms and pastures, and built sturdy structures to house their families. Approximately one hundred of these 18th century houses still exist today. These settlers continued the trade of shipbuilding, while others constructed small mills on the streams for grinding corn, sawing wood, and smelting iron nuggets from the town's various bogs.

According to a town historian, the Town had a population of approximately 300 people at

³ Town of Hanover. 1997. Hanover Open Space Plan. Hanover, Massachusetts.

the time of its incorporation in June 1727. However, nearly 1/6 of these people lived in a part later annexed to Pembroke. The town continued to grow slowly from a population of 958 in 1800 to 1,303 in 1830. Most citizens built homes and operated small farms to accommodate the needs of their families. Tracts of swamp cedar provided wood for post rails and tubs. Several hundred cord of pine was carted annually to Hingham for the use of the coopers to be made into the now famous Hingham buckets. Later, pine was used in the manufacture of boxes in town while both cedar and pine shingles were sawed at the Shingle Mill in North Hanover. By 1850 the population had increased to 1,592 and much of the land was cleared and the large timber gone.

From 1896 to 1904 the Town was served by Fire wardens. In the event of a fire, the Firewards would ring church bells to alert volunteers, who would then line up in bucket brigades. Hanover's first Fire Department was established in 1904. The Town's library was built in 1906 with \$15,000 donated by John Curtis.

Around the turn of the century (1900's) George J. J. Clark took over the fireworks factory around the Factory Pond area. In World War One the National Fireworks Company made illuminating rounds for the war effort. These are commonly called tracer rounds and they were revolutionary for the time. George's son William Melvin Clark was interested in flight and across Winter street he "started" Clark Airport. Apparently he got into his plane and just took off from the area. He then expanded and paved the runway (s). By the late 1930's it was a bustling municipal airport. The Hanover Postmaster even used the airport to deliver and pick up mail. After the bombing of Pearl Harbor Dec. 7, 1941 George J.J. Clark, who owned the National Fireworks Company, bought the airport land from his son William Melvin Clark. He needed the space to store supplies for making munitions and the airport was a great space for it. At the Plymouth County Registry of Deeds a document states that George J.J. Clark as owner of the National Fireworks Company bought a good amount of land on December 30, 1941. It is not clear if the some of these lands were taken by Eminent Domain or if the Federal Government gave a large contract to The National Fireworks Company to acquire them. In any case the airport was not in use for a time. After the war was over George sold the land back to his son and the airport was once again back in a action. In 1958 William Melvin Clark sold the land to the Indian Head Land Trust, who began to develop it as a residential area. In it's day, Clark airport seemed to be very important to the area. East Coast Airways was a flight training facility for the government and civilians alike. I'm sure that some very important military individuals flew to this airport in order to oversee munitions development ate the National Fireworks Company. You could also charter flights to and from the area as did my grandfather after World War Two. There were three runways and four hangers including a repair shop.⁴

Industry

Iron works were an early industry in Hanover. One forge was located near the Luddam's

⁴ Clark Airport, http://www.andrewstella.com/clark_airport.htm, viewed August 9, 2007.

Ford site (now conservation land) and another on the Drinkwater site (also near conservation land). Anchors, oven doors, cannon, cannon balls, bells, and machinery were cast in the forges of Hanover. Amongst the items forged in Hanover was the original anchor to the “Old Ironsides,” the U.S.S. Constitution. The manufacturing of nails and tacks also flourished in Hanover.

Many of the people in North Hanover were engaged in the cottage industry of shoe manufacturing. Typically, families operated small shops on their property where shoes in various stages were passed to various neighborhood families to be completed. Later, larger factories were established. Studley’s on Main Street and Blanchard’s at Assinippi were the Town’s largest manufacturers of shoes and boots in 1860. From 1860 to 1880, the shoe business flourished, and ultimately there were approximately 10 shoe factories located in Hanover. In 1875 the value of the products manufactured within Hanover was approximately \$200,000.

In 1875 the Clapp Rubber Mill, located near the Luddam’s Ford site, began its business of grinding and cleaning ground rubber. While such an industry provided employment for many in town, it most likely also contributed towards the pollution of the river. Other industries included: The E. Phillips & Sons, The Waterman Tack Factories, The Goodrich Shoe Factory, Clark’s National Fireworks Factory and The Lot Philips Box Mill.

In 1900 the population of Hanover was 2,152 and most households in Hanover still consisted of small subsistence farms. Most households were still heated with wood cut from their property or purchased locally, but coal was also being used.

Transportation

From 1864 to 1938, the Hanover Branch Railroad, which followed the river bank, provided convenient transportation from the Four Corners area, thorough South Hanover to West Hanover and on to Rockland, Abington, and Boston. Freight service went to West Hanover until the late 1970’s to early 1980’s. Presently, the land previously used by freight trains is used as walking trails.

From 1893 to 1921, a trolley ran through North Hanover with a spur to Assinippi. The trolley provided transportation for many workers, as well as for vacationers heading to Nantasket in the summer. From 1927 to 1958, land was cleared for an airport in West Hanover (on the present site of the Indian Head Housing Development). The first paved road in Hanover went from the North River to the end of Rockland Street. In 1930, construction of Route 53 began.

Cultural

There are many historical and cultural opportunities in Hanover. The Civil War Monument, a granite obelisk, designed by J. Williams Beal in 1878 at the age of 23, is located in the Town’s Center. The Hanover Cemetery, with earliest burials from 1727,

contains a large number of early slate markers concentrated behind the church, and provides a back drop to the historic center along the north side of the district. Nearby Quincy features the homes, birthplaces and tombs of Presidents John Adams and John Quincy Adams. Plymouth Rock, a replica of the ship Mayflower and Plymouth Plantation are a half hour away via car from Hanover.

Religious organizations and events often contribute to a community's cultural fabric. The first church in Hanover was the First Congregational Church. The church was located on the present site in Hanover Center. The present church is the fourth building on the site. The Episcopal Church was located at Church Hill and later built in the Four Corners. Other denominations followed. The first Catholic Church was built in 1897, and the church's priest also served the towns of Hanson, Pembroke, Holbrook, Halifax and Plympton.

Historic Buildings

Samuel "Drummer" Stetson built the Stetson House, near Hanover Town Hall, in the early 1700's. Town Meetings and religious services were held in the house during its early years, and since 1979 the house has been listed on the National Register of Historic Places. The house is now owned by the town and is open for public tours under the direction of the Town appointed overseers. A citizens group, Friends of Stetson House Inc., and others aid in the preservation and upkeep of the property.



Photos: Briggs Stable & Hanover Cemetery, both in Historic District

The historic "Line House" in the Assinippi section of Hanover straddles the Hanover and Norwell town line. The house originally served as the Post Office and Selectmen's Office for Hanover, but since these offices were in the Norwell section of the building it was deemed to be illegal to conduct Hanover town business in another town. Renaming the area where the house was located as "neutral territory" with the name Assinippi solved the dilemma. This Indian name translates to "rushing clear water" or "rocks over water" and commemorates a nearby Indian Meeting Ground on Third Herring Brook. This same area was also the crossroads of two Indian Trails: Plymouth Path and Bay Path. A complete list of historic structures in Hanover is located in Appendix B and for additional information, in the town Historic Preservation Plan, completed in 2007.

Historic District

In late 1995, Massachusetts Historical Commission voted to nominate Hanover Center to the National Register of Historic Places (NRHP). On May 9, 1996, the district was approved by the NRHP and became a National Register District. The district is comprised of twenty properties in Hanover's Town Center. The district contains a well preserved grouping of buildings and sites, reflecting the historical and developmental core of the community. These buildings range in date from the Stetson House, circa 1716 to the Sylvester School, circa 1927. Other buildings within the district include the First Congregational Church, the founding body of the town, the parsonage of the church, circa 1855, from the Greek Revival period; the Town Hall designed by architect Luther Briggs III in 1863, and expanded in 1893 by well-known local architect J. Williams Beal; and the John Curtis Library designed by another Hanover architect, Edmund Q. Sylvester.

The Civil War Monument, a granite obelisk, designed by J. Williams Beal in 1878 is located in the center of the cluster of buildings. The Hanover Cemetery, with earliest burials from 1727, contains a large number of early slate markers concentrated behind the church, and provides a backdrop to the historic center along the north side of the district.



Photo: Civil War Monument

Listing of the Hanover Center Historic District provides recognition of the community's historic importance and assures protective review of projects that might adversely affect the character of the district. Listing in the National Register does not mean that limitations will be placed on the properties by the Federal government. In Massachusetts, properties nominated to the National Register are automatically listed in the State Register of Historical Places. State Register properties owned by municipalities and nonprofit organizations may compete for state restoration funds.

3.3 Population Characteristics

Due to Hanover's desirable location on the "South Shore" and its proximity to Boston, large numbers of up-scale professionals who work in Boston or along the Route 128 corridor have moved to Hanover. As a result, there has been a significant increase in property values. Historically, a majority of Hanover's growth actually occurred between 1950 and 1970, when Hanover's population increased almost 200%. This dramatic increase was due in part to the construction of Route 3 in 1950-1960, which resulted in convenient vehicular access to Boston, Cape Cod and other popular destinations.

Another factor was the trend towards suburbanization. Although development has slowed since the 1970's, new construction continues to result in the loss of valuable open space and recreation land.

The Town of Hanover has a population of approximately 13,164 residents as of 2000 and it is expected that by the year 2020, the number of people living in the community will remain steady at 13,194 residents more or less. Populations estimates made by the US Census Bureau projected Hanover's population to increase to 13,371 in 2001, 13,568 in 2002, 13,679 in 2003, 13,834 in 2004 and 14,101 in 2005 (a 5.5% increase between 2001 and 2005).

According to the 2006 Town Census, Hanover's population had risen to 14,148. The 2006 population count is greater than the MISER prediction that the population will increase in 2010 to 13,390 residents and fall slightly to in 2020 to 13,194 residents.

Table 3-2: Town of Hanover Population

Town of Hanover	
Year	Population
1930	2,808
1940	2,875
1950	3,389
1960	5,923
1970	10,107
1980	11,358
1990	11,912
2000	13,164
2006	14,148

Source: (<http://www.massbenchmarks.org/statedata/data/pop19302000.xls>)
Town of Hanover through Town of Hanover Housing Needs Assessment

According to US Census 2000 data, Hanover's population makes up approximately 2.7% of Plymouth County's population overall. The nearby communities of Pembroke and Rockland have larger populations than Hanover ranging from approximately 16,930-17,670 residents (*see Table: Population Change*). Hanover experienced an overall population increase of nearly 10.5% between 1990 – 2000 which is greater than other nearby towns of Hanson, Norwell, and Rockland.

Table 3-3: Population Predictions

Town Of Hanover	
Year	Population Projection
1980	11,358
1990	11,912
2000	13,164
2010	13,390
2020	13,194

Source: MISER Projections: <http://www.massbenchmarks.org/statedata/data.htm>

Based upon the 2006 Town Census the Town of Hanover has grown substantially compared to projections calculated by MISER after the 2000 census. MISER projected that Hanover’s population would increase by only 30 people in 20 years. However, from the actual data, one can see that Hanover has grown 984 residents in only six years. That is an increase by 7% over 6 years compared to the projected less than 1% increase over 20 years. Therefore, Hanover is growing at a rate much faster than originally projected in 2000.

Table 3-4 Population Change

	1930	1940	1950	1960	1970	1980	1990	2000	% Change 1990-2000
Massachusetts	4,248,326	4,316,721	4,690,514	5,148,578	5,689,377	5,737,037	6,016,425	6,349,097	5.5%
Plymouth County	162,311	168,824	189,468	248,449	333,314	405,437	435,276	472,822	8.6%
Hanover	2,808	2,875	3,389	5,923	10,107	11,358	11,912	13,164	10.5%
Hanson	2,184	2,570	3,264	4,370	7,148	8,617	9,028	9,495	5.2%
Norwell	1,519	1,871	2,515	5,207	7,796	9,182	9,279	9,765	5.2%
Pembroke	1,492	1,718	2,579	4,919	11,193	13,487	14,544	16,927	16.4%
Rockland	7,524	8,087	8,960	13,119	15,674	15,695	16,123	17,670	9.6%

Source: MISER Population change 1930-2000

Understanding Hanover’s population as a whole is important because it allows an overall look at how the town has grown and changed over time. For use in this particular plan another helpful way to look at the local population is via different age groups. The open space and recreation needs of children and young adults are not the same as those of teenagers which are not the same as adults and the elderly. Between 1990 – 2000, Hanover saw a decline in the number of people in the age range of 20 to 34 and age 60 to 74 (*see Table 3-5: Hanover Population by Age*). Significant increases in age groups occurred in Hanover residents who are age 45 to 59 and those 85 and older. While open space amenities and recreational facilities should be available to residents of all ages, there may be opportunities to investigate that would provide enhanced opportunities for specific age groups.

Table 3-5 Hanover Population by Age

Age Group	Hanover Population		% Change	Massachusetts	United States
	1990	2000		% Change	% Change
Under 5	856	1,013	18.3	3.7	4.5
Age 5 to 9	909	1,095	20.5	14.0	13.5
Age 10 to 14	899	1,174	30.6	23.9	19.9
Age 15 to 19	1007	894	-11.2	1.4	13.9
Age 20 to 24	854	481	-43.7	-21.3	-0.3
Age 25 to 34	1,598	1,337	-16.3	-15.9	-7.6
Age 35 to 44	2,163	2,457	13.6	15.7	20.1
Age 45 to 54	1,572	2,067	31.5	45.5	49.4
Age 55 to 59	530	792	49.4	22.3	27.9
Age 60 to 64	425	475	11.8	-9.6	1.8
Age 65 to 74	691	752	8.8	-7.0	1.6
Age 75 to 84	319	484	51.7	18.1	34.3
Age 85+	89	143	60.7	26.6	37.6

Source: US Census 2000, Summary File 1, US Census 1990, Summary File 1

Passive and active recreational facilities should be added, maintained and improved where appropriate with different population groups in mind. An example might be discussing adding a pocket park or improving a park that is in a neighborhood where there is known to be a number of younger children.

Density

In 2000, the Town of Hanover had a density of approximately 843.4 persons per square mile of land area. Based on 2006 Town of Hanover population data, the population per square mile is approximately 906.9 persons.

Table 3-6: Land Area and Density

Hanover Land Area: 15.6 square miles

Year	Population	Population per square mile
2000	13,164	843.4
2006	14,148	906.9

Source: (<http://www.massbenchmarks.org/statedata/data/pop19302000.xls>)
Town of Hanover through Town of Hanover Housing Needs Assessment

Family Income

According to the 2000 US Census the Town of Hanover had approximately 3,558 families. The median family income was approximately \$86,835. Family income is based on blood related or adopted children in a household. The median household income was approximately \$73,838. Household income is based on the income of non-related persons living in the same household.

Major Industries, Employers and Employment Trends

Historically, the major industries within Hanover were shipbuilding and cottage industries such as shoe manufacturing and iron works. Presently, Hanover has a small industrial district but also provides for a number of service oriented businesses. Businesses are primarily located along Route 53.

The Town of Hanover has many small businesses. Some of the larger employers within the Town include P.A. Landers (Construction since 1978), Cri-Tech (a full service custom compounder of high performance FKM compounds, specialty compounds, and additives founded in 1977), the Hanover Public School System, and the Town of Hanover.

Residents within the Town of Hanover are employed in several major sectors according to the 2000 US Census. Approximately 22% of residents are employed in educational, health and social services. Approximately 14% of residents are employed in retail trade and approximately 13% of residents are employed in finance, insurance, real estate and rental and leasing. Over 78% of the residents are private wage and salary workers while approximately 14% are government workers. Approximately 8% of residents are self employed. According to MetroBoston DataCommon, in 2000, approximately 1,240 workers traveled within the community. Approximately 6,319 workers traveled to Hanover from an outside community to work. Approximately 5,472 Hanover residents traveled to another community for work.

The Massachusetts Department of Workforce Development tracks the number of jobs within the Town of Hanover. From 1992 to 2002 the number of jobs in Hanover increased from just below 6,000 to approximately 8,000. From 2002 to 2005 the number of jobs decreased to just over 7,000.

3.4 Local and Regional Planning

When planning for a community, it is important to not only assess at the individual town, but also understand what is occurring regionally. It is important for towns to outline goals and objectives on both a local and regional level. The State of Massachusetts has several agencies that are regionally based and provide resources to local towns and cities.

3.4.1 Metropolitan Area Planning Council (MAPC)

The Town of Hanover is part of the Metropolitan Area Planning Council (MAPC). MAPC is a regional planning agency representing 101 cities and towns in the metropolitan Boston Area. In addition, Hanover is a member of the South Shore Coalition, one of eight MAPC subregions. The purpose of the Coalition is to meet monthly and discuss issues of common concern, and it could be a forum for facilitating some of the items noted throughout this plan. More information can be found at:

http://www.mapc.org/metro_area/ssc.html.

MetroPlan

In 1987, MAPC initiated the MetroPlan planning process in recognition of the mixed impacts of widespread low density development in the region. The MetroPlan document is divided into four sections: Overview of the Plan, Planning Elements, Action Recommendations and Capital Investment Program and further classified into The Urban Area, The Multi-Service Area, The Suburban/Rural Area and the Land Resources Protection Area.

Within the Land Resource Protection Area Section, there are four goals that include:

- Preserve and protect critical land resources.
- Shape the growth of the region.
- Preserve and enhance a “sense of place” for the region.
- Fulfill the recreational needs of the region’s population and to provide access, when appropriate, to protected open areas.

Hanover has been pursuing these general goals in their Open Space and Recreation Committee, Parks and Recreation Committee and Conservation Commission. As stated in the MetroPlan, some of the goals will be accomplished by “identifying and mapping protected open space and identifying and mapping areas recommended for protection in the future based on criteria that define areas of regional importance.” Hanover began mapping their open space with the Greenway project and continues to map areas of regional importance today.

MetroFuture

MAPC is in the process of completing the MetroFuture program. Products of this planning initiative will include Regional Vision, a Plan to Achieve the Vision, Public Policy Recommendations, Municipal Template and a New Set of Leadership.

This program has also allowed for the creation of MetroBoston DataCommon, an online mapping tool for MAPC communities.

3.4.2 Massachusetts Bay Transit Authority (MBTA)

Hanover is part of the 175 member collection of towns and cities within the Massachusetts Bay Transportation Authority (MBTA) Service Areas. The MBTA has no direct service in the town of Hanover, and bus service for the area is put out for contract to local bus companies. At the present time, bus service is provided by Plymouth & Brockton Street Railway Co.⁵ The bus stop is at the Hanover Mall and terminates in Braintree. However, as part of the 175 member service district, Hanover still pays an assessment to support MBTA services. The closest MBTA commuter rail locations were originally in the Towns of Hanson (6 miles from Hanover Center) and Abington (5 miles from Hanover Center). Additionally, the MBTA recently opened the Greenbush commuter rail line that runs from Greenbush in Scituate to South Station. The Greenbush

⁵ MBTA website, www.mbta.com, viewed July 18, 2007.

station is approximately 7 miles from the Assinippi neighborhood of Hanover.

Regional Open Space

Generally, natural features do not follow political boundary lines. Ponds may be located in three different towns; a cranberry bog may be located in two towns; a valuable aquifer may encompass five towns. These examples have been mentioned to stress the importance of Regional Open Space. Generally, towns are unable to manage open space for their own municipality as well as three or four others. Regional organizations tend to take on regional open space projects. Regional open space organizations in the Hanover area are outlined below.

The Wildlands Trust

The Wildlands Trust is a land trust in Southeastern Massachusetts which owns or holds conservation restrictions on more than 140 properties protecting over 4,500 acres of land in 26 communities. The Wildlands Trust and the North and South Rivers Watershed Association have partnered to protect land along the North River that flows through Hanover, Pembroke, Norwell, Marshfield and Scituate. The Wildlands Trust is also involved in protecting land within the Herring Brook Valley. This area is located at the junction of the Indian Head River, North River and the fourth Herring Brook at the Hanover/Pembroke Line.

North and South Rivers Watershed Association

The North and South Rivers Watershed Association (NSRWA) is a grassroots environmental organization located in the South Shore of Massachusetts. The mission of NSRWA is to “preserve, restore, maintain and conserve in their natural state, the waters and related natural resources within the watershed.” The NSRWA also offers activities and opportunities for paddling, boating, walking and nature walking within the Town of Hanover and surrounding communities.

Plymouth County Conservation District

The Plymouth County Conservation District (PCCD) is a non-profit organization funded through its own fundraising initiatives. Located in West Wareham, MA, PCCD provides technical assistance to private land owners and communities within Plymouth County. This assistance primarily relates to agricultural issues, especially cranberries due to their predominance in southeastern Massachusetts. PCCD serves as a liaison between private landowners and government agencies such as the US Department of Agriculture and Coastal Zone Management (CZM).

South Shore Natural Science Center

The South Shore Natural Science Center (SSNSC) is an independent, non-profit organization whose primary mission is to “provide natural science experiences that educate, excite, and commit every generation to preserve the environment and to encourage responsible use, stewardship and enjoyment of our natural resources”. The SSNSC, which was founded in 1962, is located on 30 acres of conservation, historic and

recreation land in the Town of Norwell. It utilizes its land, which it has gained through donations, to offer a variety of educational programs for both children and adults. Programs offered by the Center include Summer Day Camps; Earth Day festivities, and informative trail walks.

The SSNSC owns the following parcels in Hanover:

- Melody Woods- A 45 acre parcel divided by Pleasant Street, abutting the Colby-Phillips site. There are two trails, a climax beech forest, white cedar swamps, holly stands and vernal pools.
- Tedeschi Sanctuary- A 17 acre parcel of wetlands and upland located within the Well Protection Zone off Twin Fawn Drive.
- Hackets Pond- Several wooded acres between Country Way and Hackets Pond.

3.5 Growth and Development Patterns & Local Planning Efforts

3.5.1 Land Use

The land use within the Town of Hanover from 1971 to 1999 is detailed in the table below.

Table: Land Use Change in Acres, Hanover 1971-1999

	1971	1985	1999	Change 1971-1999	% Change 1971-1999
Agriculture	302.91	252.62	143.77	-159.14	-52.5%
Forest	5,864.83	5,452.21	4,944.47	-920.36	-15.7%
Recreation & Urban Open Space	290.71	306.91	290.58	-0.13	0.0%
Multifamily Residential	0.00	10.17	24.38	24.38	100.0%
High Density Residential	1,234.01	1,350.32	1,615.16	381.15	30.9%
Moderate Density Residential	1,244.10	1,502.80	1,897.23	653.13	52.5%
Commercial	292.99	331.68	417.55	124.56	42.5%
Industrial	96.94	98.98	112.79	15.85	16.4%
Transportation	69.83	69.83	69.83	0.00	0.0%
Open Land, Mining & Other Uses	353.25	341.42	213.51	-139.74	-39.6%
Wetlands	199.72	230.81	218.47	18.75	9.4%
Water	58.28	59.82	59.82	1.54	2.6%
Total	10,007.56	10,007.56	10,007.56		

Source: MassGIS, accessed May 2007

According to the table above, the amount of agricultural, forest and open land within the Town of Hanover has decreased from 1971 to 1999. Surprisingly, the amount of land comprised of water and wetlands has increased over the same time period.

As noted in the Land Use Change table, the area of Hanover consisting of Wetlands and Water increased between 1971 and 1990. Wetlands and Waters can increase due to increases in development and associated stormwater runoff or from mitigation/replication, if required at a greater than 1:1 ratio for impacts to wetlands. However, wetlands may also be lost to development impacts as well, without mitigation, especially historically, when wetlands regulations may not have been effective as they are today. It seems more likely that the increase in Wetlands area between 1971 and 1990 is due to a difference in definition and characterization of wetlands during these two time periods. Historically (pre-1972, when the Massachusetts Wetlands Protection Act was adopted), the edges of wetlands were often delineated as "where your boots got wet." After 1972, the definition of a wetland was refined to include an analysis of vegetation, soils, and hydrology, often resulting in more conservative (larger) wetlands. It seems less likely that a difference in the definition of Water led to the noted increase in this land use. As noted previously, an increase in Water area could be due to increased stormwater runoff; however, given the somewhat small change (2.6%), the difference could also (and perhaps more likely) be due to differences in how Water areas were measured, or measuring error.

Residential

Residential land use within the Town of Hanover consists primarily of moderate density and high density residential property. The amount land used for multifamily residential development has increased from 1971 to 1999 from 0 acres to approximately 24 acres.

Commercial

The amount of land used for commercial use within the Town of Hanover has increased by approximately 43% from 1971 to 1999. Based upon zoning, much of the commercial land use occurs along Route 53 where the zoning permits commercial uses.

Industrial

The amount of land within the Town used for industrial purposes has increased from 1971 to 1999, however, not at as sharp a rate as residential or commercial use.

3.5.2 Build-Out Analysis

Over the winter of 2000, the Commonwealth of Massachusetts issued a Build Out Map for the town of Hanover. The Map prepared for the project, titled Map 3: Composite Development Town of Hanover, depicts the areas within the Town that are absolutely constrained for development, partially constrained and future developable land.

In 2000, the developable land area within the Town of Hanover was approximately 110,649,900 square feet. The land area could accommodate approximately 2,295

additional residential lots. The build-out analysis estimated that the population could increase by approximately 6,800 residents. The water use for residential purposes would increase by approximately 509,590 gallons per day (gpd).

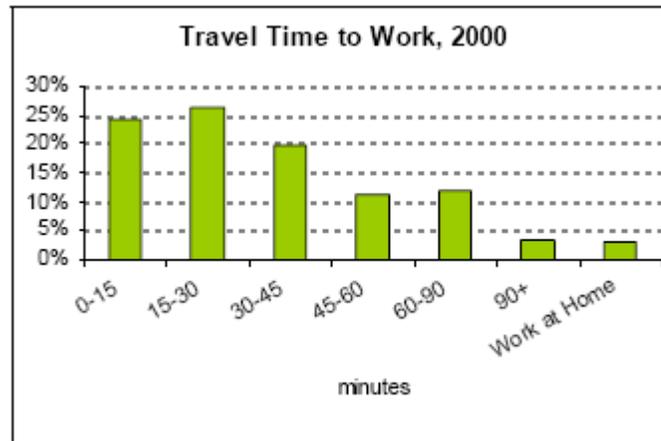
In addition to residential use development, the build-out plan provided for approximately 2,572,500 additional square feet of commercial/industrial buildable floor area. The estimated additional water use for commercial and industrial space was estimated to be approximately 192,900 gpd. The build-out analysis assumes that approximately 60% of the new residential lots will have required frontage on new roads, therefore, the analysis estimates that approximately 39 miles of new roads will be built.

If Hanover were to become fully “built-out,” ecological impacts may include contamination of wells used for drinking water, a decrease in the quality and quantity of sensitive habitat areas for plants and animals and an increase in habitat fragmentation, an increase in issues with stormwater flow and management and a decrease in air and water quality.

3.5.3 Infrastructure

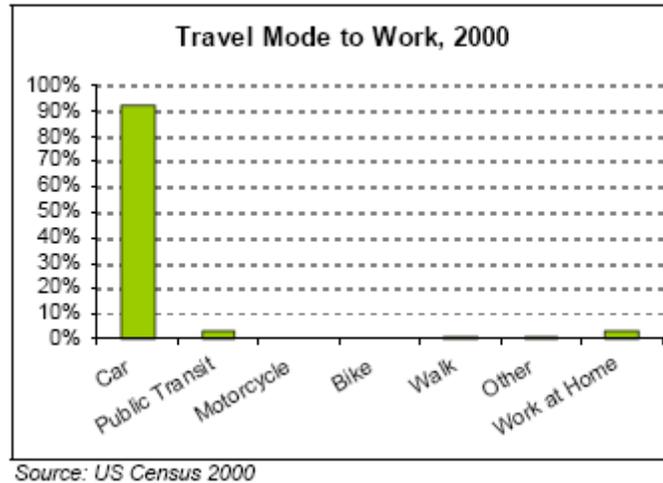
Transportation

Hanover’s traffic circulation system is dominated State Routes 3, 23, 123 and 139. The Bay Colony Railroad provides freight service to West Hanover, and the Marshfield Airport is located approximately two miles to the east. Presently, a private bussing company is contracted by the MBTA to provide bussing services to the Town. According to the 2000 US Census, the commuting time to work is as follows:



Source: US Census 2000

The following is a breakdown of the modes of transportation used for these residents to travel to work:



Water and Sewer

The Town of Hanover does not have a public sewer system, therefore, residential, commercial and industrial properties have private septic systems. Several commercial properties have private wastewater treatment plants.

According to a conversation on June 21, 2007 with Mr. Diniak, the DPW Director in the Town of Hanover, the entire town is serviced by public Water. The Town currently has four public well fields, two (2) located off Hanover Street and two (2) located off Broadway containing a total of nine wells. According to the 2006 Town of Hanover Annual Report, the Water Distribution Division is preparing to replace a stretch of water main on Broadway between the Broadway Wells and Spring Street. It is estimated that this project will take over two years⁶.

The Hanover Board of Health agent confirmed that there are six areas in the community that have a high septic system failure rate and are in need of wastewater treatment:⁷

- Brookwood/Cedarwood – due to high groundwater and highly constrained soils.
- Presidential Estates – due to high groundwater.
- Candlewood Drive/Reed Drive – due to high groundwater and clay-like soils.
- Route 53 – due to the intensity of development and volume of flows. Also, this area of commercial development is located within the Town’s Aquifer Protection District.
- Fireworks Industrial District – due to minimal lot sizes and the types of uses.
- Walnut Hill Area – due to poor soils and the shallow depth to bedrock.

Since the last OSRP was completed, Hanover has seen an increase in shared septic tanks for multi-unit housing developments, the number of Groundwater Discharge Permits has

⁶ Town of Hanover Annual Report for Fiscal Year Ending June 30, 2006, p. 153.

⁷ Jeanmarie Joyce, Board of Health to Mary C. McCrann, Beals and Thomas, Inc. via telephone, 2 November 2007.

quadrupled (due to large treatment systems for commercial properties) and the use of alternative treatment methods.

3.5.4 Other Hanover Planning Efforts

Affordable Housing Plan

According to the Massachusetts Department of Housing and Community Development (DHCD) the Town of Hanover does not have an approved Affordable Housing Plan. However, the Town is in the process of creating an Affordable Housing Plan. The Town currently has approximately 8.5% of its housing stock categorized as affordable. As part of the Affordable Housing Plan planning process, public forum was held on July 18, 2007 to discuss housing needs assessment. Specific efforts on the plan will be directed towards “smart” development, for the most part away from greenfields. Additionally, the plan may encourage some clustered housing in tandem with open space preservation when feasible⁸.

Parks and Recreation Master Plan Update

The Town of Hanover Parks and Recreation Committee is in the process of updating their Parks and Recreation Master Plan. As of May 2007, the Committee has held numerous public meetings, distributed and collected data from survey, completed assessments of each recreational property within the town and presented the current findings at Town Meeting.

The Parks and Recreation Master Plan Update identifies Hanover’s key recreation needs and preferences. Some include: walking, jogging, hiking trails, improved parking and access at all facilities, softball fields, additional little league fields and multiple tennis courts in one location to name a few.

Some of the goals of the Parks and Recreation Master Plan Update include refurbishing existing facilities, increasing the number of participants of activities, address critical needs as well as others outlined in the Plan Update. The Recreation Master Plan Update is scheduled to be completed by Winter 2008.

Historic Preservation Plan

The Town of Hanover Historical Commission has recently completed an Historical Preservation Plan (Preservation Plan)⁹. The Preservation Plan is intended as a ten-year guide of strategies endorsed by the Hanover Historical Commission to preserve and enhance the Town of Hanover’s historic and cultural resources.

The Preservation Plan outlines that not only historic buildings should be preserved, but also documents, scenic views, public areas and cemeteries. Additionally, the

⁸ Email from Karen Sunnarborg, Private Consultant for Hanover Affordable Housing Plan, dated July 18, 2007.

Preservation Plan outlines a number of ways to implement historic preservation through regulations, education and outreach.

Master Plan

The Town of Hanover and the Planning Board are in the process of updating their Master Plan. Their Master Plan was last updated in 1997 (the same year of the last OSRP update). The Planning Board has held a public forum and has been holding regular meetings to update their Master Plan.

Some of the goals of the Master Plan include preserving rural character and open space, providing alternatives to sprawl, encouraging affordable and moderately priced housing, creating street and pedestrian connections in neighborhoods, improving existing recreational facilities, preservation of historic and scenic resources and long range capital improvements programs. The Master Plan is scheduled to be completed May of 2008.

Community Preservation Act

The Community Preservation Act is statewide enabling legislation to allow cities and towns to exercise control over local planning decisions. The Community Preservation Act provides new funding sources which can be used to address three core community concerns:

- 1. Acquisition and preservation of open space*
- 2. Creation and support of affordable housing*
- 3. Acquisition and preservation of historic buildings and landscapes*

A minimum of 10% of the annual revenues of the fund must be used for each of the three core community concerns. The remaining 70% 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 happen¹⁰.

In 2005, the Town of Hanover passed the Community Preservation Act (3% surcharge) at Town Meeting. The Hanover General Bylaws, Section 4-19 provides further information about the Community Preservation Committee. Funds raised through the Community Preservation Act can be used to purchase land within the Town of Hanover for open space and conservation purposes. Currently, there are nine members of the committee who review potential projects based on criteria from the Community Preservation Act statute which include:

The Massachusetts Community Preservation Act website has an inventory of CPA projects throughout Massachusetts. The Town of Hanover does not have any projects

⁹ Hanover Historical Preservation Plan, Hanover, Massachusetts, September 2007.

¹⁰ Massachusetts Community Preservation Act website, www.communitypreservation.org, viewed July 19, 2007.

listed on the inventory. The abutting Town of Norwell has used CPA funds for the renovation of the historic Sparrell School, to build a skateboard park, to partially fund the construction of a home built by Habitat for Humanity as well as other projects.

- *Consistency with Hanover's 1997 Open Space and Recreation Plan, as well as other planning documents;*
- *Feasibility;*
- *Urgency;*
- *Affordability;*
- *Serving a currently under-served population;*
- *Serving multiple needs and populations;*
- *Consistency with recent town meeting actions;*
- *Preservation of currently owned town assets;*
- *Acquisition of threatened resources;*
- *Multiple sources of funding; and*
- *Use of local contractors where possible.¹¹*

Projects that have been completed by the Community Preservation Committee (CPC) to date include providing funds to purchase the Cervelli Property (King Street). Ongoing CPC projects include funding the compilation of town planning documents such as the Open Space and Recreation Plan, Affordable Housing Plan, Historic Preservation Plan and the Parks and Recreation Plan. Additionally, the CPC has authorized funds for the Town to purchase the Murtha Property off Center Street and is funding renovations to the John Curtis Library.

3.5.5 Regulatory Tools

The Town of Hanover faces development pressures prevalent in the region. Unguided, this added development of single family residences and strip malls will negatively affect the character and natural resources of the community, as well as the economic stability of the town. Without provisions for the protection of open spaces, conventional, grid-like residential development patterns will slowly result in the loss of significant parcels that are presently undeveloped. Therefore, it is necessary for the Town to plan now to protect its significant open space and natural resources, as well as begin planning for the economic stability of the future. Existing and proposed regulatory tools are outlined below.

The Town of Hanover has established two zoning districts that pertain to environmental protection, the Flood Plain Protection District and the Water Resource Protection District. The Water Resource Protection District includes the Well Protection Zones and the Aquifer Protection Zone.

¹¹ Ibid

The Board of Health is active in their role of protecting the quality of the Town's groundwater and surface waters, establishing the Local Rules and Regulations for the Disposal of Wastewater.

The Zoning Bylaw for the Town of Hanover establishes the following zoning districts within the Town (See Map 1, Appendix A):

- A. Residence A District
- B. Business District
- C. Commercial District
- D. Planned Shopping Center District
- E. Limited Industrial District
- F. Industrial District
- G. Fireworks District
- H. Flood Plain Protection District (Overlay District)
- I. Water Resource Protection District, which consists of the Aquifer Protection Zone and the Well Protection Zones. (Overlay Districts)
- J. Wireless Telecommunications District (Overlay District)
- K. Adult Use District (Overlay District)

The Flood Plain Protection District and the Water Resource Protection District were created to provide protection for wetlands, surface and groundwater through the control of land use in sensitive areas.

Flood Plain Protection District (§ 6-7 of the Zoning Bylaw)

The purpose of Hanover's Flood Plain Protection District (which is an overlay to underlying zoning districts) is to ensure that land subject to seasonal or periodic flooding isn't used for residential or other purposes when the use will endanger the health and safety of the occupants or the general public. In addition, the district's purpose is to assure the continuation of the natural flow pattern of water courses necessary to provide adequate and safe flood water storage capacity to protect against the hazards of flood inundation, to preserve and maintain the water table and water recharge areas, and to preserve the natural character of land within the District.

Water Resource Protection District (§ 6-8 of the Zoning Bylaw)

The purpose of the Water Resource Protection District is to protect the water supply of the Town of Hanover from harmful and hazardous pollutants and contaminants by preventing the degradation of surface and ground water supplies within the district. The district is considered an overlay to other zoning districts and it includes several well protection zones and an aquifer protection zone.

The Town of Hanover has a number of regulatory tools in place pertaining to environmental protection and water quality. The Flood Plain Protection District, Water Resource Protection District and Wetlands Bylaw (supplementary to the Massachusetts

Wetlands Protection Act) each serve a specific purpose in terms of Hanover's water and wetland resources. The Water Resource Protection District includes Well Protection Zones and the Aquifer Protection Zone. The Town General Bylaws also have Water Use Restriction Bylaw to protect, preserve and maintain the public health, safety and welfare whenever there is in force a State of Water Supply Conservation or State of Water Supply Emergency.

Wetlands Protection Bylaw (§ VI, 6-14 of the General Bylaws)

The purpose of the Town of Hanover's Wetlands Protection Bylaw (approved by the Attorney General in 1986) is to protect the wetlands, related water resources and adjoining land areas in Hanover by controlling activities deemed by the Hanover Conservation Commission that are likely to have a significant or cumulative effect on public/private water supply, groundwater, flood control, erosion and sedimentation control, storm damage prevention, water pollution control, fisheries, wildlife habitat, recreation, aesthetics and agriculture values.

The Bylaw enforces no activity (except with a permit) within a 100 foot buffer around wetland resource areas.

Water Resource Protection Bylaw (§ VI, 6-15 of the General Bylaws)

The purpose of the Water Resource Protection Bylaw (approved by the Attorney General in 1981 and amended in 2000) is to protect the public health by establishing performance standards that govern activities which may potentially affect groundwater in the Water Resource Protection District as delineated on the Town of Hanover's Zoning Map.

Changes in land use, expansion of existing facilities, changes in drainage, wastewater disposal, logging, earthmoving, application of herbicides, pesticides and fertilizers, storage and handling of hazardous materials are regulated by the Water Resource Protection Bylaw.

New construction projects in the Water Resource Protection District must obtain a certificate of compliance from the Board of Public Works prior to a building permit being issued. The certificate of compliance enforces and ensures performance standards required by the Board of Health are being met. The overall purpose of the specific performance standards is to:

- Limit nitrogen loading from sewage flow and fertilizer application to amounts which will be adequately diluted by natural recharge,
- Prevent groundwater contamination from toxic and hazardous substances, and
- Insure continued groundwater recharge, clearing, earthmoving and paving.

Water Use Restriction Bylaw (§ VI, 6-24 of the General Bylaws)

In May 2000, the Town of Hanover voted to approve a Water Use Restriction Bylaw to protect, preserve and maintain the public health, safety and welfare whenever there is in force a State of Water Supply Conservation or State of Water Supply Emergency. The

Bylaw allows the Town to enforce any imposed restrictions, requirements, provisions or conditions imposed by the Town or by the Massachusetts Department of Environmental Protection.

Regulation Updates

The Hanover Zoning Bylaw currently does not contain any provisions that allow or promote development that preserves open space. The Town of Hanover Planning Board and the Town Planner are working to establish regulatory tools within the Zoning Bylaw and Subdivision Regulations to help protect open space. Such planning efforts include creating a provision for Open Space Residential Development (cluster development). This type of development allows for dwelling units to be located on smaller lots in order to maximize resource protection on the remaining portions of the property.

Section 4.0 Environmental Inventory & Analysis



Photo by Mary McCrann, Forge Pond

4.0 ENVIRONMENTAL INVENTORY & ANALYSIS

4.1 Geology, Soils & Topography

4.1.1 Geology

Bedrock Geology

The bedrock geology of Hanover includes rocks of both igneous and sedimentary origin that have undergone low-grade metamorphic episodes. The two major rock types include a light grayish-pink to greenish-gray granite that was intruded into the existing bedrock and a sedimentary rock comprised of shale, sandstone, conglomerate and greywacke with minor beds of fossil plants. The sediments making up the second rock type were deposited after the intrusion of the granite, when the area formed part of the Narragansett Basin.

The two major rock types in Hanover have each undergone low grade metamorphism. The area associated with the granite, found in the eastern side of the town, exhibits mineral assemblages associated with a low grade metamorphic zone, formed during the Proterozoic Z metamorphism. These rocks often show greenschist, greenstone, feldspar and quartzite assemblages enveloped in granite. The rocks found mostly on the western side of town, in part of the metamorphic zone associated with sedimentary rocks, exhibit mineral assemblages typical of the Chlorite Zone. The typical chlorite-muscovite assemblages visible within these rocks were formed during a Pennsylvanian-Permian metamorphic episode 270 million years ago.

Hanover is located on the edge of the Narragansett Basin between two tectonic provinces, with several minor faults trending in a general north-south direction. The Milford-Dedham Zone, which includes the town of Hanover, has had a complex tectonic history involving granite intruded into older volcanic and plutonic rocks millions of years ago, followed by a period of erosion, and the deposition of continental sediments on top of the older granite.

Surficial Geology

The surficial deposits in Hanover which make up most of the soils and all of the deposits above the bedrock include predominantly glacial sediments. As the glaciers retreated northward at the end of the Wisconsin Ice Age, they left thick stratified drift deposits made up of well sorted sands and gravels and unstratified deposits made up of poorly sorted tills. Even more recently organic matter has accumulated in the form of swamp deposits and alluvium has been deposited by present day streams.

According to the MassGIS general Surficial Geology data layer, dated October 1999, the majority of Hanover's surficial geology consists of sand and gravel. In the north central section of town is an area of till or bedrock that extends along a large portion of eastern Hanover where it borders Norwell. Floodplain alluvium is dispersed throughout the community in smaller pockets.

4.1.2 Soils

The 1997 Open Space and Recreation Plan discussed in great detail the soil features of the Town of Hanover using the July 1968 Plymouth County General Soil Map. Since that time, the USDA Natural Resource Conservation Service has begun to update the soil survey for Plymouth County, Massachusetts. Due to the fact that the update is still in progress, the 1969 Plymouth County soil survey information has been included in this document as the official soils information. To be thorough, we have also included information from the most recent draft update that NRCS has been working on.

1969 Plymouth County Soil Survey – General Soil Map

The general soil types that can be found in Hanover include three different associations. A small area of Tidal Marsh-Dune land-Coastal beach association is located in the southeast corner of town and is part of the influence of the North River. A large finger of Hinckley-Merrimack-Muck association covers the central portion of Hanover. The third general soil type can be found in both the northwestern and eastern areas of town and is known as the Scituate-Essex-Merrimac association.

The geographic location of soil types within Town as mapped by the Soil Conservation Service in 1969 are illustrated on Map 2, Appendix A.

Table General Soil Associations and Distribution		
General Soil Associations	Approximate Acreage	Percent
Scituate-Essex-Merrimac	5,370	53
Hinckley-Merrimac-Muck	4,500	45
Tidal marsh-Dune Land-Coastal Beach	190	2
<i>TOTAL:</i>	10,060	100

Source: Acreage derived from General Soil Map of Plymouth County (1969).

The most predominant soil association in Hanover is the Scituate-Essex-Merrimac association, occupying approximately 53% of the town’s land area. Hills and ridges are interspersed among broad, low-lying plains and terraces. The slopes for the most part are gentle to moderately steep. The maximum elevation is less than 200 feet. Essex and Scituate soils occupy the uplands. They are deep, gently sloping to moderately steep coarse sandy loams underlain at a depth of 18 to 30 inches by firm but coarse glacial till. The Merrimac soils occupy the nearly level plains and terraces.

The Hinckley-Merrimac-Muck association, occupying approximately 45% of the town’s area, consists of broad, low ridges, nearly level plains and terraces, and knobby, irregular ridges. Intermingled with these are low, flat wet areas. The elevation of this association is generally between 50 and 150 feet. Hinckley soils are deep, excessively drained gravelly loamy sands on gentle to steep slopes. Merrimac soils are well-drained and

somewhat excessively drained sandy loams underlain by sand and gravel. Muck is an organic soil that occurs in low-lying areas.

In Hanover the Tidal marsh-Dune land-Coastal beach Association, which occupies approximately 2% of the town's land area, consists of tidal marshes along the North River. Tidal marshes vary greatly in composition. Some areas consist mainly of organic material and others of mineral material, chiefly silt and clay. Tidal marsh is valuable as habitat for various waterfowl, for some mammals, and for many marine organisms.¹²

Draft 2002 Plymouth County Soil Survey Update – General Soil Map¹³

According to the Draft 2002 General Soil Map Update, there have been significant updates made to the soil areas in the Town of Hanover. In 1968, there were three main soil categories. The updated map shows five categories that include: Birchwood-Poquonock-Mattapoisett, Freetown-Swansea-Scarboro, Hinckley-Windsor-Deerfield, Plymouth-Carver and Woodbridge-Paxton-Ridgebury. The categories include the soils that were identified in 1968, however they may have been identified with other soil types and in different locations according to the update.

Hinckley-Windsor-Deerfield are now considered the most dominant soil unit in the Town of Hanover. In general, the soil is very deep and can range from being nearly level to steep and it is excessively to moderately well drained. Several minor soil types are also located in this map unit such as Merrimac, Sudbury, Wareham, Pipestone, Scarboro and Berryland. Many of the areas associated with this soil type are woodland, residential or industrial in nature. In general, the soils are well suited to building or development projects.

Freetown-Swansea-Scarboro is located at seven different locations in Hanover. Three smaller areas are located along the western border of the community, one larger and one smaller area lie toward the center <http://www.harrysbluesbar.com/main.htm> town and two small areas lie along Hanover's eastern border. Very deep and very poorly drained soils formed in deep to shallow freshwater organic deposits underlain by glacial fluvial deposits in swamps and depressions characterize this soil unit. The majority of the areas with this unit designation are wooded or scrub-shrub wetlands, many of which are used for cranberry production.

Woodbridge-Paxton-Ridgebury soils are located in three separate areas of Hanover: the northeast corner of town; a smaller area along the eastern town boundary; and one other area in the very southwest corner. These soil types are formed in loamy glacial till on upland hills and ground moraines. Paxton and Woodbridge soils are well suited for

¹² Soil Survey of Plymouth County, Massachusetts. 1969. General Soils Map and description.

¹³ Soil Survey Update, Plymouth County Massachusetts, General Soil Map Town of Hanover [INTERNET] accessed June 2007, <http://www.nesoil.com/plymouth/gsm/hanover.htm>

woodland productivity and cropland, however, Ridgebury soils are not due to wetness and are considered to be a wetland hydric soil.

Plymouth-Carver soils are primarily only found along the eastern boundary of Hanover, they are excessively drained and formed in loose sandy ice contact and glacial outwash deposits. This soil type is usually forested with pitch pine, white pine and scrub oak and is often used for home building or cropland. It is poorly suited for cultivated crops and pasture because it has low water holding capacity. This soil type is also often associated with groundwater aquifer recharge areas.

Birchwood-Poquonock-Mattapoissett soils are located in two areas in the southeastern portion of Hanover. These soils types are deep and well to poorly drained. Birchwood is usually found on the footslopes of hills, Poquonock on steep side slopes and Mattapoissett on low-lying flat areas along drainage ways. These soil types are poorly suited for dwelling units with on-site septic tank absorption fields due to slow permeability.

4.1.3 Topography

Hanover forms part of the coastal lowland section of the New England physiographic province and has gently rolling to flat topography characteristic of this region. Hanover is shown on four USGS Topographic Maps: Whitman, Weymouth, Cohasset and Hanover. The elevation throughout the town ranges from 10+ feet above sea level at the headwaters of the North River to 177+ feet at the top of Walnut hill in the Northeast corner of Hanover. Other significant topographical features include several low hills found in the northeast and northwest sections of town, and low areas containing swamps, three of which are named. A former cranberry bog (Clark Bog) in the southeast and southwest sections of Hanover is also present, as well as a sand pit in the south and a gravel pit by Silver Brook.

Table Major Hills in Hanover	
Hills	Elevation
Walnut Hill	177± feet
(Water tower hill)	155± feet
Tumbledown Hill	140± feet
King Hill	140± feet

Source: USGS Topographic Maps; Whitman, Hanover, Weymouth, Cohasset Quadrangles

Drainage patterns throughout Hanover are determined by an extensive swamp and brook system which feed three major waterways: the Drinkwater River, the Indian Head River, and the Third Herring Brook. Most of the drainage from the western side of town flows into the Drinkwater River, eventually reaching the Indian Head River. Other brooks flow directly into the Indian Head River and The Third Herring Brook, both of which define

over half of the town's boundaries. These two waterways come together to form the North River at Hanover's borders with Pembroke and Norwell, and are a significant area resource.

4.2 Landscape Character

Participants at the June 19, 2007 public forum were asked why they live in Hanover and what gives the Town its own unique character. One respondent stated that he loves living in Hanover because "the whole Town Center area is just pristine and Briggs Stable is like looking at a Norman Rockwell painting." The responses varied from naming specific places and areas to general comments about the good, strong, quality of life that can be found in Hanover. Briggs Stable which is a horse farm in the Town Center area was mentioned several times for its uniqueness and visual appeal and Hanover Day which was held in June was also well received by residents who attended as evidence of the thriving civic pride in the community.

Many locations throughout the Town of Hanover provide the community with its own unique character and memorable points of interest. Numerous water resources like rivers, streams, brooks, ponds and wetland are abundant in Hanover and they provide both recreational opportunities and a home for wildlife and plant species. Hanover's roadways, seven of which are officially designated to be scenic are often tree-lined and scattered throughout town are old stone walls that either line the roadways. There are even smaller notable details in Hanover that are unique including at the intersection of Old Washington Street and Silver Street, the barely noticeable old granite marker that shows motorists how many miles away Plymouth and Boston are.

Another unique area in Hanover is the Four Corners section which is located along Route 139 which is an unofficial historic area. The buildings were constructed before zoning was instated and do not have the setbacks that are now required which gives the area a very pedestrian friendly, walkable feel to it. Four Corners was the original business center of Hanover. According to information from Barbara Barker of the Hanover Historical Commission, shipyards were located on the banks of the North River in the 1800s and became well known for the many ships launched in the Four Corners area.

The Town of Hanover, though it continues to experience growth, is a beloved community by its residents, not only for its good quality water supply, beautiful open spaces and recreational amenities and programs, but for its quality of life and civic pride.

4.3 Unique Features/Environments

A letter from the Natural Heritage and Endangered Species Program (NHESP) dated May 18, 2007 identified an uncommon Freshwater Tidal Marsh located in Hanover which is home to many species of rare plants and wildlife. The Freshwater Tidal Marsh is discussed in more detail in Section 4.6.4.

In addition to scenic resources identified in Section 3 of this plan, the 1997 OSRP identified several features/resources unique to the Town of Hanover, they include:

Rainbow Bridge: A footbridge across Third Herring Brook was used as a shortcut from the Hanover yards to Fox Hill. Named for its bowed shape, it has long since disappeared.

Hanover Yards (1668-1844): Looking downstream from the stone bridge, eleven shipyards could be seen with vessels in various stages of construction during the peak years of shipbuilding activity. From 1800 to 1808 at least 10 ships per yard were built here by a work force of 400 ship carpenters. Two plaques mark the sites.

The Crotch: At the head of the North River, formed by the confluence of the Indian Head River and Heritage Brook, this is one of only three major freshwater tidal marshes in Massachusetts.

Luddam's Ford: The North River's easternmost foot crossing on the Old Bay Path going from Plymouth to Boston was named for the guide who carried Governor Winthrop across the river in 1632 on the way to visit Governor Bradford of Plymouth.

Chapman's Landing: This was the westernmost shipping point on the North River. Iron ingots were landed at Humarock for shipment to the Hanover forges. The North River built steamship "Mattakesett" was used in this service.

Luddam's Ford Fish Ladder: Site of the early mills and Curtis Anchor Works, famous for the casting of the "Constitution" anchor. Later, the site of the Clapp Rubber Mills (1873), largest of its kind in the country. The remaining dam forces migrating fish to scale the fish ladder in their efforts to reach spawning locations upstream. Conservation land on both sides of the Indian Head River provides canoe access to the Wampanoag Indian Passage.¹⁴

4.3.1 Herring Brook Valley

The Herring Brook Valley is located where the Indian Head River and North River meet at the Hanover/Pembroke line¹⁵. The uniqueness of this area is characterized by freshwater wetlands that are influenced by the rise and fall of daily tides. In fact, the Herring Brook Valley is one of the largest examples of the globally rare tidal freshwater marsh habitat in New England. In addition to providing a home for numerous plant and wildlife species, the area also provides spectacular scenic vistas and recreational experiences through canoeing and kayaking.

¹⁴ The North and South Rivers Guide: North and South Rivers Watershed, Assoc. Inc. 1993

¹⁵ Wildlands Trust Special Focus Areas, <http://www.wildlandstrust.org/documents/focus.html#herring>, viewed August 9, 2007.

4.3.2 Areas of Critical Environmental Concern

The Town of Hanover does not contain any State recognized Areas of Critical Environmental Concern (ACECs) as regulated by the Executive Office of Environmental Affairs (EOEA). ACECs are areas in Massachusetts that are recognized for their unique natural and cultural resources and are most often nominated at the community level and then reviewed by the state. To be eligible for ACEC nomination, an area must include at least four of the eleven following features:

- *Fishery Habitat* – anadromous/catadromous fish run, fish spawning area, fish nursery area, or shellfish bed;
- *Coastal Features* – barrier beach system, beach, rocky intertidal shore, or dune;
- *Estuarine Wetlands* – embayment, estuary, salt pond, salt marsh, or beach;
- *Inland Wetlands* – freshwater wetland, marsh, tidal flat, wet meadow, swamp, or vernal pool;
- *Inland Surface Waters* – lake, pond, river, stream, creek, or oxbow;
- *Water Supply Areas* – surface water reservoir, reservoir watershed, groundwater aquifer, or aquifer recharge area;
- *Natural Hazard Areas* – floodplain, erosion area, or unstable geologic area;
- *Agricultural Areas* – land of agricultural productivity, forestry land, or aquaculture site;
- *Historical/Archaeological Resources* – buildings, site, or district of historical, archaeological, or paleontological significance;
- *Habitat Resources* – habitat for threatened or endangered plant or animal species, habitat for species of special concern, or other significant wildlife habitat; and
- *Special Use Areas* – undeveloped or natural area, public recreational area, or significant scenic site.

The Town of Hanover has two significant and unique natural communities associated with the North River and the Indian Head River which are worthy of reviewing in terms of an ACEC nomination. Due to the location of these rivers, Hanover should consult with Pembroke and Norwell about submitting a nomination form. For more information about nominating an area for ACEC designation, go to the following website:

<http://www.mass.gov/dcr/stewardship/acec/nominate.htm>.

4.3.3 Local Trails and Conservation Properties

The Hanover Open Space Committee has put together descriptions of a number of significant local trails and conservation properties in the community which include the Merry Property, Luddam's Ford Park, the Colby Phillips Property and the Plain Street Property.

Merry Property¹⁶

The Merry property is a compact eleven-acre town-owned property located off Broadway directly behind the old fire station, which was renovated by the Hanover Historical Society. Hanover benefits from having both historical and living exhibits all in one place within this property. Parking for approximately six cars is provided directly in front of the fire station and a path leads into the conservation area from the side lawn.

There is a well-trodden cart road that brings visitors to a small wetland area and from there, the trail heads upland. Stay on the path and a magnificent stone wall will catch your eye, and you wonder how anything so beautiful could have been built to last so long. Where it punctuates the cart path with what was probably a gateway for cows at one time; there is a large flat boulder; (seating for two; if you will). Inscribed on its' now smooth surface is aged, black graffiti. "I love H"? and hearts of old bear witness to the relevance of this respite for all time. Here is the perfect spring exile, nestled under the tall oaks. A good book; a picnic basket' or just a quiet moment are easy companions to this setting. Farther along you will eventually enter the Phillips Wildlife Sanctuary. Retrace your steps almost to the beginning and you have an option of turning left at a fork into a narrow trail leading to higher ground and a stand of tall pines. Your meandering will again lead to the stone wall and main pathway into the acreage. The Merry property is just the perfect open space area for a weekend mini hike.

Luddam's Ford Park¹⁷

Luddam's Ford Park has been referred to as the "gem" of Hanover. This "diamond in the rough" is located along the Pembroke border on Elm Street at the fish ladder where the Indian Head River widens into Luddam's Ford Pond. This beautiful 19.5-acre resource contains several habitats including woodlands, open fields, a stream and a pond. Luddam's Ford Park supports diverse wildlife and is currently enjoyed by fishermen, picnickers, walkers/hikers, bikers, boaters, and bird-watchers. There are several well-defined trails that skirt around the pond and follow the former railbed from Elm Street to Water Street. The pond created along the Indian Head River by the Luddam's Ford dam is stocked with coho salmon and shad and provides excellent fishing. The recently upgraded canoe launch is easily accessible for anyone wishing to experience the park from the water.

The area is important for it's historic as well as its environmental significance. Luddam's Ford was named after James Luddam, who carried Massachusetts Bay Colony's Governor Winthrop on his back as they forded the river in 1632. The pond is surrounded by open fields where a succession of mills were once located, including the Anchor

¹⁶ Town of Hanover, Open Space Committee, by Bruce Ryerson, "Merry Property," [INTERNET] accessed June 2007 <http://www.hanover-ma.gov/open-space.shtml>

¹⁷ Town of Hanover, Open Space Committee, by Doug Thomson, "Merry Property," [INTERNET] accessed June 2007 <http://www.hanover-ma.gov/open-space.shtml>

Works, which forged the anchors for the U.S.S. Constitution. The park contains approximately 2 miles of an old railbed that is bordered by historical foundations.

This property is very near and dear to the hearts of many Hanover residents and there has been a consolidated effort to improve this conservation land. Projects have included fish ladder improvements; brush removal; annual clean-ups; canoe launch improvements; parking lot improvements; and the installation of historical guide and sign posts.

Colby Phillips Property¹⁸

The Colby Phillips property is a 135 acre parcel that provides what is probably the most alluring walk on public land in Hanover. The best access lies off the dead end section of Circuit Street that extends past the fire station at the intersection of Pleasant Street, Circuit Street and Rte Route 139. Parking is available at the dead end cul-de-sac where visitors can walk a short distance up the street to the town owned access. A wide dirt road on the left passes between 959 (a shingled house with red trim) and 969 (a white house) and this road turns into a path which passes the private Darling Cemetery, with headstones dating from the early 1800s.

The Colby Phillips walk follows a beautiful, clear trail over a small brook and continues nearly three-quarters of a mile through an open forest of mixed pines, hemlocks, and beech trees. The land is mostly high and easily traversed at all but the wettest times of the year. Several small offshoot paths lead to still quieter destinations including a grove of large holly trees. For anyone wondering why we need to protect the limited open space remaining in our town, you need only experience the serenity of this walk.

Plain Street Property¹⁹

On the north side of Plain Street, behind many of the houses which lie west of Old Farm Road, there is a 60 acre conservation property ideally suited for the fitness enthusiast. The town of Hanover has owned this former fireworks property for many years. However, the multiple access points along Plain Street have no convenient parking and require walking along narrow rights-of-way across what would appear to be private yards. Consequently, this property is very much underutilized. New, town owned access to this property is now available via a number of recently acquired unbuildable house lots off Tucker Road, Aspen Drive and Bailey Road.

During World War II, most of Plain Street was closed and the National Fireworks Company built a magnesium manufacturing plant under the name of Pilgrim Ordnance. The roads visible today were built on both sides of Plain Street to connect the many small buildings. The swamp land near the property was an ideal location to contain the extreme fire hazards associated with magnesium production. Interestingly, the military also briefly

¹⁸ Town of Hanover, Open Space Committee, by Doug Thomson "Colby Phillips Property," [INTERNET] accessed June 2007 <http://www.hanover-ma.gov/open-space.shtml>

¹⁹ *Ibid.*

used the facility to house prisoners of war. Soon after the end of the war, the military closed the plant and sold all of the property.

Today, the old roads provide a clear, dry path in any season and the surrounding land has returned to a near natural state with little evidence of its past. The best route for travel is to turn right on the main loop and head down the very long straight, westward path. Trees now arch over the road, bringing welcome shade during your summer jogs. The wetlands also provide some natural air conditioning although you will want to keep moving to avoid the mosquitoes in peak season. An array of small woodland creatures will scurry through the underbrush as you arrive. At the end of your straightaway, the road is briefly disrupted by development. The path rises and goes to the right, quickly rejoining the main loop heading south.

4.4 Water Resources

Hanover has a number of water resources and a varied natural landscape that includes streams, ponds, wetlands and wildlife habitats. Hanover's eastern and southern borders are comprised of three main waterways, the North and Indian Head Rivers along the south and southeast, and the Third Herring Brook along the east. (The latter two are both tributaries, and the town border is marked by their confluence.)

4.4.1 Surface Waters

Named Ponds and swamps in Hanover include: Forge Pond, Hackett Pond, Shinglemill Pond, Peterson Pond, Mill Pond, Factory Pond (a tributary of the Indian Head River in the south of town), Pine Island Swamp, Wampum Swamp, Peg Swamp, Hell Swamp and a small portion of Beech Hill Swamp in the southwestern section of town (the majority lies in Rockland).

In addition to the previously discussed rivers that form the town's borders, another prominent river in the Town of Hanover is the Drinkwater River, which meanders through the western side of town. Numerous streams also meander across the town, including: Ben Mann Brook Shinglemill Brook, Silver Brook, Molly's Brook, Torrey Brook, Iron Mine Brook, Cushing Brook and Longwater Brook.

The major river within Hanover consists of the North River. The North River is approximately 8 miles long and it is primarily a tidal river formed by the confluence of the Indian Head River and Herring Brook. It flows through Hanover, Pembroke, Norwell, Marshfield and Scituate and much of its bordering lands and marshes have been designated by the Natural Heritage & Endangered Species Program (NHESP) as priority or estimated habitat for rare and endangered species.

The North River was the first designated Scenic River in Massachusetts by the Massachusetts Department of Environmental Management pursuant to the Scenic and Recreational Rivers Act, G.L.c.21, s. 17B and the North River Commission Act, c.367, s.62 of the Acts of 1978. Designation under the Scenic River Act means that a 300 foot

corridor is regulated by the North River Commission, which oversees development in the corridor. The North River has also been designated by the Federal Government as a natural National Landmark for its characteristics, which include a coastal estuary with freshwater tidal habitat.

4.4.2 Watersheds

Hanover is located entirely in the North and South Rivers Watershed which is a portion of the South Coastal Watershed,²⁰ which has a drainage area of approximately 241 square miles and encompasses either all or part of 19 communities. Several unique features of this particular watershed are that it is one of eleven watersheds in Massachusetts that discharge directly into the ocean and that it contains the Plymouth-Carver aquifer (located in the southern part of the watershed), which provides the majority of the drinking water for the region and has been designated as a sole source aquifer by the Environmental Protection Agency (EPA). Within the watershed there are over 350 lakes and ponds scattered throughout, numerous wetlands and Silver Lake which is 620 acres. The watershed is also significant because a diverse and large number of rare and endangered species live in the region.

Planning for the South Coastal watershed has included developing priorities such as²¹:

- *“Involve all stakeholders and develop a Silver Lake Regional Natural Resources Management Plan through the Silver Lake Stewardship Project.*
- *Increase awareness about water quality and water quantity impacts from stormwater runoff and establish strategies that engage homeowners, developers, and public officials to protect and restore water quality and quantity from those impacts.*
- *Develop a Regional Open Space and Recreation Plan involving local stakeholders.*
- *Promote Smart Growth strategies that minimize the loss of open space and biodiversity of upland, freshwater, and coastal ecosystems, and protect and/or restore ground and surface water quality and quantity from current and future land use impacts.*
- *Continue to identify opportunities to develop and/or nurture alliances for stream teams, lakes and ponds associations, and watershed associations in areas without environmental stewardship.”*

A comprehensive South Coastal Watershed plan was completed in December 2003 by a private consultant and funded by the Executive Office of Environmental Affairs (EOEA). The purpose of the project was to provide an opportunity for the watershed communities to work together to prioritize regional open space and recreational land acquisition and

²⁰ A watershed is an area of land from which precipitation drains into a wetland system or body of water.

²¹Executive Office of Environmental Affairs, “South Coastal Watershed” [INTERNET] <http://www.mass.gov/envir/water/southCoastal/southCoastal.htm>, 21 May 2007.

protection goals. Another goal set by EOEА was to work towards consistency in open space planning and municipality goals to reduce conflicts between planning efforts. Some of the higher priority discussion items that directly or indirectly affect the Town of Hanover include:

Inland Water Resources (Surface Water and Groundwater)

- Protect both existing and potential water supplies through:
 - Zoning
 - Aquifer overlay districts
 - Acquisition
- Prioritize wetland preservation and restoration (wildlife habitat)

Wildlife

- Identify and protect habitat corridors and linkages
 - Identify habitat corridor barriers and key inter-town connections
 - Identify regularly used hunting areas
- Acquire Land for habitat protection
 - Use BIOMAP for parcel prioritization/rankings

Scenic, Historic & Cultural Resources

- Identify and protect historically and culturally significant sites and trails
 - Promote cross-town self-guided historical/cultural trails and tours
- Protect/save working and historic farms

Passive Recreation

- Promote inter- and intra-town connections for existing trail systems:
- Promote public access (i.e. new access points, improved identification/public awareness) to sites for:
 - Swimming
 - Fishing
 - Boating
 - Cross country skiing, snow-shoeing
 - Birding
- Promote development of nature/self-guided trails (i.e. Quest Trails)

Active Recreation

- Promote “directed use” of motorized recreational vehicles (all terrain vehicles, dirt bikes, snowmobiles, jet-skis, etc.)
- Encourage the use of hardy species for sports fields, to reduce the need for intensive watering

In addition, several towns in the North/South River Watershed have adopted strategies that could be implemented in Hanover for protecting Open Space and for reducing

impacts to the resource areas in the town. Low Impact Development/Smart Growth and the local Greenscapes model should be encouraged by the Planning Board, and developers and homeowners should be educated on the benefits of this type of watershed-friendly development.

4.4.3 Wetlands

The streams, brooks and rivers in Hanover support extensive wetlands systems which generally follow the dominant drainage patterns and waterways in the town.

The Drinkwater River system and contributing streams flank wetlands on the western side of Hanover. The Benn Mann Brook, Shingle Mill Brook, Longwater Brook, Cushing Brook, French Stream and Drinkwater River all have major wetland areas associated with the channeled waterways. The generally flat topography with low, rolling hills, abundance of water, and favorable soils control the local hydrology, creating several large open swamps. Hell Swamp, Pine Island Swamp, Peg Swamp, and a section of Beech Hill Swamp are aligned across the center of the Town, and each of these swamps, eventually flows into the Drinkwater River System (even the Beech Hill Swamp which first drains into Rockland and back into Hanover along Frenches Stream). Wetlands in the vicinity of Shingle Mill Brook and the northern section of Drinkwater River support certified vernal pools.

Wetlands in the southeast corner of Hanover, including some historic cranberry bogs, are present along Iron Mine Brook, and another large, unnamed wetland system is present east of the Town Center. The remainder of the Indian Head River Drainage Area, the southern portion of town, has smaller wetland areas scattered along tributaries or bordering the river.

The northeast part of town has few wetlands other than those associated with Hell Swamp; however, farther south along the Third Herring Brook where the brook meets Molly/Silver Brook, the waterway opens up to form the Old Pond Meadows. Although the majority of the meadows are located in Norwell, a significant section of land in Hanover is also encompassed by this wetland system. Also, wetlands associated with tributaries to the Third Herring Brook are scattered along the eastern edge of town, which is defined by this major waterway.

Hanover does have a local wetlands bylaw (approved by the Attorney General in 1986), the purpose of which is to protect the wetlands, related water resources and adjoining land areas in Hanover by controlling activities deemed by the Hanover Conservation Commission likely to have a significant or cumulative effect on public/private water supply, groundwater, flood control, erosion and sedimentation control, storm damage prevention, water pollution control, fisheries, wildlife habitat, recreation, aesthetics and agriculture values. The Bylaw requires that any activity within wetland resource areas or the 100 foot buffer around wetland resource areas obtain a permit from the Conservation Commission.

4.4.4 Flood Hazard Areas

The most recent available Flood Insurance Rate Maps (FIRM) are from 1982 for the Town of Hanover. FIRM maps show the areas subject to flooding in town and they designate zones of flooding including information on the probable depth of maximum high water in the floodways.

Because of Hanover's extensive river and tributary system, many flood hazard areas are spread throughout the town. All of the streams and brooks which are part of the Drinkwater River system have areas of potential flood hazard. On the west side of Hanover the Shingle Mill Brook, Cushing Brook, Ben Mann Brook, and the Torrey Brook present limited flood hazard as well as larger open wetland or swamp areas. Flooding from the Longwater Brook and French Stream is more confined to areas directly adjacent to the banks of the waterways. The Drinkwater river is also fed by Pine Island Swamp, Peg Swamp, Hell Swamp and Wampum Swamp, as well as an unnamed wetlands north of Route 139 between Plain Street and Grove Street and an area behind Cedar School all of which are marked as areas of 100-year flood hazard. The last areas of flood hazard area associated with the Drinkwater River system is a section of Beach Hill swamp on the western boundary of Town.

Flood hazards associated with Third Herring Brook and the Indian Head River drainage areas are more limited than the Drinkwater river system. Molly Brook and Silver Brook drain into the Third Herring Brook with few areas of expansive flood hazard. The most notable exception is Old Pond Meadows along Third Herring Brook; however, the majority of this wetland is in the bordering town of Norwell. Iron Mine Brook, part of the Indian Head River Drainage area, has several wetland and swamp areas which present 100-year flood hazard. These wetland areas are located to the west of Route 53 between Hanover Street and Silver Street and surrounding the former cranberry bogs downstream. Other flood areas along the Indian head river are limited, aside from a few small unnamed streams which could potentially flood areas where water drains into the Indian Head River. The last area marked on the FIRM and Floodway maps, below the Curtis Crossing Dam forming the headwaters of the North River, shows a wetland area subject to flooding in the southeast corner of the Hanover.

It should also be noted that there are a few wetland areas in Hanover which do not appear on the FIRM maps. The USGS topographic quadrangles which include Hanover show a wetland area between Colonial Drive and Main Street in the center of Hanover, a small wetland area northeast of the intersection of Whiting, Cedar and Pleasant streets, and an area equidistant between Forge Pond and the town line between Rockland and Hanover. Four other small wetland areas which are not included on the Firm or Floodway maps are an area west of Bardin Street, an area northeast of the intersection of Center Street and Old Cross Street, an area south of Route 139 and west of Tindale Way, and as area north of the intersection of Grove Street and Main Street.

4.4.5 Water Supply & Aquifer Recharge Areas

A large aquifer protection zone is located within the eastern portion of the Town of Hanover and it encompasses most of the Route 53 commercial corridor. This zone is defined as the area within which the surface water and ground water directly supply the Town wells. Three wellhead protection zones surrounding three well fields with a total of seven wells are located within the aquifer protection zone.

The Town of Hanover also enforces a Water Resource Protection Bylaw (§ VI, 6-15 of the General Bylaws). The purpose of the Water Resource Protection Bylaw (approved by the Attorney General in 1981 and amended in 2000) is to protect the water supply of the Town of Hanover from harmful and hazardous pollutants and contaminants by preventing the degradation of surface and ground water supplies within the district. The district is considered an overlay to other zoning districts and it includes several well protection zones and an aquifer protection zone.

Changes in land use, expansion of existing facilities, changes in drainage, wastewater disposal, logging, earthmoving, application of herbicides, pesticides and fertilizers, storage and handling of hazardous materials are regulated by the Water Resource Protection Bylaw.

New construction projects in the Water Resource Protection District must obtain a certificate of compliance from the Board of Public Works prior to a building permit being issued. The certificate of compliance enforces and ensures that performance standards required by the Board of Health are being met. The overall purpose of the specific performance standards is to:

- Limit nitrogen loading from sewage flow and fertilizer application to amounts which will be adequately diluted by natural recharge,
 - Prevent groundwater contamination from toxic and hazardous substances, and
 - Ensure continued groundwater recharge, clearing, earthmoving and paving.
- <http://www.mass.gov/dep/water/drinking/4122000.pdf>
<http://mass.gov/dep/water/resources/tmdls.htm>

4.5 Vegetation

The value of vegetation as a natural resource is unfortunately often overlooked or taken for granted in many communities. The usefulness of vegetation extends beyond its traditional role of providing aesthetically pleasing views and variety in the landscape. Woodlands, wetlands, abandoned fields and orchards are all forms of vegetation. In addition to creating a landscape, vegetation plays a variety of roles:

- *Protects surface and groundwater bodies by stabilizing soils and preventing erosion,*
- *Acts as a visual and sound buffer between incompatible uses,*
- *Provides wildlife habitat,*
- *Provides recreational opportunities, and*
- *Improves air quality.*²²

4.5.1 General Inventory

Hanover is vegetated with a variety of plant species commonly found on well drained upland soils throughout southeastern Massachusetts. Pine and oak forests dominate the upland forests. Other species include hemlock, swamp maple, hickory, cedar, wild cherry and birch.

According to the May 18, 2007 letter from NHESP, “*of the rare species currently known from Hanover, many are associated with the very uncommon Freshwater Tidal Marsh and the Indian Head and North Rivers. The plants are pretty much habitat specialists to Freshwater Tidal Marshes.*”

4.5.2 Forest Land

The most common forest types in eastern Massachusetts is the *Central Hardwoods – Hemlock – White Pine* forest which includes oaks and hickories (these are dominant) and red maple, chestnut oak, black birch and scarlet oak are also common. Hemlock is the most common softwood and on sandy sites, white pine is dominant.²³

Hanover is fortunate to have forest land dispersed throughout the community. By looking at an aerial photograph, it can be seen that there aren't large tracts of untouched forestland, but smaller pieces that have been transected by either commercial or residential development. Data available from MA GIS shows that in 1971, Hanover had 5,864 acres of forest land which decreased to 5,452 acres in 1985 and 4,944 acres in 1999. Today, approximately 49% of the Town is forested.

According to the Natural Heritage & Endangered Species Program (NHESP), Hanover has areas of possible Primary Forest, untilled woodlots and wooded pastures which generally have greater biodiversity than areas that have been tilled. Information from NHESP states that “*the importance of Primary Forest is that such sites retain more native biodiversity than sites that have been tilled: soil fauna and flora, microorganisms and plants that reproduce wildflowers are more common in untilled forests than previously tilled lands. The areas of 1830s forest on private land would be good targets for conservation acquisition to maintain the biodiversity of the Town and the region.*”

²² Town of Hanover, 1979, Hanover Open Space Plan.

²³ Massachusetts Forestry Association, “Common Forest Types in Massachusetts,” [INTERNET] www.massforests.org, 13 July 2007.

4.5.3 Agricultural Land

Early industries in Hanover revolved around farming, small mills and shipbuilding at points along the North River. Data available from MA GIS indicates that in 1971, Hanover had approximately 303 acres of agricultural land which consists of cropland and pasture. In 1985, it decreased to 252 acres and in 1999, it decreased even further to only 143 acres (only 2% of the Town's land area), a loss of 160 acres between 1999 and 1971. Most recently, the Town voted to use Community Preservation Act funds to purchase the Cervelli Farm Property for open space and/or recreational purposes.

The Cervelli Farm property on King Street is, without exception, the largest agricultural open space remaining in the Town of Hanover. Located on the west side of King Street, it encompasses most of the southern shore of Forge Pond. Approximately half of this nearly 70 acre property is high quality open farmland. As of August 2007, the property is currently being farmed.

Agricultural land in Massachusetts is a finite natural resource that is threatened by competing land use pressure and the loss of this land has a detrimental effect upon environmental quality. Agricultural land reduces flooding, replenishes ground water supplies, enhances wildlife habitat, and maintains the landscape's aesthetic and historic quality. Every effort should be made to ensure that Hanover's agricultural land remains available for present and future generations.

4.5.4 Rare Plant Species

According to a letter written to Beals and Thomas, Inc. on May 18, 2007, the Natural Heritage & Endangered Species Program (NHESP) has identified five rare plant species in the Town of Hanover:

Water Marigold (*Bidens beckii*): One of only a few members of the aquatic sunflower family, it is a perennial plant that has opposite finely divided leaves underwater and toothed leaves above water. Its yellow daisy-like head flowers between July and September. Water marigolds are sensitive to water pollution and they are a food source for ducks. As of February 1, 2007, this vascular plant is a watch listed species in Massachusetts because it is uncommon.



Estuary Beggar-Ticks (*Bidens hyperborean* var. *colpophilia*): This is an herbaceous plant with yellow daisy-like or button-like flowers and opposite leaves. The plant is characteristic of muddy margins and exposed banks of large tidal rivers. As of 2003, the plant is considered an endangered species in Massachusetts. It is rare because it is near the southern limit of its range and fewer than five communities it inhabits are found in Massachusetts.

Hemlock Parsley (*Conioselinum chinense*): Characteristics of this plant include white flowers, hollow stems and heavily divided leaves, typically two to five feet in height. Habitat for this plant is most commonly sphagnum knolls within coniferous forested fens and hardwood forest fens and it flowers between July and September. As of 1997, this is a species of special concern in Massachusetts.

Estuary Pipewort (*Eriocaulon parkeri*): Estuary Pipewort is found within the Indian Head River freshwater tidal marsh and it is a small, delicate, erect perennial. It is grass like in appearance and grows 2-6cm in length with small whitish to yellowish flowers that appear from late July to late September. In Massachusetts, as of 1997, it is listed as an Endangered Species.

River Arrowhead (*Sagittaria subulata*): In Massachusetts, River Arrowhead has been listed as an Endangered Species since 1928.

4.5.5 Invasive Species²⁴

In Massachusetts, Invasive Species are defined as those that are exotic in origin and have the ability to out-compete native vegetation.²⁵ The major and most problematic invasive species presently within Hanover consist of glossy buckthorn (*Rhamnus frangula*), Japanese barberry (*Berberis thunbergii*), oriental bittersweet (*Celastrus orbiculata*), black swallowwort (*Cynanchum louiseae*), Japanese knotweed (*Polygonum cuspidatum*), purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), garlic mustard (*Alliaria petiolata*), and Asian milfoil.

Glossy Buckthorn

Glossy buckthorn grows in both upland and wetland areas, and forms a monoculture such that other plants cannot grow. It is a shrub or small tree that can grow up to 22 feet and have a 10 inch wide trunk. Eliminating the species through fire is a common eradication technique and it should only be done under supervision. Young plants can be easily removed by hand pulling as the root systems are shallow.

Japanese Barberry

Although technically an upland species, this thorny shrub can also grow on hummocks within wetlands. It is a dense spiny shrub with brown branches and small leaves and typically it alters soil pH, nitrogen levels and biological activity in the soil. Not planting Japanese Barberry in the first place is typically a good management technique.

²⁴ Email from Steve Ivas, Principal, Ivas Environmental to Patrick Gallivan Conservation Agent, Town of Hanover, dated June 23, 2007, and Plant Conservation Alliance, "Fact Sheets," [INTERNET] accessed 16 July 2007 <http://www.nps.gov/plants/alien/fact.htm>

²⁵ Invasive Plants in Massachusetts brochure produced by the Town of Orleans Invasive Species Committee.

Oriental Bittersweet²⁶

Oriental bittersweet tends to grow in upland areas, and is the worst vine in Hanover. It is a deciduous woody perennial plant that grows as a climbing vine and trailing shrub. It typically smothers existing vegetation that dies from shading or breakage. Usually a combination of methods to eradicate this species works the best, both chemical and manual.



Black Swallowwort

Black swallowwort is limited to upland areas and is a type of vine. It can form patches that crowd out native vegetation and it is tolerant of a range of moisture and lighting conditions. To prevent it from establishing itself, early detection and management is important. Removal of all of the plants at a site is the best practice.

Japanese Knotweed

Japanese knotweed is prevalent through Hanover. Although typically an upland species, it can grow within the outskirts of wetlands as well. This species is extremely difficult to eradicate, can grow to over 10 feet in height and forms dense thickets that often alter natural ecosystems. It spreads very quickly and is a threat to riparian areas. Grubbing and hand removal are common eradication techniques, however, the entire plant, including roots must be removed.



Purple Loosestrife²⁷

Along with common reed, purple loosestrife is the worst invasive species within wetlands. This species has purple flowers, adapts well to natural and established wetland areas and it forms dense homogenous stands that restrict and suffocate native plant species. Small infestations can usually be pulled by hand, but for larger problems, herbicides commonly are used.

Common Reed (Phragmites)

Along with purple loosestrife, common reed is the worst invasive species within wetlands. Common reed is a tall grass that flowers in July or August and spreads by sending out rhizome runners. The plant can invade native communities rapidly and change marsh hydrology and effect wildlife habitat. In areas where there is a significant population, the species is best eradicated by using herbicides.

²⁶ Photo from Plant Conservation Alliance website <http://www.nps.gov/plants/alien/fact/ceor1.htm>, accessed 17 July 2007

²⁷ Photo from Plant Conservation Alliance website <http://www.nps.gov/plants/alien/fact/lysa1.htm>, accessed 17 July 2007

Garlic Mustard²⁸

Garlic Mustard is present in uplands adjacent to wetlands and is common in the Town of Hanover. It poses a threat to native plants species because it monopolizes light, moisture, nutrients, soil and space. The seeds of garlic mustard can stay in the soil and become active for up to five years, so managing the species must be done long-term to prevent the seeds from production. Hand pulling, stem cutting and using pesticides as a last resort are all eradication techniques.



Asian Milfoil

Asian Milfoil is a submergent species that forms a nearly solid mat within Jacobs Pond. It is an aquatic plant that prevents light from penetrating the water to serve native plant species. It enjoys areas that have been affected by man-made disturbances. This plant can either be hand raked or large harvesting equipment can be used.

4.6 Fisheries & Wildlife

4.6.1 General Inventory

The Town of Hanover is home to a number of wildlife species commonly found in Eastern Massachusetts. They include:

Rabbit	Trout	Turkey Vultures
Possum	Shad	Crows
Raccoon	Herring	Blue Jay
Fox, Red and Gray	Chain Pickerel	Cardinals
Coyotes	Large Mouth Bass	Chickadee
Deer	Small Mouth Bass	Red Wing Black Birds
Squirrel, Red, Gray, Flying	Yellow Perch	Grackels
Bats	White Perch	Starlings
Chipmunk	Sunfish, Pumpkin Seed, Blue Gill	English Sparrows
Moles	Suckers	Morning Doves
Mice	Minnows and other small fish	Bob White Quail
River Otter	Gray Horned Owl	Ruffed Grouse

²⁸ Photo from Plant Conservation Alliance website <http://www.nps.gov/plants/alien/fact/alpel1.htm>, accessed 17 July 2007

Beaver	Bard Owl	Ring Neck Pheasant
Mink	Screech Owl	Canadian Geese
Muskrat	Saw Wet Owl	Mallard
Skunk	Hawk	Swans
Fisher	Egrets	Great Blue Herron
	Osprey	

Source: 1997 Hanover Open Space and Recreation Plan and 2007 Open Space Committee

Areas of the North River, downstream from Hanover, provide an important habitat for spawning and migration of Alewife, American shad White perch, Rainbow smelt, and Atlantic tomcod fish species. Atlantic salmon are listed as using this same area as a migratory area. In addition, the outer estuary area of the North River is listed as shellfish growing waters for mussels and oysters.

4.6.2 Vernal Pools

Vernal pools serve as a breeding ground and home to a number of species. According to NHESP, “*vernal pools fill with water in the autumn or winter due to rising ground water and rainfall and remain ponded through the spring and into summer. Vernal pools dry completely by the middle or end of summer each year, or at least every few years. Occasional drying prevents fish from establishing permanent populations which allows amphibian and invertebrate species who rely on breeding habitat that is free of fish predators to use them for habitat.*” As of April 13, 2007, the Town of Hanover has 21 certified vernal pools, several of which are in clusters and many more potential vernal pools. Hanover’s vernal pools are identified on Map 4 which is located in Appendix A.

The clusters of PVPs/CVPs provide extra habitat value for species that use them for breeding because each pool is different and provides alternate habitats in different years and seasons. Vernal pool clusters that are also in primary forests are important for biodiversity, an example of which occurs in the northwest portion of town. Land that is primary forest and contains vernal pool clusters would be excellent to consider for acquisition to help protect the biodiversity of Hanover.

According to the Conservation Commission, there are numerous potential vernal pools (PVP’s) in Hanover and the Commission is currently developing a plan to identify and certify all PVP’s that meet the requirements. At the present time Massachusetts State Regulations establish vernal pool habitat 100’ around vernal pools where the area lies within a wetland resource area – a much larger undisturbed buffer area (that includes adjacent uplands) is recommended. Strengthening the buffer requirements, educating the public about the importance of vernal pools and continuing to identify and certify them are all initiatives that will continue to be important.

4.6.3 Rare Animal Species

The population status of rare animals in Massachusetts is described using three categories: special concern, threatened and endangered:

- Special concern species have either experienced a decline that could threaten the species without intervention, or whose populations are so small, localized, or dependant upon specialized habitats that they could become threatened.
- Threatened species are likely to become endangered in the foreseeable future.
- Endangered species are in danger of extirpation from Massachusetts.

According to a letter written to Beals and Thomas, Inc. on May 18, 2007, the Natural Heritage & Endangered Species Program (NHESP) has identified six rare animal species in the Town of Hanover (see Appendix E):



Spotted Turtle (*Clemmys guttata*): In general, spotted turtles prefer shallow water like boggy ponds, muddy streams and tamarack swamps. They are usually no more than 4.5 inches long and have shells that are a brown/black color with yellow spots. Spotted turtles are very active in the spring and they tend to be more dormant during the summer months. As of 2003, the spotted turtle is considered to be a delisted species in Massachusetts.

Four-Toed Salamander (*Hemidactylium scutatum*):

The Four-Toed Salamander is the smallest salamander typically found in Massachusetts and can be identified by its four toes on the hind feet, a distinct constriction at the base of the tail and its belly is bright white speckled with black. They are usually between 2 and 3 inches in size and they breed in wetland areas. Threats to this species include road construction, development and timber harvesting around wetlands. As of 2007 it is listed as a species of Special Concern in Massachusetts.



Eastern Box Turtle (*Terrapene carolina*): The Eastern Box turtle is small with a dark brown or black shell and yellow, orange or reddish markings. They are most typically found in woodlands, fields or bogs. Threats include habitat destruction, road mortality and collection by individuals for pets. Protection of habitat, including ensuring that it does not become fragmented is important. As of 2006, the Eastern Box Turtle is considered to be a species of Special Concern.

Spine-Crowned Clubtail (*Gomphus abbreviatus*): The Spine-Crowned Clubtail is a type of dragonfly that are dark brown/black with bright yellow markings and green eyes and between 1 and 1.5 inches long. Typically this species lives near large streams or rivers with silty or sandy bottoms. Adults also may live near riparian areas, forested uplands and fields. Poor water quality, the disruption of natural flooding and

development of upland areas near river systems has an effect on their habitat. In Massachusetts, this has been listed as an Endangered Species since 2004.

Eastern Pondmussel (*Ligumia nasuta*): The Eastern Pondmussel is a freshwater mussel approximately 4 inches in length with a distinctive brown/black shell. Typically this mussel lives in protected areas of lakes and rivers and is threatened by habitat alteration. Pollution that abuts aquatic habitat, runoff from hazardous materials and gill damage to host fish by acid rain are significant threats to this species. It has been listed as a Species of Special Concern since 1953 in Massachusetts.

Umber Shadowdragon (*Neurocordulia obsoleta*): The Umber Shadowdragon is a dragonfly characterized by bright green eyes and metallic green highlights on the face, thorax and abdomen. Usually less than 2 inches in size, they are found on relatively unvegetated lakes and rivers and they do well in artificially created habitats like reservoirs and dammed sections of rivers. This species may be vulnerable to overuse of its habitat and shoreline development. They have been listed as a Species of Special Concern in Massachusetts since 2003.

4.6.4 Natural Communities

The Town of Hanover is home to two natural communities that the NHESP recognizes as uncommon/exemplary, an estuarine intertidal fresh/brackish tidal swamp and an estuarine intertidal freshwater tidal marsh. Southeastern Massachusetts in general is also home to Atlantic White Cedar Swamps which are priority natural communities for protection.

The MA Natural Heritage & Endangered Species Program has identified the natural areas adjacent to the North River/Indian Head River as being critically important habitat areas. In addition to its importance for wildlife and plant species, the North River is a highly valued recreational area, as well as being a Scenic River under EOEA protection. Hanover needs to protect this important river corridor and should consider the importance of habitat values when making decisions about open space parcels.

Freshwater Tidal Marsh

Freshwater tidal marshes are very uncommon and are a globally rare habitat. They most often occur along free-flowing coastal rivers and they are characterized by salt intolerant plant species. This type of marsh is home to a number of rare species and it is tracked in Massachusetts by NHESP as a high priority natural community. Plant species that depend upon this community type include Estuary Beggar-Ticks, Hemlock Parsley, Estuary Pipewort and River Arrowhead. One large and high quality example of this community type occurs on the North River, at the confluence of the Indian Head River and (4th) Herring Brook.

Extensive damage to freshwater tidal marshes has already occurred from historic land uses, such as damming and filling. With the more recent trend of breached or intentionally deconstructed dams, the potential exists for natural restoration of additional

habitat. Two current threats to this community type are hydrologic alteration from excessive water withdrawal, and invasive plant species. In order to help mitigate any further damage, monitoring invasive species, determining hydrologic requirements, developing a system for monitoring hydrologic stress and preventing alteration of tidal shores should be considered.

Fresh/Brackish Tidal Swamp

Fresh/brackish tidal swamps are located along coastal rivers at the upper limit of tidal influence. In Hanover, one large example exists near the North River. They typically occur upstream of freshwater tidal marshes and are home to several rare and endangered plant species such as Long's Bitter-Cress, Hemlock Parsley and Gypsywort. Characteristics of this type of natural community include a dense shrub understory and a rich herbaceous layer. Alteration of river hydrology from large amounts of water withdrawal is a threat to this type of community, so determining hydrologic requirements and developing a system for monitoring hydrologic stress should be considered.

Atlantic White Cedar Swamps

According to NHESP, Hanover has several areas that are at least partly Atlantic White Cedar Swamps as identified by MassGIS's aerial photograph interpreter (no full evaluations have been done). Atlantic White Cedar Swamps are forested wetland communities with a dense canopy, deciduous shrub layer and sparse herb layer dotted with moss. They are most commonly associated with open bogs and red maple swamps. Major threats to this natural community include clearing for direct residential and commercial development and interferences with natural hydrological processes due to surrounding development.

4.6.5 NHESP Program

BioMap Habitat

NHESP has created the BioMap to identify the most critical areas whose protection will protect the state's biodiversity. Although the BioMap concentrates on state-listed plants and animals and significant natural communities, it also considers more prevalent species and ecosystems. *"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."*²⁹ BioMap focuses on species of uplands and wetlands and in Hanover; there are ten locations that have been mapped by NHESP, all of which are in the south and southeastern portion of town, particularly near the Freshwater Tidal Marsh along the Indian Head River.

A list and description of each BioMap Core Habitat, with associated natural communities and wildlife, is provided in Appendix E.

²⁹ <http://www.mass.gov/dfwele/dfw/nhosp/nhbiomap.htm>

Living Waters

The NHESP Living Waters project identifies the “*most critical sites for freshwater biodiversity in the Commonwealth.*” Conservation efforts should be focused on these rivers, streams, lakes, and ponds identified as Core Habitats. Furthermore, for Living Waters Core Habitats, conservation and protection efforts should focus on lands adjacent to water bodies. Vegetated buffers (preferably a minimum of 100 meters wide) maintain cooler water temperatures as well as supplying the nutrients and natural hydrology required by freshwater species.

In Hanover, there is one Living Waters Core Habitat area, LW 331 which is Fish Habitat along the Indian Head River. The sections of the River that are identified as LW 331 contain spawning habitats for American Shad, Alewife and potentially Blueback Herring which are all anadromous fish species that migrate from coastal waters to fresh waters to spawn. All of these fish species are important to Massachusetts’ aquatic biodiversity.

4.7 Environmental Challenges

The Department of Public Works is responsible for the care and maintenance of public roadways, sidewalks, drainage systems, bridges, dams, water supply, water supply infrastructure, fleet repair, shade trees, parks, grounds, recreation fields, athletic fields, the Town’s Recycling and Trash Transfer Facility, and snow and ice control on all public roadways. In all there are 39 employees in the department that work together to offer 24 hour services to the Town of Hanover. The DPW Department is located at the water treatment plant on Pond Street. According to Victor Diniak, the Director, some of the major parks and recreational needs in Hanover include more field space for the purpose of accommodating additional programming needs, and so that the Town has the ability to give fields a needed rest period to avoid over use.

4.7.1 Chronic Flooding³⁰

The Town of Hanover drains to a river network in the western portion of town which then drains toward the North River. Due to this natural flow of water, there are two different types of flooding that typically occur. The first type is major river flooding along the Drinkwater River and Forge Pond which occurs about every twenty-five years in major storm events. The other type of flooding that occurs is more localized where drainage networks empty into smaller rivers and streams and ditches. The problem is exacerbated by the dumping of yard waste which is a major factor in causing localized neighborhood flooding.

4.7.2 Hazardous Waste Sites

The Massachusetts Department of Environmental Protection (DEP) maintains a database of sites in communities throughout the state where oil or other hazardous material has been released and reported to DEP. According to DEP’s Waste Site/Reportable Release database, as of June 2007, the Town of Hanover has 62 sites listed (see Appendix E).

³⁰ Victor Diniak, Hanover DPW Director to Mary C. McCrann, Beals and Thomas, Inc. via telephone, 21 June 2007.

4.7.3 Landfill

Hanover's seven (7) acre landfill, located on Rockland Street (Route 139) near its intersection with Route 53, was closed in 1972. In the late 1990's, the Southeast Region of DEP required the full assessment and capping of the 7-acre landfill under the Solid Waste Regulations. The closure, constructed in 1999/2000, consisted of installing a standard solid waste cap (consisting of a gas venting layer, a 40 Mil High Density Polyethylene Liner, a sand drainage layer, and a vegetative layer) over 4-acres of the former landfill, a paving cap covering 3-acres, and a passive gas collection system and surface water controls. Currently, the town is in its 25 year required monitoring period to make sure that groundwater does not migrate off-site and that any gases released on the capped landfill are being monitored and managed when necessary.

According to DPW Director Victor Diniak, solid waste disposal and recycling is now handled at the Town Transfer Station located on the easterly side of Route 53. Residents in the Town of Hanover have a 500 lb. per week limit on their trash and they must bring it along with their recycling (there is no curb-side pickup) to the Transfer Station between 8:30am – 4:00pm Friday through Tuesday. At the Transfer Station, recyclables are separated and trash is sent to a waste facility in Rochester, MA.

4.7.4 Development Impact

Finding a balance between growth and sustainability is a challenge for numerous Massachusetts communities. In Hanover, which is primarily a residential community, there is the challenge of balancing commercial growth with both residential growth and the town's capacity to service it. Encouraging commercial growth benefits the overall tax base, however, one of Hanover's major commercial areas is located in the Water Protection District/Aquifer Protection District. Managing Hanover's water supply area with future growth will continue to be a challenge.

The Town of Hanover does not have a public sewer system, therefore, residential, commercial and industrial properties have private septic systems. Several commercial properties have private wastewater treatment plants.

4.7.5 Ground and Surface Water Pollution

Every effort should be made to educate residents/homeowners on such topics as: proper disposal of lawn and yard waste; application of fertilizer, herbicides, pesticides, and insecticides; disposal of pool water; inspection and ongoing maintenance of septic systems; use of native, low impact vegetation for landscaping; the importance of limiting the amount of impervious surfaces in a community; how to care for wildlife habitat on, or near, your property; reducing the amount of sand and salt on winter roads and driveways; and the importance of leaving buffers and no-cut areas near resource areas. Additional information on preventing erosion, sedimentation, and the eutrophication of water bodies should also be provided.

It will be important to build in strong safeguards to protect the town's aquifer so that hazardous substances, excess nitrogen, and other pollutants do not impact the town's water supply.

4.7.6 Stormwater Management

With continued increases in the amount of impervious surfaces (paved roads/driveways/parking lots/roofs) and the removal of additional acreage of vegetation/trees, stormwater management is a critically important component in protecting the resources of Hanover. With less vegetation to slow the flow of stormwater, to promote infiltration to groundwater, and to filter sediments and other pollutants, there will be more impacts to rivers, streams, water supplies, wildlife habitats and wetlands. Low Impact Development techniques must be introduced and encouraged by the Planning Board, Conservation Commission, and the Board of Health - if erosion, sedimentation, and water pollution are to be controlled. Homeowners and developers also have important roles to play in addressing this issue.

The Town is not currently looking very closely at utilizing Low Impact Development techniques and could benefit greatly from a Cluster Bylaw, Stormwater Bylaw and/or Low Impact Development Bylaw to help encourage and manage runoff, stormwater and drainage patterns.

4.7.7 Fish Consumption

According to the January 2007 Massachusetts Department of Public Health Center for Environmental Health, the Drinkwater River, Indian Head River and North River (from Forge Pond Dam in Hanover to Route 3 in Norwell/Pembroke) and Factory Pond all had a P6 Fish Advisory Code due to mercury hazard. A P6 code means that the general public should not consume any fish from the water body that is so designated because of the presence of mercury.

Section 5.0
Inventory of Lands of Conservation and Recreational Interest



Photo by Mary McCrann, King Street

5.0 INVENTORY OF LANDS OF CONSERVATION AND RECREATIONAL INTEREST

The following section details specifically where open space resources and recreational amenities are located within the Town of Hanover. The type of facility and its condition was determined by the Open Space Committee. For the purposes of this project, the Town of Hanover took the initiative to update the outdated MA GIS Open Space data layer. Assumptions made in the new data layer include:

- Typically, Town owned land, managed by the Conservation Commission is considered to be permanently protected open space. Andrew Port, Town Planner spoke with Melissa Cryan at the Division of Conservation Services and they agreed that because there are no conservation restrictions on the properties managed by the Conservation Commission, it would not be appropriate to designate the parcels as permanently protected. Though they are under the care and custody of the Conservation Commission, the Town could change the designation and use of the property because there is no permanent restriction stating otherwise.
- Fields owned by the School Committee were not included as a part of the open space inventory. The property under School Committee care and custody has no protection at all and most of the land is already developed in some fashion. It is not considered to be open space by the Town of Hanover, which was also discussed between Mr. Port and Ms. Cryan.

Open space in a community is valuable for several reasons. Land is a finite resource, there is only so much, so by leaving areas in their natural state, it not only helps define community character, but it also provide habitat areas and corridors for wildlife and plants. In addition, particularly in the Town of Hanover, it helps protect drinking water supplies.

The open space and recreation inventory column headings include:

Site Name: Indicates the name of the site.

Acres: Total number of acres or a close approximation. Once acre equals 43,560 square feet.

Manager: Name of the manager of the property and the agency or department responsible for managing the property, if applicable.

Level of Protection: Notes whether the site if by virtue of zoning, or by the receipt of state or federal funding, is protected from sale and building development. Mass GIS notes the following characteristics about level of protection:

Permanent (In Perpetuity) – Legally protected in perpetuity and recorded in a property’s deed. Public land is typically in perpetuity if it is owned by the Conservation Commission (see first bullet point above), if there is a conservation restriction on the

property, if it is owned by a State conservation agency, if it is owned by a non-profit land trust or if state or federal monies were used to purchase or improve the property. Private land is in perpetuity if it has a deed restriction in perpetuity, if there is an agriculture preservation restriction, or if there is a conservation restriction on the property.

Temporary – Legally protected for less than perpetuity (short term conservation restriction) or temporarily protected through a functional use. Example: water district lands are only temporarily protected while water resource protection is their primary use.

Limited – Protected by legal mechanisms other than those listed above. Land might be protected by a requirement of a majority municipal vote for change in status or Chapter 61 land.

Unknown – Should be researched through the property deed to see if any protection level is listed.

For the purposes of the updated Hanover Open Space layer, the level of protection descriptions defined above have been used.

Public Access: Notes whether or not the site is open to public use.

Type of Facility/Condition: Details what kind of condition the site or facility is in and what the site might be used for (ballfields, beach etc).

Open Space for the purposes of the 2007 Hanover update is defined as parks, playgrounds, fields, recreational amenities, forests, land of significant size owned and managed for agricultural, conservation, open space or recreation purposes.

5.1 Types of Open Space and Recreation Land Protection

In this section of the Open Space and Recreation Plan update, areas in Hanover that are significant for their open space, natural resource or recreational amenities have been highlighted. The inventory is inclusive of private and public sites (both developed and undeveloped) and is meant to be comprehensive.

According to the Division of Conservation Services, land that is protected (or in perpetuity) is typically owned by the Conservation Commission³¹, a State conservation agency, a nonprofit land trust or if the Town was awarded state or federal money for the improvement of purchase of a specific piece of property. Some private property can also have a protected designation if it is indicated in the property deed, if the property has an Agricultural Preservation restriction or if the Department of Environmental Protection has placed a restriction on the property for wetland protection or conservation purposes.

³¹ See assumption on previous page regarding conversation between Mr. Andrew Port, Town Planner and Ms. Melissa Cryan, Division of Conservation Services.

Land owned by other agencies is often times not protected. For example, many of the parks and playgrounds or baseball fields may not be permanently protected and in danger of development in the future.

More specifically, the types of programs below illustrate different types of protection that could be available to property in Hanover. Some of the programs are already in use such as Chapter 61.

Article 97 Protection: Article 97 protects publicly owned lands used for conservation or recreation purposes. In order for a property to be sold, transferred or converted to a different use, Article 97 requires a vote of the Town in which the land use would be changed (by Conservation Commission, Parks Department, other, whichever is appropriate), a 2/3 vote at Town Meeting or City Council in support of the disposition, a 2/3 vote of the legislature in support of the disposition, they must demonstrate compliance with applicable funding sources and the municipality must file an ENF with MEPA.

Conservation Restriction: A conservation restriction is an agreement that is bound legally between a landowner and a “holder” or grantee. The landowner would agree to limit the amount and/or use of a specific property in order to protect the unique or specific conservation values that are evident on the property or important to the landowner or “holder.” A specified amount of time for the conservation restriction can be noted, or the conservation restriction can be in perpetuity. A conservation restriction is recorded at the Registry of Deeds.

Easements: An easement is typically listed on a property deed and it allows permanent access to a property for a specific purpose. It is a right of use, not a right of possession.

Chapter 61: Chapter 61 encourages preservation of agricultural, recreation and forest land in Massachusetts. Landowners can ensure the long-term protection of their property by receiving a tax benefit if they agree to the terms of Chapter 61. If an owner wants to take property out of Chapter 61 designation, the Town can recover the tax benefits given and they have the right of first refusal to purchase the property if the land is sold for residential, commercial or industrial purposes.

The following table is a listing of open space and recreational resources located in the Town of Hanover. The Open Space and Recreational resources are illustrated on Map 6, Appendix A prepared for this plan.

Town of Hanover
Open Space and Recreation Plan

Hanover, Massachusetts
125601RP001

Inventory of Areas of Conservation and Recreation Interest – Town of Hanover								
Site Name	Acres	Owner	Management	Zoning	Grant Received? Funding?	Level of Protection	Public Access	Type of Facility/Condition
Town of Hanover								
Amos Gallant Field/Curtis School	2.90	Town of Hanover/BOS	BOS, Parks and Rec	Residential		Temporary	Public	Baseball Field/Good
B. Everett Hall Field/Sylvester School	20.1	Town of Hanover/BOS	Parks & Rec, BOS	Residential		Temporary	Public	Bandstand, Football and Baseball Fields, Basketball, Tennis Courts, Playgrounds, Picnic Areas/Good
Baily Parcel	5.94	Town of Hanover/CC	Con Com	Residential		Unknown	Public	Wooded neighborhood conservation land/Good
Barstow Parcel	7.28	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Nature trails/Good
Beal/Riverside Drive Well Property	47.7	Town of Hanover/DPW	DPW	Residential		Temporary	N/A	Water Supply Protection
Birchwood Road Property	2.37	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood conservation land/Wet
Bonney Conservation Parcel	6.04	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Good
Bonney Land	1.28	Town of Hanover/ CC	Con Com	Business		Temporary	Public	Conservation Land/Good
Briggs Field	1.18	Town of Hanover/BOS	Parks & Rec, BOS	Residential		Temporary	Public	Baseball Field/Good
Broadway Well Site	98.43	Town of Hanover/DPW	DPW	Business/ Residential		Temporary	N/A	Water Supply Protection
Broadway/Indian Head Parcel	1.79	Town of Hanover/DPW	Con Com	Residential		Temporary	Public	Conservation, Old railbed/Good
Brookwood Road Parcel	0.54	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land/Wet
Buttonwood Lane Property	3.70	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land/Wet
Calvin J. Ellis Field	11.60	Town of Hanover/P&R	Parks & Rec	Residential		Temporary	Public	Baseball Fields/Good
Cedar Old Farm Connector	0.36	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Connector to ConCom Land/Good

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Site Name	Acres	Owner	Management	Zoning	Grant Received? Funding?	Level of Protection	Public Access	Type of Facility/Condition
Cedar Street Property	21.4	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation land, Vernal Pool/Wet
Clark Land	13.06	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Colby Phillips Area/Wet
Clark Land	64.71	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Cranberry Bog/Good
Colby Phillips Property	3.18	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Nature Trails/Good
Colby Phillips Property	129.9	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Nature Trails/Good
Colonial Drive Property	0.64	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Wetlands
Cross Street Site	4.33	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Adjacent to Morrill Phillips
Dillingham Old Town Way Site	5.91	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Neighborhood conservation land/Good
Dwelly Avenue Parcel	3.20	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood conservation land/Wet
East Street Property	3.99	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land, no access/Wet
Elm Street Property	0.75	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land/Wet
Emily Elizabeth White Conservation Area	5.29	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Aquifer Protection District/Good
Fairbairn Parcel	1.18	Town of Hanover/CC	Con Com	Commercial		Temporary	Public	Abutts Third Herring Brook/Good
Fireworks Property	142.18	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Nature Trails/Good
Hammer Hook Conservation Parcel	3.32	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Wooded area behind detention area/wet
Hanover Center Cemetery	33.0	Town of Hanover/DPW	DPW	Residential		Temporary	Public	Cemetery
Hanover Center Corner Property	.25	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Park area near Town Hall/Good

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Site Name	Acres	Owner	Management	Zoning	Grant Received? Funding?	Level of Protection	Public Access	Type of Facility/Condition
Hanover Spring Meadow Lot	1.58	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Wetlands
Hanover Street Well Protection	32.87	Town of Hanover/BOS	DPW	Residential		Temporary	N/A	Water Supply Protection
Hell Swamp	73.06	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Swamp, Conservation Land
Hillside Drive Lane	1.22	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Neighborhood Conservation Land/Good
Indian Head/Riverside Land	34.0	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Aquifer Protection Zone/Good
Jay's Lane Parcel	3.05	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Neighborhood Conservation Land/Good
King Street/Cervelli Property Lot 1A Lot 1B subparcel a Lot 1B subparcel b Lot 1B subparcel c	75.4 20.67 27.3 19.5 7	Town of Hanover P&R CC P&R CC	Conservation/ P & R	Residential	CPA Funding	Temporary	Public	Former farmland, nature trails
Larchmont Parcel	1.75	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land/Wet
Legion Drive Property	6.32	Hanover Housing Authority	Housing Authority	Residential		Temporary	Public	Land Designated for Affordable Housing
Luddams Ford Park	29.18	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Nature trails, fishing, canoe launch/Good
Mann Brook Swamp	9.97	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land
Mann Brook/Hobart Swamp	18.92	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Wet
Mayflower Circle Property	7.71	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land/Wet
Merry Property	56.84	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Nature Trails/Good
Morrill Allen Phillips Wildlife Sanctuary	72.44	Town of Hanover/P&R	Conservation/Parks	Residential		Temporary	Public	Nature Trails, Baseball Field/Good

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Site Name	Acres	Owner	Management	Zoning	Grant Received? Funding?	Level of Protection	Public Access	Type of Facility/Condition
Norwell Line Parcel NE	14.3	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Wet
Norwell Line Parcel NW	2.35	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Wet
Old Farm Road Property	12.42	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Pine Island Swamp/Wet
Old Ford Conservation Parcel	3.20	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Neighborhood Conservation Land/Wet
Old Washington Street Corner	0.02	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Route 53 Commercial Area/Good
Oldfield Drive Parcel	1.66	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land/Wet
Pine Island Swamp North	4.51	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Swamp, Conservation Land
Pine Island Swamp South	19.5	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Swamp, Conservation Land
Plain Street Site	4.71	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Diked Trails/Good
Plain Street Site	11.2	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Diked Trails/Good
Pleasant Street Property	1.94	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Old Dam Site/Good
Plymouth Road Parcel	3.11	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Neighborhood Conservation Land/Good
Pond Street Well Protection	38.8	Town of Hanover/DPW	DPW	Commercial		Temporary	N/A	Water Supply Protection
Ponderosa Drive Parcel	12.57	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land/Good
Rest Haven Lot-Rockland Town Line	1.93	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land/Wet
Rinear Property	23.2	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Mixed Woodlands & Wetlands
Salmond School Fields	3.11	Town of Hanover/School	School Department	Residential		Temporary	Public	Ballfield/Good

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Site Name	Acres	Owner	Management	Zoning	Grant Received? Funding?	Level of Protection	Public Access	Type of Facility/Condition
Shingle Mill Lane	0.68	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land/Good
Shinglemill Brook Swamp	9.75	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Wet
Sproul Land	5.64	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Wet
Summer Circuit Ellis Parcel	1.47	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Ballfields, Parking Lot/Good
Summer Street Site	104.9	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Nature trails/Good
Third Herring Brook & Old Pond Swamp	50.8	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land, Flood Plain, Wetlands
Third Herring Brook Parcel	4.47	Town of Hanover/CC	Con Com	Commercial		Temporary	Public	Conservation Land, Flood Plain, Wetlands
Tindale Bog & Beach Property	16.58	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Skating Area/Good
Tindale Parcel	9.95	Town of Hanover	Town of Hanover	Residential		Temporary	Public	Well Protection Area/Wet
Union Cemetery	1.91	Town of Hanover/DPW	DPW	Commercial		Temporary	Public	Cemetery
Union Street	14.9	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Hells Swamp/Wet
Walnut Street Parcel	0.65	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Brook/Wet
Washington Broadway Salmond School Parcel	3.28	Town of Hanover/School	School	Residential		Temporary	Public	School Administration Prroperty/Good
Washington Street – Cardinal Cushing Parcel	3.15	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Neighborhood Conservation Land/Partially Wet
Water Street Parcel	1.21	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Good
Water Street Parcel	3.85	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Old Dam site/Good

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Site Name	Acres	Owner	Management	Zoning	Grant Received? Funding?	Level of Protection	Public Access	Type of Facility/Condition
Webster Street Parcel	13.25	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Conservation Land/Good
Webster Street Parcel	2.77	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Wet
West Avenue Property	26.2	Town of Hanover/BOS	BOS	Residential		Temporary	Public	Conservation Land/Wet
Whiting Street Parcel	22.1	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Wet
Whiting Village Property	21.5	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Wet
Whiton Court Parcel	6.60	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Conservation Land/Wet
Willow Road Site	32.4	Town of Hanover/CC	Con Com	Residential		Temporary	Public	Nature Trails/Good
Woodland Drive Parcel	1.84	Town of Hanover/BOS	BOS	Commercial		Temporary	Public	Neighborhood Conservation Land/Good
Sub-Total	1,590							
Other								
Birchwood Road Property	.69	Bass Victor Trustee	BOS	Residential		Temporary	Public	Along Molly Brook
Briggs – Hanover Street	20.84	Private Landowner	N/A	Residential		Limited	Private	Chapter 61 Land/Good
Briggs – Main Street	37.70	Private Landowner	N/A	Residential		Limited	Private	Chapter 61 Land/Good
Cervelli – Center Street	7.95	Private Landowner	N/A	Residential		Limited	Private	Chapter 61 Land/Good
Denham – Circuit Street	14.7	Private Landowner	N/A	Residential		Limited	Private	Chapter 61 Land
Great Rock Shingle Mill Parcel	4.74	Bass Victor Trustee	N/A	Residential		Permanent	?	Private Conservation Land
Hacketts Pond	6.40	South Shore NCS	South Shore NCS	Residential		Permanent	?	Conservation Land
Holly Farms Wildlands Parcel	3.75	Wildlands Trust of SE MA	Wildlands Trust	Residential		Permanent	?	Conservation Land

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Indian Head Drive Boat Launch	1.93	Commonwealth of Massachusetts	MA Division of Fisheries and Wildlife	Residential		Temporary	Public	Recreation, Boat Launch
					Grant Received? Funding?	Level of Protection	Public Access	Type of Facility/Condition
Indian Head Drive/Plymouth County Land	3.19	Inhabitants of Plymouth County	Plymouth County	Residential		Temporary	Public	
Melody Woods	42.5	South Shore NCS	South Shore NCS	Residential		Permanent	?	?
Melzer Hatch Reservation	47.16	Wildlands Trust of SE MA	Wildlands Trust	Residential		Permanent	Public	Conservation Land/Good
Murtha Property	4.30		Community Preservation Committee	Residential		Temporary	Public	Conservation, Historic Preservation, Housing
Nick Tedeschi Sanctuary	14.11	South Shore NCS	N/A	Residential		Permanent	?	?
Norwell Cemetery Property	9.01	Town of Norwell		Residential		Temporary	Public	Cemetery
Onbashian – Broadway	7.16	Private Landowner	N/A	Residential		Limited	Private	Chapter 61 Land
Stoney Meadow Property	20.9	Wildlands Trust of SE MA	Wildlands Trust	Residential		Permanent	Public	?
Stony Meadow Conservation Restriction	7.05	Private Landowner	Private	Residential		Permanent	Private	Conservation Land
Sub-Total	254.08							
Total Acreage	1,844							

Note: The only property that has been purchased with any type of grant funding is the King Street/Cervelli Property, which was purchased with funds from the Community Preservation Act. Also, all properties listed in this table should be re-verified with the Town as characteristics of the parcel may continue to change.

Section 6.0 Community Vision



Photo by Mary McCrann, June 19, 2007 Public Forum

6.0 COMMUNITY VISION

6.1 Description of the Process

The Hanover Open Space and Recreation Plan update project commenced in April 2007 at which time Beals and Thomas, Inc. began working with town staff and the Open Space Committee. The public participation process for the project included four different components, monthly meetings with the Open Space Committee, participation at Hanover Day, two Public Forums (one held at the beginning of the process and one held towards the end) and a survey regarding open space and recreation that was distributed town wide. Public participation for this project was strongly emphasized and well received in the Town of Hanover.

June 16, 2007 - Hanover Day Event

On June 16, 2007, the Open Space Committee and Beals and Thomas, Inc. set up an informational booth regarding open space, recreation and conservation at Hanover Day, a town-wide event. The event included booths from a large number of local organizations, games, a food tent, antique cars, tours of historic properties, outdoor activities for children and bands playing in the bandstand. The booth had several maps indicating where open space in



Hanover is located, a handout regarding additional information about open space, a sign up sheet for more information or to volunteer, information about the public forum on June 19, 2007 and maps noting where open space amenities are located.

Visitors to the Open Space Committee's booth were asked the question, "what is your favorite place in Hanover" and they were asked to mark that place on a large map of the town with a sticker. Whenever possible, the name of the favorite place in addition to any other comments or concerns that participants wanted to share was recorded. Some of the favorite places included the North River, Factory Pond, Luddams Ford, Briggs Stables, Colby Phillips and the remaining cranberry bogs. In general, residents who stopped by the booth were very interested in what the Open Space Committee was doing for the town of Hanover.

June 19, 2007 - Public Forum

The Town of Hanover held a public forum facilitated by Beals and Thomas, Inc. for the Open Space and Recreation Plan update project on June 19, 2007 at the Hanover Town Hall, Hanover MA. The focus of the evening was to engage local residents in a discussion about open space and recreation resources in the community. Hal Thomas, the

Chair of the Open Space Committee started the evening by welcoming attendees and providing a brief introduction. Beals and Thomas, Inc. then made a presentation that included a discussion of why the OSRP update is important, demographic data, open space data and open ended questions to help the audience think about what aspect of open space and recreation in the community is important. During breakout groups, participants were asked to use a map that was provided and take a first time visitor on a “Tour of Hanover.” The purpose of this exercise was to get attendees to really think about what is special and meaningful in the community from their viewpoint. (A full summary of the public forum can be found in Appendix C).

November 8, 2007 – Public Forum

The second public forum for this project was held in coordination with other community preservation plans being prepared for the Town concurrently, including the Historic Preservation Plan, Affordable Housing Plan and Parks and Recreation Master Plan. The forum was well attended and is summarized in Appendix C.

Open Space and Recreation Plan Survey

In August and September 2007, the Open Space Committee conducted a survey regarding open space and recreation in the town of Hanover that was prepared and analyzed by Beals and Thomas, Inc. The survey was made available online at the Town website, and a hard copy was mailed to every household in the community. In total, 246 survey responses were received. A full summary of the survey can be found in Appendix C.

Beals and Thomas, Inc. discussed the goals and objectives of the 1997 OSRP with the Open Space Committee and at the public forum to help determine what items are no longer relevant and what items would make sense to update and include in the 2007 OSRP. Several new goals have also been added based on the public participation component of this project and working with Town staff and the Open Space Committee.

6.2 Statement of Open Space and Recreation Goals

In 1979, Hanover prepared its first Open Space and Recreation Plan under the guidance of the Conservation Commission. The plan prioritized list of parcels for acquisition, site specific improvements for existing Town-owned properties, and a recommended set of land use controls to be implemented. The Plan also presented an overall strategy for open space preservation. The 1987 update focused on resource protection and passive recreation rather than active recreation. In 1997, the plan took into consideration all of the growth pressures that Hanover and the surrounding region was facing and developed five general goals.

In 2007, several themes ran throughout all of the public participation events. Rural character, small town community feel, over development, beautiful open spaces and natural areas, wonderful residents and a strong school system were all mentioned a number of times throughout the planning process at Hanover Day, the Public Forum and in the survey results. Hanover’s rich history, beautiful natural areas, convenient location

and civic pride are all characteristics that make it a unique community. The character and small town charm that so many residents love can in part be preserved and protected by really understanding what amenities and resources exist, what is important, and how to move forward in the future.

Goals and objectives for the Hanover Open Space and Recreation Plan update were developed from evaluating a number of resources and from input at Hanover Day, the June Public Forum, the local survey and from the Hanover Open Space Committee. Beals and Thomas, Inc. also took into consideration other goals and objectives of the ongoing overall Master Plan to determine what goals other boards and committees in town were highlighting that may pertain to the more specific Open Space and Recreation Plan project. In May 2007, the goals and objectives from the 1997 Open Space and Recreation Plan were discussed in detail at the monthly Open Space Committee meeting. The goals and objectives were also discussed at the June 2007 public forum where attendees were asked whether or not there was any validity to them a decade later. For the purposes of this project, goals were formed around a general vision or concept and objectives are more concrete ideas for accomplishing the stated goals. The action items that will be included in section 9.0 are specific activities that make achieving the goals and objectives realistic.

Hanover's major challenge is to manage growth, acquire any remaining open space parcels that become available, protect the open space and sensitive natural resources and recreational amenities that exist and help the community retain its rural, small town feel that gives it character while also meeting the needs of residents.

The primary goals of the Open Space and Recreation Plan update are to:

- ❖ Identify, preserve and protect those historic, cultural, and natural resources that contribute to the character of the Town,
- ❖ Protect and enhance the quality of Hanover's surface and groundwater as a source of municipal drinking water and for wildlife and recreation use,
- ❖ Work with other nearby towns and regional planning agencies to further regional open space and recreation goals and projects,
- ❖ Provide accessible facilities to all user groups and residents and improve and increase recreational opportunities in Hanover,
- ❖ Enhance appropriate public access to and uses of existing conservation land and continue to work towards establishing a continuous greenbelt, and
- ❖ Better inform residents about where open space and recreation amenities are located, how they can be utilized and why they are important to the community.

Section 7.0 Analysis of Needs



Photo by Mary McCrann, Factory Pond

7.0 ANALYSIS OF NEEDS

7.1 Resource Protection Needs

The Town of Hanover is a community that has maintained its rural, small town charm since it was incorporated in 1727. It has always held in high regard its location to Boston and Cape Cod, and the recreational and open space amenities and sensitive natural resources that have become important to its identity. In 2000, Hanover's population was over 13,000 residents, and since that time it has continued to experience a significant amount of growth. Currently, there is an opportunity to continue acquiring additional undeveloped land parcels that would add to the protected open space which already exists in the community, as well as increase and enhance recreational programming and facilities.

The 1997 Open Space and Recreation Plan stated that *"efforts should be made to retain and enhance the Town's semi-rural, small town character by maintaining and increasing open space areas, preserving scenic landscapes and protecting wildlife habitats."* Ten years later, in 2007, the same sentiment is true. In a survey conducted for this project, local residents are proud of Hanover's small town country feel, open space, established neighborhoods, wildlife and quiet nature. Residents like the rural feel of the community, the neighborliness of those who live here, the civic pride that is evident, and the safety of being able to walk around and be comfortable. The quality of the school system was also noted as a reason for why people want to live in Hanover. When survey respondents were asked about how Hanover has changed, the overarching theme was that Hanover has been accommodating a tremendous amount of development and experiencing growth in a number of ways. For the most part, many thought that recent growth was negative. Hanover needs to continue along a path in which it can retain its rural, small town charm while managing growth.

Water Supply and Groundwater

The 1997 Open Space and Recreation Plan indicated the importance of protecting the quality of Hanover's water resources. This need is still true today. The creation of the Water Resource Protection District within the Zoning Bylaw, that includes the Well Protection Zones and the Aquifer Protection Zone will help this initiative, but it is also important that Hanover take a regional perspective to protecting the drinking water supply since groundwater does not adhere to political boundaries. First and foremost, any land available around this district should be protected as well to act as a buffer to prevent contamination. The Town should also talk to neighboring communities and discuss how they can work together on regional protection of water resources.

According to Hanover's Conservation Agent, some small steps that could be investigated to further help protect drinking water include earlier identification of issues and better enforcement when they are found on the part of the Board of Health and reviewing whether or not the Town could use something other than sand/salt on the roadways during the winter. The Town should also review the regulations pertaining to the

“grandfathering” of certain potentially harmful commercial and industrial enterprises in the Water Resource Protection District. Even though some businesses were permitted to operate in this district in the past, the continuance of some practices pose threats to the drinking water supplies. With regarding to failing septic systems, it is important to address the problem as quickly as possible in order to prevent the effluent from entering the town’s surface waters and groundwater. Currently, a failed system may not be permitted for repair, upgrade, or replacement for months.

Invasive Species

Conservation land should be monitored for invasive species, and where they are found, should be promptly be removed before they become a problem and impact native species. Better information needs to be provided to the Conservation Commission by citizens who see invasive species in Hanover so that they can be better tracked and mitigated. In addition, an educational program informing residents about what invasive species are, and why they need to be monitored would be helpful. Utilizing the Boy Scouts for such an educational campaign and preparing a brochure to all new Hanover homeowners are examples that should be considered. Massachusetts did implement a ban on the sale and importation of over 140 plants in 2006, however, existing invasive plant populations will continue to spread. Control, eradication options and education of residents and visitors is needed to help manage invasive species within the Town of Hanover. The organization of volunteer work days to remove plants has achieved successful results.

Other Needs

According to NHESP, Hanover has a tremendous amount of land in a specific BioMap Core labeled as 1079 (see Appendix E). This area is around the Freshwater Tidal Marsh along the Indian Head River. NHESP suggested that working with surrounding towns and land trusts to protect remaining open land in that area and west and north along the river system would help to protect significant areas of biodiversity and maintain ecosystem functioning in the riparian and estuarine areas. Conserving remaining unprotected land in the area, including buffers would really add to/benefit the size and continuity of open space which is important for supporting wildlife populations. In addition, Hanover should focus on preventing habitat fragmentation to help protect the ecosystem for rare species and for common species, particularly amphibians and reptiles.

Section 4.6.4 noted the various uncommon natural communities that are located within Hanover which support important biodiversity. The most effective way to protect the Freshwater Tidal plant communities and their specific species is to protect the water regime that maintains them. In particular, allowing tidal influence to continue and improving water quality. The upland areas and health of the wetlands that support these areas is also important to maintain. The land that has been identified as primary forest with associated Certified and Potential Vernal Pools are also important to protect.

According to the Hanover Conservation Agent, many residents are unaware of what activities are allowed or prohibited, near wetlands. More should be done to educate

homeowners and business owners on the regulations pertaining to wetlands and on the importance of these resource areas. Overall, there seems to be a knowledge gap regarding the importance of wetland resource areas, and an educational campaign is necessary. Enforcement and encroachment are two major problems the Conservation Commission faces regarding wetland resource areas. In addition, Hanover currently has in its Bylaw a 35 foot no structure buffer between a wetland resource area and a building, and 25 feet should be totally undisturbed. Many towns in the region have voted to change local wetland regulations in order to increase the size of protected buffers adjacent to wetland resource areas. Of critical importance is the need for adequate buffers around such habitat areas as vernal pools.

7.2 Land Resources

Hanover has approximately 1,844 acres of open space in the community. This represents approximately 18.5% of Hanover's total land area. Physically, the open space is fairly dispersed throughout the community, with the exception of the northeast corner of town near the Hanover Mall. Along the Rockland/Hanover border, there are several large clusters of open space which include Colby Phillips, the Summer Street Site and the newly acquired King Street property and almost adjacent towards the east is the Fireworks property. Another cluster is located along the Hanover/Pembroke line which includes Luddams Ford and the Hillside Drive Lane land. Other open space is scattered throughout and opportunities to add parcels of land in the future should be looked at closely whenever possible so as to create and connect large tracts of open space.

The majority of open space in Hanover is only temporarily protected, even though a lot of it is owned by the Town and managed by various boards and commissions. As noted in Section 5.0, Andrew Port, Town Planner spoke with Melissa Cryan at the Division of Conservation Services and they agreed that because there are no conservation restrictions on the majority of properties managed by the Town, it would not be appropriate to designate the parcels as permanently protected. Though they are under the care and custody of the Conservation Commission, the Town could change the designation and use of the property because there is no permanent restriction stating otherwise. Working to change the temporary level of protection on town owned open space to permanently protect it is a real opportunity for the Town of Hanover.

Competition for Open Space and Conservation Land

The Town of Hanover has experienced a tremendous amount of residential and commercial growth in recent years. Residents have observed that new development seems to be happening frequently and at a rapid pace. In addition, the town has competing needs for the open space that remains in the community for housing, park and recreation and leaving the land in its natural state.

The land that is permanently protected provides a wide range of functions, preserving environmentally and culturally sensitive resources, buffering developed areas and providing opportunities for recreation. As Hanover grows in the future, demands for

these areas will increase and overuse at the Town’s most popular areas (Luddams Ford, Colby Phillips, Sylvester Field and the Town Center area) may lead to their degradation without implementation of management strategies and regular maintenance. Town-wide development may also affect both protected and unprotected open space resources, resulting in traffic congestion, degradation of water quality, loss and/or fragmentation of critical habitat areas, loss of community character and increased demand for municipal services.

Land Acquisition Needs

At Hanover Day, the Public Forums and as noted in the Survey that was conducted for this project, residents of Hanover repeatedly stated that they thought that there was too much development, both commercial and residential occurring in the community. They did not want to lose Hanover’s rural, small town character. Approximately 95% of respondents thought there was a need to preserve and protect open space and natural areas in Hanover.

As part of the 2007 Open Space and Recreation Plan update, the Open Space Committee was interested in ensuring that they had a system for targeting and prioritizing land for future property acquisition. In lieu of identifying specific parcels, the Open Space Committee decided to adopt criteria that they would consider when land became available. The criteria were turned into a worksheet that will be filled out with each new property that they review. The information in the worksheet is listed below.

Hanover Open Space Committee – Land Acquisition Worksheet

Parcel Name: _____ Assessed Value: _____
 Map and Parcel: _____ Acreage: _____
 Location: _____ Tax Title: _____

Criteria	High (10-8 Points)	Medium (7-3 points)	Low (2-0 points)	Score
Water Supply	Within 1,000 feet of public well or well site	In watershed protection zone	Within recharge zone	
Flood Plain	Velocity Zone	Zone A	Zone X	
Agricultural	Operating Farm	Chapter Lands, 61, 61A, 61B	Other	
Linkage	Current linkage to waterfront, conservation or protected land	Potential linkage to waterfront or conservation land	Other	
Recreation	Strong need land appropriate	Suitable if modified	Not suitable	
Urban Green Space	Open land in densely settled area, suitable for pocket park	Not densely settled area, suitable for pocket park	Not likely	
Water Access Point	Yes	No	No	

Wildlife Habitat	Endangered or Rare Species	Part of wildlife corridor or vernal pools	Other	
Wetlands	Yes, upland buffer greater than 50 feet	Yes, buffer less than 50 feet	No	
Development Potential	High	Medium	Low	
Scenic Value	High	Medium	Low	
Local Preference	High	Medium	Low	
Buildings Present	None	One Building	Multiple Buildings	
Unique, Townwide, Historic or Public Value	High	Medium	Low	

Additional criteria or property characteristics that the committee should consider when looking at property in the future include:

- If the property is in or adjacent to an Area of Critical Environmental Concern (ACEC) (*currently Hanover does not have any ACECs, but there is the potential to designate an area in the future*),
- In addition to the wildlife habitat criteria, if the property is in a specifically identified NHESP priority or estimated habitat area,
- Additional wetland criteria should be if the property contains wetlands or lands subject to the wetlands protection act or rivers protection act,
- If the property contains a vernal pool (land that is primary forest and contains vernal pool clusters would be excellent to consider for acquisition to help protect the biodiversity of Hanover),
- If the property provides a buffer to minimize the disruption of ecological processes on it or abutting lands,
- If the property will provide accessibility with ADA standards,
- If the property already contains trails or linkages or would serve the purpose,
- If the property will be available for public use for active or passive outdoor recreation,
- If the property contains significant archaeological or historic resources based upon the State or National Register of Historic Places or the Massachusetts Historical Commission’s inventory,
- If the property maintains a sense of agricultural tradition or rural character,
- If the property provides a sense of openness or scenic view, if it is isolated from roads/structures and serves as a buffer to other land uses or if the property would enhance the scenic aspect of an existing open space parcel.

In pursuing other land acquisition possibilities, vacant land adjacent to sensitive natural resources, land that would create a larger tract of open space and land that is near key water supply areas should strongly be considered for protection.

7.3 Recreation and Community Needs

Enhancing, maintaining and preserving the open space and recreation amenities that currently exist in the Town of Hanover is an important goal of this OSRP update. Hanover is a community that is fortunate to have a number of amenities available for residents.

The Parks and Recreation Committee and their Master Plan (*discussed in more detail below*) should be utilized and consulted regarding the future of fields and property under their care and custody. In addition, the Master Plan should be seen and used as a document that parallels this OSRP. The OSRP community wide survey that was conducted for this project suggested a balance of passive and active recreation be funded and created in the Town of Hanover. The Community Preservation Committee and Town Meeting are responsible for determining how much money is allocated for parks and fields for active use, versus use of Community Preservation Act funds for new open space acquisition and preservation. It is strongly recommended that the Open Space Committee and the Parks and Recreation Committee work together to implement both plans and communicate effectively regarding projects.

Parks and Recreation Master Plan³²

In addition to the Open Space and Recreation Plan update, the Town of Hanover Parks and Recreation Committee prepared a more specific Parks and Recreation Master Plan in 2007 with assistance from Weston & Sampson (the full Parks and Recreation Master Plan has been included in **Appendix E** of this plan). The purpose of the project was to assess current Parks and Recreation Committee properties and other Town properties that provide recreational resources (more specifically, “active” recreational resources) to Hanover residents. In addition, the plan provides a guide for the future development of park and recreation properties and specific details about what can and needs to be achieved. Public participation for this project was conducted through public forums and a town-wide survey.

Key points from the Parks and Recreation Master Plan project include:

- Lacrosse is the fastest growing sport in Hanover, but there are no dedicated fields
- Softball is “under-fielded,”
- There is not sufficient field space to accommodate the programming that Parks and Recreation would like to offer and there is no building or space identified for a much needed community center,
- Passive recreation opportunities were the most sought after activity. Further opportunities should be provided or more information about what exists should be made available, and
- Parking, safety and access concerns at Ellis Field, Myrtle and B. Everett Hall.

Two identified goals from the Parks and Recreation Master Plan project are:

³² Town of Hanover Parks & Recreation Master Plan, 2007 – Weston & Sampson

- Each property (managed by the Parks and Recreation Committee) should be enhanced for both active and passive recreational opportunities, and
- New facilities that meet the continuing needs of a growing town and various recreational programs/community leagues should be provided.

Listed in the Parks and Recreation Master Plan are Parks and Recreation Committee properties and School Department properties. The Parks and Recreation Master Plan focused primarily on and intensely studied the six properties that fall under the jurisdiction of the Parks and Recreation Committee. Together, these studies begin to provide a picture of recreational opportunities available in Hanover.

Parks and Recreation Committee Properties

Property Name	Address	Acres	Description
Briggs Field	Hanover/Center Streets	1.17	Small-scale facility located within the historic district near town center with a single field for Tball and softball use.
Sylvester Field (B. Everett Hall Field)	495 Hanover Street	20.33	Town’s premier recreation facility, also located within the historic district near town center, with extensive fields, courts (tennis, basketball and street hockey), children’s playground, beach volleyball, bandstand and other related amenities.
Calvin J. Ellis Field	750 Circuit Street	12.50	Major baseball field complex with facilities for most levels of competition.
Myrtle/Center Playground	215 Myrtle Street	75.00	The Town’s largest park facility in total area with basketball courts, a large and open multi-use field complex used for baseball, softball and soccer. Trails meander through large undeveloped woodland and wetland sections of the property.
Amos Gallant Field	848 Main Street	2.74	Small-scale facility used for baseball and softball. Located behind the unused Curtis School on Main Street.
King Street Property	245 King Street	66.66	Recent acquisition, open fields that have been historically farmed. Recreation uses to be determined. This property falls under the jurisdiction of both the Parks & Recreation Committee and the Open Space Committee. The portion of the site under P&R Committee jurisdiction corresponds generally to the area that has been historically farmed near King Street.

School Department Properties

Property Name	Address	Acres	Description
Sylvester School	495 Hanover Street	20.33	Fields used for softball, soccer and playground
Center School	65 Silver Street	12.91	Baseball field, multi-purpose field and playground
Salmond School	188 Broadway	6.66	Softball field and playground
Hanover High School	287 Cedar Street	23.41	Track, football, baseball, multi-purpose field and tennis courts
Hanover Middle School	45 Whiting Street	29.62	Multi-purpose field, playground
Cedar School	265 Cedar Street	48.80	Multi-purpose field, playground

Needs Identified in Parks and Recreation Master Plan³³

As a part of the Parks and Recreation Master Plan, a townwide survey was conducted. The survey indicated that the top three facilities that respondents wanted to have more of in the Town of Hanover were: woodland/nature trails, walking and jogging areas and biking and picnic amenities. In addition, half of the respondents felt that the conditions were only fair/poor at Myrtle Field and a third felt that conditions are fair/poor at B. Everett Hall and Ellis Fields. Over 70% of the residents who took the survey felt that recreation is very important to their families.

HANOVER'S RECREATION NEEDS AND PREFERENCES
Walking, jogging, biking trails Improved parking and access at all facilities Children's playgrounds Skateboard Park Restrooms Softball fields Multi-use rectangular athletic fields – football, lacrosse, field hockey Four basketball courts in one location Additional Little League baseball fields One additional or relocated full size (90 foot diamond) baseball field Regulation street/roller hockey rink Potential ice hockey rink Multiple tennis courts in one location

Three of the expressed needs above warranted a separate discussion due to the potential complexity of achieving their implementation; they were the ice rink, skateboard park

³³ There was a disparity in information obtained in the town-wide Recreation User Survey and at the public meeting regarding needs. The survey showed needs to be more/better walking, jogging, biking, playgrounds and restroom facilities, while at the public forum, the need for additional fields was quickly identified as a pressing need.

and park support buildings. Full discussions are located in the Park and Recreation Master Plan; however, several main points are included below.

- **Ice Rink** – the Parks and Recreation Master Plan notes that an ice rink should be privately funded and located on Route 53. In addition, the need for one was been identified within the User Survey and at public meetings.
- **Skateboard Park** - 210 middle school students signed a petition urging that a skateboard park be constructed in Hanover. The Parks and Recreation Committee did discuss location for a skateboard park, and determined that it would need to be monitored 24 hours a day and a good location for one would be Gallant if a new fire station is built there or across from the Police Station. Both locations would allow for 24 hour supervision.
- **Park Support Buildings** - a park support building would provide space for restrooms and storage and might contain a concession facility to support various leagues and programs.

Local Recreational Programming

Participation in local sports and local recreational programming is excellent in the Town of Hanover. In addition to the Parks and Recreation Department, Hanover also has a Youth Athletic Association that provides a number of recreational programs in the community. The Parks and Recreation Department is responsible for programming for the Town and there is coordination with the DPW regarding maintenance of recreational amenities like fields and playgrounds. The Hanover Youth Athletic Association (a 100% volunteer organization) has been in existence for over 50 years and up until recently, was the primary recreation program provider. Currently the HYAA, Parks and Recreation Department and DPW work closely together on all organized recreational activities.

Listed below is a general summary (not all inclusive) of the types of recreational amenities available to residents of Hanover and the locations where these activities take place.

Baseball/Softball Fields: Amos Gallant Field, B. Everett Hall Field, Briggs Field, Calvin J. Ellis Field, Center School Fields, Hanover High School, Hanover Middle School, Myrtle/Center Fields, Salmond School Fields, Sylvester School Fields

Soccer/Football Fields: B. Everett Hall Field, Hanover High School, Hanover Middle School

Basketball Courts: B. Everett Hall Field, Hanover High School, Hanover Middle School, Myrtle/Center Fields

Tennis Courts: B. Everett Hall Field, Hanover High School

Playgrounds:	B. Everett Hall Field, Cedar School Field, Center School Fields, Sylvester School Fields
Trails:	Colby Phillips, Fireworks Property, Indian Head/Riverside Land, Luddams Ford, Plain Street Property, Willow Road Site, High School Cross Country Trail, Frenches Stream, King Street Property, Merry Property, Center School Trail
Passive Recreation:	Luddams Ford, Forge Pond, Colby Phillips, Bonney Conservation Land, Clark Land, Fireworks Property, Merry Property, Melody Woods
Running Track:	Hanover High School
Fishing:	Luddams Ford

Programming in Hanover includes but is not limited to:

- Bandstand Summer Concert Series, Archery, Basketball, Fencing, Babysitting Classes, Fitness Conditioning Program, Kitchen Kids, Piano Lessons, Stroller Strides, Tennis, Wrestling, Youth Hockey, Youth Lacrosse, Baseball, Spring/Fall Soccer, Softball, Cheerleading, Football, Paintball Trip, Skiing Trips, Mohawk Trail Trip, Circus Trip, New York City Day Trip, High School Musical Trip, Summer Park and Recreation Program, Learn to Ski, Teen Extreme

For more information, the following websites are available:

www.hanover-ma.gov
<http://www.hanover-ma.gov/bandstand.shtml>
<http://www.hanover-youthathletics.com/>

National Park Land Standards³⁴

According to the National Park Land Standards, below is a guideline for what types of amenities a typical community should have in terms of recreation based on their population size. For comparison purposes, the standards are listed below so that Hanover can further consider what types of facilities it may need in the future.

<u>Facility</u>	<u>Area Needed</u>	<u>Units per Population</u>	<u>Service Area</u>
Basketball Court	7,280 sq. ft.	1 per 5,000	1/4-1/2 mile

³⁴ NRPA Standards, School of Park and Recreation Management, [INTERNET]
http://www.ci.big-spring.tx.us/Recreation/park_standards.html, March 2007.

Tennis Court	1 court	1 per 2,000	1/4-1/2 mile
Volleyball	4,000 sq. ft.	1 per 5,000	1/4-1/2 mile
Baseball	1.2 acres minimum	1 per 5,000	1/4-1/2 mile
Football	1.5 acres	1 per 20,000	20 min travel
Soccer	1.7-2.1 acres	1 per 10,000	popularity level
Softball	1.5-2 acres	1 per 5,000	1/4-1/2 mile
Multi-use Court	9,840 sq ft	1 per 10,000	1/4-1/2 mile
Swimming Pool	2 acres minimum	1 per 20,000	30 min travel
Trails	1 trail system per region		

Hanover Council on Aging

The Hanover Council on Aging was formed in 1966 and is currently located in the Senior Center building on Circuit Street. The Senior Center serves as a meeting place for seniors to enjoy, as well as a community resource for services, information and referrals for the older adult population and their families. The Senior Center office has a five person paid staff: Elderly Services Director, full-time position; Outreach Coordinator, full-time position; one full time position shared among four drivers; and a Custodian, 24 hours a week. The Senior Center has a Meal Site Manager who is paid through Old Colony Elderly Services (OCES) and a Volunteer/Transportation Coordinator who is partially paid through a grant from the Executive Office of Elder Affairs. In addition, there is a Council on Aging Advisory Board and a Friends of the Council on Aging Group.

According to the Council on Aging’s webpage, *“the mission of the Hanover Council on Aging, interchangeably known as the Senior Center, is to provide services, programs and activities to maintain and increase independence and quality of life for residents sixty years of age and older. The Council identifies and assesses the needs of elders, and offers services to meet the challenges of aging. There are 2,375 residents of Hanover who are 60 years of age and older as of Fiscal Year 2005.”*

Programs and services offered by the Council on Aging include (but are not limited to):

- Congregate Lunch Program (consisting of luncheons and Meals and Wheels)
- Fuel Assistance Program
- Food Stamp Program
- Prescription Advantage Program
- Tax Assistance
- Legal and Accounting Assistance
- Blood Pressure Check
- Foot Clinic
- Massage
- A Council on Aging Van to help Seniors get to appointments
- Yoga
- Cribbage
- Movies

- Walking Club
- Line Dancing
- Bingo
- Book Club

According to the Council on Aging 2005 Annual Report, “*the Senior Center at 624 Circuit Street is housed in the former King Street School, which over the years has been remodeled and improved. The lot is approximately three fourths of an acre, the building is approximately 2,000 square feet, and there is parking for about 27 cars plus 4 handicaps. The estimated senior population, over 60 years of age, is 2,376 or 16% of the population. On average, approximately 500 people use the Center from time to time or approximately 22% of the seniors. Estimates are that by the year 2020, 27% will be over 60. In towns with a new facility, the percentage of use has greatly increased.*

The current space available restricts the extent of the programs and the ability to carry out different programs at the same time. For example, if there are health and fitness classes going on, there’s no space for other activities such as arts and crafts. There is also no office or conference room space for seniors to discuss, with the Director or other councilors, such problems as health care, financial problems or needs of caregivers, all of which require confidentiality. The one main room only seats approximately 75, which restricts participation in many activities such as special holiday events. This necessitates a waiting list, which means some of those who wish to attend are turned away. Expansion of the present facility is not possible due to the size of the lot and even if an addition could be effectively designed, the already limited parking would be diminished and there is no room for septic system expansion.”

Recently, at the 2007 Town Meeting a proposal was made for a Senior Center to be located at the Myrtle Street property. The proposal passed at Town Meeting, but was defeated at the Town election. The need for a new Senior Center in the Town of Hanover currently still remains.

Open Space and Recreation Plan Survey

Hanover prepared and administered a townwide survey regarding Open Space and Recreation during the OSRP update project (full survey is included in Appendix C. The purpose of the survey was to provide another opportunity for local residents to offer their thoughts and ideas regarding open space, natural resources and recreational amenities in Town. The survey was conducted in August and September 2007 and was made available through a link on the Town website and a copy of the survey was also mailed to every household in the community. In total, 246 responses were received.

Approximately, 95% of the survey respondents said they feel there is a need to preserve open space and natural areas in Hanover. Respondents specifically noted that without protecting these resources, Hanover will lose its small town, country charm that so many residents love. In addition, respondents felt that it was important for their children to live

in a town where they can grow and learn about nature and reap the health benefits of utilizing open space and natural areas. Survey respondents also felt that Hanover is becoming overdeveloped, both by commercial businesses and residential homes.

Quality of Life

Residents that responded to the survey indicated the importance of the following statements regarding quality of life in their neighborhood and Hanover in general. From most important to least important, they are:

- Protecting open space from development
- Preserving environmentally sensitive areas
- Maintaining scenic byways/roadways
- Protecting scenic views
- Offering recreational areas for youth
- Offering recreational areas for adults
- Creating town gathering places

Does Hanover Meet Your Needs?

In addition, survey respondents also indicated how well they felt the Town serves their needs in the following areas. From serving very well to not serving very well, they are:

- Parks and park facilities
- Recreation programs
- Historic and cultural resources
- Open space preservation and conservation lands
- Equestrian trails
- Walking trails
- Water access
- Bicycle trails

Sidewalks

Survey respondents generally thought that there are not enough sidewalks in Hanover. Several people noted that they like the way the Town of Hingham has utilized and located their sidewalks, and think a similar look would be appropriate in Hanover. Areas where respondents thought sidewalks should be addressed in Hanover include:

- All of the main commuter roads
- Main Street, Webster, Route 124, Broadway, Circuit, Center, Spring, Whiting, Myrtle, Silver, Dillingham, Woodland Drive, West Avenue, King, Union, Pleasant, Grove and all routes that lead to and from the schools.

Activities and Priorities

The most popular recreational activities that residents participate in according to the survey include walking, bandstand activities, playgrounds, biking, jogging and bird watching. Other activities noted in the survey were going to historical sites, golf, swimming, tennis, basketball, horseback riding, trail hiking and kayaking/canoeing. Respondents were also asked to help the Town prioritize where they thought money should be spent regarding park and recreation facilities and open space. According to the survey, the first five open space and recreation priorities for the Town of Hanover should be to:

- Buy more open space
- Repair/maintain existing sports fields
- Map and mark existing walking trails
- Construct and build a paved bike path
- Create more small, local parks in various areas of town

In addition, residents would most like the Open Space Committee to focus on trail maintenance and adding new trails in Hanover, acquiring additional open space, and public education and outreach.

Needs/Areas of Improvement

Areas of need in the Town of Hanover regarding open space, recreation and natural areas include:

- Acquisition of additional open space and natural areas,
- Improvement of access to information about open space and recreational programming. Continuing to advertise about public events and put articles in the local newspaper regarding open space and recreation, in addition to utilizing the Hanover website, and sending out information via mail would be the most effective ways to continue outreach regarding open space and recreation.
- Accessibility for handicapped individuals at a number of facilities in Hanover which have been identified in the ADA Study section of this report. Considering applying for CPA money to fund improvements may be appropriate.
- Another approach to preserving Open Space (that has not received much attention in Hanover) is to establish a Cluster Development Bylaw whereby more acreage could be left untouched in a development in exchange for smaller lot requirements and narrower roadways. Developers should also be strongly encouraged to utilize (and be rewarded for practicing) Low Impact Development techniques.
- Finding and utilizing additional sources of funding. The Open Space Committee and Recreation Committee should review all potential grant funding opportunities listed in this plan and any others that they find and set up a system for identifying which grants may be applicable/good to consider applying for in Hanover,

monitor the grant type, submission deadlines, enlist local support and keep the Town and CPC informed of grants that may require matching funds.

- Increase the part-time Parks and Recreation Administrator position to full time.
- Expand the Planning Department by hiring at least another part-time Planner.
- Improved coordination and communication amongst the various boards, departments and key stakeholders in Hanover involved with open space and recreation.
- A new Senior Center for the Council on Aging and associated programs/events.
- Think about and plan for the long term maintenance of improvements to parks, fields and other recreational amenities. For example, irrigation, manpower to maintain the fields and parks and how additional manpower would affect the tax roll. Also, environmental impact and drainage of major projects should be considered heavily and planned for in detail. (This will be important to keep in mind regarding any projects that come from the Parks and Recreation Master Plan.)

According to the Parks and Recreation Master Plan, a number of basic, recurring needs/improvement themes became apparent. The basic improvement themes, to be implemented potentially at all or most recreational properties at some point in the future as capital improvements are planned and constructed include:

- **Pathways, Trails & Picnic Areas** - The preferred master plans call for incorporating new (and upgrading were applicable) pathways, trails and picnic areas at all park locations studied. These types of passive recreational amenities provide opportunities for enjoyment by residents of all ages, backgrounds and abilities and they compliment the traditional active recreational facilities at a given property. At most sites, pathways could be constructed in a manner that is ADA compliant due to the typically gentle terrains that prevail.
- **Children's Playgrounds** - The Park and Recreation user survey process identified the need for Children's playgrounds at each of the properties studied during the project. Playgrounds provide a destination for neighborhood children and their parents and as such often become hubs of community life. Playgrounds also provide outlets for the siblings of children involved in other recreational activities (like a baseball, soccer or lacrosse game) at the same property.
- **Access and Linkages** - Provide new and improved opportunities to access the public properties (by foot or by car), provide convenient and appropriately scaled parking amenities and reduce conflicts between pedestrians and drivers. Provide logical, ADA compliant linkages between various site features and facilities within a given park/school/open space property.
- **Support Buildings** – Potential locations of park support buildings are indicated on most of the preferred master plans. Support buildings would contain at least restroom and storage accommodations. Where appropriate, slightly larger structures might contain a concession room or space.

- **Athletic Fields and Courts** - The master planning process identified the need for providing new and refurbished athletic facilities (fields, diamonds, courts...) in order to better support the myriad of sports programs that operate within the community. At present, based on participation rates for various activities, there are simply too few fields to accommodate the sheer number of users. The resulting problem is two fold in that certain programs cannot be adequately served and the desired field conditions cannot be maintained due to heavy programming and use. *This situation is expected to worsen when field facilities go off line in conjunction with a major reconstruction project at Hanover High School.*
- **Informal Playing Fields** – Within all communities there is always a need for informal play fields for pick up games, less formal practices, kite flying, Frisbee tossing etc. The proposed Master plans address these needs as space allows. Also, when not programmed, some fields can be used for open play. The Parks and Recreation Committee may want to limit this use, however, due to the need to occasionally rest the fields.
- **Basic Park Aesthetics and Inherent Natural Qualities** - The preferred master plans identify improvements that help to protect, preserve and enhance the aesthetics and inherent natural qualities and features of a given property and that improve sustainability.

7.4 Potential Funding Sources

There is a wealth of funding sources available through the Department of Conservation and Recreation (DCR) that the Town of Hanover may want to consider utilizing for future open space and recreation acquisitions and relevant projects. Below is a list of the many programs that exist. The Open Space Committee and the Parks and Recreation Committee should consider assigning several committee members to monitor grant funding opportunities and coordinate accordingly with the Town Planner. Additional information can be obtained from <http://www.mass.gov/dcr/grants.htm>.

Greenways and Trails Demonstration Grants Program – According to the Department of Conservation and Recreation, greenways are corridors of land and water that protect and link a variety of natural, cultural, and recreational resources. The Division of Conservation and Recreation provides grant awards to municipalities, non-profits and regional planning agencies to support innovative projects, which advance the creation and promotion of greenway and trail networks throughout Massachusetts. DCR provides grants of up to \$5,000 to non-profit organizations, municipalities, and regional planning associations to support innovative greenway and trail projects throughout Massachusetts. DCR will also consider requests of up to \$10,000 for multi-town greenway and trail projects. These additional funds are intended to promote linkages across town boundaries and foster partnerships among neighboring communities. This grant program was not funded for 2007, however, it should be monitored for future grant funding rounds. <http://www.mass.gov/dcr/stewardship/greenway/grants.htm>

Recreational Trails Grant Program - The Recreational Trails Program, part of the federal "Transportation Efficiency Act for the 21st Century (TEA-21)," provides for the transfer of fuel tax revenue generated by the use of off-highway vehicles and in backcountry camping to a statewide grants program. These grants provide reimbursement to non-profit organizations, government agencies and municipalities for a variety of trail protection, construction, and stewardship projects. Recreational Trails Grants must be submitted this year by October 1, 2007.

<http://www.mass.gov/dcr/stewardship/greenway/regionalGrants.htm>

Flood Management Grants – The Federal Department of Flood Hazard Management, in coordination with the Massachusetts Emergency Management Agency, offers two grant programs to local government in order to reduce the risks and costs of natural disasters, especially floods, on homeowners and community infrastructure. These programs include pre-disaster grants through the annual Pre-Disaster Mitigation Program and post-disaster grants through the Hazard Mitigation Grant Program (HMGP).

<http://www.mass.gov/dcr/stewardship/mitigate/grants.htm>

Lake and Pond Grant Program – The Lake and Pond grant program awards grants for the protection, preservation and enhancement of public lakes and ponds in the Commonwealth. A maximum grant of \$25,000 is available to eligible applicants on a 50/50 cost-sharing basis. The grant program helps municipalities and local organizations that are struggling to meet the challenges of providing long-term solutions for lake and ponds management.

<http://www.mass.gov/dcr/waterSupply/lakepond/lakepond.htm>

Urban Forest Planning and Education Grants - The goal of the Urban Forestry program is to assist communities and nonprofit groups in building support for the long-term protection and management of community trees and forests. The USDA Forest Service provides the grant funds that the DCR administers with guidance from the Massachusetts Community Forestry Council. A maximum of \$10,000 is available per project.

<http://www.mass.gov/dcr/stewardship/forestry/urban/urbanGrants.htm>

Rivers and Harbors Grant Program - A statewide program of matching grants from DCR's Office of Waterways to towns and municipalities for design and construction to address problems on coastal and inland waterways, lakes and great ponds.

<http://www.mass.gov/dcr/stewardship/forestry/urban/index.htm>

The Division of Conservation Services (DCS) also administers several grants that the Town of Hanover may be interested in pursuing. According to the DCS website (<http://www.mass.gov/envir/dcs/default.htm>), they are:

Massachusetts Self-Help Program - The Self-Help program started in 1961 to help conservation commissions acquire land for natural resource and passive outdoor recreation purposes. Lands acquired may include wildlife, habitat, trails, unique natural,

historic or cultural resources, water resources, forest, and farm land. Compatible passive outdoor recreational uses such as hiking, fishing, hunting, cross-country skiing, bird observation and the like are encouraged by this grant program. Projects that are applying for funding must allow access by the general public (a requirement). This state program pays for the acquisition of land, or a partial interest (such as a conservation restriction), and associated acquisition costs such as appraisal reports and closing costs.

<http://www.mass.gov/envir/dcs/selfhelp/default.htm>

Massachusetts Urban Self-Help Program - The Urban Self-Help Program started in 1977 to assist cities and towns in acquiring and developing land for park and outdoor recreation purposes. Any town with a population of 35,000 or more year-round residents, or any city regardless of size, that has an authorized park /recreation commission and conservation commission, is eligible to participate in the program. **Communities that do not meet the population criteria listed above may still qualify under the "small town," "regional," or "statewide" project provisions of the program.** Only projects that are to be developed for suitable outdoor recreation purposes, whether active or passive in nature, shall be considered for funding. Grants are available for the acquisition of land, and the construction, restoration, or rehabilitation of land for park and outdoor recreation purposes such as swimming pools, zoos, athletic play fields, playgrounds and game courts. Access by the general public for the proposed project is required.

<http://www.mass.gov/envir/dcs/urban/default.htm>

Massachusetts Land and Water Conservation Fund - The Federal Land & Water Conservation Fund (P.L.88-578) provides up to 50% of the total project cost for the acquisition, development and renovation of park, recreation or conservation areas. Municipalities, special districts and state agencies are eligible to apply. Nearly 4000 acres have been acquired and hundreds of parks renovated using the \$90.5 million that Massachusetts has received from the state side portion of the federal program since 1965. DCS administers the state side Land & Water Conservation Fund program in Massachusetts. Access by the general public for proposed projects is required. To apply for a park acquisition or park development project grant, see the Recreation Application Package. To apply for a conservation acquisition grant, see the Conservation Application Package. <http://www.mass.gov/envir/dcs/landwater/default.htm>

The National Fish and Wildlife Foundation offers two different types of grant programs, they include:

Keystone Initiative Grants – The National Fish and Wildlife Foundation seeks to achieve measurable outcomes on a select set of conservation issues through our Keystone Initiatives. Within each of the initial Keystone Initiatives (i.e., Birds, Freshwater Fish, Wildlife & Habitat, Marine & Coastal), the Foundation has established specific funding priorities. Federal, state, and local governments, educational institutions, and nonprofit organizations are welcome to apply for matching grants twice annually, in accordance with the Keystone Initiative Grant guidelines. Awards are made on a competitive basis to

eligible grant recipients, including federal, tribal, state, and local governments, educational institutions, and non-profit conservation organizations. Project proposals are received on a year-round, revolving basis with two decision cycles per year. Grants generally range from \$50,000-\$300,000 and typically require a minimum 2:1 non-federal match. For more information, go to the following website:

http://www.nfwf.org/AM/Template.cfm?Section=Keystone_Initiatives_Grant_Guidelines

Special Grant Programs - In addition to the general matching grant, the Foundation administers a number of special grant programs with specific guidelines and time-lines. If your project does not meet the criteria of any program described below, please consider applying under the general matching grant program. Also, please note, if your project is not funded under the grant program for which it was submitted, Foundation staff may move your project to the general matching grant program or a different special grant program if it has the potential of being funded under it. Program deadlines are listed for the most recent grant cycle and are updated when a new call for proposals is released. For more information, go to:

http://www.nfwf.org/AM/Template.cfm?Section=Browse_All_Programs.

7.5 State Open Space and Recreation Efforts (SCORP)

In 2000, the Commonwealth of Massachusetts prepared a document called the *Statewide Comprehensive Outdoor Recreation Plan* (SCORP). The SCORP document looks at open space and recreation from a regional perspective. The purpose of the document is to help cities and communities in Massachusetts better direct local investment into protecting and enhancing open space and recreational amenities. Hanover is located in the Southeastern region identified in the report which only has 14% of its land area protected or in recreation use, even though it has the third largest population at 1.1 million of the regions studied. Specifically mentioned in the SCORP report is the fact that there is no single, major land holding of significance by a federal management entity.

The Southeastern region is fortunate to have a variety of open space, natural and recreational resources. The three most popular individual activities in the region are swimming, sightseeing, tours and events and walking. Other common activities that residents and visitors to the region participate in include playground activities, fishing, hiking, golfing, viewing and studying wildlife, biking, skiing, boating and canoeing. The report also states that “*when grouped by type of activity, the water-based activities predominate, but as in other regions, there is strong participation in some dimension of each type. A rough rank order would be water-based, passive, trail-based, field-based, and wilderness activities.*” The most widely visited sites in the region are the coastal beaches and shorelines.

In terms of facilities need, the Southeast region residents indicated that more golf courses, neighborhood parks, playgrounds and tot lots, agricultural lands and rivers and streams are necessary. All of the activities that were noted as needed, were also identified in the report as having middle to low levels of current participation, even

though the resources themselves are in relatively decent abundance. The report stated that access to these resources may be part of the perceived need, along with maintenance of existing resources. A need was also noted for additional historic and cultural resources.

7.6 Management Capacity

The Town of Hanover is fortunate to have a number of active boards and committees who are working towards improving open space and recreation opportunities in the community. Moving forward, in order to ensure successful implementation of the 2007 Open Space and Recreation Plan update, outstanding communication will be paramount between boards, committees, town staff and local residents. The Board of Selectmen, Town Planner, Conservation Commission, Open Space Committee, Parks and Recreation Committee, Community Preservation Committee and Planning Board all need to make a commitment to work together so that the goals, objectives and action items of this plan will be addressed and attained. In order to set the stage for good communication, a specific entity in the Town of Hanover should be assigned to oversee the implementation of the overall OSRP. The best suited committees would be the Open Space Committee and the Parks and Recreation Committee who would work together on a regular basis.

In general regarding the maintenance of fields and playgrounds, the Town of Hanover does need additional manpower in the Department of Public Works. The DPW and School Department should continue to coordinate efforts that pertain to maintenance, however, before any additional fields and playgrounds are planned and constructed, the Town needs to consider the maintenance of such facilities and discuss it with DPW and the School Department in terms of how they will be taken care of in the future.

Open Space Committee

The Hanover Open Space Committee's mission is to ensure that the town's rural character is maintained and enhanced both through protection of existing resources and acquisition of new properties. The Committee is made up of seven local citizens who work together to plan for and facilitate the improvement of open space resources in Hanover. One major undertaking of the Committee has been the Hanover Greenway project which is focused on establishing a continuous walking trail from Hanover High School to Luddam's Ford park (the 1999 Hanover Greenway Project Report is included in Appendix E). In addition, the Committee has intently focused on trails at other locations in the community including improving them and adding linkages. Another interest of the Committee is continuing to protect available land in the community from adverse impact and development. Educating the public and working to preserve the character and charm of Hanover through land conservation is an important initiative of the Committee.

Parks & Recreation Committee

The Hanover Park and Recreation Committee is a six member appointed Board which was first established as the Playground Committee at the March 1930 Annual Town Meeting, and reestablished under the provisions of Massachusetts General Laws (M.G.L.)

Chapter 45, Section 14. The Playground Committee was active in the 1950s and 1960s with projects such as the creation and dedication of Calvin Ellis Park and the purchase of 60 acres of land on Myrtle and Center Streets. In 1971, the Town voted to change the name of the committee to the Hanover Parks and Recreation Committee who continued to organize year round programming activities like skiing and swimming. At the 2004 Town Meeting, the bylaws for the Parks and Recreation Committee were amended and eight specific responsibilities were identified which include:

- Overseeing the day to day maintenance and improvements of the recreation facilities under its jurisdiction, together with the fences, bleachers, dugouts and other appurtenances;
- Scheduling the use of ball courts, fields and other recreation facilities;
- Implementing and managing recreation programs;
- Coordinating the Bandstand Summer Concert Series with all activities incidental thereto;
- Hiring and overseeing employees and volunteers to work in recreation programs;
- Preparing, administering and monitoring the annual budget, including controlling Parks and Recreation Trust Funds, Revolving accounts, General Fund accounts; and
- Working with other Town Officers to ensure all safety, access, employment, construction and other legal requirements are met.

The primary responsibility of the Parks and Recreation Committee is to manage and provide recreational programming in Hanover. In addition, they also manage and coordinate all field/space permits and they maintain the overall recreational programming calendar. The committee works closely and collaboratively with the Department of Public Works who maintains all of their properties and the Hanover Youth Athletic Association (a 100% volunteer youth recreational program group) who conducts a majority of the sports programs offered such as football, baseball, basketball, cheerleading and soccer. In August 2005, the Parks and Recreation Committee hired its first paid staff, a part time Recreation Administrator which was something Hanover had talked about doing for years. The purpose was to improve and increase the amount of year round funded recreational programs offered in town. There is a need to increase the part-time Parks and Recreation staff position to full time.

Community Preservation Committee (CPC)

The primary responsibility of the Community Preservation Committee is to appropriate allocate funds acquired through the Community Preservation Act that was adopted in Hanover in 2005. Projects that are eligible for CPA funding are those that preserve open space and historic sites and create affordable housing and recreational facilities. Hanover's CPC is a nine member committee. In addition to evaluating projects for criteria and goals as stated in Hanover's Community Preservation Plan, they also evaluate projects according to the following criteria:

- Consistency with Hanover’s 1997 Open Space and Recreation Plan, and other planning documents that have received wide input and scrutiny,
- Feasibility,
- Urgency,
- Affordability,
- Serving a currently under-served population,
- Serving multiple needs and populations,
- Consistency with recent town meeting actions,
- Preservation of currently-owned town assets,
- Acquisition of threatened resources,
- Multiple sources of funding, and
- Use of local contractors where possible.

Non-Profit/Volunteer Organizations

The Town of Hanover is fortunate to have a number of non-profit/volunteer organizations that take the initiative to do extensive work in the community in terms of conservation, education and natural resource protection. Some of the organizations include:

North/South River Watershed Association³⁵

“The North and South Rivers Watershed Association, Inc. (NSRWA) is a non-profit grassroots environmental organization located on the South Shore of Massachusetts. The NSRWA was founded in 1970 and has grown to over 1,500 members today, comprised of individuals, families, businesses, and other environmentally-concerned organizations. The membership comes primarily from the 12 towns within the watershed: Norwell, Hingham, Scituate, Marshfield, Hanover, Pembroke, Whitman, Hanson, Duxbury, Weymouth, Rockland and Abington. The NSRWA was created by a handful of river-lovers bound together by an intense devotion to the natural beauty of the area and a strong commitment to protect these natural resources for their own and future generations.

The mission of the NSRWA is to preserve, restore, maintain and conserve in their natural state, the waters and related natural resources within the watershed.

Goals of the organization are to:

- *Protect the watershed and promote responsible growth by working in partnerships to preserve open space, scenic vistas and sensitive natural resources;*
- *Educate and encourage stewardship of the watershed through public education, outreach and recreation programs; and*
- *Restore the water quality of the rivers by identifying and correcting adverse*

³⁵ The North and South Rivers Watershed Association, [INTERNET] <http://www.nsrwa.org/default.asp>, accessed October 25, 2007

impacts.”

<http://www.nsrwa.org/default.asp>

North River Commission

The North River Commission was established by the Massachusetts Departments of Environmental Management (DEM) pursuant to the Scenic and Recreational Rivers Act, G.L.c.21, s. 17B and the North River Commission Act, c.367, s.62 of the Acts of 1978. The North River does have a Scenic and Recreational Protective Order which is a set of regulations adopted in 1978 by the Massachusetts Legislature, acknowledging the significance of the North River as a recreational and scenic resource in Massachusetts. To preserve this natural resource, the regulations identify the River Corridor (land subject to protection under the Order) and specify allowed, prohibited, and special permitted uses within the Corridor.

According to the North River Commission, *“the goal of the Protective Order is to preserve and protect the North River for use and enjoyment today and for years to come. The mission of the North River Commission is to make that goal a reality. This can be achieved if interested citizens, municipal officials, environmental professional and property owners all join with the Commission to share in stewardship of this great local resource.”* <http://www.nsrwa.org/NRC/default.htm>

The Wildlands Trust

The Wildlands Trust actively seeks to permanently protect land with significant natural and scenic resource value using techniques such as land donations, conservation restrictions (also known as conservation easements), trade lands, and other conservation methods. The Trust's primary focus areas encompass Plymouth and Bristol counties, but it is empowered to protect land in Barnstable and Norfolk counties also. <http://www.wildlandstrust.org/index.html>

Section 8.0 Goals and Objectives



Photo by Mary McCram, Ellis Field

8.0 GOALS AND OBJECTIVES

Goals and objectives for the Hanover Open Space and Recreation Plan update were developed using input received from a number of resources including two Public Forums, Hanover residents who participated in Hanover Day, a town wide survey, comments from members of the Parks and Recreation Committee, comments from Town staff and from comments from the Hanover Open Space Committee. For purposes of this project, goals were formed around a general vision or concept and the objectives listed are more concrete ideas for accomplishing the stated goals. The action items in Section 9.0 are specific activities that make achieving the goals and objectives realistic.

Beals and Thomas, Inc. also reviewed the recent Hanover Parks and Recreation Master Plan, Historic Preservation Plan and the 1997 Hanover Master Plan to determine what goals were specified that would pertain to the more specific Open Space and Recreation Plan.

MANAGEMENT

GOAL 1: Assign a specific entity to oversee the implementation of the overall Open Space and Recreation Plan.

- The Open Space Committee and the Parks and Recreation Committee should work together on a regular basis to implement the Open Space and Recreation Plan with oversight from the Town Administrator, Town Planner and Parks and Recreation staff person.
- Inform other Boards and Committees (Conservation Commission, DPW, Board of Health, Historic Commission, Community Preservation Committee, etc.) of the Open Space Committee and Parks and Recreation Committee's implementation efforts.
- Designate at least one member of the Open Space Committee and one member of the Parks and Recreation Committee (with assistance of the Town Planner where needed) to thoroughly research and monitor the types of grant funding listed in the body of the OSRP update so as to better target specific projects and maximize the potential to apply for and receive grant funding (See Section 7.0). Another option might be for the Town to hire additional staff, or a consultant to monitor and apply for grant funding.

GOAL 2: Devise and maintain a system for targeting and prioritizing land for future property acquisition.

- Utilize the Land Acquisition Worksheet on potential open space parcels to determine priority of potential purchase (outlined in Section 7.0).
- The Open Space Committee should work closely with the Town Planner and communicate when properties come up for acquisition through the Planning Board. Ideally, a member of the Planning Board would sit on the Open Space Committee.

- The Open Space Committee should continue their outreach efforts to local landowners and pursue the protection of properties that classify as high priority.
- Develop a more formal property tracking system/database for monitoring land of interest, property owners, and what type of contact has been made.
- Consider the potential options for forming a Land Trust to oversee the proper management of particular open space parcels within the Town.

COMMUNITY CHARACTER

GOAL 3: Preserve and protect open space and natural areas in Hanover because they provide linkages between the history of the Town and the present conditions.

- Acquire additional open space and natural areas.
- Further protect the natural areas adjacent to the North River/Indian Head River due to their status as critically important habitat areas (the North River is an example of a Freshwater Tidal Marsh and Fresh/Brackish Tidal Swamp).
- Continue to implement projects which heighten public awareness of Hanover's unique natural and cultural resources (such as designating additional Scenic Roads).
- Utilize the Historic Preservation Plan and involve/collaborate with the Historical Commission whenever possible on joint projects.

GOAL 4: Collaborate with other committees, organizations and towns regarding open space and recreation projects and initiatives.

- Communicate with Rockland, Norwell, Hanson, Pembroke and Weymouth Open Space Committees and Recreation Committees to share ideas, collaborate where possible and determine what some joint projects may be.
- The Open Space Committee could collaborate with the Southeastern Wildlands Trust, Recreation Committee, Historical Commission the Community Preservation Committee and others on projects whenever possible and to identify, acquire and manage open space to meet projected community needs. Offer support to each other on initiatives that organizations take on separately.

OPEN SPACE AND NATURAL RESOURCES

GOAL 5: Continue to acquire additional open space.

- Give priority to those open space acquisitions that meet criteria in the Land Acquisition Worksheet (See Section 7.0).
- If a property is already designated as open space, but does not have permanent protection (temporary and limited protection designations), work to protect the parcels in perpetuity.
- Acquire tax title lands for community purposes, including open space,

recreation, affordable housing, or municipal services.

- Inform Hanover residents about the Town's interest in preserving additional open space and make them aware of opportunities to do so such as conservation restrictions or selling the property.

GOAL 6: Encourage sustainable growth, development and redevelopment consistent with the remaining carrying capacity of Hanover's natural environment.

- Preserve significant natural and fragile resource areas during the design/permitting stage of developments. At the pre-application meeting discuss these resources in terms of the project. Such resources include critical wildlife and plant habitats, water resources (lakes, rivers, aquifers, wetlands, etc...) and historical, cultural and archaeological areas, scenic roads and views, and significant landforms.
- Add provisions to Hanover's regulations to ensure that development is consistent with Town character and goals and move them further to help promote good design.

GOAL 7: Enhance public access to and appropriate use of existing conservation lands; continue to further the greenways initiative and creation/improvement of existing and new trails and monitor permanently protected conservation lands to ensure their character remains unchanged.

- Inventory natural resources present on conservation lands, and identify the appropriate level and type of public access by developing and maintaining:
 - Data base of conservation lands and degree of public access,
 - Management plans to allow public access without harming environmentally sensitive areas, and
 - Rules and regulations pertaining to the use of public lands.
- Improve and maintain public access to conservation parcels.
 - Establish a group of volunteers responsible for creating and maintaining trails. This group should include a member of the Conservation Commission, or at a minimum, review placement of new trails in order to avoid impacts to important natural resources, including wetlands and rare species.
- Monitor and promptly remove invasive species from conservation lands before they become a problem and impact native species.

GOAL 8: Expand Hanover's local efforts and work towards taking a regional approach to protecting drinking water and provide long range protection of public drinking water supplies.

- Protect land available around the Water Resource Protection District to act as a buffer to prevent contamination.
- Work with neighboring towns to formulate a plan for groundwater and surface water protection.

- Work with neighboring towns and land trusts to protect remaining open land in the area west and north along the Freshwater Tidal Marsh and Indian Head River.

REGULATORY

GOAL 9: Improve and enhance Open Space and Recreation land within Hanover through regulatory methods.

- Develop Open Space Development/Cluster Zoning Bylaw.
- Amend Subdivision Regulations to promote Low Impact Development techniques and green design.
- Hanover Boards/Town commissions should work closely with and ask for assistance from NHESP in reviewing any project proposed in the habitat areas of the regulatory areas of the maps in the Natural Heritage Atlas.
- Nominate Freshwater Tidal Marsh/Indian Head River area as an ACEC

RECREATION

GOAL 10: Enhance, maintain and preserve passive and active recreational opportunities for Hanover residents and visitors of all ages, abilities and interests.

- Focus on trail creation, maintenance and information outreach.
- Improve and create more equestrian trails, walking trails, water access and bicycle trails.
- Repair and maintain existing sports fields.
- Map and mark existing walking trails and access points to the trails.
- Create small, local parks in various areas of town.
- Maintain an accurate inventory of all of the recreational facilities (playing fields, courts, playgrounds etc.) and conservation areas in Hanover.
- Maintain an accurate inventory of all the recreational programming provided in the Town of Hanover.
- Use the ADA section of this plan and start to address needs of special user groups including handicapped and elderly and provide additional facilities and programs adequate to meet the identified needs.
- Inventory available parking at all town-owned conservation/ recreation areas and add parking where needed/appropriate.
- Research and apply for additional funding sources for the maintenance and upgrading of Hanover's parks and playgrounds (*See Section 7.0 for funding sources*).
- Address recreational needs identified in the Statewide Comprehensive Outdoor Recreation Plan. Needs include more swimming, road biking, walking, playground and tennis facilities (*See Section 7.0 for more information*).

- Utilize and make an effort to implement the Parks and Recreation Master Plan created in 2007/2008 by the Parks and Recreation Committee with their consultant.

EDUCATION

GOAL 11: Better educate Hanover residents about conservation and land use and provide education and materials on conservation and land use issues so as to improve their knowledge.

- Formulate a working group within the Open Space Committee with the assistance of the Conservation Commission to create brochures and pamphlets regarding M.G.L. Chapter 61, conservation restrictions, invasive species and wetlands.
- Invite knowledgeable citizens and professionals to hold seminars regarding conservation matters.
- Continue to hold guided walks through existing open space as a form of education and outreach.
- Consider providing a pamphlet to new Hanover residents from the Open Space Committee and the Conservation Commission regarding conservation, wetlands, invasive species and contact information should questions arise.

GOAL 12: Improve public awareness and public access regarding Hanover's Open Space and Recreation assets.

- Develop an inventory of existing recreation and cultural service providers that are associated with area organizations.
- Improve access to information about open space and recreational programming including placing articles in the newspaper, utilizing the Hanover website and sending out information via mail.
- The Parks and Recreation Committee should oversee the day to day maintenance and improvements of the recreation facilities under its jurisdiction, together with the fences, bleachers, dugouts and other appurtenances.

Section 9.0
Five Year Action Plan

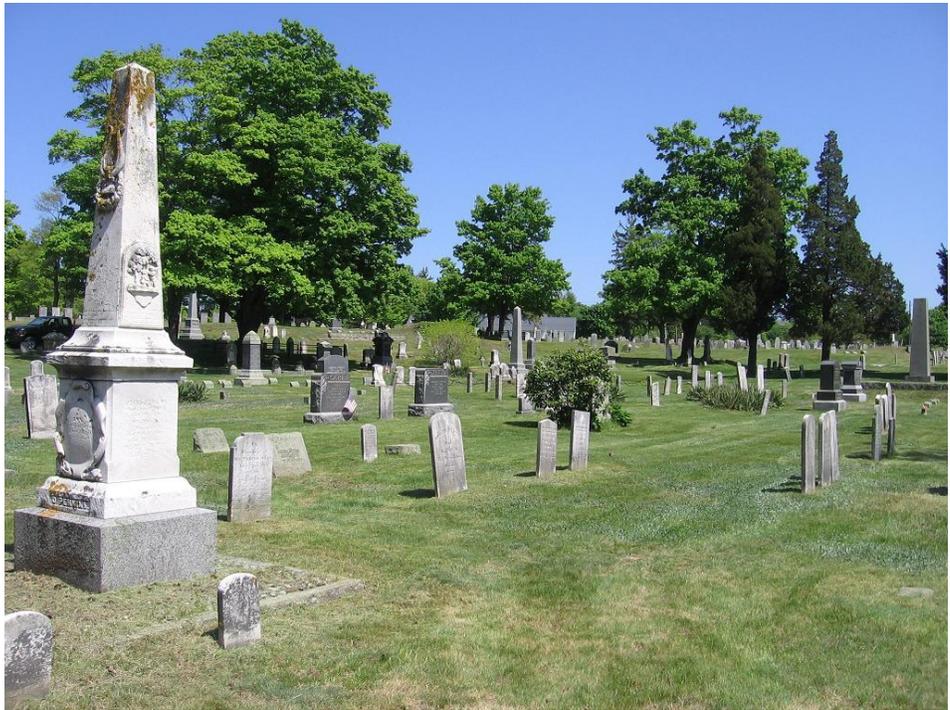


Photo by Mary McCrann, Hanover Center Cemetery

9.0 FIVE YEAR ACTION PLAN

The action plan is the section that details for the next five years, a timetable of specific actions and activities that should occur for successful implementation of the Hanover Open Space and Recreation Plan. The action items (or priorities) are based on the goals and objectives that were formulated in Section 8.0 and the needs analysis prepared in Section 7.0.

Section 9.0 is often the most difficult component of an Open Space and Recreation Plan for a number of reasons. An Action Plan can be difficult to commit to and be problematic to review over time. Items that have been accomplished fade from view, while the more intractable problems continue to haunt the town. Financial and political trends may change, advancing some items while leaving others untouched. For these reasons alone, many communities are hesitant to put in writing the full scope of their intentions.

The following action plan intends to deliver on the promise of the goals and objectives expressed throughout this process, with a program of tangible steps for Hanover to take over the next five years. There is a high level of activity on these issues, based upon the input received during the planning process (the Public Forums, Hanover Day, Citizen Survey). While all actions listed are recognized as important, two areas in particular rise to the top as being absolutely essential for any future progress towards meeting the goals of this Plan:

- *The collaboration of the Open Space Committee and the Parks and Recreation Committee to implement the Open Space and Recreation Plan.* Although there are many groups and departments active in open space and recreation issues in Hanover, their activities are not totally coordinated or focused. If the ambitious goals and objectives of this Plan are to be achieved, there needs to be a collaborative effort between these committees to oversee this progress and coordinate the actions and priorities of the other various groups. This effort should be overseen by the Town Administrator and the Town Planner. Other groups to involve throughout the process include but are not limited to:
 - Conservation Commission, Community Preservation Committee, Council on Aging, Hanover Youth Athletic Association, Private Non-Profits and State and County Resources
- *Continue to educate and involve the numerous Town Boards and Committees regarding this project and the relevant action items and remind them that Hanover's open space and recreational amenities are a central and lasting priority for the Town.* While there may be competing needs for time and funding, all groups must abide by the central tenet that open space and recreation issues are extremely

important to the residents of Hanover. Where open space and recreational resources are concerned, the goals and policies of this Plan and the members and staffs of the Town's open space agencies must be consulted. Furthermore, groups must agree in advance on the proper decision making procedures to be followed in such matters.

- *Securing additional sources of funding, staffing, and other support for open space and recreation activities and programs.* The Town of Hanover has an opportunity to seek out additional funding sources to achieve the goals of this Plan in addition to grant funding they have received in the past and Community Preservation Act funds. Support for the goals and objectives may be found in the form of donated community labor or park “adoption” by residents, or from federal, state, and private grants (See discussion in Section 7.0).

9.1 Five Year Action Plan Summary Table

Abbreviation Key: CC = Conservation Commission, TP = Town Planner, OSC = Open Space Committee, PRC = Parks and Recreation Committee, BOS = Board of Selectmen, BOH = Board of Health, CPC = Community Preservation Committee, HC = Historic Commission, TA = Town Administrator, PB = Planning Board, HYAA – Hanover Youth Athletic Association

#	Action Item	Year	Responsible Party	What Page is the Action Item on?
Year 1 - 2008				
1	Formally designate the Town Administrator as the coordinator of the Five Year Action plan. The Open Space Committee and the Parks and Recreation Committee should work closely with the Town Administrator to implement the Open Space and Recreation Plan, with the assistance of the Town Planner.	2008	TA, OSC, PRC, TP	9-8
2	The Open Space Committee and Parks and Recreation Committee should meet with the Board of Selectmen and Town Administrator to discuss the Open Space and Recreation Plan and its implementation.	2008	TA, OSC, PRC, TP, BOS	9-8
3	The Open Space Committee and Parks and Recreation Committee should develop a checklist of action items to accomplish that will also identify each committee's goals, their organizational responsibilities for the updated Open Space and Recreation Plan (including how they can/will work together) and regarding conservation and recreation programs and activities in the community. In addition, they should meet at least semi-annually and share progress memorandums and have joint meetings when possible.	2008	OSC, PRC, TP	9-8
4	Consider adding either a full or part-time position to the Planning Department to assist the Town Planner on local planning initiatives and help implement this plan and other projects, or offer an internship to a graduate student.	2008	TA, BOS, TP, CPC	9-9
5	Confirm that all commissions, committees, boards and pertinent town staff mentioned in this plan receive a copy of it and understand their role in its implementation.	2008	TP, OSC, PRC	9-9
6	Update every six months the list of key parcels of land which are of high interest for protection by acquisition or other methods. Consider transferring the care and custody to the Conservation Commission of existing open space where possible and add conservation restrictions to as many designated open space parcels as possible.	2008	TP, OSC, PB, CC	9-9
7	Modify the land acquisition worksheet as needed to ensure it is an appropriate evaluation tool to use when considering property for protection (located in Section 7.0). In addition, develop a computer database to track parcels of interest and status (this could be something like an Excel Spreadsheet) and update it frequently to monitor key parcels of	2008	OSC, TP	9-10

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	land which are of high interest for protection by acquisition or other methods.			
8	Identify major open space areas in abutting towns and develop a working relationship with representatives in communities like Rockland, Pembroke, Norwell and Hanson to discuss future projects. Communication needs to be more consistent.	2008	OSC, TP	9-10
9	Improve the communication and working relationships amongst the Open Space Committee, Parks and Recreation Committee and Community Preservation Committee. Hold a two to four hour working meeting (maybe a Saturday morning) with all three committees facilitated by a third party where goals and agendas of each committee would be stated and brainstorming could be done regarding how to better communicate and work together in the future.	2008	OSC, TP, CPC, PRC	9-10
10	Work with Pembroke and Norwell to nominate an area surrounding a portion of the North River/Indian Head River as an Area of Critical Environmental Concern. Go to http://www.mass.gov/dcr/stewardship/acec/aboutMaps.htm for more nomination information, and see Section 4.0 for more details about the ACEC program. Hire a consultant if necessary to help with the nomination and consider using CPA funds to do so. The nomination should be made by the community.	2008	CC, TP, OSC	9-11
11	Develop educational materials about alternative methods used to leave land parcels in their natural state in perpetuity or available for public access as appropriate and a Frequently Asked Questions handout that the Open Space Committee could provide to landowners interested in more information about protecting their property.	2008	OSC, TP, CC	9-11
12	Research and apply for additional funding sources for the maintenance and upgrading of Hanover's parks, playgrounds and conservation areas (see Section 7.0 for a list of funding sources).	2008	TP, OSC, PRC	9-11
13	At the design/permitting state of developments, discuss the significant natural and fragile resource areas that may pertain to a project with would be developers. Such areas include critical wildlife and plant habitats, water resources and historical, cultural and archaeological areas, scenic roads and views and significant landforms. Encourage projects to take these areas into consideration. Where it makes sense, notify the Open Space Committee and ask for input when needed.	2008	TP, PB, CC, OSC	9-12
14	Continue to identify and certify vernal pools.	2008	CC	9-12
15	Develop a potential list of new trails for development and trails that need maintenance/signage and present the plan to the Town with the support of the Town Planner. Use this trails plan as a guide for projects and to seek out funding sources for passive and active recreation.	2008	OSC, TP, PRC	9-12
16	If possible, try to inventory natural resources present on conservation lands, and identify the appropriate level and type of public access.	2008	TP, CC, Volunteers	9-13

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17	Establish a group of volunteers responsible for creating and maintaining trails. This group should include a member of the Conservation Commission or at a minimum, review placement of new trails in order to avoid impacts to important natural resources, including wetlands and rare species.	2008	TP, CC, OSC, PRC, Volunteers	9-13
18	Continue to monitor and promptly remove invasive species from conservation lands before they become a problem and impact native species.	2008	CC, Volunteers	9-13
19	Specifically target land surrounding the Water Resource Protection District for protection to act as a buffer to prevent contamination of the water supply.	2008	OSC, TP	9-14
20	Contact twice annually representatives in neighboring towns to discuss groundwater and surface water protection and develop a collaborative plan/line of communication for doing so.	2008	TP, DPW	9-14
21	Investigate the potential of using another substance besides sand/salt on the roadways during the winter as a way to further protect drinking water.	2008	CC, DPW, BOS	9-14
22	Review the existing system for addressing failing septic systems and identify ways in which it can be approved.	2008	BOH, CC	9-14
23	Establish an Open Space Development Zoning Bylaw (sometimes known as Cluster Subdivision Bylaw). The Town of Hanover currently does not have such a Bylaw.	2008	TP, PB, BOS	9-15
24	Amend subdivision regulations to maximize amount of open space maintained in proposed developments (should be done in conjunction with the Open Space Development Zoning Bylaw).	2008	TP, PB, BOS	9-15
25	As also noted in the Historic Preservation Plan, revise the Village Planned Unit Development Bylaw.	2008	TP, PB, BOS	9-15
26	As also noted in the Historic Preservation Plan, revise the Retreat Lot Bylaw.	2008	TP, PB, BOS	9-15
27	Adopt a Scenic Road Bylaw to formalize the application and review process of projects along designated scenic roads.	2008	TP, PB, BOS	9-16
28	Develop a proposed plan for adding sidewalks to key roadways in Hanover. These connections should be throughout town to provide walking/biking networks where trails do not or cannot be added to the "Greenway." More sidewalks in Hanover was identified as a need in the Citizen Survey conducted for this project.	2008	TP, DPW	9-16
29	Investigate the potential of further utilizing Low Impact Development techniques and/or developing a Low Impact Development Bylaw.	2008	TP, CC	9-16
30	Investigate potential sites for a designated recreational programming facility/community center, including specific space for the Parks and Recreation Administrator.	2008	TP, PRC, OSC	9-17
31	Continue to focus on trail creation, maintenance and information outreach. Consider developing a trail management plan that utilizes the newly created trails layer and suggested maintenance/management techniques to use at the various sites.	2008	OSC, CC, TP, PRC	9-17

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32	Repair and maintain existing sports fields where necessary (utilize Parks and Recreation Master Plan). A maintenance schedule should be developed.	2008	PRC, DPW	9-17
33	Work with the Town Planner to identify where equestrian trails, walking trails, bicycle trails and water access could be added/improved in the Town of Hanover. Develop a memorandum summarizing the findings, circulate it to all relevant boards and commissions and suggest next steps.	2008	OSC, CC, PRC, TP	9-17
34	When possible, address needs identified in the Statewide Comprehensive Outdoor Recreation Plan. The needs identified were more swimming, road biking, walking, playground and tennis facilities in Hanover. Consider including these elements when moving forward with new projects or updating existing sites.	2008	TP, OSC, PRC	9-18
35	Continue to map and mark existing walking trails and access points to the trails in Hanover. Consider preparing a more formal walking trail map, similar to that of the Town of Needham (one Open Space Committee member should investigate Needham's work and report back). Once everything is mapped, visit the map annually and update it.	2008	OSC, TP	9-18
36	Investigate in detail the potential of creating small, local parks in various areas of Town where there are currently no amenities available, particularly in the northern part of town on Town-owned land.	2008	PRC, TP	9-18
37	Review the inventory in Section 5.0 of this plan annually and update it so as to maintain its accuracy.	2008	OSC, TP	9-18
38	Inventory all recreational programming provided in the Town of Hanover, including what is provided by the HYAA and update the inventory annually.	2008	PRC, PRD, HYAA	9-19
39	Utilizing the ADA Component (Appendix D) of this OSRP and Section 7.0, begin to address the needs of special user groups, including the handicapped and elderly, and provide additional facilities and programming to meet their needs.	2008	OSC, PRC, ADA, TP	9-19
40	Inventory the available parking at all town-owned conservation/recreation areas and consider adding additional parking where needed/appropriate.	2008	PRC, DPW, TP, OSC	9-19
41	Sit down together and review in detail the Parks and Recreation Committee's Master Plan.	2008	PRC, OSC	9-19
42	Make recommendations regarding how to improve available information and access to the Town of Hanover's website in terms of open space and recreation to the Town Planner and Town Administrator.	2008	PRC, OSC, CPC	9-20
43	Increase awareness and educate the public about open space, natural resources and trails in the community.	2008	OSC, TP	9-20
44	Formulate a working group within the Open Space Committee with the assistance of the Conservation Commission to create brochures and pamphlets regarding MGL Chapter 61, conservation restrictions, wetlands and invasive species. Inserts with tax mailings may work well.	2008	OSC, TP, CC, BOS	9-20

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45	Conduct an educational campaign regarding wetlands in Hanover.	2008	CC, TP	9-21
46	Increase/improve signage at open space and natural resource areas in Hanover by continuing to work with local volunteers and Scout Troops on such projects.	2008	OSC, CC, TP	9-21
47	Create a historical landscape/historical village self-guided walking tour map. See the Historic Preservation Plan, page 71 for more information.	2008	HC, TP	9-21
48	In support of the recommendation in the Historic Preservation Plan, work with the town and other boards/committees to organize an Annual Volunteer Fair/Day, maybe in coordination with Hanover Day or near Town Meeting. Volunteer activities may be varied, and might include trail maintenance, river clean-up, clean-up along scenic roads etc.	2008	BOS, TA, TP, HC, CC, CPC, OSC, PRC	9-21
49	Invite local citizens and professionals to hold seminars regarding conservation/recreational matters that they are familiar with or interested at Town Hall. Perhaps make it a monthly lecture series.	2008	TP, OSC, PRC	9-22
50	Increase awareness of Scenic Roads in Hanover regarding where they are and why they were designated. Start a multi-pronged media campaign and consider sending an informational letter to every person who lives on a designated Scenic Road in Hanover about the designation.	2008	HC, TP	9-22
Year 2 - 2009				
Action Items 6, 7, 8, 10, 11, 12, 13, 14, 17, 18, 19, 20, 28, 31, 32, 33, 34, 35, 37, 38, 43, 45, 46, 48 and any incomplete regulatory recommendations				
Year 3 - 2010				
Action Items 6, 7, 8, 12, 13, 14, 16, 17, 18, 19, 20, 28, 31, 32, 33, 34, 35, 37, 38, 43, 45, 46, 48 and any incomplete regulatory recommendations.				
Year 4 & 5 – 2011/2012				
Note: See Section 9.0 of the report				

9.2 Five Year Action Plan Summary

YEAR 1 (2008) – PLAN IMPLEMENTATION

MANAGEMENT

GOAL 1: Assign a specific entity to oversee the implementation of the overall Open Space and Recreation Plan and determine the next steps for moving forward.

ACTION ITEMS:

- 1) Formally designate the Town Administrator as the coordinator of the Five Year Action plan. The Open Space Committee and the Parks and Recreation Committee should work closely with the Town Administrator to implement the Open Space and Recreation Plan, with the assistance of the Town Planner.

Responsibility: Town Administrator, Open Space Committee, Parks and Recreation Committee, Town Planner

When: Immediately upon approval of Open Space and Recreation Plan update by the Division of Conservation Services (**Winter 2008**)

Action Item Complete: **Date:** _____

- 2) The Open Space Committee and Parks and Recreation Committee should meet with the Board of Selectmen and Town Administrator to discuss the Open Space and Recreation Plan and its implementation.

Responsibility: Board of Selectmen, Town Administrator, Open Space Committee, Parks and Recreation Committee, Town Planner

When: Immediately upon approval of Open Space and Recreation Plan update by the Division of Conservation Services (**Winter 2008**)

Action Item Complete: **Date:** _____

- 3) The Open Space Committee and Parks and Recreation Committee should develop a checklist of action items to accomplish that will also identify each committee's goals, their organizational responsibilities for the updated Open Space and Recreation Plan (including how they can/will work together) and regarding conservation and recreation programs and activities in the community. In addition, they should meet at least semi-annually and share progress memorandums and have joint meetings when possible.

Responsibility: Open Space Committee, Parks and Recreation Committee,

assistance from Town Planner

When: 2008

Action Item Complete: **Date:** _____

- 4) Consider adding either a full or part-time position to the Planning Department to assist the Town Planner on local planning initiatives and help implement this plan and other projects, or offer an internship to a graduate student.

Responsibility: Town Administrator, Board of Selectmen, Town Planner, Community Preservation Committee

When: 2008

Action Item Complete: **Date:** _____

- 5) Confirm that all commissions, committees, boards and pertinent town staff mentioned in this plan receive a copy of it and understand their role in its implementation.

Responsibility: Town Planner and Secretary, Open Space Committee, Parks and Recreation Committee

When: 2008

Action Item Complete: **Date:** _____

GOAL 2 – Devise and maintain a system for targeting and prioritizing land for future property acquisition.

ACTION ITEMS:

- 6) Update every six months the list of key parcels of land which are of high interest for protection by acquisition or other methods (this specific list has not been included in the OSRP and can be obtained from the OSC or Town Planner). Consider transferring the care and custody to the Conservation Commission of existing open space where possible and add conservation restrictions to as many designated open space parcels as possible.

Responsibility: Open Space Committee, Town Planner, Planning Board, Conservation Commission

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 7) Modify the land acquisition worksheet (located in Section 7.0) as needed to ensure it is an appropriate evaluation tool to use when considering property for protection. In addition, develop a computer database to track parcels of interest and status (this could be something like an Excel Spreadsheet) and update it frequently to monitor key parcels of land which are of high interest for protection by acquisition or other methods.

Responsibility: Open Space Committee, Town Planner

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 8) Identify major open space areas in abutting towns and develop a working relationship with representatives in communities like Rockland, Pembroke, Norwell and Hanson to discuss future projects. Communication needs to be more consistent.

Responsibility: Open Space Committee, Town Planner

When: 2008

Action Item Complete: **Date:** _____

COMMUNITY CHARACTER

GOAL 4 – Collaborate with other committees, organizations and towns regarding open space and recreation projects and initiatives.

ACTION ITEMS:

- 9) Improve the communication and working relationships amongst the Open Space Committee, Parks and Recreation Committee and Community Preservation Committee. Hold a two to four hour working meeting (maybe a Saturday morning) with all three committees facilitated by a third party where goals and agendas of each committee would be stated and brainstorming could be done regarding how to better communicate and work together in the future.

Responsibility: Open Space Committee, Parks and Recreation Committee, Community Preservation Committee, Assistance from Town Planner

When: 2008

Action Item Complete: **Date:** _____

GOAL 3 – Preserve and protect open space and natural areas in Hanover because they provide linkages between the history of the Town and the present conditions.

ACTION ITEMS:

- 10) Work with Pembroke and Norwell to nominate an area surrounding a portion of the North River/Indian Head River as an Area of Critical Environmental Concern. Go to <http://www.mass.gov/dcr/stewardship/acec/aboutMaps.htm> for more nomination information, and see Section 4.0 for more details about the ACEC program. Hire a consultant if necessary to help with the nomination and consider using CPA funds to do so. The nomination should be made by the community.

Responsibility: Conservation Commission, Town Planner, Open Space Committee

When: 2008, Ongoing

Action Item Complete: **Date:** _____

OPEN SPACE AND NATURAL RESOURCES

GOAL 5 – Continue to acquire additional open space.

ACTION ITEMS:

- 11) Develop educational materials about alternative methods used to leave land parcels in their natural state in perpetuity or available for public access as appropriate and a Frequently Asked Questions handout that the Open Space Committee could provide to landowners interested in more information about protecting their property.

Responsibility: Open Space Committee, Assistance from Town Planner, Conservation Commission

When: 2008

Action Item Complete: **Date:** _____

- 12) Research and apply for additional funding sources for the maintenance and upgrading of Hanover's parks, playgrounds and conservation areas (see Section 7.0 for a list of funding sources).

Responsibility: Town Planner, Open Space Committee, Parks and Recreation

When: Committee
2008

Action Item Complete: **Date:** _____

GOAL 6 – Encourage sustainable growth, development and redevelopment consistent with the remaining carrying capacity of Hanover’s natural environment.

ACTION ITEMS:

- 13) At the design/permitting state of developments, discuss the significant natural and fragile resource areas that may pertain to a project with would be developers. Such areas include critical wildlife and plant habitats, water resources and historical, cultural and archaeological areas, scenic roads and views and significant landforms. Encourage projects to take these areas into consideration. Where it makes sense, notify the Open Space Committee and ask for input when needed.

Responsibility: Town Planner, Planning Board, Conservation Commission, Open Space Committee

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 14) Continue to identify and certify vernal pools.

Responsibility: Conservation Commission

When: 2008, Ongoing

Action Item Complete: **Date:** _____

GOAL 7 – Enhance public access to and appropriate use of existing conservation lands; continue to further the greenways initiative and creation/improvement of existing and new trails and monitor permanently protected conservation lands to ensure their character remains unchanged.

ACTION ITEMS:

- 15) Develop a potential list of new trails for development and trails that need maintenance/signage and present the plan to the Town with the support of the Town Planner. Use this trails plan as a guide for projects and to seek out funding sources for passive and active recreation.

Responsibility: Open Space Committee, Town Planner, Parks and Rec Committee
When: 2008

Action Item Complete: **Date:** _____

- 16) If possible, try to inventory natural resources present on conservation lands, and identify the appropriate level and type of public access by developing and maintaining:
- Data base of conservation lands and degree of public access,
 - Management plans to allow public access without harming environmentally sensitive areas, and
 - Rules and regulations pertaining to the use of public lands.

Responsibility: Town Planner, Conservation Commission, Assistance of Volunteers, Parks and Recreation Committee

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 17) Establish a group of volunteers responsible for creating and maintaining trails. This group should include a member of the Conservation Commission, or at a minimum, review placement of new trails in order to avoid impacts to important natural resources, including wetlands and rare species.

Responsibility: Town Planner, Conservation Commission, Open Space Committee, Assistance of Volunteers

When: Ongoing

Action Item Complete: **Date:** _____

- 18) Continue to monitor and promptly remove invasive species from conservation lands before they become a problem and impact native species.

Responsibility: Conservation Commission, Assistance of Volunteers

When: Ongoing

Action Item Complete: **Date:** _____

GOAL 8 – Expand Hanover’s local efforts and work towards taking a regional approach to protecting drinking water and provide long range protection of public drinking water supplies.

ACTION ITEMS:

- 19) Specifically target land surrounding the Water Resource Protection District for protection to act as a buffer to prevent contamination of the water supply.

Responsibility: Open Space Committee, Town Planner

When: Ongoing

Action Item Complete: **Date:** _____

- 20) Contact twice annually representatives in neighboring towns to discuss groundwater and surface water protection and develop a collaborative plan/line of communication for doing so.

Responsibility: Town Planner, Department of Public Works

When: Ongoing

Action Item Complete: **Date:** _____

- 21) Investigate the potential of using another substance besides sand/salt on the roadways during the winter as a way to further protect drinking water.

Responsibility: Conservation Commission, DPW, Board of Selectmen

When: 2008

Action Item Complete: **Date:** _____

- 22) Review the existing system for addressing failing septic systems and identify ways in which it can be approved.

Responsibility: Board of Health, Conservation Commission

When: 2008

Action Item Complete: **Date:** _____

REGULATORY

GOAL 9 - Improve and enhance Open Space and Recreation land within Hanover through regulatory methods.

ACTION ITEMS:

- 23) Establish an Open Space Development Zoning Bylaw (sometimes known as Cluster Subdivision Bylaw). The Town of Hanover currently does not have such a Bylaw.

Responsibility: Town Planner, Planning Board, Board of Selectmen
When: 2008

Action Item Complete: **Date:** _____

- 24) Amend subdivision regulations to maximize amount of open space maintained in proposed developments (should be done in conjunction with the Open Space Development Zoning Bylaw).

Responsibility: Town Planner, Planning Board, Board of Selectmen
When: 2008

Action Item Complete: **Date:** _____

- 25) As also noted in the Historic Preservation Plan, revise the Village Planned Unit Development Bylaw (Section 6.11.0) to *“enhance quality of open space resulting from development. The calculation of required open space within the current VPUD bylaw allows for inclusion of wetlands, floodplains and landscaped areas. This is unlikely to result in substantial land protection that would not otherwise have occurred due to wetlands protection regulations. In order to ensure protection of land that is not otherwise protected, the Town should amend the VPUD bylaw to exclude land that is protected by wetlands regulations from the calculation of required open space. In order to preserve the viability of the bylaw, this amendment may be accompanied by a reduction in the required percentage of open space.”*

Responsibility: Town Planner, Planning Board, Board of Selectmen
When: 2008

Action Item Complete: **Date:** _____

- 26) As also noted in the Historic Preservation Plan, *“revise the Retreat Lot Bylaw (Zoning Sec. 6.030) to require that frontage land remaining upon development is protected as*

open space through permanent conservation restriction or thirty year deed restriction. Although the bylaw requires that the frontage land be left undeveloped, the legal protections for such land will be uncertain in the absence of a recorded deed restriction.”

Responsibility: Town Planner, Planning Board, Board of Selectmen

When: 2008

Action Item Complete: **Date:** _____

- 27) Adopt a Scenic Road Bylaw to formalize the application and review process of projects along designated scenic roads.

Responsibility: Town Planner, Planning Board, Board of Selectmen

When: 2008

Action Item Complete: **Date:** _____

- 28) Develop a proposed plan for adding sidewalks to key roadways in Hanover. These connections should be throughout town to provide walking/biking networks where trails do not or cannot be added to the “Greenway.” More sidewalks in Hanover was identified as a need in the Citizen Survey conducted for this project.

Responsibility: Town Planner, DPW

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 29) Investigate the potential of further utilizing Low Impact Development techniques and/or developing a Low Impact Development Bylaw to help encourage and manage runoff, stormwater and drainage patterns. See http://www.mass.gov/envir/smart_growth_toolkit/pages/mod-lid.html for more information.

Responsibility: Town Planner, Conservation Commission

When: 2008

Action Item Complete: **Date:** _____

RECREATION

GOAL 10 – Enhance, maintains and preserve passive and active recreational opportunities for Hanover residents and visitors of all ages, abilities and interests

ACTION ITEMS:

- 30) Investigate potential sites for a designated recreational programming facility/community center, including specific space for the Parks and Recreation Administrator.

Responsibility: Parks and Recreation Committee, Town Planner, Open Space Committee

When: 2008

Action Item Complete: **Date:** _____

- 31) Continue to focus on trail creation, maintenance and information outreach. Consider developing a trail management plan that utilizes the newly created trails layer and suggested maintenance/management techniques to use at the various sites.

Responsibility: Open Space Committee, Conservation Commission, Town Planner, Parks and Recreation Committee

When: 2008

Action Item Complete: **Date:** _____

- 32) Repair and maintain existing sports fields where necessary (utilize Parks and Recreation Master Plan). A maintenance schedule should be developed.

Responsibility: Parks and Recreation Committee, DPW

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 33) Work with the Town Planner to identify where equestrian trails, walking trails, bicycle trails and water access could be added/improved in the Town of Hanover. Develop a memorandum summarizing the findings, circulate it to all relevant boards and commissions and suggest next steps.

Responsibility: Open Space Committee, Conservation Commission, Parks and Recreation Committee, Town Planner

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 34) When possible, address needs identified in the Statewide Comprehensive Outdoor Recreation Plan. The needs identified were more swimming, road biking, walking, playground and tennis facilities in Hanover. Consider including these elements when moving forward with new projects or updating existing sites.

Responsibility: Town Planner, Open Space Committee, Parks and Recreation Committee

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 35) Continue to map and mark existing walking trails and access points to the trails in Hanover. Consider preparing a more formal walking trail map, similar to that of the Town of Needham (one Open Space Committee member should investigate Needham's work and report back). Once everything is mapped, visit the map annually and update it.

Responsibility: Open Space Committee, Town Planner

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 36) Investigate in detail the potential of creating small, local parks in various areas of Town where there are currently no amenities available, particularly in the northern part of town on Town-owned land.

Responsibility: Parks and Recreation Committee, Town Planner

When: 2008

Action Item Complete: **Date:** _____

- 37) Review the inventory in Section 5.0 of this plan annually and update it so as to maintain its accuracy.

Responsibility: Open Space Committee, Town Planner

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 38) Inventory all recreational programming provided in the Town of Hanover, including what is provided by the HYAA and update the inventory annually.

Responsibility: Parks and Recreation Committee, Parks and Recreation Director, HYAA

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 39) Utilizing the ADA Component of this OSRP (Appendix D) and Section 7.0, begin to address the needs of special user groups, including the handicapped and elderly, and provide additional facilities and programming to meet their needs.

Responsibility: Open Space Committee, Parks and Recreation Committee, ADA Coordinator, Town Planner

When: 2008

Action Item Complete: **Date:** _____

- 40) Inventory the available parking at all town-owned conservation/recreation areas and consider adding additional parking where needed/appropriate.

Responsibility: Parks and Recreation Committee, DPW, Town Planner, Open Space Committee

When: 2008

Action Item Complete: **Date:** _____

- 41) Sit down together and review in detail the Parks and Recreation Committee's Master Plan.

Responsibility: Parks and Recreation Committee, Open Space Committee

When: 2008

Action Item Complete: **Date:** _____

EDUCATION

GOAL 11 – Provide materials and educate Hanover residents on conservation, recreation and land use issues in the community.

GOAL 12 – Improve public awareness and public access regarding Hanover’s Open Space and Recreation assets.

ACTION ITEMS:

- 42) Make recommendations regarding how to improve available information and access to the Town of Hanover’s website in terms of open space and recreation to the Town Planner and Town Administrator.

Responsibility: Parks and Recreation Committee, Open Space Committee, Community Preservation Committee

When: 2008

Action Item Complete: **Date:** _____

- 43) Increase awareness and educate the public about open space, natural resources and trails in the community. Use a multi-pronged that includes but is not limited to: frequent newspaper articles, participation in local community events such as Hanover Day, mailings, emails, prepare a map for distribution (similar to the 1999 trails map) and send informational letters home with children from school. Collaborate with other committees to keep them informed and ask for their assistance as well.

Responsibility: Open Space Committee, Town Planner

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 44) Formulate a working group within the Open Space Committee with the assistance of the Conservation Commission to create brochures and pamphlets regarding MGL Chapter 61, conservation restrictions, wetlands and invasive species. Inserts in tax mailings work well.

Responsibility: Open Space Committee, Town Planner, Conservation Commission, Board of Selectmen

When: 2008

Action Item Complete: **Date:** _____

- 45) Conduct an educational campaign regarding wetlands in Hanover. Focus on making information available regarding what is a wetland, what can/can't be done in a wetland resource area, what the local and state regulations are and where to go for more information. Newspaper articles, mailings and information on the town website would be helpful.

Responsibility: Conservation Commission, Town Planner

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 46) Increase/improve signage at open space and natural resource areas in Hanover by continuing to work with local volunteers and Scout Troops on such projects.

Responsibility: Open Space Committee, Town Planner, Conservation Commission

When: 2008, Ongoing

Action Item Complete: **Date:** _____

- 47) Create a historical landscape/historical village self-guided walking tour map. See the Historic Preservation Plan, page 71 for more information.

Responsibility: Historical Commission, Town Planner

When: 2008

Action Item Complete: **Date:** _____

- 48) In support of the recommendation in the Historic Preservation Plan, work with the town and other boards/committees to organize an Annual Volunteer Fair/Day, maybe in coordination with Hanover Day or near Town Meeting. Volunteer activities may be varied, and might include trail maintenance, river clean-up, clean-up along scenic roads etc.

Responsibility: Board of Selectmen, Town Administrator, Town Planner, Historical Commission, Conservation Commission, Community Preservation Committee, Parks and Recreation Committee, Open Space Committee

When: 2008

Action Item Complete: **Date:** _____

- 49) Invite local citizens and professionals to hold seminars regarding conservation/recreational matters that they are familiar with or interested at Town Hall. Perhaps make it a monthly lecture series.

Responsibility: Town Planner, Open Space Committee, Parks and Recreation Committee

When: 2008

Action Item Complete: **Date:** _____

- 50) Increase awareness of Scenic Roads in Hanover regarding where they are and why they were designated. Start a multi-pronged media campaign and consider sending an informational letter to every person who lives on a designated Scenic Road in Hanover about the designation.

Responsibility: Historical Commission, Town Planner

When: 2008

Action Item Complete: **Date:** _____

Year 2 (2009) - Plan Implementation

In year two, implementation of this plan should be focused on continuing the following action items:

- 6, 7, 8, 10, 11, 12, 13, 14, 17, 18, 19, 20, 28, 31, 32, 33, 34, 35, 37, 38, 43, 45, 46, 48 and any incomplete regulatory recommendations.

Year 3 (2010) - Plan Implementation

In year three, implementation of this plan should be focused on continuing the following action items:

- 6, 7, 8, 12, 13, 14, 16, 17, 18, 19, 20, 28, 31, 32, 33, 34, 35, 37, 38, 43, 45, 46, 48 and any incomplete regulatory recommendations.

Year 4 & 5 (2011-2012) - Plan Implementation

In year three, implementation of this plan should be focused on continuing the following action items:

- 6, 7, 8, 12, 13, 14, 16, 17, 18, 19, 20, 28, 31, 32, 33, 34, 35, 37, 38, 43, 45, 46, 48 and any incompleting regulatory recommendations.

In addition, in Year 5 (2012), other things to think about are to:

- Review all action items for years 1 through 4 and determine what has and has not been done. Evaluate how complete each action item is and take the necessary steps to plan for how to go about specifically addressing the action item,
- Take stock of the five years in which this plan will be active and note what worked well and what did not during implementation, and make note of what to do differently,
- Work with the Town Planner to bring the process of the Open Space and Recreation Plan update before the current one expires so that ideally, the plans will overlap and there will be no gap in a valid, state approved plan.

Section 10.0
Public Comments

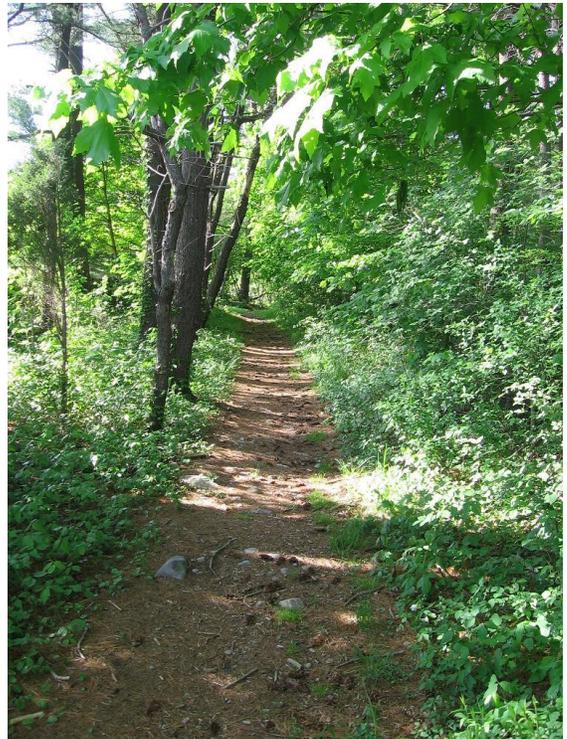


Photo by Mary McCrann, Merry Property Trail

10.0 PUBLIC COMMENTS



Open Space Committee
Town Hall
Hanover, MA 02339

January 14, 2008

Ms. Melissa Cryan
Division of Conservation Services
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

Dear Ms. Cryan,

This letter is written in support of the draft Open Space and Recreation Plan for the Town of Hanover being submitted by Mary C. McCrann, Senior Planner at Beals and Thomas, Inc.

Mary McCrann, and other staff members at Beals and Thomas, Inc., have been working with our committee, and with many other boards and officials in the Town of Hanover, since April 2007. The process has been thoughtful, thorough and inclusive. We have reviewed the existing 1997 Open Space and Recreation Plan, updated its contents, maps, and goals, and worked on a strategic plan for the next five years. A number of public forums have been conducted, along with a town survey, and much input has been received from Hanover's citizens. We have also received an education ourselves in planning techniques and resources available to us to help us protect and enhance Open Space in the town.

The most important part of our plan will be implementation. Beals and Thomas has helped us list and prioritize action items which we are committed to working on. We hope to make substantial progress on this in the next few years.

We have been very pleased with the work done on our Open Space and Recreation Plan, and are proud of the results. We have found the process extremely valuable to our Committee, and to the Town of Hanover. We hope you will approve this Plan.

Sincerely,

Mary Dunn and Hal Thomas
Co-Chairs
Hanover Open Space Committee



**PLANNING BOARD
TOWN OF HANOVER
MASSACHUSETTS**

January 11th, 2008

Melissa Cryan
Division of Conservation Services
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

Re: Hanover Open Space & Recreation Plan – Letter of Support for DCS Review

Dear Ms. Cryan:

At its regular meeting of January 7th, 2008, the Hanover Planning Board voted to offer full support and endorsement of the 2008 Open Space and Recreation Plan prepared by Beals & Thomas, Inc. for the Hanover Open Space Committee and the Town of Hanover. This plan was created with administrative funds from the Hanover Community Preservation Committee so that expenditures on future open space acquisitions and projects would be based on a full analysis of the needs, resources, and priorities of the town.

The plan is very informative, well organized, and clear in stating the goals for the Town of Hanover. In addition, the Board would like to note the addition through this plan of a more accurate map of Hanover's Open Space and developable lands, created with the use of Hanover's Geographic Information System. The new open space layer will be shared with MassGIS and both this layer and the layer depicting lands suitable for remaining development (buildout) will assist the Open Space Committee, Community Preservation Committee and Conservation Commission in pursuing the priority open space acquisitions. Enclosed herein for your reference are simple printouts of these two maps now available in our GIS system.

We offer our full endorsement of the 2008 Open Space and Recreation Plan and hope that the Division of Conservation Services (DCS) will look favorably upon the Town's request for plan approval and future funding for implementation.

If you have any further questions, please contact me at your convenience at (781) 826-7641.

For the Hanover Planning Board,



Andrew R. Port, AICP
TOWN PLANNER

CC: Mary C. McCrann, Beals & Thomas, Inc., Consultant



TOWN OF HANOVER
550 HANOVER STREET, SUITE 29
HANOVER, MASSACHUSETTS 02339
(781) 826-2261 (781) 826-5010

Board of Selectmen

February 12, 2008

Ms. Melissa Cryan
Division of Conservation Services
Executive Office of Energy and Environmental Affairs
100 Cambridge Street – 9th Floor
Boston, Massachusetts 02114

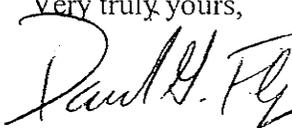
Dear Ms. Cryan:

At the January 22, 2008 meeting of the Board of Selectmen the Board met with members of the Open Space Committee to discuss the Open Space and Recreation Plan 2008-2012 presented by Beals and Thomas, Inc.

Please be advised, at a regular meeting of the Board of Selectmen, held on February 12, 2008, the Board voted to accept the "Open Space and Recreation Plan 2008-2012" presented by Beals and Thomas, Inc. with the condition that each action item is subject to the approval of the Board of Selectmen prior to any action being taken.

If you have any questions regarding this matter please do not hesitate to call.

Very truly yours,


David G. Flynn, Chairman
Board of Selectmen


Daniel A. Pallotta
Selectman


R. Alan Rugman
Selectman

xc: Mary C. McCrann



HANOVER CONSERVATION COMMISSION
TOWN HALL
HANOVER, MASSACHUSETTS 02339
Phone: (781) 826-6505
Fax: (781) 826-5950

January 17th, 2008

Melissa Cryan
Division of Conservation Services
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

Re: Hanover Open Space & Recreation Plan – Letter of Support for DCS Review

Dear Ms. Cryan:

At the January 16th, 2008 meeting of the Hanover Conservation Commission it was voted to endorse the 2008 Open Space and Recreation Plan prepared by Beals & Thomas, Inc. for the Hanover Open Space Committee. The Conservation Commission has been actively involved in the creation of this plan and will continue to work with the Open Space Committee during the implementation phase. The Commission feels that the important natural resource areas have been accurately described, remaining open space areas have been identified and prioritized, and that a comprehensive plan has been developed to protect and acquire open space parcels in Hanover.

We fully support this Open Space Plan and we look forward to working with DCS, our Community Preservation Committee, the Hanover Planning Board, and other stakeholders in Hanover to carry out this plan.

If you would like to contact the Hanover Conservation Committee to follow-up on this letter of support, we can be reached at 781-826-6505 or conservation@Hanover-MA.gov.

Sincerely,

Patrick Gallivan
Patrick Gallivan
Conservation Agent – Town of Hanover

CC: Mary C. McCrann, Beals & Thomas, Inc., Consultant
Andrew Port – Hanover Town Planner
Hanover Open Space Committee



TOWN OF HANOVER Parks and Recreation

550 Hanover Street • Hanover, MA 02339
Tel: 781-826-7529 • Fax: 781-826-5950

Melissa Cryan
Division of Conservation Services
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

January 31, 2008

The Hanover Parks and Recreation Committee supports the Town of Hanover's Open Space and Recreation Master Plan. The Committee has worked cooperatively with Open Space to share concerns and information in order to facilitate a plan that meets both the active and passive recreational needs of all the citizens of the town.

The Parks and Recreation is continuing the process it began last year of providing the town a comprehensive Parks and Recreation Master Plan. That process included multiple meetings with residents of all ages, including members of the Open Space Committee, to gather input as to what types of actions may be necessary to make improvements to the fields and facilities under the jurisdiction of Parks and Recreation. Both of our committees invited residents to complete a comprehensive survey of the future of recreation and open space in our community.

Together, due to the diligence and hard work of our two boards, these two plans offer a vision for the future that will provide untold benefits and address the need for both specific types of recreational programs and the desire to preserve the beautiful open spaces throughout town. We strongly believe that the town of Hanover should embrace these combined plans and take the necessary next steps forward.

The Town is rapidly growing. Parks and Recreation must address several concerns. The lack of a full time Parks and Recreation Director and Department decreases our ability to properly manage this new growth. With expanded fields and facilities it will be necessary to have a full time department to oversee our programs. We are very fortunate to have the endorsement of the Community Preservation Committee for the funding of our initial phase to develop a portion of the King Street parcel into much needed playing fields. The planned development of this parcel makes the establishment of a full time director even more imperative.

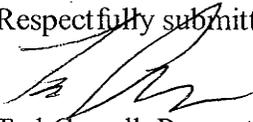
The benefits to residents of a town-supported Parks and Recreation Department are not just measured by the number of participants. Recreation has enormous rewards that

include personal, social, economic and environmental benefits that will provide immeasurable yield for people of all ages.

Passive recreation is a vital part of any community and preserving open space, and protecting habitat, wildlife and the town's natural resources should be of utmost concern. The committee would like to see the town aggressively pursue the installation of sidewalks to encourage walking and safe travel for residents of this town to pursue recreational opportunities. Furthermore all open space and recreation properties should be ADA accessible.

In conclusion, the Open Space plan has effectively focused on the passive recreation plans for the town. The Parks and Recreation asks that the Recreation Master Plan which focuses on active recreation be cross referenced and the plans are included in the appendix.

Respectfully submitted,



Ted Carroll, Recreation Administrator
Hanover Parks and Recreation Committee



Metropolitan Area Planning Council

60 Temple Place, Boston, Massachusetts 02111 617-451-2770 fax 617-482-7185 www.mapc.org

Serving 101 cities and towns in metropolitan Boston

January 17, 2008

Mary C. McCrann
Senior Environmental Planner
Beals and Thomas, Inc.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772

RE: Town of Hanover Open Space and Recreation Plan 2008-2012

Dear Ms. McCrann:

The Metropolitan Area Planning Council has reviewed the Town of Hanover Open Space and Recreation Plan 2008-2012. The plan is well-written and thorough. It includes an excellent discussion of regional open space resources as well as reference to both MAPC regional development plans: MetroPlan and MetroFuture. The implementation check list that is included with the Five Year Action Plan is an innovative feature that I have not seen in other plans.

I was pleased to see that one of the action items involved coordination with abutting towns including Rockland, Pembroke, Norwell and Hanson. However, there was no reference to Hanover's membership in the South Shore Coalition. The South Shore Coalition is one of eight MAPC subregions and it consists of 13 communities that meet monthly to discuss issues of common concern. The Coalition could provide a forum for facilitating inter-community dialog on open space issues.

Thank you for the opportunity to review this plan.

Sincerely,



Marc D. Draisen
Executive Director

Cc: Andrew Port, MAPC Representative, Town of Hanover

Richard A. Dimino, *President*

Gordon Feltman, *Vice President*

Grace S. Shepard, *Treasurer*

Jay Ash, *Secretary*

Marc D. Draisen, *Executive Director*

Section 11.0 References



Photo by Mary McCrann, the Bandstand

11.0 REFERENCES

All references used to update Hanover's Open Space and Recreation Plan have been noted within the document as footnotes.

APPENDICES

- Appendix A** – Maps
- Appendix B** – Historical Sites Listing
- Appendix C** – Public Participation Documentation
- Appendix D** – ADA Study
- Appendix E** – Supporting Documentation

Appendix A Maps

Figure 1: Zoning Map

Figure 2: Soil Features Map

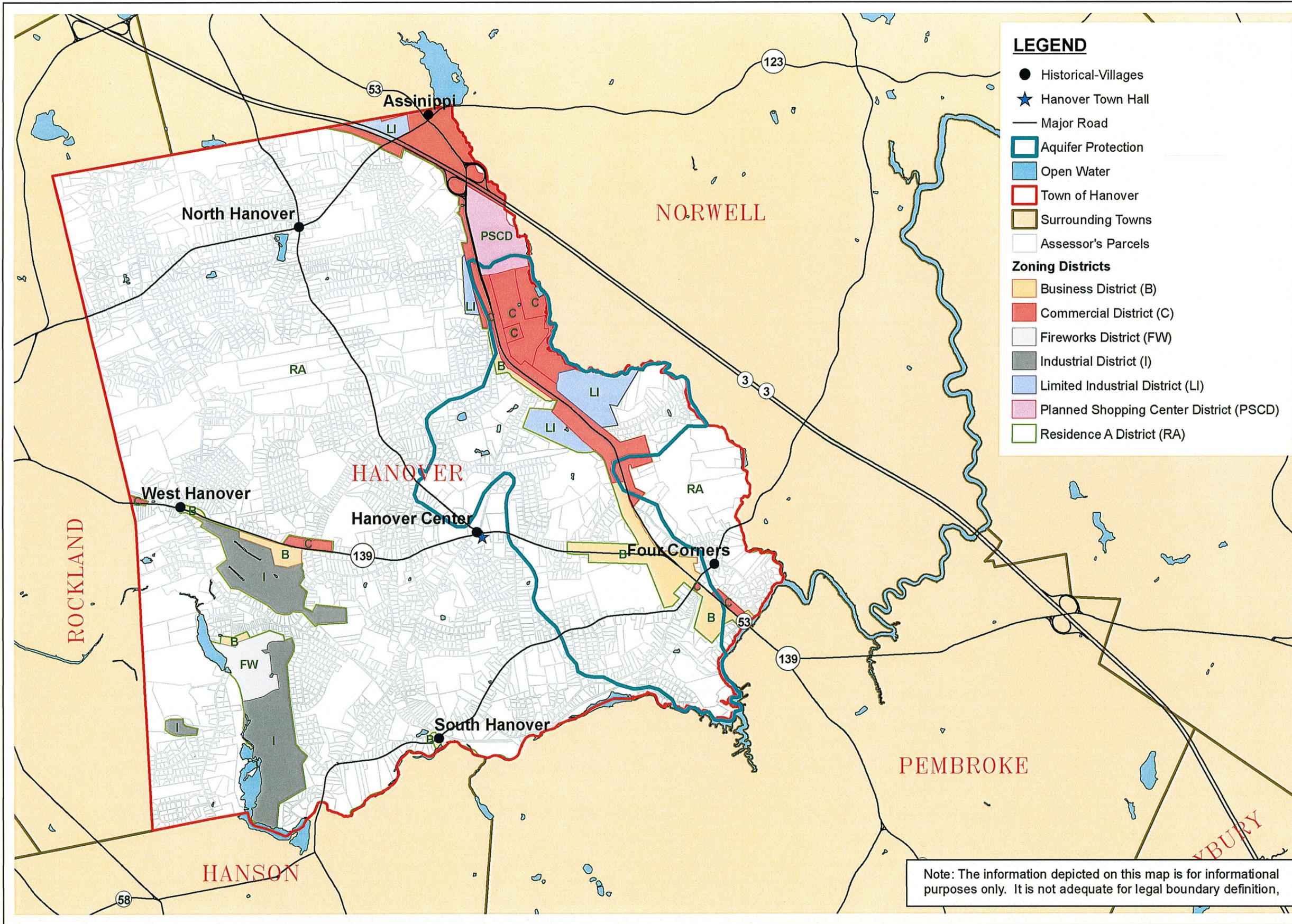
Figure 3: Water Resources Map

Figure 4: Plant and Wildlife Habitat

Figure 5: Scenic Resources and Unique Environments

Figure 6: Inventory of Open Space Map

Figure 7: Five-Year Action Plan Map



LEGEND

- Historical-Villages
- ★ Hanover Town Hall
- Major Road
- Aquifer Protection
- Open Water
- Town of Hanover
- Surrounding Towns
- Assessor's Parcels

Zoning Districts

- Business District (B)
- Commercial District (C)
- Fireworks District (FW)
- Industrial District (I)
- Limited Industrial District (LI)
- Planned Shopping Center District (PSCD)
- Residence A District (RA)

Note: The information depicted on this map is for informational purposes only. It is not adequate for legal boundary definition,

Zoning Map
Figure 1

Scale: 1"=3,000'

Date: 01/02/2008

Source File 1256F013A-001

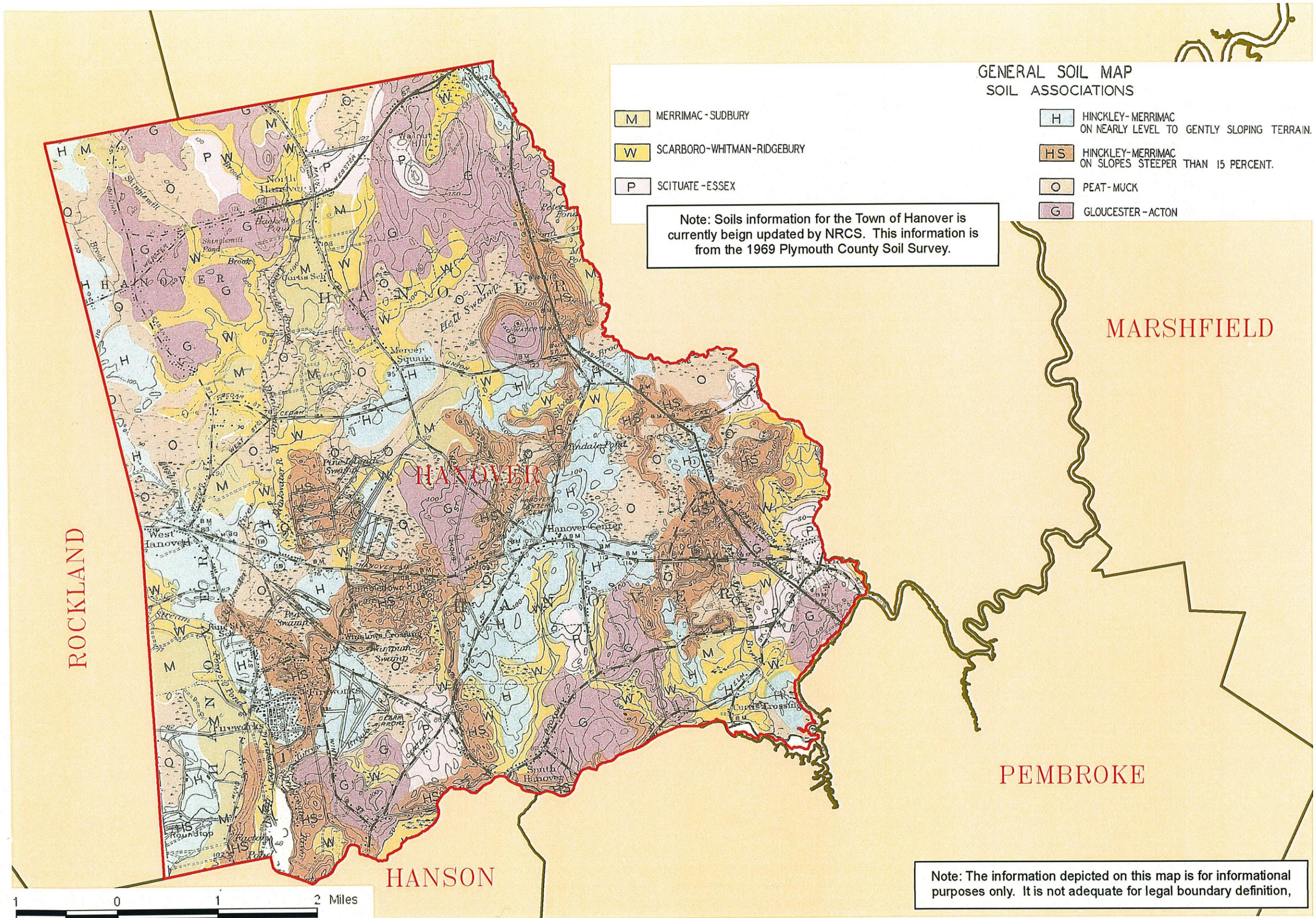
ETI Project No. 1256.01

Open Space and Recreation Plan
Hanover, Massachusetts

Town of Hanover
Town Hall
550 Hanover Street
Hanover, Massachusetts

North Arrow

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GENERAL SOIL MAP
SOIL ASSOCIATIONS

- M MERRIMAC - SUDBURY
- W SCARBORO-WHITMAN-RIDGEBURY
- P SCITUATE - ESSEX
- H HINCKLEY-MERRIMAC ON NEARLY LEVEL TO GENTLY SLOPING TERRAIN.
- HS HINCKLEY-MERRIMAC ON SLOPES STEEPER THAN 15 PERCENT.
- O PEAT-MUCK
- G GLOUCESTER - ACTON

Note: Soils information for the Town of Hanover is currently being updated by NRCS. This information is from the 1969 Plymouth County Soil Survey.

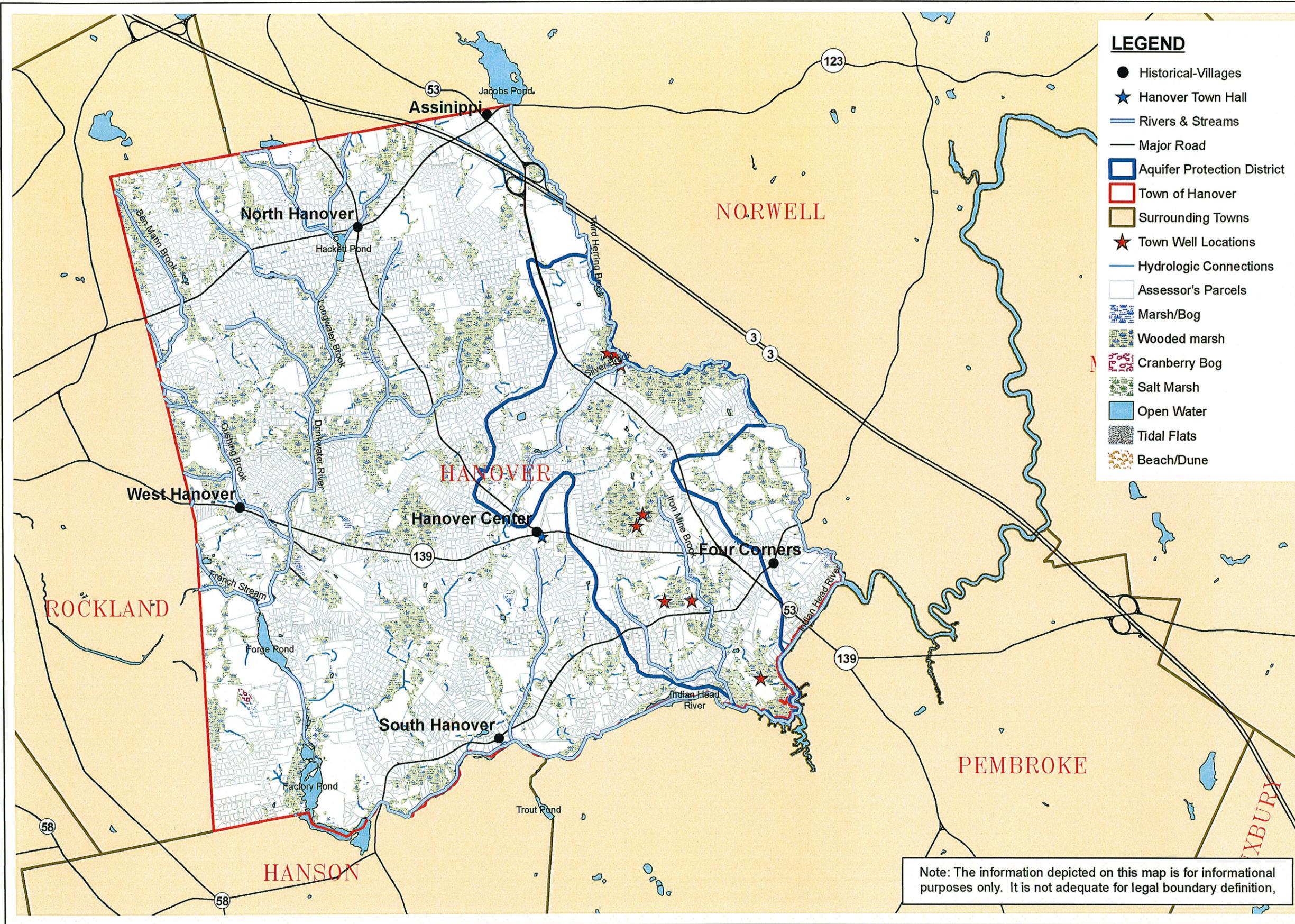
Note: The information depicted on this map is for informational purposes only. It is not adequate for legal boundary definition,

Soil Features Map
Figure 2
Scale: 1"=3,000'
Date: 1/02/2008
Source File 1256P014A-001
BTI Project No. 1256.01

Open Space and Recreation Plan
Hanover, Massachusetts
Town of Hanover
Town Hall
550 Hanover Street
Hanover, Massachusetts

North Arrow

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LEGEND

- Historical-Villages
- ★ Hanover Town Hall
- Rivers & Streams
- Major Road
- Aquifer Protection District
- Town of Hanover
- Surrounding Towns
- ★ Town Well Locations
- Hydrologic Connections
- Assessor's Parcels
- ▨ Marsh/Bog
- ▨ Wooded marsh
- ▨ Cranberry Bog
- ▨ Salt Marsh
- ▨ Open Water
- ▨ Tidal Flats
- ▨ Beach/Dune

Water Resources Map
Figure 3

Scale: 1"=3,000'

Date: 01/02/2008

Source File 1256P011A-001
BTI Project No. 1256.01

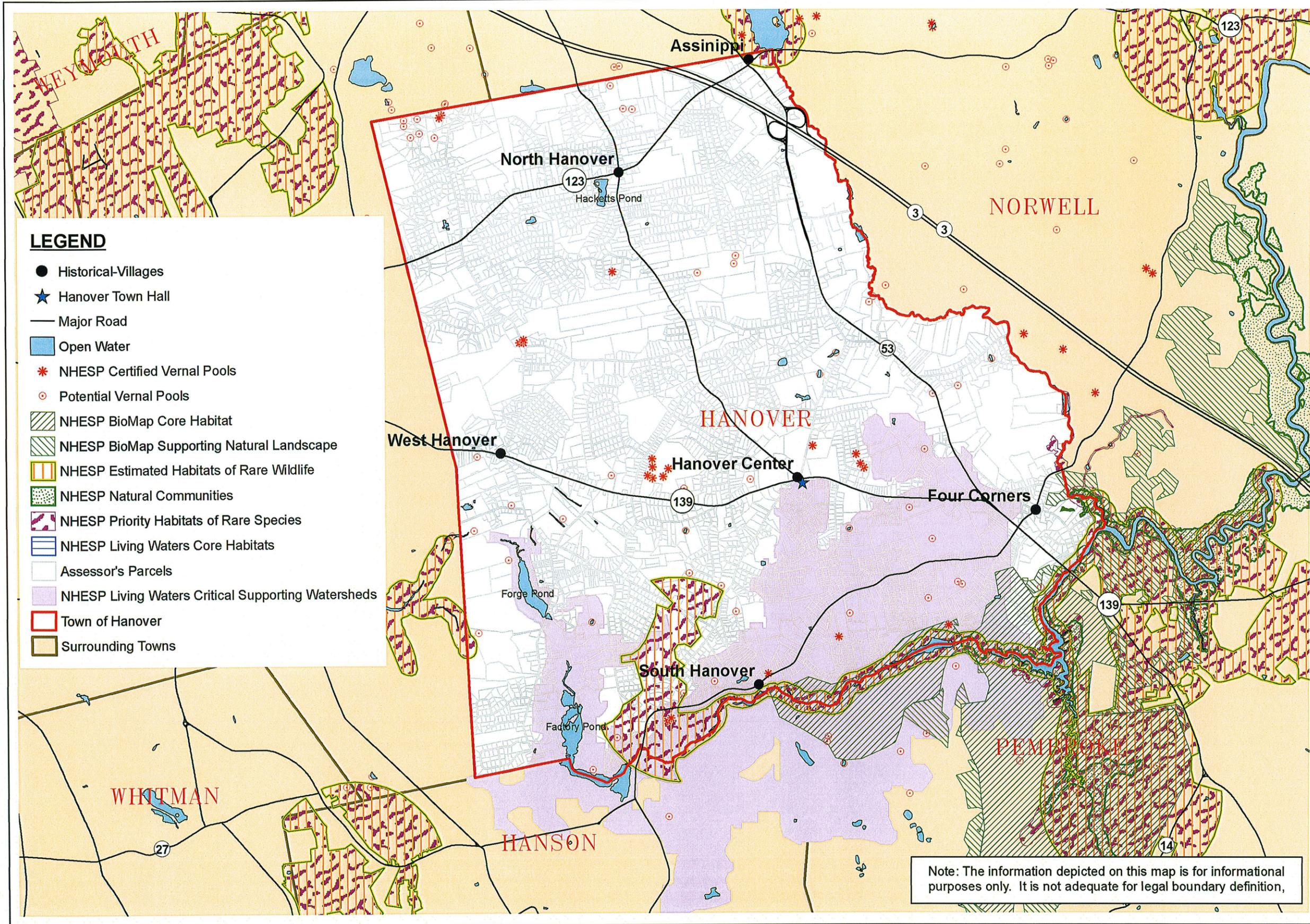
Open Space and Recreation Plan
Hanover, Massachusetts

Town of Hanover
Town Hall
550 Hanover Street
Hanover, Massachusetts

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LEGEND

- Historical-Villages
- ★ Hanover Town Hall
- Major Road
- Open Water
- * NHESP Certified Vernal Pools
- Potential Vernal Pools
- ▨ NHESP BioMap Core Habitat
- ▧ NHESP BioMap Supporting Natural Landscape
- ▩ NHESP Estimated Habitats of Rare Wildlife
- ▤ NHESP Natural Communities
- ▥ NHESP Priority Habitats of Rare Species
- ▦ NHESP Living Waters Core Habitats
- Assessor's Parcels
- NHESP Living Waters Critical Supporting Watersheds
- ▭ Town of Hanover
- ▭ Surrounding Towns

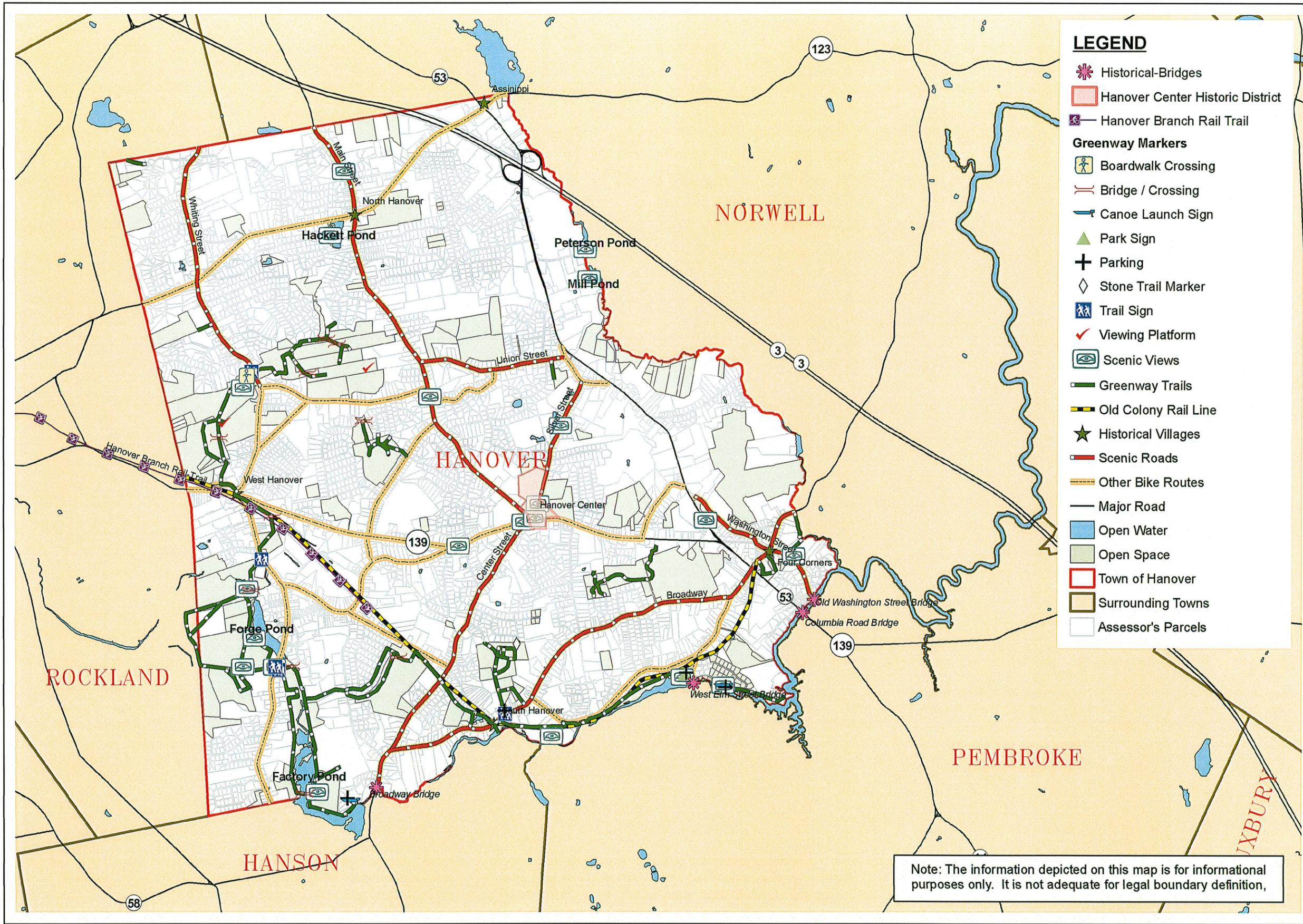
Plant and Wildlife Habitat
 Figure 4
 Scale: 1"=3,000'
 Date: 01/02/2008
 Source File 1256P010A-001
 BTI Project No. 1256.01

Open Space and Recreation Plan
 Hanover, Massachusetts
 Town of Hanover
 Town Hall
 550 Hanover Street
 Hanover, Massachusetts

North Arrow

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LEGEND

- Historical-Bridges
- Hanover Center Historic District
- Hanover Branch Rail Trail
- Greenway Markers**
- Boardwalk Crossing
- Bridge / Crossing
- Canoe Launch Sign
- Park Sign
- Parking
- Stone Trail Marker
- Trail Sign
- Viewing Platform
- Scenic Views
- Greenway Trails
- Old Colony Rail Line
- Historical Villages
- Scenic Roads
- Other Bike Routes
- Major Road
- Open Water
- Open Space
- Town of Hanover
- Surrounding Towns
- Assessor's Parcels

Scenic Resources and Unique Environments
Figure 5

Date: 01/02/2008

Scale: 1"=3,000'

Source File 1256P009A-001
BTI Project No. 1256.01

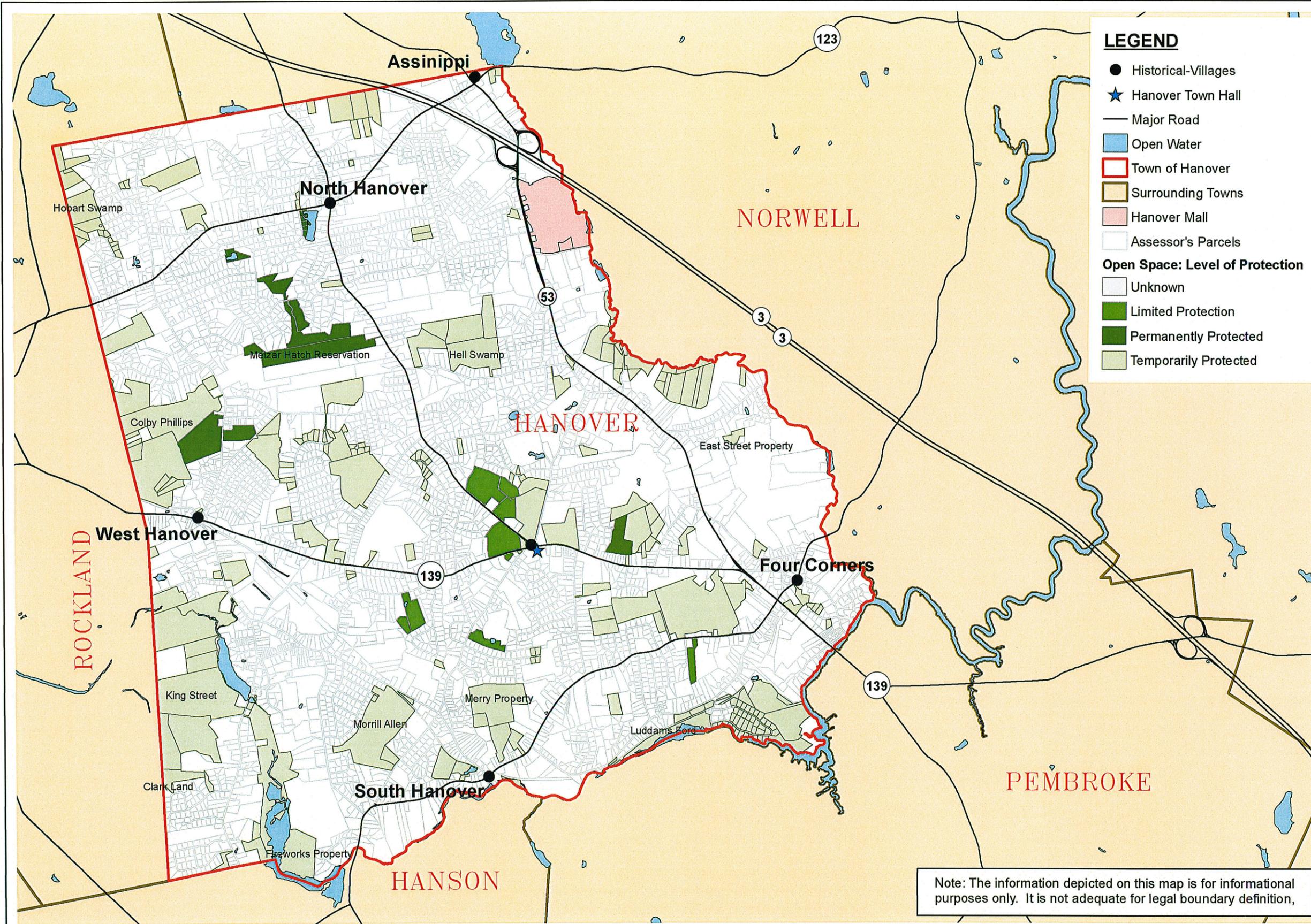
Open Space and Recreation Plan
Hanover, Massachusetts

Town of Hanover
Town Hall
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Hanover, Massachusetts

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LEGEND

- Historical-Villages
- ★ Hanover Town Hall
- Major Road
- Open Water
- Town of Hanover
- Surrounding Towns
- Hanover Mall
- Assessor's Parcels

Open Space: Level of Protection

- Unknown
- Limited Protection
- Permanently Protected
- Temporarily Protected

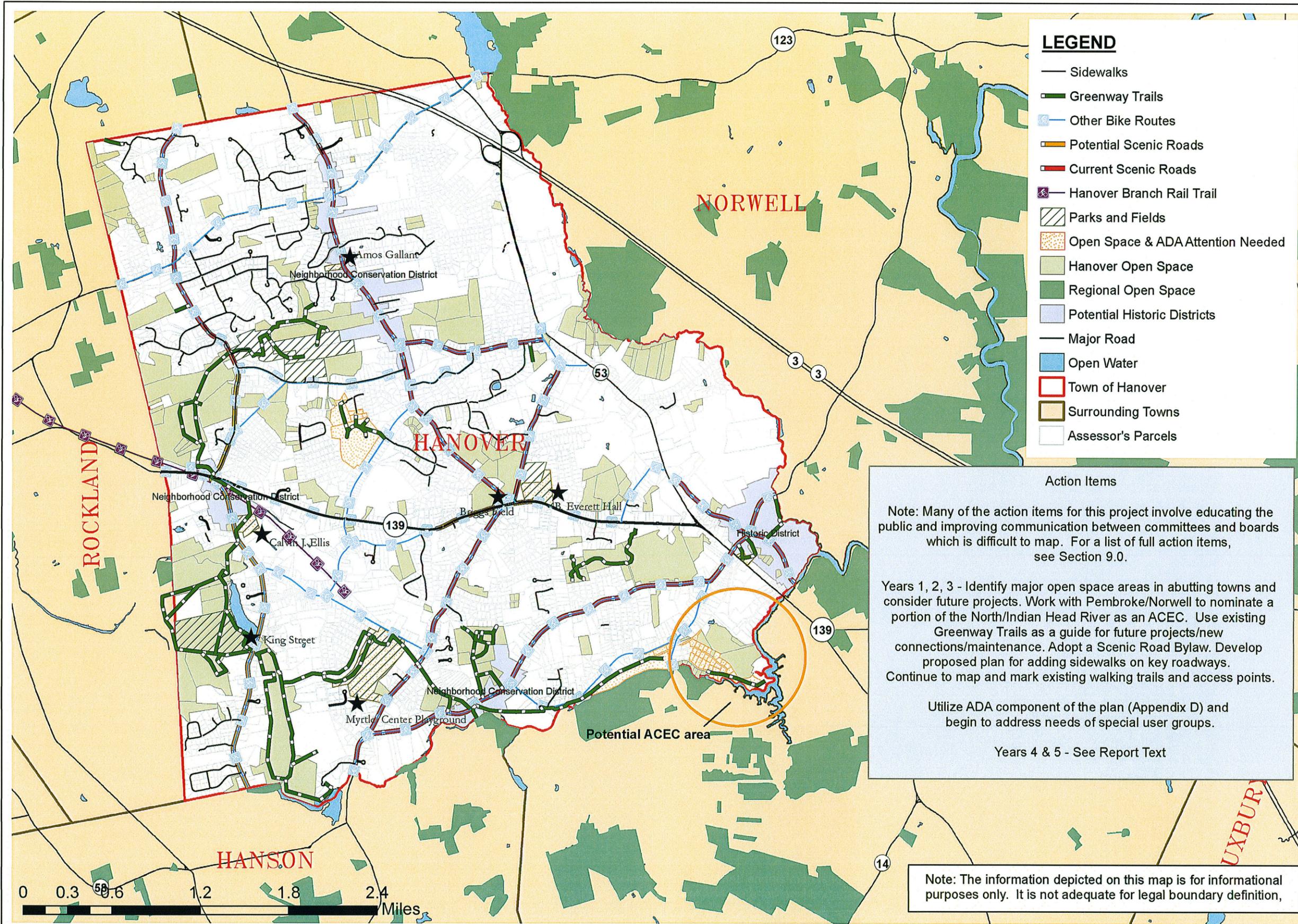
Inventory of Open Space Map
 Figure 6
 Scale: 1"=3,000'
 Date: 01/02/2008
 Source File 1256P008A-001
 BTI Project No. 1256.01

Open Space and Recreation Plan
 Hanover, Massachusetts
 Town of Hanover
 Town Hall
 550 Hanover Street
 Hanover, Massachusetts

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Note: The information depicted on this map is for informational purposes only. It is not adequate for legal boundary definition,



LEGEND

- Sidewalks
- Greenway Trails
- Other Bike Routes
- Potential Scenic Roads
- Current Scenic Roads
- Hanover Branch Rail Trail
- ▨ Parks and Fields
- ▨ Open Space & ADA Attention Needed
- ▨ Hanover Open Space
- ▨ Regional Open Space
- ▨ Potential Historic Districts
- Major Road
- Open Water
- ▭ Town of Hanover
- ▭ Surrounding Towns
- ▭ Assessor's Parcels

Action Items

Note: Many of the action items for this project involve educating the public and improving communication between committees and boards which is difficult to map. For a list of full action items, see Section 9.0.

Years 1, 2, 3 - Identify major open space areas in abutting towns and consider future projects. Work with Pembroke/Norwell to nominate a portion of the North/Indian Head River as an ACEC. Use existing Greenway Trails as a guide for future projects/new connections/maintenance. Adopt a Scenic Road Bylaw. Develop proposed plan for adding sidewalks on key roadways. Continue to map and mark existing walking trails and access points.

Utilize ADA component of the plan (Appendix D) and begin to address needs of special user groups.

Years 4 & 5 - See Report Text

Note: The information depicted on this map is for informational purposes only. It is not adequate for legal boundary definition,

Five-Year Action Plan Map
Figure 7

Scale: 1"=3,000' Date: 01/23/2008

Source File 1256P015A-001
BTT Project No. 1256.01

Open Space and Recreation Plan
Hanover, Massachusetts

Town of Hanover
Town Hall
550 Hanover Street
Hanover, Massachusetts

North Arrow



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Appendix B
Historical Sites Listing

ID	Resource Name	Notes	Structure Type	Street Number	Address	Parcel Id	MACRIS ID	MACRIS Decimal	No. on Map	Year†	Year as listed on MACRIS	List or Destroyed?	Genealogical information appears complete/ accurate	Historic	
001			House		Assinippi Ave			1		1716 (1)	1709			Y	
002			Building		Assinippi Ave			227		1863 (1)	1759			Y	
003			House		Assinippi Ave			258		1907 (1)	1750			Y	
004	Booney, Percy Blacksmith Shop		Blacksmith Shop	26	Broadway			385						Y	
005	Burton, Henry		House	23	Broadway	50-001		368		1870	1870			Y	
006	Mr. A Burston		House	31	Broadway	50-002		367		1869	1865			Y	
007	Laphan, Eliza		House	53	Broadway	49-004		202	192	1870	1865			Y	
008	Clark House (Bdacher)		House	60	Broadway	58-004		201	191	1771	1771			Y	
009	Bates, Joseph		House	87	Broadway	57-013		204	194	1820	1809			Y	
010	Bed	Site of Garrison House	House	88	Broadway	57-066		200	19	1910	1900			Y	
011	Sylvester, Robert		House	93	Broadway	57-012		359		1857	1860			Y	
012	Gleason, Charles		House	96	Broadway	57-095		195	189	1909	1909			Y	
013	****		House	104	Broadway	57-004		371						Y	
014	****		House	107	Broadway	57-011		370						Y	
015	Masonic Lodge		Masonic Lodge	133	Broadway	57-009		372		c 1900	1890			Y	
016	Wilder, Isaac		House	155	Broadway	57-064		207	197	c 1800	1790			Y	
017	Turner, Daniel		House	168	Broadway	57-104		208	158	1693	1693			Y	
018			House	171	Broadway	57-063		381			1890			Y	
019	Duffley, Robert		House	178	Broadway	57-073		209	199	1853	1853			Y	
020			House	193	Broadway	57-099		383			1840			Y	
021	Hanover Fire Company No 5		Fire Station	207	Broadway	57-057		384		1905	1910			Y	
022	Peterson, Charles		House	208	Broadway	57-079		219		1890(80y)	1870			Y	
023			House	231	Broadway			211			1810			Y	
024	Original Broad Oak School		School	254	Broadway	57-094				c 1853				Y	
025	Honey, S&S B		House	255	Broadway	57-059		388			1844			Y	
026	Broad Oak Farm		House	336	Broadway	65-071		173		1797	1760			Y	
027			House	371	Broadway			323			1775			Y	
028	Sylvester, Anthony		House	411	Broadway	65-069		348	122	1812	1805		y	Y	
029	Holz, Abel		House	420	Broadway	64-013		347		1820	1820			Y	
030	Bates, Thomas O		House	427	Broadway	64-005		171	121	c 1836	1830		n	Y	
031	Sampson, Ota		House	440	Broadway	64-097		345	119	c 1833	1830		n	Y	
032	William Hagedy/ Hady	May be builder or later owner or occupant Spelling of last name uncertain	House	489	Broadway	64-011			118				n	Y	
033	Stenson, Benjamin		House	519	Broadway	64-070		170	117	pre 1765	1765		y	Y	
034	Hosdy, Joseph		House	607	Broadway	64-001		169	116	1726	1726		y	Y	
035	Merritt, Thomas		House	673	Broadway	63-051		168		1722	1722		y	Y	
036	Buck, Isaac		House	741	Broadway	63-083		167		1720	1720		y	Y	
037	Saint Mary's Catholic Church		Church	758	Broadway	63-016		344		1882	1880			Y	
038	Sylvester, Elijah	?? Nathaniel "Builder" Sylvester??	House	839	Broadway	63-015		161	112		1791			Y	
039	Thomas Taden		House	854	Broadway	71-009		343		c 1874	1860			Y	
040	Sylvester, Elijah W		House	861	Broadway	71-017-A		342		not on 1849 map	soon after 1850	1860		y	Y
041	Sylvester, J	Joseph Bdcher Sylvester	House	887	Broadway	71-019		160	111	1818	1818		n	Y	
042	Sylvester, Jod		House	947	Broadway	71-021		159		1812	1810			Y	
043	Rose, Laban Jr.		House	956	Broadway	71-012		341	108	1850	1840		n	Y	
044	Rose, Timothy	(Rose probably built the house)	House	967	Broadway	71-022		158			1780		n	Y	
045	Stockbridge, Lebbous		House	994	Broadway	71-015		156			1840			Y	

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046	Cosden, Thomas		House	1003	Broadway	70-025		157	105	1732	1740			Y
047				1010	Broadway	71-026		155			1870			Y
048				1011	Broadway	70-075		346			1865			Y
049	Bates, Rufus		House	1024	Broadway	70-027		154	104	about 1823	1820		y	Y
050	Phillips, George L.		House	1035	Broadway	70-022			not on 1849 map	c 1878				Y
051	Bates, George M.		House	1044	Broadway	78-034			not on map	c 1852				Y
052	Benner, William E.		House	1049	Broadway					1865				Y
053	Bonney, William E. (Bonney Blue Ink Factory)	Erin Phillips and Edward Y. Perry builders?	Business	1057	Broadway	70-050				sold to William Bonney Oct 1865			n	Y
054	Goodrich, Nathan V.		House	1073	Broadway	70-019			not on map	c 1895				Y
055	Bates, Hira	Dowley says Bates built it.	House	1082	Broadway	78-022		153	103		1815		y	Y
056	Whitman, Theron House	moved from Weymouth	House	1108	Broadway	78-023			moved	c 1750			y	Y
057	Bartow, Captain Joseph		House	1119	Broadway	****			102	c 1720		burned 1922	y	Y
058				1126	Broadway	78-074		330			1860			Y
059	South Hanover General Store	Edward Y. Perry	Business	1143	Broadway	78-036		332		c 1850	1870		y	Y
060	Thomas, Torry		House	1148	Broadway	78-026		330			1860		n	Y
061				1159	Broadway	78-011		329			1840			Y
062	Perry, Samuel		House	1170	Broadway	78-059		328		c 1785	1785		y	Y
063	Drew, Thomas		House	1194	Broadway	78-029		327		1888	1880		n	Y
064				1231	Broadway	78-003		326			1835			Y
065	Bates, Joshua		House	1246	Broadway	78-040		325	99	c 1802	1800		n	Y
066				1294	Broadway	77-022		524			1840			Y
067	Perry, Peter		House	1308	Broadway	77-021			98				n	Y
068	Perry		House	1359	Broadway	77-027							n	Y
069	Perry, Levi		House	1371	Broadway	77-028			97				n	Y
070	Little, Peabody	built by Benjamin Stetson? House genealogy should be checked to ensure accurate reading.	House	1395	Broadway	77-029			96			old house was burned and Morse built a new one on site of old house (Morse b. 1900)	n	Y
071	Tobou, John		House	1433	Broadway	77-031		319	85		1810			Y
072	Bates, George		House	1463	Broadway	77-005			76				n	Y
073	Turner, Charles		House	1474	Broadway	77-012		133		c 1859	1860			Y
074	Puffer, John		House	1483	Broadway	77-009			75				n	Y
075	Turner, Samuel		House	1505	Broadway	77-010		132	74		1820		y	Y

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076	Harding, Seth	Harding listed as builder of 1490 Broadway, but members of the Commission (based on writing on forms) seem to think the genealogy actually applies to 1526 Broadway	House	1526	Broadway	77-072		306			1849		n	Y
077				1527	Broadway	82-002		311			1870			Y
078					Broadway			155			1750	Burned 1980		Y
079					Broadway			172			1740	no form found?		Y
080	Bios-Fwy Bridge over Indian Head River		Bridge		Broadway	2		904			1907			Y
081					Cedar Ln	*****		35			1850	no form found?		Y
082	Foster, Joseph	May be builder or later owner or occupant	House	164	Cedar St	36-006			26				n	Y
083	Green, Frank		House	221	Cedar St	27-004			n/a	c 1860		Iron down for the elementary school???	n	Y
084	Callahan, Anthony		House	320	Cedar St				n/a				y	Y
085	Gallagher, James		House	423	Cedar St	27-011			n/a				n	Y
086	Turner, Luther		House	430	Cedar St	27-020			n/a				y	Y
087	Foster, Andrew		House	459	Cedar St	26-009			25				n	Y
088			House	48	Center St	54-075		141			1830			Y
089			House	61	Center St	54-025		140			1885			Y
090			House	103	Center St	54-024		135			1750			Y
091	Home House	Stetson house? Simeon. Home lived in half the house, the Stetsons in the other but genealogy in file goes back to Nathaniel Stetson. However, no specific mention of him building it.	House	119	Center St	54-072		310			1735		n	Y
092	Robbins, Timothy House		House	271	Center St			138			1760			Y
093	Hunice, Shube House		House	339	Center St	62-007		137			1742			Y
094				348	Center St	62-004		136			1860			Y
095	Bates, Seth House		House	553	Center St	69-004		315			1757			Y
096				580	Center St	69-050		316			1820			Y
097				609	Center St	69-073		314			1830			Y
098				647	Center St	69-092		317			1840			Y
099				755	Center St	77-003		318			1840			Y
100					Center St	*****		135			1850	no form found?		Y

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101	Bates, John B	1810 house built by John Winslow burned in 1879 and was replaced by house built on its site by John Bates	House	1	Church St	51-053	262		132	1879	1885		y	Y
102	Saint Andrew's Church		Church	17	Church St	57-054		213			1811			Y
103	Edli, Samuel	probably a part of Robert L. Ellis property, recent newspaper article suggests it probably predates him	House	31	Church St	57-055		212	131		1800		n	Y
104				32	Church St			382			1890			Y
105	Whitman, Simeon House	Moved from 1300 North Union Street in Rockland	House	221	Circuit St	53-052		311			1859			Y
106	Stetson, Turrez	Dwellely says he built it	House	239	Circuit St	53-016		237	51	c 1795	1910		z	Y
107	Winslow, Richmond	Dwellely says he built it	House	338	Circuit St	61-062		125	52	1836	1820		z	Y
108	Bates, Ward	probably built the house	House	374	Circuit St	60-092		126	53	1819	1820			Y
109				410	Circuit St	60-071		128			1830			Y
110	Bates, Captain Thomas M	Built by Bates who built house on the same site as older house which had burned or been torn down	House	418	Circuit St	60-071								Y
111	Bates, Lysander	Old house of Culm Corbett St on 1850 map was torn down probably built by James Hatch	House	431	Circuit St	60-057		239	n/a		1840	house was torn down by 1900		Y
112	Hatch Farm			561	Circuit St	52-030		103	50		1725		n	Y
113	Stetson, Captain Prince		House	613	Circuit St	52-011		102	49		1730			Y
114	King Street Grammar School		School	625	Circuit St			97			1889			Y
115	Thomas Winslow	Thomas was living in the house, and d'd by historical society for dateboard, but no mention of him building it?	House	653	Circuit St	51-007		240	48	c 1800	1790			Y
116	Mordecai Ellis		House	676	Circuit St	51-019		101	47	c 1739	1750			Y
117				705	Circuit St	51-006		241			0			Y
118	Dwellely, Joshua	Historical Society files also list Rufus Estes as builder	House	714	Circuit St	51-048		100					n	Y
119				717	Circuit St	51-005		98			1895			Y
120				746	Circuit St	51-015		96			1780			Y
121	Ellis, Joseph		House	768	Circuit St	51-010		95	42	1830	1830		n	Y
122	Perry, Adam		House	776	Circuit St	51-009		242	41	c 1776	1825			Y
123	Hindley, Josiah		House	778	Circuit St	51-002		243		1884	1884		z	Y

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124	Rogers, John	probably built the house	House	785	Circuit St	51-068	24		40		1724			Y
125				785	Circuit St	51-001	244				1833			Y
126				795	Circuit St	43-033	245				1833			Y
127	Perry, Adam	probably built this house but at 746/776 in 1775???	House	892	Circuit St	43-032	93		39		1780		n	Y
128	Estes, Zachaeus		House	817	Circuit St	43-031	92		38		1790		n	Y
129	Edlis, Clark		House	841	Circuit St	43-030	247		37		1775		n	Y
130				842	Circuit St	43-035	246				1870			Y
131				856	Circuit St	43-036	248				1870			Y
132				866	Circuit St	43-039	249				1870			Y
133				884	Circuit St	43-041	251				1890			Y
134				914	Circuit St	43-026	262				1885			Y
135	Fratt, Ellis		House	299	Circuit St	43-015	263		32	1825	1825		y	Y
136				946	Circuit St	43-025	264				1890			Y
137				956	Circuit St	43-024	265				1870			Y
138	Ellis, David		House	958	Circuit St	43-016	266		33	1815	1815			Y
139	West Hanover Cemetery		Cemetery	958	Circuit St	43-016	802				1829			Y
140	Dading, David		House	869	Circuit St	43-017	267		34	1816	1816		y	Y
141			House	65A	Circuit St		250				1870		Address as listed on MACRIS form couldn't locate house to verify that this is correct address	
142	Clapp Rubber Factory Worker Housing		House	8	Clapp Rd	72-015					1913			Y
143				283	Columbia Rd	57-086	382				1830			Y
144	Columbia Road Bridge over North River		Bridge		Columbia Rd	****	901993				1930			Y
145	Josselyn, Abraham		House	125	Cross St				93				n	Y
146	Bates, Captain Clement		House	131	Cross St	70-036	151		94	1785	1785			Y
147	Perry, Samuel		House	149	Cross St	70-001	335		95		1820			Y
148	South Hanover Train Station		Train Station	172	Cross St	70-016	334							Y
149	Bates, Gamaliel	probably built this house	House	211	Cross St	78-037	333		101??	1770-1773	1740			Y
150	Wood, Abner		House		Cross St				92				n	Y
151	Philips Tack Factory		Business		Cross St		331							Y
152	Windsor, Nathaniel		House	141	East St	60-001			170	1788			y	Y
153				8	Elm	65-014	348				1885			Y
154	Dawster, Abner		House	48	Elm St	65-013	174		129	1724	1725			Y
155				124	Elm St	65-008	356				1865			Y
156	Smith, Joseph	identified as the Edward Ellis property???	House	167	Elm St	65-006	175		128	c1794	1750		n	Y
157	Rogers, Caleb (B)			189	Elm St	73-005	176		127		1810			Y

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		Baley - Donnell House - dateboard gives credit to Caleb though Historical society records seem to think it was his father John that built the house												
158	Rogers, Caleb (5)		House	256	Elm St	73-027		351						Y
159	Abraham Rock		Object		Great Rock Road			905	278	126	1741		n	Y
160	Wibberdt, Theophilus House		House	49	Greene St	54-020		369			1750			Y
161	Hanover Center Civil War Cannon		Object	****	Hanover St	****		706			1860			Y
162	Hanover Center Civil War Cannon Balls		Object	****	Hanover St	****		907			1860			Y
163	Soldier's and Sailor's Monument		Object	****	Hanover St	****		909			1878			Y
164				45	Hanover St	48-010		304			1800			Y
165				55	Hanover St	48-011		303			1860			Y
166	Stetson, Nathaniel House		House	118	Hanover St	48-048		220	172		1775			Y
167	Church, William		House	139	Hanover St	48-004		227	175	1822	1830			Y
168	Stetson, Turner		House	490	Hanover St	47-011			n/a	1853				Y
169	Sylvester, Edmund Q High School Memorial Flagpole		Object	495	Hanover St	****		905			1927			Y
170	Sylvester, Edmund Q High School		School	495	Hanover St	47-005		350			1927			Y
171	Stetson House		House	514	Hanover St	47-069		142			1716			Y
172	Congregational Church Parsonage		Parsonage	515	Hanover St	47-006		306		1855	1855			Y
173	Cutler, John Free Library		Library	534	Hanover St	47-008		230			1807			Y
174	First Congregational Church		Church	547	Hanover St	47-007		143			1863			Y
175	Hanover Town Hall		Town Hall	550	Hanover St	47-008		231			1863			Y
176	Staples, Joshua House	earliest known occupant	House	625	Hanover St	48-008		144			1740		n	Y
177	Stetson, Etelba Curtis	first name associated with house	House	674	Hanover St	54-013							n	Y
178	Henry Hollis/ Bates???		House	683	Hanover St	54-010		307	194		1830		n	Y
179	Thayer, Wendell		House	703	Hanover St	54-009				c 1834			n	Y
180	Litchfield, Lewis		House	704	Hanover St	54-014							n	Y
181	Stetson, Morgan B		House	714	Hanover St			308	n/a	on 1879 map	1850			Y
182	Briscoe, Edward		House	715	Hanover St	54-008		145	193	1727	1727			Y
183	Phillips, Waldo		House	727	Hanover St	54-007				c 1892			?	Y
184	Damon, Bernard		House	736	Hanover St	54-016				probably c 1852			?	Y
185	Snodley, James		House	737	Hanover St	54-005							?	Y
186	Rector Damon		House	744	Hanover St	54-030		146	n/a	1864	1860			Y
187				766	Hanover St	54-056		149			1850			Y
188	Torrey, David		House	769	Hanover St	54-002		147		built before 1726	1720		y	Y
189	Rose, Edwin		House	787	Hanover St	54-001		148	191	1840	1830			Y
190	Rose, Seth		House	811	Hanover St	53-041			n/a	c 1857				Y
191	Library Hall			1206	Hanover St	44-005		266			1850			Y
192				1213	Hanover St	44-028		261			1820			Y
193	Magoun, Horatio		House	1319	Hanover St	43-007		274	n/a	on 1879 map	1865			Y
194	Phillips Mth			1390	Hanover St	43-113		271			1871			Y
195	Ellis, Mordcai		House	1566	Hanover St	42-002		91	35		1777			Y
196				1442-1444	Hanover St	43-042		252			1850			Y
197				1448-1450	Hanover St	43-044		253			1870			Y

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198	Joselyn Dose - West Hanover Post Office		Post Office	1452-1452	Hanover St	43-045		254			1890			Y
199	Congregational Church Home - Carriage Sheds		Carriage Sheds	5508	Hanover St	47-008		291			1850			Y
200	Day, John F		House	69	King St	60-010			n/a	c 1891				Y
201	Dunkwater Hill Firemans Association			104	King St	60-027		259			1914			Y
202	Joselyn, Cyrus Barker		House	113	King St	60-009		105		Imag in it in 1879	1820			Y
203	Hanover Carding Mill			127	King St	60-005		256			1800			Y
204	Joselyn, George R		House	166	King St	60-037		257	n/a	*as in house in 1879	1816			Y
205	Wing, Sarah		House	161	King St				57	on 1790 census				Y
206	Joselyn, Charles		House	169	King St	60-001		258	58		1881			Y
207	Bartow, Samuel		House	231	King St	67-026		106	59	1792		y		Y
208				269	King St	67-003		232			1915			Y
209				272	King St	67-014		107			1920			Y
210	Bartow, Daniel		House	288	King St	67-023		108	60	c 1830	1830	y		Y
211				313	King St	67-005		233			1870			Y
212				320	King St	67-012		109			1910			Y
213				323	King St	67-006		110			1830			Y
214	Rehus Barker	also known as Hanover House	House	334	King St	67-011		234		pre 1850 about 1831	1835			Y
215	Elh Joselyn			335	King St	67-019		111	62		1860			Y
216	Duncan, Rev Abel G			337	King St				n/a	1873		n		Y
217	Baley, Gad		House	352	King St	67-010		112	63	Imag in this house in 1850	1835	n		Y
218	Joselyn, Ira		House	360	King St	67-009		113	64	Imag in this house in 1850	1800			Y
219				371	King St	67-008		235			1870			Y
220				405	King St	75-001		114			1835			Y
221	Baley, Stephen		House	408	King St	75-013		115	65		1760	n		Y
222	Baley, Stephen		House	431	King St	75-043		116	66	probably 1834	1800			Y
223	Bartow, Samuel		House	450	King St	75-011		117	68	about 1822	1800			Y
224	Baley, George W		House	463	King St				67	c 1800?				Y
225	Baley, George		House	512	King St	75-008		118			1780			Y
226				557	King St	75-006		236			1890			Y
227	Turner, Amos		House	562	King St	75-041		119	70		1775			Y
228	Gardner, David		House	590	King St	80-007		120	71	pre 1790	1750	n		Y
229				640	King St	80-006		121			1850			Y
230	Stetton, Robert	possibly built this house according to Dweley he built this house	House	75	Main St	46-047			196	pre 1950				Y
231	Studley, Galeon		House	278	Main St	37-002		67	197		1810			Y
232	Sivester, Amos		House	402	Main St	36-037		66	199	before 1759	1739	y		Y
233	Stockbridge, William		House	425	Main St	36-027		65			1809			Y
234	Baley, Benjamin	Hanover Alms House	House	500	Main St	28-009		64	201	1822	1815			Y
235	Baley, Jacob		House	520	Main St	28-030		63	202	1727	1727			Y
236				551	Main St	28-005		293			1885			Y
237	Curtis, Benjamin		House	569	Main St	28-004		60	203	before 1716	1715			Y
238	Biggs, Mary T		House	582	Main St	28-007			n/a	1880				Y
239	Baley, Arthur		House	633	Main St	28-002		58	n/a		1890	y		Y
240	Stetton, Benjamin		House	640	Main St	28-006		57	205	1729	1729			Y

ID	Resource Name	Notes	Structure Type	Street Number	Address	Parcel Id.	MACRIS ID	MACRIS Decimal	No. on 1849 Map	Year †	Year as listed on MACRIS	Lost or destroyed?	Genealogical information appears complete/ accurate	Historic
241	Whiting, Lucas		House	647	Main St	22-017	285		n/a				y	Y
242	Hatch, Maria		House	662	Main St	22-008	56		207	c 1830	1850			Y
243	Dawley, Jedotiah		House	663	Main St	22-016	288		n/a		1865		y	Y
244	Crane, Rufus		House	691	Main St	22-014	55		n/a		1865		y	Y
245	Curts, John	probably built the house	House	702	Main St	22-031	54		208		1727			Y
246	Shop Shop			714	Main St		290				1865			Y
247	Whiting, Etris		House	715	Main St	22-013	53		209		1815		y	Y
248	Joseph House		House	733	Main St	22-012	52		210	1712	1712		y	Y
249	Dawley, Joseph H		House	738	Main St	22-035	51		211		1840		y	Y
250				754	Main St	22-005	50				1870			Y
251				775	Main St	22-011	49				1830			Y
252				780	Main St		288				1840			Y
253	Wilder, Bradford		House	819	Main St	22-010			n/a	after 1850			y	Y
254	Dawley, Joseph		House	826	Main St	22-001	48		213		1830		y	Y
255	Prest, Andrew		House	833	Main St	22-022			n/a				y	Y
256	Curts School		School	848	Main St	21-007	47				1896			Y
257	Moore, Marcus		House	851	Main St	22-023			n/a	diff before 1879			y	Y
258	Brooks, Gilbert		House	872	Main St	21-610			214	around 1841				Y
259	Leavit, Kunman	earliest known occupant	House	875	Main St	16-008	46				1815		n	Y
260	Curts, Whiting House		House	894	Main St	15-024	45				1735			Y
261	Curts, Jesse	probably built this house	House	912	Main St	15-033	44		217	probably before 1735	1735			Y
262	Brooks, Warren		House	920	Main St	15-037	43		n/a	built by 1879	1840			Y
263	Whiting, Pam C		House	928	Main St	15-031			218	1830's		permission to demolish		Y
264	Brooks, Joseph	built house on site of WPham Curts house	House	956	Main St	15-029			219	1846				Y
265	Curts, Samuel		House	974	Main St	15-028			220	1773				Y
266	Brooks, Cyrus	Baptist Church Meeting House	House	992	Main St	15-026	42		221		1793			Y
267				999	Main St	15-024	41				1870			Y
268	Damon, David	Hanover Baptist Church Parsonage according to Dawley	House	1024	Main St	15-019	40		222		1840			Y
269	Hatch, Thomas	he built this house	House	1041	Main St	16-037	387		223		1770		y	Y
270	Mann, C G. Store			1049	Main St	15-020	266		224		1870			Y
271				1059	Main St	09-011	285				1830			Y
272	Mann, Benjamin	mention of house being torn down, and new one built around 1830, question on page 35 to source	House	1078	Main St	09-045	38		227	c 1744	1795			Y
273				1079	Main St	09-046	37				1870			Y
274	Mann, Benjamin		House	1095	Main St	09-038	284				1724			Y
275				1113	Main St	09-009	36				1830			Y
276	Curts, Leona		House	1128	Main St	09-024	35		226		1835		n	Y
277	Brooks, John S		House	1127	Main St	09-008	283		n/a		1870		y	Y
278	Mann, Levi		House	1137	Main St	09-005	33		229	1786	1787			Y
279	Mann, Charles		House	1142	Main St	09-026	34			1792	1792			Y
280	Brooks, John Store			1152	Main St	09-028	32				1865			Y
281				1161	Main St	09-003	282				1840			Y

ID	Resource Name	Notes	Structure Type	Street Number	Address	Parcel Id	MACRIS ID	MACRIS Decimal	No. on 1849 Map	Year	Year as listed on MACRIS	Lost or destroyed?	Geographical information appears complete/ accurate	Historic?
262	Damon, Beth		House	1165	Main St	09-030		31		235	1810	1860		Y
263	Curts, Abner		House	1254	Main St			281		239		1775		Y
264	Turner, Jonathan			1271	Main St	03-012		289				1746		Y
265	Turner, Isaac		House	1281	Main St	03-011				269	1712			Y
266	Curts, Seth		House	1305	Main St	03-010		36		241	c 1770	1740		Y
267			house	1332	Main St	N/A		279				1810	ton down in 2000	Y
268	Moore, William		House		corner of main and north street					225				Y
269	Curts, Captain Calvin	moved to Newell	House	128	Main St	N/A		15			1775	1800		Y
290				128	Main St	N/A		15			1775	1800		Y
291				23	North St	14-006		268		6		1800		Y
292				40	Oxland	57-030		363				1800		Y
293				48	Oxland	57-029		283	196			1800		Y
294	Best, J. Williams			58	Oxland Ave	49-002		58			1886	1890		Y
295				64	Oxland Ave	57-028		364				1870		Y
296	Turner, James W.		House	76	Oxland Ave	57-027		18		n/a	1853	1850		Y
295				84	Oxland Ave	57-026		360				1920		Y
297	Cocpet, Rev. Jacob		House	94	Oxland Ave	49-005		203	193	150	1810	1810		Y
298				99	Old Washington St	30-024		18				1830		Y
299	Studley, John		House	134	Old Washington St	30-005		19		265		1725		Y
300	Jenkins, David	Lived in it one year and then sold it to Capt Joseph Saper	House	184	Old Washington St	30-025		17		264		1740		Y
301				312	Old Washington St			294				1835		Y
302	Old Washington Street Bridge over North River		Bridge		Old Washington St	****		903	991					Y
303	Studley, Gridley			33	Pleasant St	43-005		90		31		1800		Y
304	Abner, William	Built house on site of old Studley House	House	47	Pleasant St	43-004		277		n/a		1888		Y
305	Harrison L. House			73	Pleasant St	43-001		39		30	1768	1752		Y
306	Studley, Elisha		House	146	Pleasant St	34-023		88		29	1740	1805		Y
307	Curts, Joseph		House	185	Pleasant St	34-013		88				1800		Y
308				252	Pleasant St	34-020		87				1800		Y
309	Whong, James		House	324	Pleasant St	26-016		56		23		1700		Y
310				16	River Rd	66-051		380				1845		Y
311				17	River Rd	66-053		183				1820		Y
312				2033	Route 53	N/A		14				1820		Y
313	Estes, Richard		House	87	School St	60-034		255		55		1914	house gone	Y
314	Josselyn, Lewis		House	92	School St	60-091							house gone demolished, granite marker	Y
315	Josselyn, Cyrus		House	112	School St	60-137		104		56		1835	house gone (1860)	Y
316	Congregational Church Parish Hall			17	Silver St	47-006						1965		Y
317	Thompson, Lyman		House	287	Silver St	38-025		22		n/a	c 1853	1850		Y
318	Curts, Medzar		House	294	Silver St	38-023		21		270		1771		Y

ID	Resource Name	Notes	Structure Type	Street Number	Address	Parcel ID	MACRIS ID	MACRIS Decimal	No. on 1849 Map	Year†	Year as listed on MACRIS	Year of destruction	Genealogical information appears complete/ accurate	Historic
319	Curtis, Luther	Medar Curtis built house for his son Luther. As the builder, this should be considered Medar's house, however, dated and gives credit to Luther.	House	309	Silver St.	38-009		20	209	c 1820	1820		n	Y
320	Hanover Center Cemetery		Cemetery		Silver St.	47-001		801			1727			Y
321	Josselyn - Bates House		House	74	Spring St.	55-006		163	178		1750			Y
322	Chamberlain, Josiah	Dwelleys says he built it	House	122	Spring St.	55-127		164	179	soon after 1790	1785			Y
323	Bass, Eliza		House	214	Spring St.	55-127		165		c 1810	1850			Y
324	Curtis, Joseph		House	66	Union St.	28-001		61	204	circa 1730	1730		y	Y
325	Curtis, Benjamin		House	179	Union St.	28-007		62	205	probably before 1735	1735			Y
326	Judge Whitman	Turner and Whitman Law Offices	House	25	Washington St.	66-020		183		1792	1800			Y
327				37	Washington St.	66-066		187			1850			Y
328	Sylvester, Nathaniel		House	40	Washington St.	66-001		375	142	1743	1743			Y
329				46	Washington St.			378			1840			Y
		Moses Simmons was demolished and replaced in 1850	House											
330	Sylvester, Edmund		House	65	Washington St.	58-016		183	145	1850	1850			Y
331			Cutbuilding	78	Washington St.	58-010		194			1835			Y
332	Sampson Beethers (arch.)		House	78	Washington St.	58-010		191		1933	1933			Y
333				99	Washington St.			377			1855			Y
334	Smith, Albert		House	128	Washington St.	58-009		192	141	1810-1814	1812			Y
335				148	Washington St.	58-008		376			1865			Y
336				167	Washington St.	58-007		375			1841			Y
337	Wright, Warren		House	176	Washington St.	58-006		374	138	c 1837	1835			Y
338	Hancock Academy Building			193	Washington St.	57-002		197	187		1799			Y
339	Turner, Caleb	Wales Tavern		199	Washington St.	57-002		198	186		1727			Y
340				209	Washington St.	57-008		373			1885			Y
341	Edits, Robert		House	231	Washington St.				138	1732				Y
342	Edits, Joseph		House	232	Washington St.	57-061		214	134		1827			Y
		Matthew Stetson is thought to be correct, but a separate genealogy was found that listed Joseph Edits. Could be discrepancy in listing of address as 232, but # on 1849 map is same as this	House, General Store, Lodge											
343	Stetson, Matthew		House, General Store, Lodge	233	Washington St.	57-023		210	152	1727	1750	lost about 1930	n	Y
344	Cushman, Jonathan		House	240	Washington St.	57-062		215	133				y	Y
345	Edits, Robert		House	243	Washington St.	57-022		217	153	1841	1841			Y
346				257	Washington St.	57-021		218			1905		y	Y
347				262	Washington St.	57-046		361			1870			Y
348	Smith, Josiah M.		House	265	Washington St.	57-020		213	n/a	1853	1853			Y
349	Cushing, Mrs. Horatio	according to Barry	House	275	Washington St.	57-034		226	154	c 1836	1835			Y

ID	Resource Name	Notes	Structure Type	Street Number	Address	Parcel Id	MACRIS ID	MACRIS Decimal	No. on 1899 Map	Year	Year as listed on MACRIS	Lost or destroyed?	Genealogical information appears complete/ accurate	Historic
350	Saint Andrew's Episcopal Church Rectory		Rectory	286	Washington St	57-045	221		156	1849	1849			Y
351	Sylvester, Robert	Constructed on site of Edward Burrows house	House	323	Washington St	57-035	220		157	1756	1750			Y
352	Sylvester, Henchman House		House	346	Washington St	57-042	225				1750			Y
353	Burgess, Benjamin		House	358	Washington St	57-039			n/a	c 1850		Destroyed 1960		Y
354				391	Washington St	N/A	359				1750			Y
355	Sylvester, Michael	Iron Kettle Inn	Inn	397	Washington St				159	1824				Y
356	Sylvester, Robert		House	417	Washington St	N/A	225		160		1764			Y
357	Clark, Nathaniel		House	511	Washington St	48-019			161					Y
358				551	Washington St	48-018	226				1750			Y
359				590	Washington St	48-006	229				1815			Y
360				1143	Washington St	24-055	300				1840			Y
361				2039	Washington St		6				1840			Y
362				2048	Washington St	05-070	7				1810			Y
363				2087	Washington St	05-018	5				1800			Y
364				2103	Washington St	05-016	4				1840			Y
365	Stockbridge, Benjamin	Stockbridge was builder of house	House	185-183	Washington St	57-001	196	188	145		1815			Y
366	Brooks and Young General Store		Business	2108-2110	Washington St	05-037	290				1840			Y
367	Cushing, Iothan House		House	242-240	Washington St	57-062	215				1810			Y
368					Washington St	*****	188				1851			Y
369				127	Water St	72-053	352				1835			Y
370	Waterman House		House	336	Water St		355				1850			Y
371	Waterman's Tack Factory		Business	368	Water St	79-005	354				1916			Y
372	Date, Prospect House		House	361	Water St	70-001	353				1727			Y
373				232	Webster St	04-001	295				1825			Y
374				267	Webster St	04-002	11				1750			Y
375				591	Webster St	09-015	38				1855			Y
376				863	Webster St	14-008	70				1800			Y
377	Union Cemetery		Cemetery		Webster St	05-014	800				1754			Y
378					Webster St	*****	2				1850			Y
379	West Elm Street Bridge over Indian Head River		Bridge		West Elm St	*****	902	922			1894			Y
380	Whiting, Sylvanus House		House	88	Whiting St	26-041	82				1820			Y
381				108	Whiting St		81				1780			Y
382	Whiting, Justus House		House	111	Whiting St	26-001	79				1820			Y
383				118	Whiting St	26-015	80				1830			Y
384	Whiting Street School		School	142	Whiting St	26-013	78				1879			Y
385	Whiting, Ezra House		House	183	Whiting St	20-020	76				1830			Y
386	Whiting, William House		House	184	Whiting St	20-039	77				1840			Y
387				200	Whiting St	20-007	75				1850			Y
388				213	Whiting St	20-017	269				1830			Y
389				272	Whiting St	20-005	74				1779			Y
390	Mann, Joshua House		House	335	Whiting St	20-025	83				1750			Y
391	Cushing, David House		House	385	Whiting St	14-023	72				1740			Y
392				542	Whiting St	13-013	272				1840			Y
393				564	Whiting St	07-048	273				1810			Y
394				663	Whiting St	07-003	275				1810			Y
395				24	Winter St	00-063	121				1830			Y
396	Wing House		House	64	Winter St	00-067	123				1720			Y
397				190	Winter St	08-005	238				1835			Y

Inventory of Hanover Historical Resources

Appendix A of Hanover Historical Preservation Plan

ID	Resource Name	Notes	Structure Type	Street Number	Address	Parcel ID	MACRIS ID	MACRIS Description	No. on 1849 Map	Year	Year as listed on MACRIS	Lost or destroyed?	Genealogical information appears complete/ accurate	Historic
398				298	Winter St	76-010					1845			Y
399				441	Winter St	77-081					1840			Y
400	Hanover Center													Y
401	Hanover Center Historic District				(1) Approximately Silver Street between Hanover & Lantern (2) Hanover, Main, Silver, Center					N/A (20)				Y
402	Old Warhiggon Street - Broadway Area													Y

NOTES:

For houses 510d on Summer street, no numbers or houses were available in files

On Warhiggon Street, several houses were identified by their number on the 1849 map, but no street number.

† Year column refers to Year Built or Circa Date (if known)

Numbers in parentheses indicate number of properties, buildings, or structures included. Absent all should be (1).

An electronic copy of this inventory is on file with the Hanover Planning Department in Microsoft Excel format.

Appendix C

Public Participation Documentation

- Notes from Hanover Day Event – June 16, 2007
 - Public Forum Flyer – June 19, 2007
 - Public Forum Press Release
 - Public Forum Agenda and Attendance List
 - Public Forum Presentation
- Public Forum Meeting Notes – June 19, 2007
 - Newspaper Articles Regarding Project
 - Open Space and Recreation Plan Survey
- Open Space and Recreation Plan Survey Results
- Public Forum Presentation – November 8, 2007

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TO: Hanover Open Space Committee
Andrew Port, AICP – Hanover Town Planner
Job File

FROM: Mary C. McCrann, Beals and Thomas, Inc.
Stacy Minihane, Beals and Thomas, Inc.

DATE: June 20, 2007

REFERENCE: Notes From Hanover Day Event on June 16, 2007
Hanover, Massachusetts
BTI Project No. 1256.01

On June 16, 2007, the Open Space Committee set up an informational booth regarding open space, recreation and conservation at Hanover Day, a town-wide event. Below is a summary of notes that were taken by Beals and Thomas, Inc. regarding the thoughts and ideas of visitors who stopped by the booth.

Visitors were asked the question, “what is your favorite place in Hanover” and they were asked to mark that place on a large map of the town with a sticker. Whenever possible, the name of the favorite place in addition to any other comments or concerns that participants wanted to share was recorded.

Note: * means that the place/property was mentioned more than once by different people.

FAVORITE PLACES

- The North River
- Factory Pond and the bridge that the Open Space Committee built
- Luddams Ford (****) and taking the kids for picnics and fishing
- Briggs Stable, very beautiful and seeing the horses is wonderful
- Walking through the woods off of Summer Street near French’s Stream
- Food Pantry
- Private home
- Melzer Hatch Reservation because it is close to home and convenient
- Center of town area
- Bonney Conservation Parcel
- Colby Phillips (*****)
- Briggs Stable (***)
- Bird Sanctuary off of Broadway
- Willow Road Site
- Sylvester Field area, live in the town center, so family uses it all the time

- Cervelli Property
- Cranberry Bogs
- Cranberry Bogs south of Route 139
- Hiking on the trail behind the old Fire Station
- Myrtle Field
- Ellis Field, there are lots of baseball games and it is a challenge to hit a home run out of the park there
- Willow Street
- Area near Bonny Estate
- Summer Street site near Sellow Street
- Backyard – 29 acres of wooded area

OTHER COMMENTS

- Concerned about hunting behind home on Summer Street (town opened up the land to hunting/archery last year).
- It would be great to mark parking areas on a trail map.
- There is not enough access to Melody Woods, trails would be good.
- Luddam's Ford trail in Hanover is not as nice as the trail in Pembroke.
- Can you walk along the former railroad bed or bike? Maybe a bike trail along it would be a good idea.
- It is dangerous walking along the street, so more places to walk would be great.
- An overall general comment was that people do not know what open space exists in the community and where it is located, but they would like to know.
- Interested in ballfields.
- Would like to see the Cervelli Property as is and thinks that there is a good balance in Hanover between open space and development.
- Booth visitors are looking for places to walk, where are they located? Where is the parking?
- Seemed to be a lot of confusion regarding where to park to access trails/open space and how to access it.
- Briggs Field really defines Hanover.
- Seems to be no open space in the north section of town near the Norwell line.
- Open space is so important, everything is being developed.
- Need better access to the rivers, there is not enough open space or parking or water access. Would be great to have more fishing spots.
- A lot of interest in keeping what is left for open space in Hanover.
- There was a lot of interest in what is/will be happening with the Cervelli Property.
- The Town really needs to get behind conservation efforts and control growth.
- Having wildlife is what makes Hanover nice, being able to see a deer or a turkey in the woods and having so many trees and enjoying the beauty and scenery of the woods.
- There needs to be better enforcement on trail maintenance and use.

Memorandum
Hanover Open Space Committee
June 20, 2007
Page 3

- Started walking on a trail, but didn't know where it went, so turned around and came back.
- The rail bed near Ellis Field should be a trail.

FOLLOW UP ITEMS FOR THE OPEN SPACE COMMITTEE

- Put a question about hunting on the survey.
- Walnut Creek condo association is interested in being involved with projects and receiving more information.
- Add overlooks and bridges to the open space plan/maps.
- Follow up with Hanover Newcomers Club.
- John Norris is interested in serving on the Open Space Committee (jnorrisink@comcast.net) his concern is trail usage/management.

MCM/cp/125601MR004

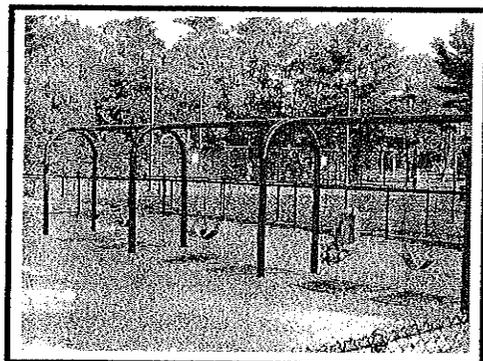
Town of Hanover

Public Forum

Open Space and Recreation Plan Update



Looking Back.... In 1997 Hanover prepared an Open Space and Recreation Plan which reflected residents' feelings about the town's scenic, cultural and natural resources, parks and recreation amenities.



Looking to the Future.... As part of the 2007 Open Space and Recreation Plan update, a Public Forum will be held to obtain your ideas about conservation areas, open space and recreation facilities within Hanover.

Hanover Open Space and Recreation Plan

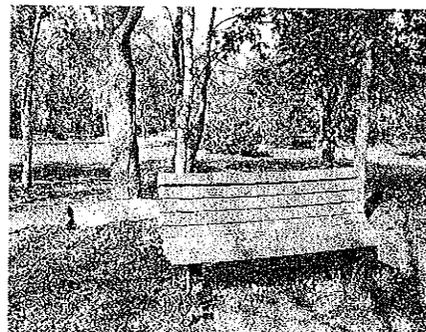
Public Forum – You Are Invited!!!

Tuesday, June 19, 2007 * 7:00-9:00 PM

Hanover Town Hall (Large Meeting Room), Hanover, Massachusetts
Facilitated by Beals and Thomas, Inc.

Sponsored by the Open Space Committee:

Andrew Port, AICP, Town Planner
Hal Thomas, Co-Chair
Mary Dunn, Co-Chair
Bruce Ryerson, Committee Member
Laura Horkey, Committee Member
Judy Grecco, Committee Member
Wallace Kemp, Committee Member
Dana Shaw, Committee Member



BEALS AND THOMAS, INC.

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For Immediate Press Release
Date: May 23, 2007

Hanover Open Space and Recreation Plan Update RESIDENTS INVITED TO PARTICIPATE IN THE PUBLIC FORUM

Clark Bog. The Cervelli Property. Ellis Field. Forge Pond. Briggs Stable. Hanover Center Cemetery. Luddams Ford Park. Sylvester Field. The Town Center. Each of these parks, fields, playgrounds and sensitive natural areas are located in your community. Which one sparks your interest? Are there others that are important to you?

On Tuesday evening, June 19, 2007, a public workshop will be held at the Hanover Town Hall in the Large Meeting Room from 7:00PM to 9:00PM to seek input for Hanover's Open Space and Recreation Plan (OSRP) Update. Your help is needed.

Hanover last produced an Open Space and Recreation Plan (OSRP) for the Town in 1997 and now, in 2007, the Open Space Committee and Town Staff are working with Beals and Thomas, Inc. to prepare an updated OSRP. Beals and Thomas, Inc. is an environmental consulting firm that was hired by the Town in the spring of 2007 to update the OSRP in compliance with the Massachusetts Executive Office of Environmental Affairs, Division of Conservation Services (DCS) regulations. Once the plan is completed and approved by DCS, Hanover will be eligible for specific types of grant funding that currently the Town cannot apply for because the 1997 OSRP has expired.

The updated OSRP will include a description of the town's natural resources, demographics and an inventory of recreation and open space facilities and properties in Hanover. **The most important element in an Open Space and Recreation Plan Update process is community input.** We would like to hear from Hanover residents about:

- What natural and recreation places in town are special to you? Why?
- What are your concerns about open space and recreation?
- Are there too many open space and recreation areas within the town? Not enough?

**Open Space and Recreation Plan Workshop for the Residents of Hanover
Tuesday, June 19, 2007, 7:00PM-9:00PM**

Reservoir Corporate Center
144 Turnpike Road (Route 9)
Southborough, Massachusetts 01772-2104

Tel: 508-366-0560
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mail@btiweb.com
http://www.btiweb.com

MEETING DATE: June 19, 2007

MEETING TIME: 7:00 pm

REFERENCE: Hanover Open Space and Recreation Plan Update
Public Forum (7pm – 9pm)
Hanover, Massachusetts
BTI Project No. 1256.01

PREPARED BY: Beals and Thomas, Inc.

AGENDA ITEMS:

- 7:00pm WELCOME – Hal Thomas, Open Space Committee Co-Chair**
- 7:10pm PRESENTATION – Beals and Thomas, Inc.**
- 7:35pm OPEN DISCUSSION**
- 8:20pm “Tour of Hanover” Exercise (Groups to Map Out
Where They Would Take a First Time Visitor to Hanover)**
- 8:50pm NEXT STEPS & WRAP UP**

TOWN OF HANOVER
Open Space and Recreation Plan Public Forum
Sign In Sheet - June 19, 2007

22

Name

Email and/or Phone Number

Kristen Wilson, Beals: Thomas

Mary McCrann

Stacy Mihalane

Hal Thomas, Open Space Committee

Nancy Dunn, Open Space Comm.

Ben Kruser Same Jane.

Joe Thomas Broadway

Ed Elliott Broadway

JOHN DOUGHERTY BRIGGS STABLE

Cathy Mark-Berater cathyhb@camcarf.net 826-3931

LARRY + LINDA FINNERAN BAILEY RD. "SAVE BRIGGS FIELD"

BETSEY L. JOSSELYN

Barbara Barker Kemp - Hist. Commission

Judy Grecco - Open Space Committee

Linda Dr. Hane Parks & Rec

BORA PERVANE 227 Center

Lynne Moores

Pat Gallivan CamCom

TOWN OF HANOVER
Open Space and Recreation Plan Public Forum
Sign In Sheet - June 19, 2007

Name

Email and/or Phone Number

Laura Horky

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Barbara A Carroll

www.FRANKT.CARROLL@AOL.COM

Nancy Chericco O'Neil

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Maura Munnely

Maura.j.m@verizon.net

Kim & Steve Rusko

kimrusko@hotmail.com



**OPEN SPACE AND
RECREATION PLAN UPDATE**

PUBLIC FORUM
TOWN HALL
June 19, 2007



PRESENTED BY:
HANOVER OPEN SPACE COMMITTEE
BEALS AND THOMAS, INC.

Photo: Coby Pharis Trail

BEALS AND THOMAS, INC



Welcome

We appreciate your being here
thank you for coming!

1727 HANOVER 1977

Photo: Town Hall Archway

BEALS AND THOMAS, INC

Introductions

Beals and Thomas, Inc.

- Mary C. McCrann
Project Manager
- Stacy Hayllin
Environmental Specialist
- Kristen D. Wilson
Environmental Planner

Hanover Open Space Committee

- Hal Thomas, Co-Chair
- Mary Dunn, Co-Chair
- Laura Holly, Conservation Commission
- Bruce Ryerson
- Judy Grecco
- Wallace Kemp
- Dana Shaw

Town Staff

- Andrew Port, Town Planner

Photo: Town Hall WWII Monument

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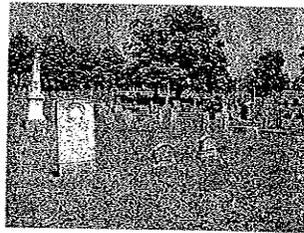
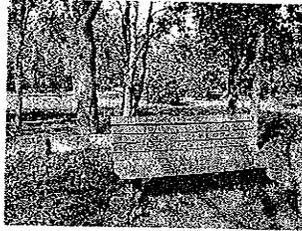
Agenda for the Evening

- Open Space and Recreation Plan Planning Process
- Hanover Demographics
- Goals and Objectives
- Open Discussion
 - What are Hanover's Strengths? Weaknesses? Opportunities? Threats?
- "Tour Around Town", Next Steps and Wrap Up

Photo: Factory Pond

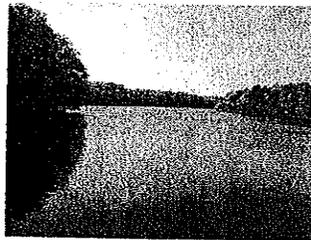
BEALS AND THOMAS, INC.

What is Open Space?



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What is Open Space?



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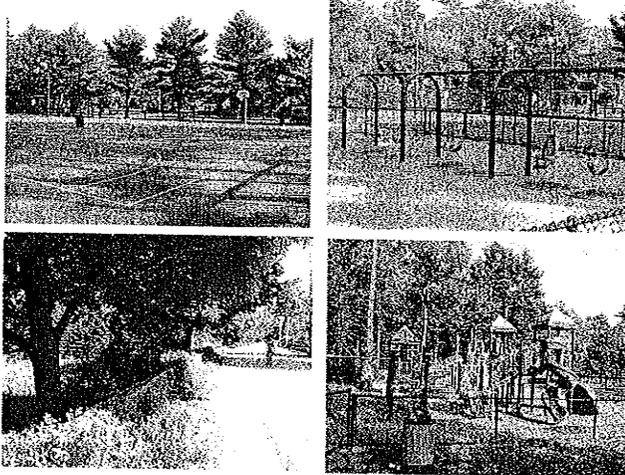
Open Space/Conservation Areas in Hanover

- Colby Phillips Property (128 acres and path network including new boardwalk)
- Fireworks Property (130 acres and trail system)
- Hell Swamp (90 acre wooded swamp)
- Luddam's Ford Park (19 acres)
- Merry Property (115 acres)
- Summer Street Site (102 acres)
- Tindale Bog and Beach Property (18 acres)
- Clark Land (70 acres)

Photo: Colby Phillips Boardwalk

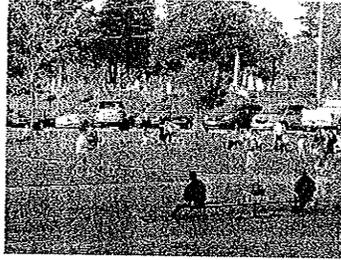
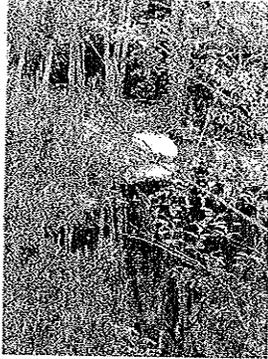
BEALS AND THOMAS, INC.

What do you mean by Recreation?



BEALS AND THOMAS, INC.

What do you mean by Recreation?



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Recreation Areas in Hanover

- Briggs Field (baseball and softball)
- Sylvester Field (playgrounds, baseball, softball)
- Myrtle Field (basketball, baseball, softball)
- Calvin J. Ellis Field (baseball, softball)
- Hanover High School & Junior High School Fields
- Cedar School Fields (playground)
- Amos Gallant Field (baseball, softball)
- Everett Hall Field (playground, basketball, football)

Photo: Hanover Day

BEALS AND THOMAS, INC.

Why is Open Space and Recreation Important?

- Mix of land uses (commercial, residential, industrial, open space)
- Preserves/protects natural habitat areas for plants and wildlife
- Recreational amenities offer health benefits and places for children and adults to recreate
- Gives a community its unique character and helps preserve the heritage of the Town

Photo: Luddam's Lord

BEALS AND THOMAS, INC.

Why Prepare an Open Space and Recreation Plan?

- Update of the Town OSRP Plan prepared in 1997
- Research demographics, environmental features, natural resources, recreational amenities
- Inventory open space and recreation properties (take stock of things in the community that give it character and a unique quality)
- Obtain benefits of development without losing valued environmental assets
- Improve coordination and collaboration between local boards and committees on similar efforts
- OSRP Plans approved by the Massachusetts Division of Conservation Services are eligible to participate in grant funding rounds

Photo: Ellis Field

BEALS AND THOMAS, INC.

Open Space and Recreation Plan Process

- Town of Hanover Hired BTI in April 2007
- Monthly Meetings with Open Space Committee
- Interviews with Town Staff and other Stakeholders
- Town-Wide Site Visits
- Hanover Day Booth, Public Forum, Survey
- Research (including Local Master Plan, 1997 OSRP, Regional Planning efforts), Data Collection and Analysis, Map Preparation, Draft Plan
- Submission of Plan to Massachusetts Division of Conservation Services

Photo: Park Tables

BEALS AND THOMAS, INC.

Questions to Think About

- What are some of your favorite places in Hanover?
- What kind of open space and recreation amenities would you like to have that are not available in Hanover?
- What gives Hanover its character?
- Where would you bring someone who is a first time visitor to Hanover? Why?
- What are the critical conservation issues?
- What are the most important recreation issues?

Photo: Factory Pond

BEALS AND THOMAS, INC.

Town Information

- Incorporated in 1727
- 15.7 square miles
- Early industry revolved around farming, small mills, shipbuilding along North River, Jack & factories and shoe factories
- Present day: primarily residential community

Photo: Tom Ford

BEALS AND THOMAS, INC.

Hanover Population

- Current Population – 13,164 (US Census 2000)

Table: Population Change

	1930	1940	1950	1960	1970	1980	1990	2000	% Change 1990-2000
Massachusetts	4,248,326	4,316,721	4,690,514	5,148,578	5,689,377	5,737,037	6,012,075	6,349,097	5.5%
Plymouth County	162,311	168,824	189,468	248,449	333,314	405,437	435,786	472,832	8.6%
Hanover	2,808	2,875	3,389	5,923	10,107	11,358	11,912	13,164	10.5%
Norwell	1,519	1,871	2,315	5,207	7,796	9,183	9,770	10,327	5.2%
Pembroke	1,492	1,718	2,379	4,919	11,193	13,911	14,511	16,327	16.4%
Haverhill	2,184	2,570	3,264	4,370	7,148	8,611	9,311	10,511	13.2%
Rockland	7,524	8,087	8,960	13,119	15,674	15,695	16,323	17,577	9.8%

Source: U.S. Census Bureau, Population Change 1930-2000

Photo: First Congregational Church

BEALS AND THOMAS, INC.

Hanover Population By Age

- Different population groups have different open space and recreation needs
- Population decline in 20 to 34 age group
- Population increase in 70+ age group

Table: Hanover Population By Age

Age Group	Hanover Population			Massachusetts
	1990	2000	% Change	% Change
Under 5	856	1,013	18.3%	4.7%
Ages 5 to 9	209	1,095	20.3%	14.0%
Ages 10 to 14	809	1,174	30.8%	23.9%
Ages 15 to 19	2007	394	-11.2%	1.4%
Ages 20 to 24	504	161	-43.7%	-21.3%
Ages 25 to 29	1,593	1,117	-16.3%	-15.9%
Ages 30 to 34	2,163	1,457	-13.6%	-13.7%
Ages 35 to 39	1,572	2,067	31.5%	45.5%
Ages 40 to 44	530	725	49.4%	22.3%
Ages 45 to 49	125	175	11.3%	19.6%
Ages 50 to 54	691	752	8.8%	7.0%
Ages 55 to 59	112	171	51.7%	18.4%
Ages 60 to 64	112	184	60.7%	26.6%

Photo: Luddam's Farm

BEALS AND THOMAS, INC.

Hanover Income Levels

- Importance – income can dictate what recreational activities residents/families participate in during leisure time
- Median Household Income (*US Census 2000*)
– \$73,838
- Median Family Income (*US Census 2000*)
– \$86,835

Photo: Briggs Stable

BEALS AND THOMAS, INC.

Hanover Housing Unit Information

- Approximately 3.33 persons per owner-occupied housing unit

	Number	Percent
Total Housing Units	4,445	
Occupied Units	4,349	97.8%
Vacant Units	96	2.2%
Owner Occupied		
Renter Occupied		

- Approximately 1.95 persons per renter-occupied housing unit

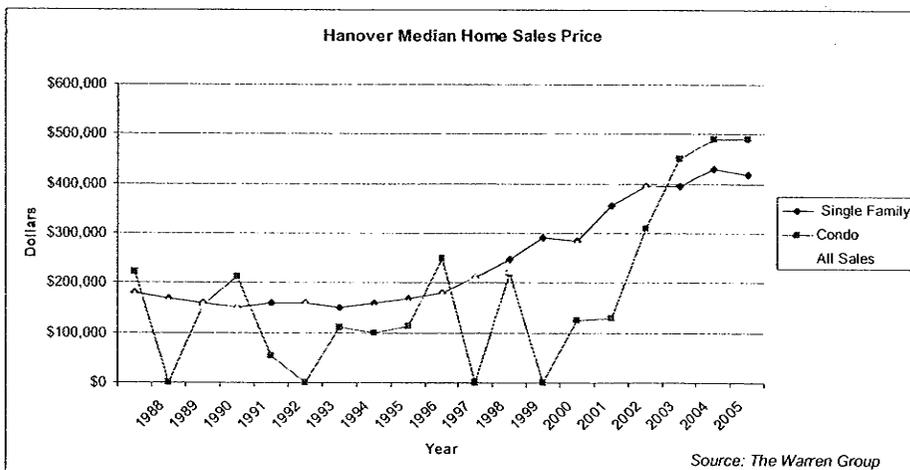
Year	Total Housing Units (Census 2000)	Total S.H.U. Units	% S.H.U.
Hanover	4,445	175	3.9%
Haver	3,167	11	0.3%
Norwell	3,299	111	3.4%
Hemlock	6,351	67	1.1%
Rosland	6,832	126	1.8%

Source: DP&ED S.H.U. Inventory, June 7, 2007

Photo: Maria Arts Commission at Hanover Day

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Hanover Housing Sale Trends



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Hanover's Open Space and Recreation Land

- Well dispersed throughout the community
- Several large clusters
- Many smaller parcels



■ Hanover Open Space
□ Surrounding Town Open Space

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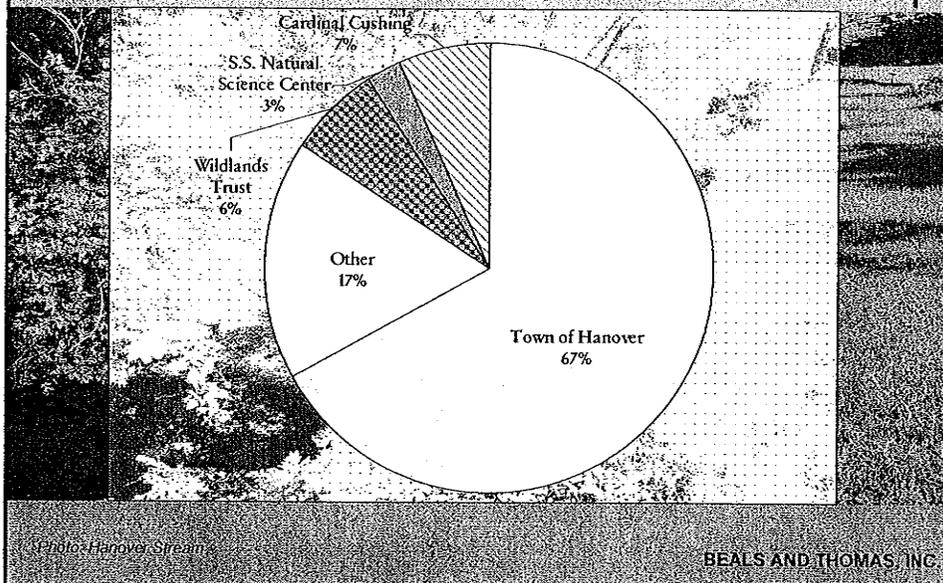
Open Space Characteristics Level of Protection

- Approximately 2,200 acres (22%) of Hanover's total land area is open space
- Level of Protection:
 - 72.0% perpetuity ("permanent" protection)
 - 17.1% limited (Chapter 61, Private, some Town Owned Property)
 - 8.5% no protection
 - 2.4% unknown level of protection

Photo: Frances Stream

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Open Space Characteristics Level of Ownership



1997 Open Space and Recreation Plan Goals and Objectives

- Identify, preserve and protect historic, cultural and natural resources that contribute to the character of the Town of Hanover
- Protect and enhance the quality of Hanover's surface water and groundwater
- Increase environmental awareness among all sectors of the community

Photo: Hanover High School Track

BEALS AND THOMAS, INC

1997 Open Space and Recreation Plan Goals and Objectives

- Enhance appropriate public access to and use of existing conservation lands
- Establish contiguous greenways
- Improve and increase the recreational opportunities in Hanover

Photo: Liddell's Farm Park

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Hanover's Vision During 1997 Master Plan

"A Town that retains and improves the pleasing character of its civic, historic, economic, and residential areas in a manner that is sensitive to its natural and built environments."

Photo: Hanover Town Hall

BEALS AND THOMAS, INC.

Hanover 1997 Master Plan Goals

- Land Use

To direct growth and development that is consistent with the carrying capacity of the natural environment and is consistent with the character of the Town.

Photo: Myrtle Park

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Hanover 1997 Master Plan Goals

- Natural and Cultural Resources
(and Open Space)

To protect, enhance and preserve the integrity of wetlands, watersheds, aquifers, groundwater recharge areas, ponds, streams and floodplains.

To acquire, protect and preserve open space and conservation lands, and recreational facilities and programs, which serve the needs of Hanover's residents.

Photo: Hanover High School Fields

BEALS AND THOMAS, INC.

Open Space Committee Accomplishments

- Involved in current 2007 OSRP Update
- Acquired the Cervelli Property
- Reconstructed footbridge across southern end of Factory Pond with volunteers
- Worked with Eagle Scouts on trail mapping and marking projects (Summer Street, Colby Phillips, Fireworks Property)
- Trail network improvement and access including the Hanover Greenway project
- Identification of possible future land acquisitions

Photo: Eddams' Farm

BEALS AND THOMAS, INC.

Parks & Recreation Committee Accomplishments

- Involved in 2007 Parks and Recreation Master Plan and survey
- Hired a part-time administrator in 2005 to manage programs
- Successful programs include ski lessons, babysitting courses, summer programs

Photo: Tidale Bog Area

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Town of Hanover

- A community with a multitude of existing and potential open space and recreational opportunities.
 - Valuable natural resources including fish runs, estuarine habitats, bogs, ponds and open fields.
 - Trail networks
 - Hanover Greenway Project
 - Many historic and cultural resources
 - Variety of recreational programming for youth

Photo: Hanover Aerial

BEALS AND THOMAS, INC.

Next Steps

Open Discussion

Photo: Tundra Bog

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Discussion Questions

- What are some of your favorite places in Hanover?
- What kind of open space and recreation amenities would you like to have that are not available in Hanover?
- What gives Hanover its character?
- Where would you bring someone who's a first-time visitor to Hanover? Why?
- What are the critical conservation issues?
- What are the most important recreation issues?

Photo: Flava

BEALS AND THOMAS, INC.

THANK YOU FOR BEING HERE!

Contact Information:

Mary C. McCrann, Beals and Thomas, Inc.
www.btiweb.com 508-366-0560

Hanover Open Space Committee
<http://www.hanover-ma.gov/open-space.shtml>

Art Work: Michelle Gillart, Hanover Master Plan Art Contest Winner

BEALS AND THOMAS, INC.

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Tel: 508-366-0560
Fax: 508-366-4391
www.btiweb.com

MEETING DATE: June 19, 2007

ISSUE DATE: June 22, 2007

REFERENCE: Hanover Open Space and Recreation Plan
Public Forum
Hanover, Massachusetts
BTI Project No. 1256.01

PRESENT: Hal Thomas, Open Space Recreation Plan (OSPR) Committee Co-Chair
Mary Dunn, OSRP Committee Co-Chair
Bruce Ryerson, OSRP Committee
Laura Horky, Conservation Commission
Judy Grecco, OSRP Committee
Wallace Kemp, OSRP Committee
Mary McCrann, Beals and Thomas, Inc.
Kristen Wilson, Beals and Thomas, Inc.
Stacy Minihane, Beals and Thomas, Inc.
Residents of the Town of Hanover

PREPARED BY: Mary McCrann, Beals and Thomas, Inc.

COPIES TO: File
Stacy Minihane, Kristen Wilson, John Thomas, Beals and Thomas, Inc.
Andrew Port, AICP, Hanover Town Planner
OSRP Committee

PURPOSE: To educate community members about the Town of Hanover's Open Space and Recreation Plan update and the current status of the planning process, as well as to facilitate a discussion about the issues relating to Hanover's open space and the goals and objectives of the community.

* Representatives from the Hanover Mariner and 95.9 WATD were at the event.

INTRODUCTION:

Mr. Hal Thomas, the Open Space Committee Co-Chair, provided a brief introduction and summary of the recent efforts and progress made by the Open Space Committee. Ms. McCrann followed up by introducing the representatives from Beals and Thomas, Inc., as well as the rest of the Open Space Committee Members. Ms. McCrann outlined the agenda for the evening. Ms. McCrann then proceeded to present a slide show which covered the many different ideas of

what open space and recreation is, the reasons for preparing an open space and recreation plan, the Open Space and Recreation Plan planning process and a variety of Hanover's demographic information. After the slide show, Ms. McCrann fielded general questions about the presentation and asked the participants questions to facilitate and provoke an open discussion between all attendees. After the open discussion, an exercise called "Tour of Hanover" was conducted. Participants were asked to use maps, markers and stickers that were provided and draw out where they would take a first time visitor to their community. Each group made a brief presentation to the larger audience explaining their map, and Ms. McCrann then thanked everyone for attending.

GENERAL COMMENTS/QUESTIONS AFTER PRESENTATION:

- Could the demographic information presented be mapped out?
- Several residents would like to see an updated open space map that includes all open space, undevelopable areas, trails, wetlands and other areas. Will an updated version of the map be available at the next public forum?
 - Ms. McCrann noted that as a part of the OSRP update, such a map will be created.
 - Ms. Wilson noted that a draft version of the updated map would likely be available at the next public forum.
- Trails could/should be superimposed on the map so that people know where they are; walking, biking and horse trails should be included.
 - Ms. McCrann noted that there would be an effort made to include this information on the updated maps for the project.
- Would like to see private property that the Town may want to acquire mapped out.
 - Ms. McCrann noted that privately owned property cannot be specifically called out for this project to respect land owner confidentiality. All municipally owned and publicly owned land will be identified. A list of private landowners could be created, but it would not be included in the plan. The Open Space Committee has already identified several parcels of land over 20-acres in area and have contacted land owners with respect to their open space agenda.
- There was a discussion about transferring town land to open space, for example, changing a soccer field into open space so that it would have greater protection.
 - Ms. McCrann explained that soccer fields are considered open space and that changing who manages the land in town would most likely require ratification at Town Meeting.
- An audience member noted that if CPA money is used to purchase land, that land must have a Conservation Restriction.
- It was noted that the Town Planner has identified which lands are controlled by which Town Boards and Committees.
- An audience member asked what limited protection meant and asked if parcels with limited protection would be identified during this process.

- Ms. McCrann indicated that limited protection includes properties that fall under the Chapter 61 programs, where the Town has the right of first refusal when the property is sold.
- A representative from the Parks and Recreation Department noted that their department is working on a Master Plan with Weston & Sampson Engineers, and that Beals and Thomas should contact Weston & Sampson for additional information. The representative noted that lacrosse is the fastest growing sport in Hanover, but that it has not dedicated fields; that softball is also “under-fielded”; and that there are some shortages in baseball, football, and soccer. The representative also noted that there is currently not sufficient field space to accommodate the programs the Department would like to offer. She added that the Department does not have building space for a community center. Another trend noted was that passive recreation is the most after activity and that passive recreational opportunities are not as well known as they should be. The representative provided Beals and Thomas with plans for six Parks and Recreation Department properties.
- One resident noted that the Town should investigate what open space areas may require future expansion (such as cemeteries), and should consider purchasing or placing restrictions upon adjacent lands to accommodate such expansions. Similarly, the Town should preserve the areas identified in a previous study for bedrock fracture wells to ensure a continued water supply.
- One resident suggested organizing a community day for open space (trail clearing, trash pickup, etc...)

DISCUSSION ITEMS:

I. Why do you live in Hanover and what gives your community its character?

- Property abuts conservation land and is near a trail head. Briggs Field is right across the street, the Stetson House, Town Hall, the whole Town Center is just pristine. Briggs Field and the horse farm are like a Norman Rockwell painting.
- Housing opportunities.
- Briggs Stable/Horse Farm.
- Hanover has an excellent water supply that surrounding towns do not have.
- Really liked Hanover Day and likes that their family lives in a Town that has so much civic pride.
- Good, strong quality of life.
- Moved to Hanover to be closer to Briggs Stable, the schools are only okay, but not great.
- A lot of residents never left. Grew up in Hanover and chose to stay and raise family here, similar to other people living in town. Children go to same elementary school that mother did. That is very telling about a town.

- Resident lives in the over 55 community at Walnut Creek, a great housing opportunity. Very impressed by events such as Hanover Day, didn't realize the town had so many resources, a very congenial atmosphere.
- Hanover's strong zoning maintains homes on larger lots that are more spread out than other towns. Don't like the density of other towns and don't want to see Hanover end up that way.
- The streetscapes with colonials, capes, Town Center is not commercial looking. Preservation of this small town character is very important. Hanover Center is a real town center.
- The trail network that is left is important, it needs to be preserved. Over the years a lot of the trail network has been lost/segmented and Chapter 61 and other programs and purchase of Right-of-Ways should be used to preserve what is left in addition to conservation restrictions and right-of-ways. Used to be able to cross the North River into Pembroke and trails should be kept open for horse riding, quality of life, fishing, boating. Town should make better use of forest land, silviculture to make the woods healthier.

2. *How important is it to preserve existing and additional open space?*

- You can never have too much open space, but it is important to find a balance with development.
- Trails are being cut off by single homeowners and other entities. Trails only need 10' – 15' feet for passage, the Town purchasing ROWs on land is important.
- Open space acquisition should be prioritized. Ideally it would be great to have more open space, but actual landowners want to make a profit off of their properties. The Town should build relationships with these landowners.
- Enforcement of rules and regulations on trails is becoming more important as the number of trails increases and the usage increases. Right now, there is a lot of self-enforcement, and in the future there will be a cost for enforcement. Usage of trails should not be taken away, and use of trails should be encouraged, but needs to be balanced with enforcement.
- Funding for trail maintenance needs more attention.

3. *Are you informed about Open Space and Recreation activities in your community?*

How do you get information?

- It appeared that the general consensus was that people were not as informed about open space activities as they were of other activities within the Town of Hanover.
- Certain days should be arranged and advertised for walking and riding. The Town needs to provide incentives for usage. People with knowledge of the trails will make it self-enforcing and a pride of ownership on the spaces, so as more people use the trails, open spaces, they will naturally be better taken care of.

- Parks and Recreation sends out flyers/mailings, so perhaps a flyer with weekly/monthly scheduled walks and other open space information should be sent to all households.
- There needs to be a multi-pronged marketing approach that includes utilizing the newspaper, website, mailings, the library and Town Hall (town buildings should be used to advertise).
- It is challenging for new people in town to access information.

4. *What are some of your most scenic areas in town? Where are the scenic viewpoints?*

- Town Center
- Briggs Field/Stable
- Four Corners
- Sylvester Field
- Luddams Ford
- Trail along the Indian River
- Slave Grave in the Town Cemetery on King Street
- The old main streets, King, Center, Main, Broadway – the Scenic Roads
- The old stone bridge on the Hanover/Pembroke line that goes over the North River
- Private backyard that borders Whiting Street
- Cardinal Cushing
- Hacketts Pond
- Forge Pond
- Main Street Hay Field
- The small rivers and streams
- The elm tree planted at Hanover's Anniversary next to the gas station
- The general comment was made that Hanover's citizens tend to take pride in their personal properties, and that the private properties in town are well maintained.

TOUR OF HANOVER MAPPING EXERCISE

Map 1

- Enter Hanover from Route 3 in Rockland on Exit 14, take Main Street in North Hanover and stop at the Stetson House. Then take 139 and cross Route 53 to the Four Corners. Stop at Sylvester Field. Go to the bridge over the North River and continue on Route 53 to Broadway. Stop at Luddam's Ford for a picnic then continue on Water Street to Broadway to enjoy the nice streetscapes. Continue on Circuit Street to King Street and stop at Clark Pond and then Factory Pond, go for a walk along the way. Get back in the car and take King Street to Circuit Street and then Whitney. Stop at Colby Phillips. Taking Whiting Street to the open fields by the woods and end the day there.

- Map 2** The route is one that the presenter takes the 3rd graders on about Hanover history.
- Start at the Cedar School and stop on Whiting Street to discuss all of the different house types (colonial, cape, garrison) and continue down Whiting Street to where the old trolley from Rockland used to come. Assinippi is no longer historic or pretty, so that area is usually avoided. Continue on Curtis/Main Street and view the Curtis House and School and the Bailey House. Continue on Union Street to view the Adams House and the Bonnie house at the bottom of the street. The route that the Indians came in on near 3rd Herring Brook will be discussed. The tour continues back to Broadway to the Four Corners area which is very historic and may be a historic district in the future. Take Washington Street and stop at the bridge to discuss shipbuilding, go back down Route 53 and Broadway to Luddam's Ford to have a picnic. Take Water Street and then up Spring Street by Drinkwater and finish the day by parking in the Historic District. Enjoy Town Hall and the cemetery.

Map 3

- Enter Hanover from the Highway exit 13 into the business district, travel down Silver Street to the Historic Town Center and see Town Hall, Briggs Stable and the cemetery. Continue down to 208 Spring Street and see the nice privately owned back land. Continue down Broadway and point out the aquifer recharge areas. Go to the Four Corners and the North River to see the stone bridge. Stop at Luddam's Ford. Notice all of the beautiful homes along Broadway and walk down the railroad tracks. Go by Myrtle Field on Center Street and take Winter Street to Forge Pond. Definitely stop at Joe's Coffee Shop for some good conversation and food. Head back to Main Street and also look at some of the newer developed areas.

Map 4

- The focus was more on "inner Hanover" and the trails and connections. There are lots of good trails along the Indian and North Rivers or along the railroad easement to Luddam's Ford. Passing the old tack factory to Luddam's Ford is a nice walk/ride and crossing the bridge to the Pembroke side offers great views. The Fireworks property, used to ride horses to Fireworks off of Plain Street. The Colby Property offers beautiful horseback riding if you can get there... there are some trails behind the high school. One good potential trail to create would be from Colby Phillips to Hells Swamp.

OTHER COMMENTS:

- A community day about open space should be planned to raise awareness.
- Conservation consideration should be given to the Cardinal Cushing burial site.

Mapping out the future

By Tessa Fitzgerald
GateHouse News Service
Wed Jun 27, 2007, 11:02 AM EDT

HANOVER -

The town is looking to map out the future of its open space and conservation land.

Hanover's open space committee held a public workshop last Tuesday (June 19) at town hall to give people a chance to have a say in the town's open space and recreation plan, which will be updated this year.

The plan that's currently on the books dates back to 1997 and needs to be redone in order for the town to be eligible for state grants.

Hal Thomas, a co-chairman of the open space committee, said one thing committee members are looking for is parcels of land that would be good to protect with a conservation restriction. "One of the things we hope to accomplish with the new open space and recreation plan is the ability to prioritize those properties," Thomas said.

The plan, he said, is supposed to be updated every five years, which the town has not done though it has been discussed.

Environmental planners from Beals and Thomas Inc., a Southborough company which designed Hanover's last open space plan, are working on the update. The town hired the company in April.

Mary McCrann, senior environmental planner for Beals and Thomas, said representatives from the company would return to town in the fall and hold a public hearing on the plan. During last week's meeting, she told those in attendance that people in many Massachusetts towns are facing increasing pressure from developers to sell their land, rather than to preserve it. She said the company could provide Hanover with a map of land that is owned by the town that does not have a conservation restriction on it, but could not do so with privately owned land because the company is not allowed to under privacy laws.

McCrann and two other members of the firm ran last week's workshop, which about 35 people attended. After a PowerPoint presentation of Hanover land, and a question and answer session, the planners gave residents markers, stickers and a map of the town and asked them to mark off areas where they would take a first time Hanover visitor to see.

"I think it will give us a better idea of what the people of town are interested in and what open space areas we actually have," Thomas said of the meeting. "Mainly it kind of gives us an action plan of things to do for the future."

Hanover officials also plan to make an open space survey available to residents in order to include their opinions in the plan. Thomas was unsure last week if the survey would be mailed to every home in town, mailed to some homes or posted on the town's web site. He said they are looking for input from residents as to what areas of town they like and why, and what they would like to see more of.

"One of the things we hear is that people are not aware of the trails in town," Thomas said. It was a subject that was raised during the meeting, and residents asked if trail maps could be made available to the public.

According to Thomas, the community preservation committee approved funding to update the open space plan last year. He said when the Community Preservation Act passed, Hanover authorized up to \$35,000 to hire a consultant.

After the company puts together a plan, the open space committee will read it over and if it gets approval from the town, it will then have to go before the state for final approval.

Hanover, which is 15.7 square miles, currently has 2,200 acres of open space, 72 percent of which is permanent and 17 percent of which is limited (or not permanent) open space, according to information collected by Beals and Thomas. Limited open space is land with a temporary conservation restriction, which gives the landowner a tax break and gives the town the right of first refusal if the property is ever up for sale.

The last piece of open space the town purchased was the Cervelli farm property on King Street, which the town bought using community preservation money.

In the 1997 plan, the town outlined goals including preserving and protecting the history of Hanover, protecting and enhancing the town's underground water supply, increasing environmental awareness and increasing public access to town-owned conservation land and the establishment a continuous greenway.

Open space, Thomas said, adds to the charm of the town and provides a natural habitat for wildlife.

At the meeting, some residents agreed.

Larry Finneran said he and his wife moved to Hanover 22 years ago because they thought the town had a Norman Rockwell type of atmosphere. "One of the main reasons we moved to town was Briggs Field," said Finneran, who added that the field is right across the street from his house.

Bora Pervale said he moved to Hanover 35 years ago "for the sheer purpose of being close to Briggs Stable." He said he'd like to see connected pathways for horseback riding.

Cathy Harder-Bernier, of the town parks and recreation department, said she would like to see more field space in town. "We simply don't have the field space to accommodate the programs that we would like to offer," she said, referring to department's recreational sports programs.

Barbara Carroll, a resident, said she would love to see more trails connect together, and to have the information on open space made more accessible to residents. Carroll said she'd also like to see town-wide nature walks so residents could get together for a day to enjoy the nature in their own backyards.

Carroll, who grew up in Dorchester, said she moved to Hanover so that she would be able to own and keep a horse on her property, something she had wanted since she was a child. "There was something about the land and the trees that I knew this was the place where I wanted to spend my life."

Also important to Carroll is the protection of the town's water supply.

On the maps, on which people marked off a tour route for first time visitors, popular stops in town were the historic Four Corners area, the Colby/Phillips property, the Stonebridge over the North River, the town center, the Stetson House as well as other historical homes.

If anyone has additional input on open space in Hanover, Thomas can be contacted by email at halhanover@msn.com.

This week in HANOVER

Hanover Masons to host blood drive this weekend

The Hanover Masons will host a blood drive from 7:30 a.m. to 1:30 p.m., **Saturday, June 16**, at 133 Broadway St., Hanover. Anyone 17 years of age or older, who weighs at least 110 pounds, is in generally good health and has not donated whole blood within the last 56 days may participate.

Breakfast will be served to all donors. To make an appointment call the American Red Cross at 800-448-3543 or visit givelife.org.

Meeting will gather input on town's plans for open space and recreation

A public workshop will be held **Tuesday, June 19** from 7 to 9 p.m., in the large meeting room of the Hanover Town Hall to seek input for Hanover's Open Space and Recreation Plan (OSRP) update. The help of Hanover residents is needed.

Hanover last produced an Open Space and Recreation Plan for the town in 1997 and now, in 2007, the Open Space Committee and town staff are working with Beals and Thomas, Inc. to prepare an updated OSRP. Beals and Thomas, Inc. is an environmental consulting firm hired by the town

this spring to update the OSRP in compliance with the Massachusetts Executive Office of Environmental Affairs, Division of Conservation Services (DCS) regulations. Once the plan is completed and approved by DCS, Hanover will be eligible for specific types of grant funding that currently the town cannot apply for because the 1997 OSRP has expired.

The updated OSRP will include a description of the town's natural resources and demographics and an inventory of recreation and open space facilities and properties in Hanover. The most important element in an Open Space and Recreation Plan update process is community input.

Input from Hanover residents is required in regards to such issues as: Which natural and recreation places are in town are special and why; what are the main concerns about open space and recreation in Hanover and whether or not there too many open space and recreation areas within the town.

Collection will be made for food pantry at Hanover Day

The cost of admission to Hanover Day this Saturday is a donation for the Hanover Food Pantry. There will be boxes to drop food donations off to help stock the pantry. If everyone brought one can of tuna or jar of

peanut butter or any other non-perishable item we might fill it twice over. Many people don't think of feeding the hungry so much in the summer months and the need is just as great as the winter. So help celebrate Hanover's giving spirit at Hanover Day!

Artists encouraged to submit work for Hanover Day exhibit

The Hanover Cultural Council is sponsoring an art exhibit featuring Hanover residents of all ages at Hanover Day. **Saturday, June 16** from 10:30 a.m.-4: p.m. at Riley Hall. If you would like to submit artwork to be displayed, please contact Ellen Fitzpatrick at 781-878-2926 or email at ellfitz@msn.com. Artwork may be dropped off on Friday, June 15 in the afternoon between 3:30-5 p.m. at Riley Hall or Saturday, June 16 from 8:30-9:30 a.m. All artwork must be picked up between 3:30-4 p.m. on Saturday.

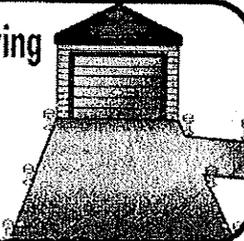
List of Persons books are available at town hall

List of Persons books are available in the town clerk's office, which is open from 8 a.m. to 4 p.m., Monday through Friday. The cost of the book is \$15. There is an additional charge of \$5 for shipping and handling to purchase a book through the mail. For information call 781-826-2691.

Hanover town committees need volunteers

Many committees in town need residents to get involved. There are openings coming up on most committees, notably the School Building Committee, which was

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HANOVER

Forum set for open space, recreation area plans

Hanover has its share of public parks, fields, playgrounds and natural conservation areas.

Now town officials want to know how best to use them.

On Tuesday, June 19, the town's open space committee will ask residents to help decide the future of Clark Bog, the King Street Field, Ellis Field, Forge Pond, Briggs Stable, the Hanover Center Cemetery, Luddams Ford Park, Sylvester Field and the Town Center.

The public forum, at town hall from 7 to 9 p.m., is needed to help the town update its Open Space and Recreation Plan.

Hanover last wrote such a plan in 1997, and an update is needed to help the town qualify for state grants.

Beals and Thomas Inc., an environmental consulting company, was hired by the town in earlier this year to update the plan in compliance with new state regulations.

The updated plan will include a description of the town's natural resources and demographics, and provide a list of recreation areas and open space in Hanover.

Hanover Open Space Committee
 550 Hanover Street
 Hanover, MA 02339
www.hanover-ma.gov/open-space.shtml



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OPEN SPACE AND RECREATION HANOVER RESIDENT SURVEY

POSTAL CUSTOMER
 HANOVER, MA 02339

WE NEED YOUR HELP!

**Survey is also available online at:
www.hanover-ma.gov**

- 15) If you do not use Hanover's conservation land and recreational facilities, why not? (check all that apply)
- Do not have the information about where they are located
 - Hard to get to/lack of transportation
 - Not handicapped accessible (please indicate where)
 - Lack of parking
 - Regarding trails, do not have information about where they go to
 - Safety concerns
 - Other
- 16) Do you support using CPA money to fund the creation or improvement of recreational facilities?
- Strongly Support
 - Somewhat Support
 - Neutral
 - Do Not Support
- 17) Do you support using CPA money to fund open space and conservation purposes?
- Strongly Support
 - Somewhat Support
 - Neutral
 - Do Not Support
- TOWN PRIORITIES**
- 18) The Town works hard to provide high quality park and recreation facilities and services to the residents of Hanover. However, difficult choices often must be made in the allocation of scarce resources. Please rank your open space and recreation priorities from 1 being the most important to 12 being the least important for each item below (please use the numbers 1 through 12 only once):
- a) Improve water access for boating/fishing _____
 - b) Town to buy more open space _____
 - c) Build new playing fields _____
 - d) Build indoor community recreation center _____
 - e) Construct/build a paved bike path _____
 - f) Create small local parks in more areas of town _____
 - g) Build a skate/skateboarding park _____
 - h) Repair/maintain existing sports fields _____
 - i) Build a community dog park _____
 - j) Mapping/marking of existing walking trails _____
 - k) Repair/maintain existing historical properties _____
 - l) Equestrian trail linkages _____

- 19) Of the possible outcomes of facing the future of town owned property please list the three that you believe to be the greatest detriment in order of importance, with #1 being the most important.
- 1) _____
 - 2) _____
 - 3) _____
- 20) To help further protect, preserve and better manage existing and future open space and natural resources, how willing would you be to (1 = very willing, 5 = not very willing):
- a) Donate all or a portion of your land to the town/state/land trust _____
 - b) Donate money to buy land _____
 - c) Rewrite your deed to limit future development of your land _____
 - d) Sell all or portion of land to Town at a "bargain price" _____
 - e) Sell all of portion of land to Town at fair market value _____
 - f) Contribute a conservation restriction to protect your land _____
 - g) Volunteer time to the OS Committee initiatives _____
 - h) Other (specify) _____
- 21) What would you like the Open Space Committee to focus the most on in the next five years? (1 = the most, 5 = the least)
- a) Public education and outreach _____
 - b) Trail maintenance/adding new trails _____
 - c) Acquiring additional open space _____
 - d) Organizing walking/trail tours of existing open space _____
 - f) Other (specify) _____
- 22) In your opinion, are there enough sidewalks in town? Are they in the right place? If not, what are the deficiencies?
- 23) Are there any specific properties in Hanover you would like the Town to acquire as open space? If so, please describe the location:

Other Comments:

Please return by September 14th to:

**Hanover Open Space Committee
 c/o Andrew Port, Town Planner
 Hanover Town Hall
 550 Hanover Street
 Hanover, MA 02339**

*Complete this survey
 online instead! Go to:*
www.hanover-ma.gov

Phone (781) 826-7641

THANK YOU VERY MUCH FOR YOUR PARTICIPATION!

PLEASE COMPLETE THIS IMPORTANT USER SURVEY

The Town of Hanover Open Space Committee is updating the Hanover Open Space and Recreation Plan. In order to gather additional public input, this survey has been prepared. We hope that you will participate in this survey so that the most important open space, natural resource and recreational needs of Hanover can be addressed in the future. It is important to note that open space can be anything from a cemetery, to a field, to a forest and that recreational activities can be both passive and active.

Your feedback will help the Open Space Committee and the Town Planner plan the future of Hanover's valuable resources. Please return your survey by September 14, 2007 to Andrew R. Port, Town Planner (see other side) or complete the survey online at www.hanover-ma.gov.

A. SURVEY PARTICIPANT INFORMATION

- 1) How many people live in your household?
 children (<1-17) _____ adults (18 - 54) _____ 55 and over _____
- 2) How many years have you lived in Hanover? _____
- 3) How has the Town changed since you have lived in Hanover?
- 4) What development pressures, if any, do you think Hanover is facing?
- 5) What characteristics does Hanover have that make you want to live here?

B. GENERAL INTERESTS

- 6) Do you feel that there is a need to preserve open space and natural areas in Hanover? _____ yes _____ no
 Why, or why not?
 - 7) What factors should determine what open space should be acquired? (1 = very important, 5 = not important)
- | | |
|--|-------|
| Protection of scenic view | _____ |
| Wildlife habitat protection | _____ |
| Potential recreational opportunities | _____ |
| Cultural/historic preservation | _____ |
| Preservation of drinking water/aquifer protection district | _____ |
| Connections to greenway/trails | _____ |
| Adjacency to other open space | _____ |

- 8) Please indicate your interest in the following recreation and open space subject areas: (1 = very interested, 5 = not interested)
- | | |
|--|-------|
| Outdoor Park and Recreation Facilities | _____ |
| Indoor Park and Recreation Facilities | _____ |
| Equestrian Trails | _____ |
| Recreation Programming | _____ |
| Open Space Preservation & Conservation Lands | _____ |
| Bicycle & Pedestrian Paths and Trails | _____ |
| Wildlife (including birds and other animal life) | _____ |
| Historic & Cultural Resources | _____ |
| Access to Waterways | _____ |

C. QUALITY OF LIFE

- 9) When you consider the quality of life in your neighborhood and the Town in general, please indicate how important each of the following statements are: (1 = very important, 5 = not important)
- | | |
|--|-------|
| Maintaining scenic byways/roadways | _____ |
| Protecting Open Space from development | _____ |
| Preserving environmentally sensitive areas | _____ |
| Protecting scenic views | _____ |
| Creating Town gathering places | _____ |
| Offering recreational areas for youth | _____ |
| Offering recreational areas for adults | _____ |

D. TOWN RESOURCES

- 10) Please indicate how well you feel the Town serves your needs in the following areas: (1 = very well, 5 = not very well)
- | | |
|--|-------|
| Parks and Park Facilities | _____ |
| Water Access | _____ |
| Recreation Programs | _____ |
| Open Space Preservation & Conservation Lands | _____ |
| Bicycle Trails | _____ |
| Walking Trails | _____ |
| Equestrian Trails | _____ |
| Wildlife Opportunities | _____ |
| Historic & Cultural Resources | _____ |
- 11) How do you currently obtain information about Hanover open space, natural resources and recreational amenities? (check all that apply)
- | | |
|--|-------|
| Reading the local newspaper | _____ |
| By talking to friends | _____ |
| Town of Hanover website | _____ |
| Receiving information in the mail | _____ |
| Town Staff and Committee Members | _____ |
| I currently don't know any information | _____ |

What do you feel is/would be the most effective form of outreach?

EXISTING & POTENTIAL USES

- 12) What activities do you and/or members of your family enjoy in Hanover, or would you like to see more of in the future? Check as many as appropriate:
- | | Use Now | Want More |
|---|-----------------------|-----------------------|
| Walking | <input type="radio"/> | <input type="radio"/> |
| Jogging | <input type="radio"/> | <input type="radio"/> |
| Biking | <input type="radio"/> | <input type="radio"/> |
| Golf | <input type="radio"/> | <input type="radio"/> |
| Basketball | <input type="radio"/> | <input type="radio"/> |
| Baseball/softball | <input type="radio"/> | <input type="radio"/> |
| Swimming | <input type="radio"/> | <input type="radio"/> |
| Tennis | <input type="radio"/> | <input type="radio"/> |
| Soccer | <input type="radio"/> | <input type="radio"/> |
| Skating on pond | <input type="radio"/> | <input type="radio"/> |
| Skating on ice rink | <input type="radio"/> | <input type="radio"/> |
| Cross country skiing | <input type="radio"/> | <input type="radio"/> |
| Canoeing/kayaking | <input type="radio"/> | <input type="radio"/> |
| Sunbathing | <input type="radio"/> | <input type="radio"/> |
| Trail biking | <input type="radio"/> | <input type="radio"/> |
| Horseback riding | <input type="radio"/> | <input type="radio"/> |
| Fishing | <input type="radio"/> | <input type="radio"/> |
| Hunting | <input type="radio"/> | <input type="radio"/> |
| Bird watching | <input type="radio"/> | <input type="radio"/> |
| Picnicking | <input type="radio"/> | <input type="radio"/> |
| Historical Sites | <input type="radio"/> | <input type="radio"/> |
| Concerts, Events at Bandstand | <input type="radio"/> | <input type="radio"/> |
| Ponds, River Areas and Access
(canoe/kayak) | <input type="radio"/> | <input type="radio"/> |
| Football | <input type="radio"/> | <input type="radio"/> |
| Skateboarding | <input type="radio"/> | <input type="radio"/> |
| Playgrounds
(including swings, slides, tot lots) | <input type="radio"/> | <input type="radio"/> |
| Lacrosse/Field Hockey | <input type="radio"/> | <input type="radio"/> |

- 13) Of the activities listed above, which ones do you participate in the most? List the top three in order of use (#1 being the most frequent).
- 1)
 - 2)
 - 3)

- 14) Which Hanover park, playground, recreation or conservation areas do you use most often?
- What do you consider to be Hanover's most attractive areas, landscapes or natural features?

For Immediate Press Release

Date: August 10, 2007

**Hanover Open Space and Recreation Plan Update
RESIDENTS INVITED TO PARTICIPATE IN PUBLIC SURVEY!**

What do you consider to be Hanover's most attractive landscape or natural feature? How should open space be further protected, preserved and managed in Hanover? Should it be? What would you like the Open Space Committee to focus on in the next five years? These are some of the questions that we would like to hear from you about. The Open Space survey is available online at the Town's website and being mailed to each household in Hanover.

The Hanover Open Space Committee has been hard at work with the assistance from consultant, Beals and Thomas, Inc. to update the 1997 Open Space and Recreation Plan. A public forum was held in June 2007 for local residents, and to gather additional input. Now, a survey has been prepared for residents to fill out and submit to the Open Space Committee. Your input is needed!

The overall Open Space and Recreation Plan will be updated in compliance with the Massachusetts Executive Office of Environmental Affairs, Division of Conservation Services (DCS) regulations. Once the plan is completed and approved by DCS, Hanover will be eligible for specific types of grant funding that currently the Town cannot apply for because the 1997 OSRP has expired.

A survey is being mailed as a hard copy to every single home in Hanover! Please keep an eye out for it in your mailbox. Also, the survey is available for you to complete **online** at the Town of Hanover website, www.hanover-ma.gov. Please either fill out the paper copy and return it to Town Hall, or **go online** and complete the survey, it should only take about ten minutes to complete. Tell your friends, neighbors, co-workers!

The updated OSRP will include a description of the town's natural resources, demographics and an inventory of recreation and open space facilities and properties in Hanover. Additionally, the plan will include goals and action items for the next five years. Much of this information will come from your input. **The most important element in an Open Space and Recreation Plan Update process is community input.** We would like to hear from you! If you have any questions or comments, please feel free to contact Mary C. McCrann at Beals and Thomas, Inc. at 508-366-0560.

Reservoir Corporate Center
144 Turnpike Road (Route 9)
Southborough, Massachusetts 01772-2104
mail@btiweb.com

Tel: 508-366-0560
Fax: 508-366-4391
www.btiweb.com

TO: Hanover Open Space Committee
Andrew R. Port, AICP, Town Planner
Job File

FROM: Mary C. McCrann, Beals and Thomas, Inc.

DATE: October 8, 2007

REFERENCE: Hanover Open Space and Recreation Plan Survey Results Summary
Hanover, Massachusetts
BTI Project No. 1256.01

The purpose of this memorandum is to summarize the results of the Hanover Open Space and Recreation Plan (OSRP) Survey that was conducted as a part of the OSRP update. The survey was conducted in August and September 2007 and was made available through a link on the Town website and a copy of the survey was also mailed to every household in the community. In total, 246 responses were received. The questions asked are noted in bold font, and the responses have been added below.

1) **How many people live in your household?**

children (<1-17)	<u>1.80</u>
adults (18 – 54)	<u>2.05</u>
55 and over	<u>1.27</u>

The numbers above are the average response rates for the number of people who live in each household that responded to the survey. More specifically:

Of the survey responders who noted adults living in the household:

- 46% of survey responders had **two** adults living in the household
- 12% of survey responders had **one** adult living in the household
- 6% of survey responders had **four** adults living in the household
- 5% of survey responders had **three** adults living in the household

Of the survey responders who noted children living in the household:

- 19% of survey responders had **two** children living in the household
- 10% of survey responders had **one** child living in the household
- 10% of survey responders had **three** children living in the household
- .01% of survey responders had **four** children living in the household

Of the survey responders who noted 55 and over adults living in the household:

- 27% of survey responders had **two** 55 and over adults living in the household

- 17% of survey responders had **one** 55 and over adult living in the household

The majority of respondents had either two adults living in the household, or two 55 and over adults. In addition, approximately 39% of the households had at least one child.

- 2) **How many years have you lived in Hanover?** 20.45

The average number of years that survey responders have lived in Hanover is approximately 20 years.

- 3) **How has the Town changed since you have lived in Hanover?**

Survey respondents offered a number of comments regarding how the Town has changed since they have lived in Hanover and they are summarized below.

Development

The overarching theme that was clear from this question was the fact that Hanover has been accommodating a tremendous amount of development and experiencing growth in a number of ways and this for the most part, was commented on as something that was negative. Population increase, traffic, large homes, condominiums, commercial development along the highway areas, flooding as a result of new development, more affluent residents as a result of the new development, an increase in taxes, too much sprawl in general and loss of open space and farmland due to new developments, were noted throughout the comments.

According to survey respondents, the Town appears to be losing some of its rural charm to all of the development that is happening and this is very disconcerting. A loss of starter homes and a lack of affordable housing were noted in addition to the fact that it has become more expensive in general to live in Hanover.

The overwhelming sentiment from this question was that Hanover has developed a tremendous amount both in terms of residential and commercial development, and as a result, traffic, the population and taxes have all increased and that not enough is being done to protect the charming, rural nature of the community.

Open Space and Recreation

Respondents also noted the terrible condition of the high school building and fields, a noticeable loss of open space due to development, a loss of trees, Hanover is not as rural as it used to be and has turned into a real suburb, there are fewer trails that can be used, there is very little open space left and the schools and school grounds are not well maintained or improved. In addition, several people noted how great the trails and bridges are that have been created over the last few years.

Other

Several respondents made the general comment that yes, Hanover has changed, but in a positive way.

In addition, some people did not feel that enough was being done to manage and balance the growth that is taking place and that it should be more thought out instead of just letting it happen. A number of people commented that it appears there is not any planning or forward thinking going on in the community and that it is just new development after new development.

It was also noted that there are many more young families in town. The closing of fire stations was noted a number of times as a big concern, particularly as Hanover is experiencing more growth.

One person stated that though development has continued, the zoning bylaw keeps everything in check and it is a real asset to the Town.

4) What development pressures, if any, do you think Hanover is facing?

Survey respondents offered a number of comments regarding the development pressures that Hanover is facing and they are summarized below.

Overbuilding

In general, survey respondents thought that there was too much development, both commercial and residential happening in the community. Better controlling the development permitting process was noted. Over development and the loss of Hanover's rural, town character was mentioned countless times.

Senior Center

Several respondents noted the pressure to provide a new Senior Center for Hanover's older residents.

Affordable Housing

It was noted numerous times the need and pressure for more affordable housing and senior housing to accommodate the different demographic groups in Hanover. Many current residents are finding it hard to stay in Hanover, and it is hard for young families to move to town.

Traffic, School Overcrowding

As a result of all of the development happening in Town, a number of survey respondents noted traffic and school overcrowding as significant issues. The need for a new high school was mentioned a large number of times, particularly due to the deteriorating quality of the existing high school, and the large number of children in the community.

Other

A strain on local resources and town services was noted, like the high school, police and fire departments, and infrastructure system (water/sewer). In addition, the need for more sidewalks was noted. Many respondents thought that the Town really is just over building itself and isn't doing enough to manage the growth and address needs like a new high school.

It was also noted that there seems to be tremendous pressure to build increasingly larger homes on former farmland and that a lot of the pressures this town is experiencing is self inflicted. The over building has created an infrastructure over utilization catastrophe of water, roadway and an over budgeted school system.

5) What characteristics does Hanover have that make you want to live here?

Survey respondents offered a number of comments regarding the characteristics that make them want to live in Hanover, they are summarized below.

Small Town Feel/Quality of Life

A large number of survey respondents noted that they love living in Hanover because of the small town country feel of the town, open space, established neighborhoods, wildlife and quiet nature. People like the rural feel of the community, the neighborliness of those who live here, the civic pride that is evident, and the safety of being able to walk around and be comfortable. In general, residents feel that Hanover provides a strong sense of community and a quality of life they are looking for. In addition, a number of respondents noted that they grew up in Hanover and/or have family in the community, so staying in the community in which they grew up was a reason for settling down here.

School System

Though in the previous question, respondents noted the tremendous need for a new high school, the quality of the school system was noted as a reason for why people want to live in Hanover.

Location and Amenities

Respondents also like Hanover because of its convenient location to shopping amenities, transportation routes, beaches, Cape Cod and to Boston. In addition, the history, open space and beauty of the community were noted. A number of respondents noted that Town amenities like the library, historic buildings, variety of recreational programming and transfer station were also reasons they like living in Hanover.

6) Do you feel that there is a need to preserve open space and natural areas in Hanover?

95% yes
5% no

Approximately 95% of survey respondents said yes, they feel there is a need to preserve open space and natural areas in Hanover. 5% of respondents said they did not feel there is a need to do so.

Why, or why not?

Survey respondents thought it was important to preserve open space and natural areas in Hanover for a number of reasons which are noted below.

It was noted that without protecting these resources, you will lose the small town, country charm that so many people like about Hanover. A number of respondents noted that "once it's gone, it's gone" regarding open space. People also felt that it was important for their children to live in a town where they can grow and learn about nature. In addition, the health benefits of utilizing open space and natural areas was mentioned.

Overdeveloping will eliminate all of the open space, which would be a real detriment, the country charm of Hanover is why residents live in the community. Preserving the rural atmosphere should be a real focus. Survey respondents felt that already, Hanover is becoming to overdeveloped, both by commercial businesses and residential homes. If something is not done now to protect what remaining natural areas there are, they will be gone forever.

7) **What factors should determine what open space should be acquired? (1 = very important, 5 = not important)**

	<u>Survey Response</u>
Protection of scenic view	2.16
Wildlife habitat protection	1.90
Potential recreational opportunities	2.59
Cultural/historic preservation	2.09
Preservation of drinking water/aquifer protection district	1.50
Connections to greenway/trails	2.22
Adjacency to other open space	4.79

Survey respondents clearly felt that there should be an order of importance regarding what open space should be acquired in Hanover. From most important to least important, they are:

- Preservation of drinking water/aquifer protection district
- Wildlife habitat protection
- Cultural/historic preservation
- Protection of scenic views
- Connections to greenway/trails
- Potential recreational opportunities
- Adjacency to other open space

Note: Look at Open Space Committee ranking sheet and make sure these things are listed.

8) **Please indicate your interest in the following recreation and open space subject areas: (1 = very interested, 5 = not interested)**

Outdoor Park and Recreation Facilities	2.13
Indoor Park and Recreation Facilities	2.91
Equestrian Trails	3.64
Recreation Programming	2.66
Open Space Preservation & Conservation Lands	1.76
Bicycle & Pedestrian Paths and Trails	1.85
Wildlife (including birds and other animal life)	2.01
Historic & Cultural Resources	2.34
Access to Waterways	N/A

Survey respondents were interested in the following recreation and open space subject areas. From most interested to least interested, they are:

- Open space preservation and conservation lands
- Bicycle and pedestrian paths and trails
- Wildlife
- Outdoor park and recreation facilities
- Historic and cultural resources
- Recreation programming
- Indoor park and recreation facilities
- Equestrian Trails

The access to waterways response question somehow did not compile survey respondent answers correctly, and has not been included in the survey results.

9) **When you consider the quality of life in your neighborhood and the Town in general, please indicate how important each of the following statements are: (1 = very important, 5 = not important)**

Maintaining scenic byways/roadways	1.88
Protecting Open Space from development	1.59
Preserving environmentally sensitive areas	1.63
Protecting scenic views	2.04
Creating Town gathering places	2.62
Offering recreational areas for youth	2.18
Offering recreational areas for adults	2.41

Survey respondents indicated the importance of the following statements regarding quality of life in their neighborhood and Hanover in general. From most important to least important, they are:

- Protecting open space from development
- Preserving environmentally sensitive areas
- Maintaining scenic byways/roadways
- Protecting scenic views
- Offering recreational areas for youth
- Offering recreational areas for adults
- Creating town gathering places

10) Please indicate how well you feel the Town serves your needs in the following areas: (1 = very well, 5 = not very well)

Parks and Park Facilities	2.36
Water Access	3.00
Recreation Programs	2.59
Open Space Preservation & Conservation Lands	2.72
Bicycle Trails	3.48
Walking Trails	2.95
Equestrian Trails	2.83
Historic & Cultural Resources	2.65

Survey respondents indicated how well they felt the Town serves their needs in the areas listed above. From very well to not very well, they are:

- Parks and park facilities
- Recreation programs
- Historic and cultural resources
- Open space preservation and conservation lands
- Equestrian trails
- Walking trails
- Water access
- Bicycle trails

11) How do you currently obtain information about Hanover open space, natural resources and recreational amenities? (check all that apply)

Reading the local newspaper	80%
By talking to friends	59%
Town of Hanover website	32%
Receiving information in the mail	53%

Town Staff and Committee Members 16%
I currently don't know any information 10%

What do you feel is/would be the most effective form of outreach?

Most respondents felt that continuing to advertise and put articles in the local newspaper, utilizing the Hanover website, and sending out information via mail would be the most effective ways to continue outreach regarding open space and recreation.

12) What activities do you and/or members of your family enjoy in Hanover, or would you like to see more of in the future? Check as many as appropriate:

	<u>Use Now</u>	<u>Want More</u>
Walking	55%	45%
Jogging	49%	50%
Biking	38%	61%
Golf	20%	79%
Basketball	63%	36%
Baseball/softball	64%	35%
Swimming	30%	69%
Tennis	60%	39%
Soccer	68%	31%
Skating on pond	68%	31%
Skating on ice rink	17%	82%
Cross country skiing	30%	69%
Canoeing/kayaking	32%	67%
Sunbathing	48%	51%
Trail hiking	27%	72%
Horseback riding	47%	52%
Fishing	49%	50%
Hunting	33%	66%
Bird watching	58%	42%
Picnicking	45%	54%
Historical Sites	63%	36%
Concerts, Events at Bandstand	63%	36%
Ponds, River Areas and Access (canoe/kayak)	41%	58%
Football	53%	46%
Skateboarding	36%	63%
Playgrounds (including swings, slides, tot lots)	65%	34%
Lacrosse/Field Hockey	45%	54%

More than 50% of survey respondents who answered this question are enjoying walking, basketball, baseball, tennis, soccer, skating on the ponds, bird watching, historical sites, concerts and events at the bandstand, football and the playgrounds.

More than 50% (or equal to) of survey respondents who answered this question feel that they would like more opportunities for jogging, biking, golf, swimming, skating on an ice rink, cross country skiing, canoeing/kayaking, trail hiking, horseback riding, fishing, hunting, picnicking, water access, skateboarding and lacross/field hockey.

13) Of the activities listed above, which ones do you participate in the most? List the top three in order of use (#1 being the most frequent).

The top six responses to this question were:

- 1) Walking
- 2) Bandstand Activities
- 3) Playgrounds
- 4) Biking
- 5) Jogging
- 6) Bird Watching

A number of responses not quite making the top six, but that had a lot of folks saying they participated in the activity include going to historical sites, golf, swimming, tennis, basketball, horseback riding, trail hiking and kayaking/canoeing.

14) Which Hanover park, playground, recreation or conservation areas do you use most often?

The areas that were the most mentioned by survey respondents regarding this question include:

- Sylvester Field
- The Town Center area
- Colby Phillips
- Luddams Ford
- The High School (the fields and track)
- Myrtle Field
- Indian River

What do you consider to be Hanover's most attractive areas, landscapes or natural features?

Survey respondents felt very clearly that the places listed below are Hanover's most attractive areas, landscapes and natural areas, they include:

- The Town Center area
- North River
- Luddams Ford
- Four Corners
- Colby Phillips
- Sylvester Field

- Stetson House/Historical Properties

15) If you do not use Hanover's conservation land and recreational facilities, why not? (check all that apply)

Do not have the information about where they are located	59%
Hard to get to/lack of transportation	8%
Not handicapped accessible (please indicate where)	2%
Lack of parking	19%
Regarding trails, do not have information about where they go to	70%
Safety concerns	25%
Other	12%

Survey respondents noted that two of the main reasons they do not use Hanover's conservation land and recreational facilities are because regarding trails, they do not have information about where they go to, and they do not have information about where these amenities are located.

16) Do you support using CPA money to fund the creation or improvement of recreational facilities?

Strongly Support	47%
Somewhat Support	25%
Neutral	19%
Do Not Support	8%

17) Do you support using CPA money to fund open space and conservation purposes?

Strongly Support	53%
Somewhat Support	21%
Neutral	20%
Do Not Support	6%

18) The Town works hard to provide high quality park and recreation facilities and services to the residents of Hanover. However, difficult choices often must be made in the allocation of scarce resources. Please rank your open space and recreation priorities from 1 being the most important to 12 being the least important for each item below (please use the numbers 1 through 12 only once):

a) Improve water access for boating/fishing	9
b) Town to buy more open space	1
c) Build new playing fields	8
d) Build indoor community recreation center	7
e) Construct/build a paved bike path	4
f) Create small local parks in more areas of town	5
g) Build a skate/skateboarding park	12

h) Repair/maintain existing sports fields	2
i) Build a community dog park	11
j) Mapping/markings of existing walking trails	3
k) Repair/maintain existing historical properties	6
l) Equestrian trail linkages	10

According to survey respondents, the first six open space and recreation priorities for the Town of Hanover should be to:

- Buy more open space
- Repair/maintain existing sports fields
- Map and mark existing walking trails
- Construct and build a paved bike path
- Create more small, local parks in various areas of town

19) **Of the possible outcomes of facing the future of town owned property please list the three that you believe to be the greatest detriment in order of importance, with #1 being the most important.**

- 1) Letting currently owned property deteriorate and not maintaining it
- 2) Losing town owned open space to development
- 3) Residential and commercial development

In general, respondents did not really understand this question. Other answers were selling land to private development, over developing the town and using it for more ballfields.

20) **To help further protect, preserve and better manage existing and future open space and natural resources, how willing would you be to (1 = very willing, 5 = not very willing):**

a) Donate all or a portion of your land to the town/state/land trust	4.52
b) Donate money to buy land	3.67
c) Rewrite your deed to limit future development of your land	3.60
d) Sell all or portion of land to Town at a "bargain price"	4.42
e) Sell all of portion of land to Town at fair market value	3.76
f) Contribute a conservation restriction to protect your land	3.08
g) Volunteer time to the OS Committee initiatives	2.84

Survey respondents seemed the most willing to volunteer their time to Open Space Committee initiatives.

After that, respondents were less willing to do anything on the list provided, however, the next highest marks noted that they were most likely to either contribute a conservation

restriction to protect their own land, or rewrite their deed to limit future development on their property.

21) What would you like the Open Space Committee to focus the most on in the next five years? (1 = the most, 5 = the least)

a) Public education and outreach	2.23
b) Trail maintenance/adding new trails	2.05
c) Acquiring additional open space	2.07
d) Organizing walking/trail tours of existing open space	2.43

Survey respondents would most like the Open Space Committee to focus on trail maintenance and adding new trails in Hanover, then acquiring additional open space, and then public education and outreach. The options listed were responded to favorably, with organizing walking trail tours of existing open space coming in last on the list of activities.

22) In your opinion, are there enough sidewalks in town? Are they in the right place? If not, what are the deficiencies?

Survey respondents generally thought that no; there are not enough sidewalks in Hanover. Areas where respondents thought sidewalks should be addressed in Hanover include:

- All of the main commuter roads
- Main Street, Webster, Route 124, Broadway, Circuit, Center, Spring, Whiting, Myrtle, Silver, Dillingham, Woodland Drive, West Avenue, King, Union, Pleasant, Grove and all routes that lead to and from the schools.

Several respondents also noted that they like the way the Town of Hingham has utilized and located their sidewalks, and think a similar look would be appropriate in Hanover.

23) Are there any specific properties in Hanover you would like the Town to acquire as open space? If so, please describe the location:

Survey respondents noted the following properties:

- Cardinal Cushing,
- King Street farm land
- Any land available at a reasonable cost
- Curtis School
- Areas along the bank of the North River
- Land on the right side of the road past Grampy's general store and the pond
- Field on Washington Street
- Any land across from the high school
- Walking trails along North River
- Between 557 King Street, Kind Hill Road and Old Forge
- The back of King Street that abuts Cervelli
- The back of Ellis (to connect bike path to Ellis)
- Parcels that will link the Greenway

- Area on Main Street near the Hanson border with the old yellow farm house on it
- 16 to 20 acres on King Street, right before Olde Forge Road on the right
- Field on Washington Street
- The Fireworks Property
- Robsinson's Land off of Washington Street
- Any parcels which have not been developed should be reviewed for possible acquisition. A list should be created by the Open Space committee of parcels in excess of a certain acreage so the Town citizens are aware these parcels may be considered for Open Space.

Other Comments:

- We need welcome to Hanover signs at the corners of the town
- From the end of Myrtle Street to the fish ladder, the railroad would be a great trail
- Keep as open space all properties, now under jurisdiction of Town
- We must not forget our Council on Aging building
- No more building in historical or conservation areas
- Greenway from Rockland to the Four Corners
- Need a new senior center
- More Maps/info print or online
- Town should look into street lights
- Would be willing to purchase the land of neighbors for preservation
- Fix up the open space, we have now, why buy more if we can't keep the ones we have now in good shape?
- What is the sense in open space if you can't walk to it on safe sidewalks?
- After 32 years I am convince the town will never move to acquire significant open space. The town has passed up so much of it.
- Donated land to habitat for humanity
- Open space should not be acquired. Zoning restrictions should be enlarged instead.
- Promote use of Reduce/Reuse/Recycle philisophy, educate public regarding hazards of plastics, see Algalita Marine Research Foundation online.
- How about using the old school administration building on Main Street for senior housing?
- Do not pave bike paths, leave paths dirt so they are natural and open to bikes, horses and joggers.
- Acquire more woods to build trails.
- One concern I have is that the town has not maintained the town fields for organized sports. They are in deplorable condition. Whether the children or adults of this town are using them, they should be in great condition! It's embarrassing to live here.
- PLACE HUNTING ON A TOWN VOTING BALLOT! ** Regarding public education & outreach: the majority of Hanover residents are not aware that hunting has been allowed!
- Can the old railroad tracks be cleared out for a bike/walking trail yet? Publish a community clean up and I'm sure you'll get a lot of volunteers as well as Boy Scout help at least to get it passable for a start.
- One of my biggest concerns is to limit the building of new structures in the town (unless replacing older structures on the same property). New structures not only eliminates

beautiful landscape but also places additional demands on natural resources and social services.

- I think more needs to be done to protect the wetlands in this town. We see people cutting down trees, clearing vegetation that is there to protect the wetlands. The stream next to our home has dried up, in part to the weather and to the development of land behind our home. This stream feeds a pond across the street that is also drying up. There are teenagers who are constantly destroying the outfall for the pond and that is impacting the wildlife that lives in the pond. More policing of the areas surrounding the wetlands needs to be done, when people clear trees that are there to protect the streams they need to be fined and replant what they have taken down. There is an area on Grove street that this has happen too and nothing was done as this homeowner cleared his property. Education of new homeowners in this town whose property is surrounded by wetlands needs to take place so they understand why those trees are there, why they cannot clear that vegetation and landscape the property without approval. Some follow the proper procedures while others just do it and get away with it.
- We need an ice rink, either private or publicly funded.
- **STOP NEW RESIDENTIAL BUILDING IN HANOVER!**
- I think the dedication of those on the Open Space Committee will allow my children the opportunity to live in a town with outdoor spaces to play at and trails to walk through.
- I walk several times a week from the 4 corners down River St. to Tiffany. I take my life in my hands before I reach Tiffany. There are no sidewalks and cars do 10 - 20 miles over the speed limit.
- Would like to see guided tours of each of the existing walking trails. As there is hesitancy to use a new trail for the first time as one does not know the trail, the length of it, etc. A guided trail tour would help with this.
- Town should not be buying or acquiring any space.
- The two areas that I would like to see improved are sidewalks, and access to the river/lakes.
- My #1 priority would be to get the greenway completed so that joggers, bikers, horse people could traverse the town via the old railroad easement. I think the selectman have been obstructing this project. I am disturbed to see the suggestion for an indoor recreation facility...we need a new high school and a new senior center. The fire dept wants a new station. We cannot afford a recreation center...we are not Duxbury!
- I think the web surveys are an excellent way to gather input, I wished they were used more often. I think the Open Space Committee has done a great job in the past 10 years, and should continue their mission in the future.

MCM/---/125601MR006



OPEN SPACE AND RECREATION PLAN

PUBLIC FORUM
TOWN HALL
November 8, 2007



PRESENTED BY:
HANOVER OPEN SPACE COMMITTEE
BEALS AND THOMAS, INC.

Photo: Public Forum & Hanover Day

BEALS AND THOMAS, INC.

- Update of the Town OSRP Plan prepared in 1997
- Research demographics, environmental features, natural resources, recreational amenities
- Inventory open space and recreation properties (take stock of things in the community that give it character and a unique quality)
- Obtain benefits of development without losing valued environmental assets
- Improve coordination and collaboration between local boards and committees on similar efforts
- OSRP Plans approved by the Massachusetts Division of Conservation Services are eligible to participate in grant funding rounds

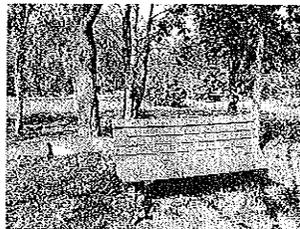
Photo: Ellis Field

BEALS AND THOMAS, INC.

- Town of Hanover Hired BTI in April 2007
- Monthly Meetings with Open Space Committee
- Interviews with Town Staff and other Stakeholders
- Town Wide Site Visit
- Hanover Day Booth, Public Forum, Survey
- Research (including Local Master Plan, 1997 OSRP, Regional Planning efforts, other current planning projects in Hanover), Data Collection and Analysis, Map Preparation, Draft Plan
- Submission of Plan to Massachusetts Division of Conservation Services

Photo: Picnic Tables

BEALS AND THOMAS, INC.

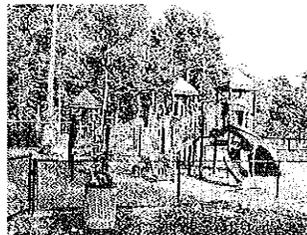
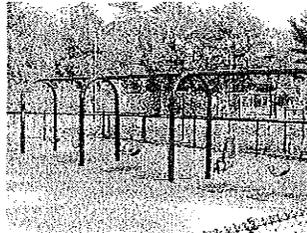
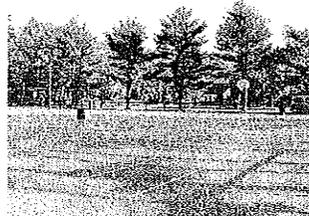


BEALS AND THOMAS, INC.

- Colby Phillips Property (128 acres and path network including new boardwalk)
- Fireworks Property (130 acres and trail system)
- Hell Swamp (90 acre wooded swamp)
- Luddam's Ford Park (19 acres)
- Merry Property (15 acres)
- Summer Street Site (102 acres)
- Tindale Bog and Beach Property (18 acres)
- Clark Land (70 acres)

Photo: Colby Phillips Boardwalk

BEALS AND THOMAS, INC.



BEALS AND THOMAS, INC.

- Sylvester Field (playgrounds, baseball, softball)
- Myrtle Field (basketball, baseball, softball)
- Calvin J. Ellis Field (baseball, softball)
- Hanover High School & Junior High School Fields, Track
- Cedar School Fields (playground)
- Amos Gallant Field (baseball, softball)
- Everett Hall Field (playground, basketball, football)

Photo: Hanover Day

BEALS AND THOMAS, INC.

- Well dispersed throughout the community
- Several large clusters
- 2,200 acres/20% of land area

 Hanover Open Space
 Surrounding Town
 Open Space



BEALS AND THOMAS, INC.

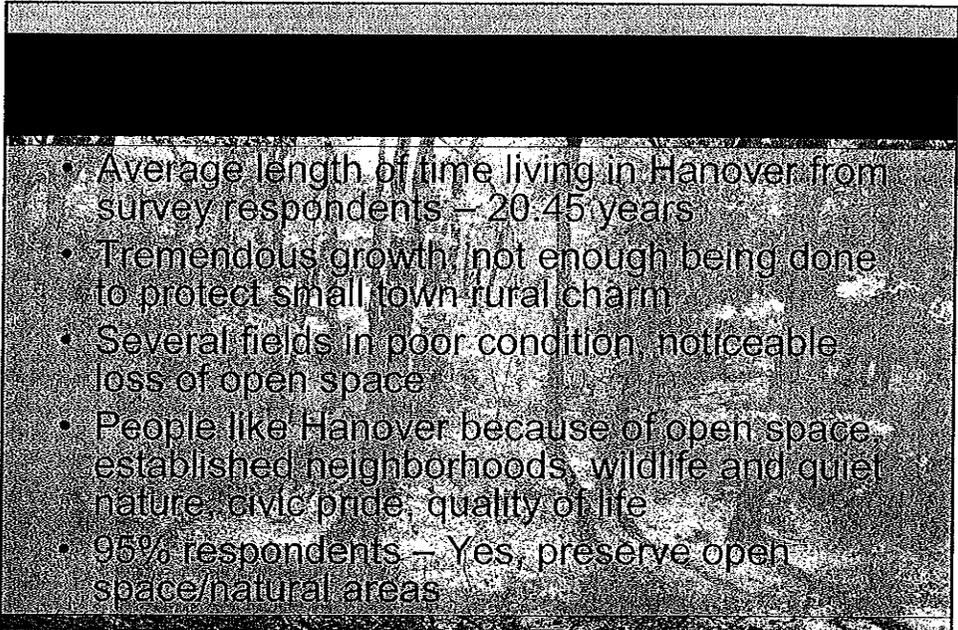
- 
- Average length of time living in Hanover from survey respondents – 20.45 years
 - Tremendous growth, not enough being done to protect small town rural charm
 - Several fields in poor condition, noticeable loss of open space
 - People like Hanover because of open space, established neighborhoods, wildlife and quiet nature, civic pride, quality of life
 - 95% respondents – Yes, preserve open space/natural areas

Photo: Franches Stream

BEALS AND THOMAS, INC.

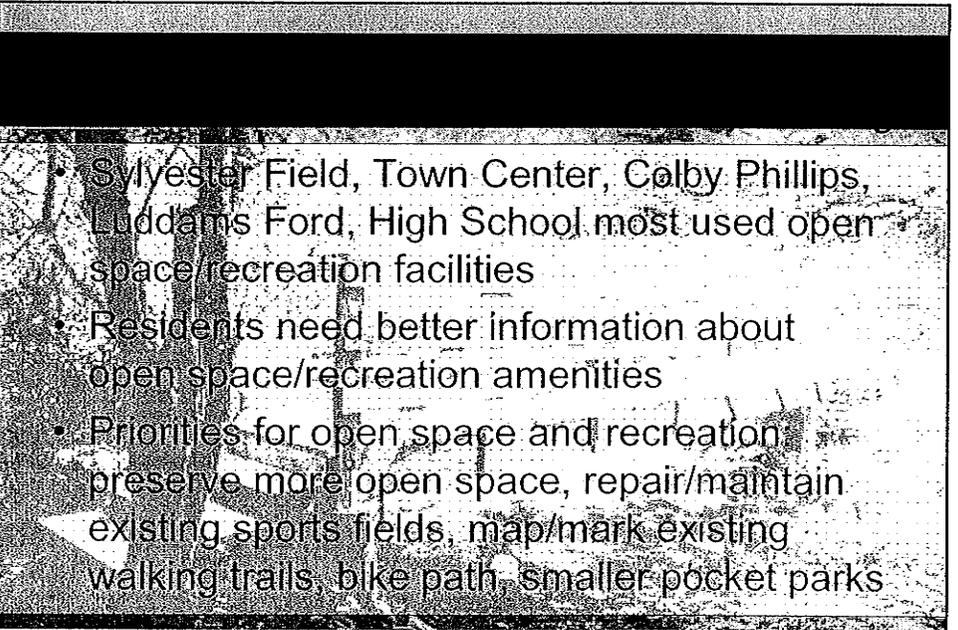
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- Sylvester Field, Town Center, Colby Phillips, Luddams Ford, High School most used open space/recreation facilities
 - Residents need better information about open space/recreation amenities
 - Priorities for open space and recreation: preserve more open space, repair/maintain existing sports fields, map/mark existing walking trails, bike path, smaller pocket parks

Photo: Cushing Bridge

BEALS AND THOMAS, INC.

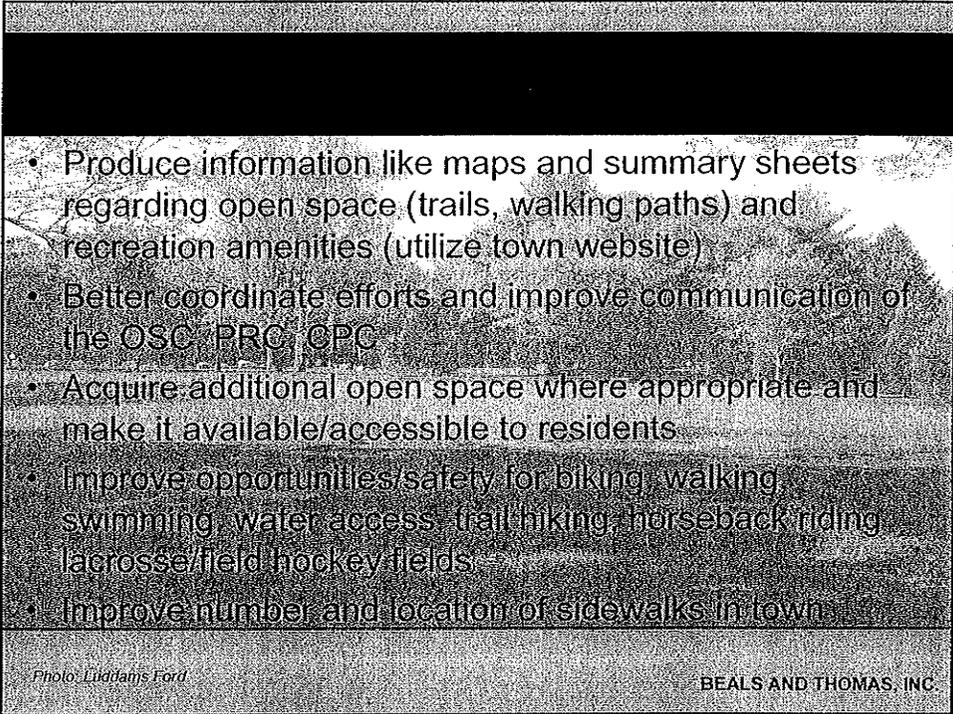
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- Produce information like maps and summary sheets regarding open space (trails, walking paths) and recreation amenities (utilize town website)
 - Better coordinate efforts and improve communication of the OSC, PRC, CPC
 - Acquire additional open space where appropriate and make it available/accessible to residents
 - Improve opportunities/safety for biking, walking, swimming, water access, trail hiking, horseback riding, lacrosse/field hockey fields
 - Improve number and location of sidewalks in town

Photo: Liddams Ford

BEALS AND THOMAS, INC.

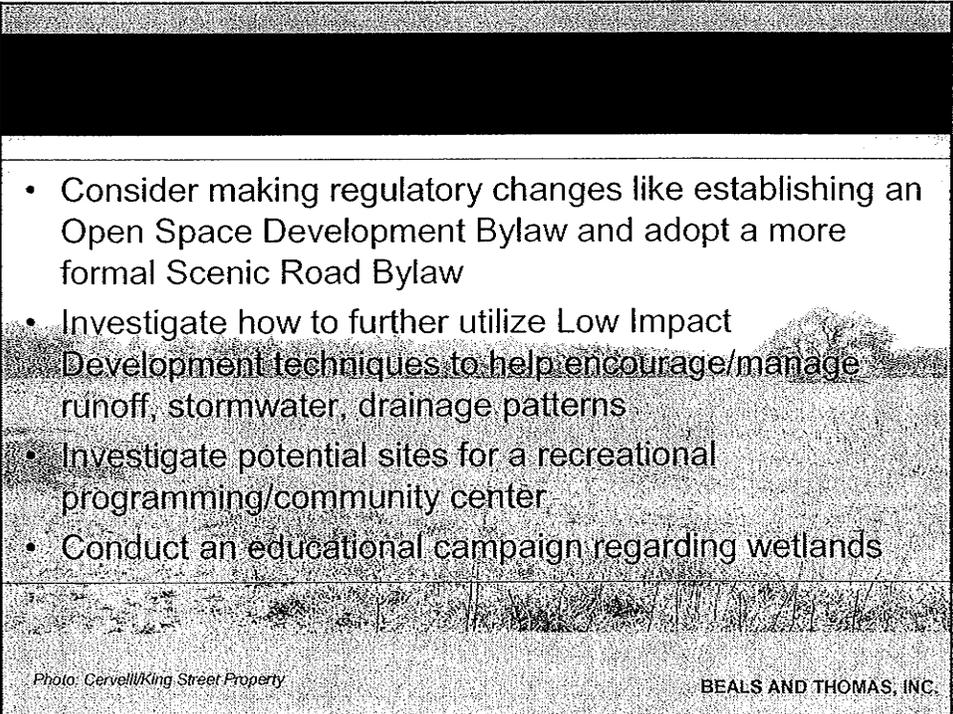
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- Consider making regulatory changes like establishing an Open Space Development Bylaw and adopt a more formal Scenic Road Bylaw
 - Investigate how to further utilize Low Impact Development techniques to help encourage/manage runoff, stormwater, drainage patterns
 - Investigate potential sites for a recreational programming/community center
 - Conduct an educational campaign regarding wetlands

Photo: Cervelli/King Street Property

BEALS AND THOMAS, INC.

- Nominate the area near/around the North/Indian Head Rivers as an Area of Critical Environmental Concern
 - ACEC is a place in Massachusetts that receives special recognition because of the quality, uniqueness, and significance of its natural and cultural resources
 - provides a framework for citizens, communities, and state agencies to work together and ensure the long-term preservation and management of the area
 - North River is a Scenic River, freshwater tidal marsh (globally rare), fresh/brackish tidal swamp (home to rare/endangered species), wetlands, historic resources like the bridges, sensitive habitat area

Photo: Forge Pond

BEALS AND THOMAS, INC.

THANK YOU FOR BEING HERE!

celebrating

Contact Information:

Mary C. McGrann, Beals and Thomas, Inc.

www.btiweb.com 508-366-0560

Hanover Open Space Committee

<http://www.hanover-ma.gov/open-space.shtml>

... and beyond!

Art Work: Michelle Gillard, Hanover Master Plan Art Contest Winner

BEALS AND THOMAS, INC.

Handicapped Accessibility Inventory – Town of Hanover OSRP

Location	Parking Spaces	Play Area/Ramps	Public Phones	Water Fountains	Toilet Facility	Picnic Area	Accessible Trails	Swimming Pool	Target Action
Baldy Parcel, wooded neighborhood conservation land									
Bonney Conservation Parcel, conservation land									
Bonney Land, conservation land									
Broadway/Indian Head Parcel, conservation/old railbed									
Cedar Street Property, conservation land									
Clark Land, Colby Phillips area, cranberry bog									
Colby Phillips Property, nature trails									
Cross Street Site, adjacent to Morrill Phillips									
Dillingham Old Town Way Site, neighborhood conservation land									
Emily Elizabeth White Conservation Area, aquifer protection district									
Fairbairn Parcel, abuts Thurd Herring Brook									
Fireworks Property, nature trails									
Hammer Hook Conservation Parcel, wooded area									
Hell Swamp, swamp/conservation land									
Hillside Drive Lane, neighborhood conservation land									
Indian Head/Riverside Land, aquifer protection zone	yes						yes		yes
Jay's Lane Parcel, neighborhood conservation land									
Luddams Ford Park, nature trails, fishing, canoe launch	yes						yes		yes
Mann Brook Swamp, conservation land									
Mann Brook/Hobart Swamp, conservation land									
Merry Property, nature trails									

Appendix D
ADA Study

Handicapped Accessibility Inventory -- Town of Hanover OSRP (Continued)

Location	Parking Spaces	Play Area/Ramps	Public Phones	Water Fountains	Toilet Facility	Picnic Area	Accessible Trails	Swimming Pool	Target Action
Norwell Line Parcel NE, conservation land									
Norwell Line Parcel NW, conservation land									
Old Ford Conservation Parcel, neighborhood conservation land									
Old Washington Street Corner, route 53 commercial area									
Pine Island Swamp North, swamp									
Pine Island Swamp South, swamp									
Plain Street Site, diked trails	yes						yes		yes
Plymouth Road Parcel, neighborhood conservation land									
Rinear Property, conservation land									
Shinglemill Brook Swamp, conservation land									
Sproul Land, conservation land									
Summer Street Site, nature trails									
Third Herring Brook & Old Pond Swamp, conservation land									
Third Herring Brook Parcel, conservation land									
Tindale Bog & Beach Property, skating area									
Union Street, Hells Swamp									
Water Street Parcel, conservation land									
Webster Street Parcel, conservation land									
Whiting Village Property, conservation land									
Whiton Court Parcel, conservation land									

Handicapped Accessibility Inventory – Town of Hanover OSRP (Continued)

Location	Parking Spaces	Play Area/Ramps	Public Phones	Water Fountains	Toilet Facility	Picnic Area	Accessible Trails	Swimming Pool	Target Action
Willow Road Site, nature trails									
Amos Gallant Field/Curtis School, baseball field	yes						yes		yes
B. Everett Hall Field/Sylvester School, baseball field, bandstand, playground, tennis	yes	yes			yes		yes		yes
Briggs Field, baseball field	yes						yes		yes
Calvin J. Ellis Field, baseball field	yes						yes		yes
King Street/Cervelli Property, former farmland, nature trails									
Morrill Allen Phillips Wildlife Sanctuary, nature trails, baseball fields	yes						yes		yes
Salmond School Fields, ballfield	yes						yes		yes

Notes Regarding the Inventory:

- Melissa Cryan, Division of Conservation Services confirmed on December 10, 2007 that the only properties which need to be inventoried for the OSRP update are those which are managed by the Conservation Commission or Parks and Recreation Department.
- Yes = Target Action is required
- The Town of Hanover will encourage other jurisdictional public, private and nonprofit recreational facility owners to undertake these actions to achieve ADA compliance and handicapped accessibility.
- While the Town of Hanover will strive to undertake these target actions, or cause them to be undertaken by other facility owners, the ability to effectuate these changes will largely be dependent on the availability of grant or other resources beyond the Towns conventional means.

Target Actions

In December 2007, the Conservation Commission and Parks and Recreation managed conservation areas, parks, playgrounds, fields and water access areas were inventoried by a qualified professional at Beals and Thomas, Inc. in terms of handicapped accessibility. Recommendations about what steps should be taken regarding ADA compliance are noted in this section and have been included in the Five Year Action Plan (Section 9.0). Inventory forms were prepared for the following sites and have been summarized below and in the table in this section.

Indian Head/Riverside Land - LOCATION: Indian Head Drive, Riverside Drive

The property is in the aquifer protection zone and there is a canoe and boat launch available for public use. The site is approximately 36.1 acres and is managed by the Conservation Commission.

Recommendations: At the Riverside Drive Boat Launch, there is a gravel parking area and turnaround. At the parking area, one handicapped parking space should be designated, a handicapped van space and sign should be provided and there should be a hard packed surface. In addition, the path to the boat launch should be made accessible, the surface should be hard packed and the path should be a minimum of 3 feet.

Luddams Ford Park - LOCATION: Water Street

The property has a park, nature trails, fishing and canoe launch access points. The site is approximately 19.50 acres and is managed by the Conservation Commission.

Recommendations: At Luddams Ford Park, a handicapped parking space is needed along an accessible route and a handicapped van space and sign is needed. The path at Luddams Ford should be regarded to a 5% maximum slope. In addition, an accessible path from the parking area to the launch area should be added and it should be a hard packed surface.

Plain Street Site - LOCATION: Aspen Drive, Longwater Drive, Plain Street Rear

The property has nature trails available for public use. The site is approximately 61 acres and is managed by the Conservation Commission and the Board of Selectmen.

Recommendations: An additional handicapped parking space is needed, as is a handicapped van parking space and sign. An accessible path should be provided from the handicapped parking space to the nature trails and it should be a hard packed surface.

Amos Gallant Field - LOCATION: Aspen Drive, Longwater Drive, Plain Street Rear

The property is located at the Curtis School and there is a baseball field there for public use. The site is approximately 3 acres and is managed by the Board of Selectmen.

Recommendations: At Amos Gallant, a handicapped van parking space and sign should be provided, the ballfield is greater than 200' from the parking lot, so a drop-off area

should be provided within 100'. In addition, at the lawn area between the parking lot and the field, an accessible path from parking spaces to the bench near the ballfield should be added and the surface should be hard packed.

B. Everett Hall Field/Sylvester School - LOCATION: Hanover Street

The property is located near the center of town and there is a bandstand, football and baseball fields, basketball court, tennis court, playgrounds and picnic areas. The site is approximately 21 acres and is managed by the Parks and Recreation Department.

Recommendations: At B. Everett Hall Field/Sylvester School, a bench with an arm rest should be provided near the picnic area, a handicapped van parking space and sign should be provided, the bandstand needs a handicapped ramp so that it can be accessed, an accessible path needs to be provided to the bandstand, picnic area, bleachers and tennis court and the surface should be 4' wide and hard packed. A 4' wide hard packed path should be added to all facilities. The entrance to the field needs to be 4' wide through the chain link fence. The restroom facilities also need to be improved and need to meet all requirements of the ADA Checklist, flush access needs to be provided to the door. If these improvements are too prohibitive, consideration should be given to providing a handicapped accessible portable toilet on site. In addition, a handicapped accessible picnic table is needed.

Briggs Field - LOCATION: Hanover Street

The property is located along Hanover Street and there is a baseball field there for public use. The site is approximately 1 acre and is managed by the Parks and Recreation Department.

Recommendations: At Briggs Field, a bench with back and arm rests is needed, there should be an accessible path to the lawn area, a handicapped van space and sign is needed, an 8' aisle should be added and striped, an accessible route from the parking spaces to the field and sitting areas should be added, accessibility is needed to the bench and bleacher areas, the surface should be at least 4' wide and even, hard packed.

Calvin J. Ellis Field - LOCATION: Circuit Street

The property is located along Circuit Street and there is a baseball field there for public use. The site is approximately 12.6 acres and is managed by the Parks and Recreation.

Recommendations: At Calvin J. Ellis field, a handicapped bench should be provided, 3 handicapped parking spaces total should be available, and there needs to be one handicapped van parking space and sign. An accessible path should be added to the seating area and it should be a hard packed, even surface. The restrooms at the Reservoir Building need to meet the requirements on the ADA worksheet. An accessible picnic table should be provided and the surface should be even and hard packed.

Morrill Allen Phillips (Myrtle Field) - LOCATION: Myrtle Street

The property is located along Myrtle Street and there is a baseball field and nature trails there for public use. The site is approximately 216 acres and is managed by the Conservation Commission and Parks and Recreation.

Recommendations: At Morrill Allen Phillips, a handicapped bench should be provided where the ballfields are located. In addition, at the gravel lot off of Myrtle Street, there should be 2 handicapped parking spaces, one handicapped van space and sign, and a drop off area near the backstop. At the parking spaces, a hard packed surface should be provided. There should also be a handicapped path from the drop-off area to the bench area and it should be a hard packed surface.

Salmond School Field - LOCATION: Broadway

The property is located along Broadway and there is a baseball field there for public use. The site is approximately 3.10 acres and is managed by the School Department.

Recommendations: At the Salmond School, handicapped benches should be added, at the parking lot adjacent to the field, one handicapped parking space should be added and there should also be a handicapped van parking space and sign. A path should be provided to the handicapped bench and the surface should be even and hard packed.

Town of Hanover - Grievance Procedure for Non-Compliance with the Americans with Disabilities Act Title II Regulations

Policy

The intent of this grievance procedure is to reconcile the Americans with Disabilities Act Title II regulations in an appropriate and effective manner. Participants in the grievance are expected to act appropriately and respect this grievance process.

Grievance Procedure

Grievances shall relate to improper compliance of the Americans with Disabilities Act. Grievances shall be resolved in the following manner:

a. Individuals are encouraged to discuss any matter of dispute with a Department Head or the ADA Coordinator (Town Administrator) in a mutual effort to resolve any problem or misunderstanding. Failure to resolve any grievance in an informal manner, the aggrieved individual may present a grievance in writing to a Department Head or the ADA Coordinator along with all pertinent information relative to the grievance and indicating the relief that is desired. The Department Head or ADA Coordinator shall, within seven (7) days of receipt of a grievance, provide an answer in writing to the aggrieved individual; a copy of which shall be provided to the Board of Selectmen, to be kept on file by the Personnel Department.

b. If the grievance has not been resolved as provided in (a) above, the aggrieved individual may within seven (7) days after receipt of the written answer from the Department Head or ADA Coordinator or within fifteen (15) days after presentation of the grievance to the Department Head or ADA Coordinator present the grievance in writing to the Board of Selectmen. The Board of Selectmen shall schedule a hearing on the grievance and shall answer the grievance within thirty (30) days after its receipt. The minutes of that Board meeting and the steps involved in the resolution of the grievance shall be kept on file by the Personnel Department.

As of May 2006, the designated ADA (504) Coordinator is:

Albert Paul McAuliffe
Building Commissioner
Town of Hanover
550 Hanover Street, Suite 8
Hanover, MA 02339

Phone: 781-826-6400

Fax: 781-826-5950

E-mail: mcauliffe.building@hanover-ma.gov

Town Website: www.hanover-ma.gov

The appointment of Mr. McAuliffe as the ADA Coordinator expires with his appointment as Building Inspector.

BEALS AND THOMAS, INC.

ADA Study 7

II. EMPLOYMENT

II.1 Employment Policy

The Town selects applicants for employment and candidates for promotion and job transfer on the basis of their ability to perform the job and does not discriminate against any individual because of race, creed, color, national origin, ancestry, religion, marital status, age, handicap, or sex.

II.2 Employee Records

All employment records are considered confidential. They are kept by the personnel administrator and may not be viewed by anyone other than the applicable employee or his/her immediate supervisor on strictly a need to know basis. An employee may view his/her employment records by requesting access from the Personnel Administrator.

II.2.A

The Personnel Administrator shall, for all Town employees, covered, and not covered, by the Hanover Personnel By-law, be fully authorized to organize the administrative personnel practices, information and files, and compliance efforts required of the Town, in any manner needed to best administer authorized personnel practices of the Town. Further, in regards to compliance efforts required of the Town by the Federal or State Government, the Personnel Administrator shall be authorized to direct the efforts of any personnel in any department, notwithstanding any by-law, or other governing authority to the contrary, to achieve the required compliance.
(May 1993)

II.3 Recruitment

Department heads or boards must notify the Town personnel administrator when job openings occur. Written notification must be accompanied by a job description, required qualifications, and the number of regularly scheduled weekly working hours.

Within three working days a notice of vacancy will be posted on the Town Hall bulletin board and on bulletin boards in the following areas: school department, fire department, DPW, and the library. Qualified Town employees are encouraged to apply to the appropriate department to fill a job vacancy. Job vacancies may also be advertised in newspapers or professional publications, or may be advertised using other methods to find appropriate applicants. Each external applicant must complete a job application.

Each applicant's qualifications will be reviewed by the appropriate department head or board. Hiring decisions will be made by the appropriate department head or board within established procedures.



TOWN OF HANOVER
550 HANOVER STREET, SUITE 29
HANOVER, MASSACHUSETTS 02339
(781) 826-2261 (781) 826-5010

Board of Selectmen

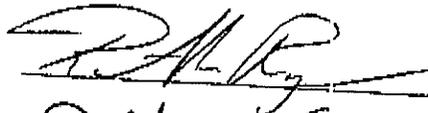
TO: ALBERT PAUL MCAULIFFE

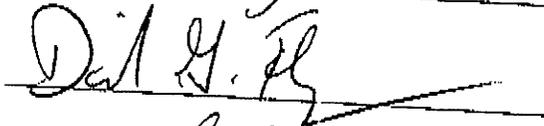
of 18 Atwood Street, Kingston, MA 02364

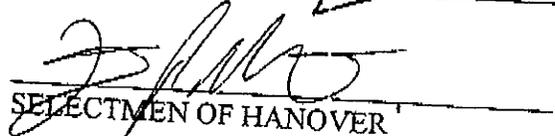
We, the Selectmen of Hanover by virtue of the authority in us vested by the laws of the Commonwealth, do hereby appoint you

504 Coordinator

APPOINTMENT EXPIRES: Concurrent with appointment as Building Inspector.
Given at Hanover, this 30th day of May, 2006.

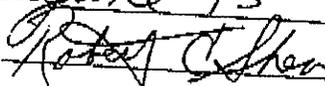






SELECTMEN OF HANOVER

Recorded June 13 A.D. 2006

Attest  Town Clerk



TOWN OF HANOVER
HANOVER, MASSACHUSETTS 02339

Board of Selectmen

Tel. 826-2261 826-5010

**GRIEVANCE PROCEDURE FOR NON-COMPLIANCE WITH THE AMERICANS
WITH DISABILITIES ACT TITLE II REGULATIONS**

Policy. The intent of this grievance procedure is to reconcile the Americans with Disabilities Act Title II regulations in an appropriate and effective manner. Participants in the grievance are expected to act appropriately and respect this grievance process.

Grievance Procedure. Grievances shall relate to improper compliance of the Americans with Disabilities Act. Grievances shall be resolved in the following manner:

- a. Individuals are encouraged to discuss any matter of dispute with a Department Head or the A.D.A. Coordinator (Town Administrator) in a mutual effort to resolve any problem or misunderstanding. Failure to resolve any grievance in an informal manner, the aggrieved individual may present a grievance in writing to a Department Head or the A.D.A. Coordinator along with all pertinent information relative to the grievance and indicating the relief that is desired. The Department Head or A.D.A. Coordinator shall, within seven (7) days of receipt of a grievance, provide an answer in writing to the aggrieved individual; a copy of which shall be provided to the Board of Selectmen, to be kept on file by the Personnel Department.
- b. If the grievance has not been resolved as provided in (a) above, the aggrieved individual may within seven (7) days after receipt of the written answer from the Department Head or A.D.A. Coordinator or within fifteen (15) days after presentation of the grievance to the Department Head or A.D.A. Coordinator present the grievance in writing to the Board of Selectmen. The Board of Selectmen shall schedule a hearing on the grievance and shall answer the grievance within thirty (30) days after its receipt. The minutes of that Board meeting and the steps involved in the resolution of the grievance shall be kept on file by the Personnel Department.

February 1995
grievanc.ada

Appendix E

Supporting Documentation

- Parks and Recreation Master Plan – Draft October 2007
 - Parks & Recreation and School Fields Map
 - Build-out Areas Remaining in Hanover Map
 - NHESP Documentation
 - DEP Reportable Release Sites
- The Hanover Greenway Project Plan – April 1999

APPENDIX A

HANOVER'S EXISTING PARKS & RECREATION FIELDS AND FACILITIES

Under Custody of Parks & Recreation

No. (Map ID)	Field/Facility Name	Map-Lot(s)	Total Acres	Street Address and/or Cross Streets	Ownership/Management	Available Fields
1	Briggs Field	46-014	1.17	Hanover/Center Street	Selectmen / Parks & Recreation	T-Ball / Softball
2 (*)	B. Everett Hall Field	47-015	20.33	495 Hanover Street	Selectmen / Parks & Recreation	Tennis/Basketball/Playground/ Football/Bandstand/Volleyball/ Baseball Field
3	Calvin J. Ellis Field	51-004	12.50	Approx. 750 Circuit Street	Parks & Recreation	Baseball
4	Myrtle/Center Playground	69-014	75.00	Approx. 215 Myrtle Street	Parks & Recreation	Basketball/Baseball/ Soccer/Softball
5	Amos Gallant Field	21-007	2.74	848 Main Street	Selectmen / Parks & Recreation	Baseball/Softball
6	Cervelli (Lot A) (Lot 1B, subparcel a) (Lot 1B, subparcel b) (Lot 1B, subparcel c)	67-001	74.47 (20.67) (27.30) (19.50) (7.00)	Approx. 245 King Street	Total / Entire Parcel (Parks & Recreation) (Conservation Commission) (Parks & Recreation) (Conservation Commission)	Recent Acquisition (To be Determined) (See Parks & Recreation Committee Draft Recreation Facilities Master Plan)
Total Acres (Approximate):			186.21			

Under Custody of School Department

No. (Map ID)	Field/Facility Name	Map-Lot(s)	Total Acres	Street Address and/or Cross Streets	Ownership/Management	Available Fields
7 (*)	Sylvester School	47-015	20.33	495 Hanover Street	School Department	Softball/ Playground/Soccer
8	Center School	47-003	12.91	65 Silver Street	School Department	Playground/Baseball/Multi-Purpose
9	Salmond School	57-076	6.66	188 Broadway	School Department	Playground/Softball
10	Hanover High School	27-005 + 27-002	23.41 23.90	287 Cedar Street	School Department	Track/ Tennis/ Baseball/ Football/Multi-Purpose
11	Hanover Middle School	26-007	29.62	45 Whiting Street	School Department	Playground/Multi-Purpose
12	Cedar School	27-001 + 27-002	48.80 23.90	265 Cedar Street	School Department	Playground/Multi-Purpose
Total Acres (Approximate):			189.53			

(*) These parcels have a split control over total land area which does not coincide with parcel boundaries. See Annual Town Meeting Vote, May 14, 2007, Article 47.

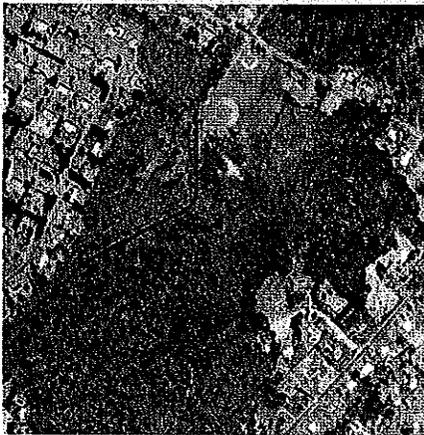
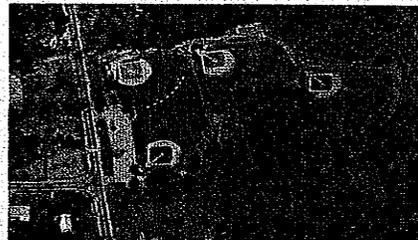
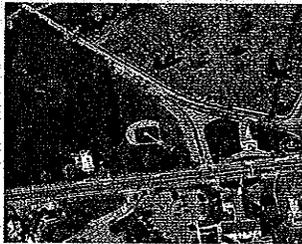
DRAFT
October
2007



Town of Hanover
Massachusetts
**PARKS & RECREATION
MASTER PLAN**

Summer 2007

Hanover Parks & Recreation
the benefits are endless...



Aerial Images of Study Properties



Town of Hanover Parks & Recreation Master Plan

2007

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APPENDIX

Field Quantities and Use Matrices
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Parks and Recreation User Survey

Acknowledgements

We gratefully acknowledge the many dedicated individuals from both the Parks and Recreation Committee and Master Plan Subcommittee for their participation in every aspect of this master planning process. Their ability to understand Hanover's most critical recreational needs, to design solutions that address those needs and to develop realistic strategies for implementing the actual improvements, will yield positive benefits to all seeking enjoyment as key aspects of the Master Plan are accomplished over the course of the next few years.

Thanks also to Ted Carroll, Parks and Recreation Administrator; and to Andrew Port, Town Planner; for their assistance in developing and launching the Park and Recreation User Survey and for compiling much of the plan information and related property data that was used to develop this document. Thanks to many other members of the Hanover community, who filled out the park user surveys in order to indicate their likes, dislikes and desires in regard to the past, present and future use of the various park properties. Thanks also to those community members who came out for the open forums to express their concerns in person and to the many representatives of other Town departments and entities who provided advice and insight. The recommendations contained in the Hanover Parks & Recreation Master Plan represent our best professional judgment and expertise tempered by the unique perspectives of each of the participants to the process.

Eugene R. Bolinger, RLA
Vice President

Michael S. Moonan, RLA
Project Manager

October 2007

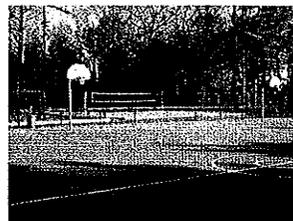
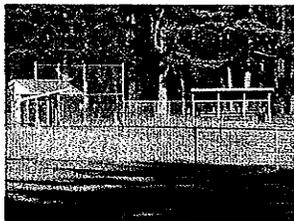
Hanover Parks and Recreation Committee

Michael Tivnan, Chairperson
Arthur Ceurvels, Jr.
Linda DiNardo
Amy Perkins
Julianne McLaughlin
Cathy Harder-Bernier

Chris Sullivan – HYAA Liaison

Hanover Parks & Recreation Master Plan Subcommittee

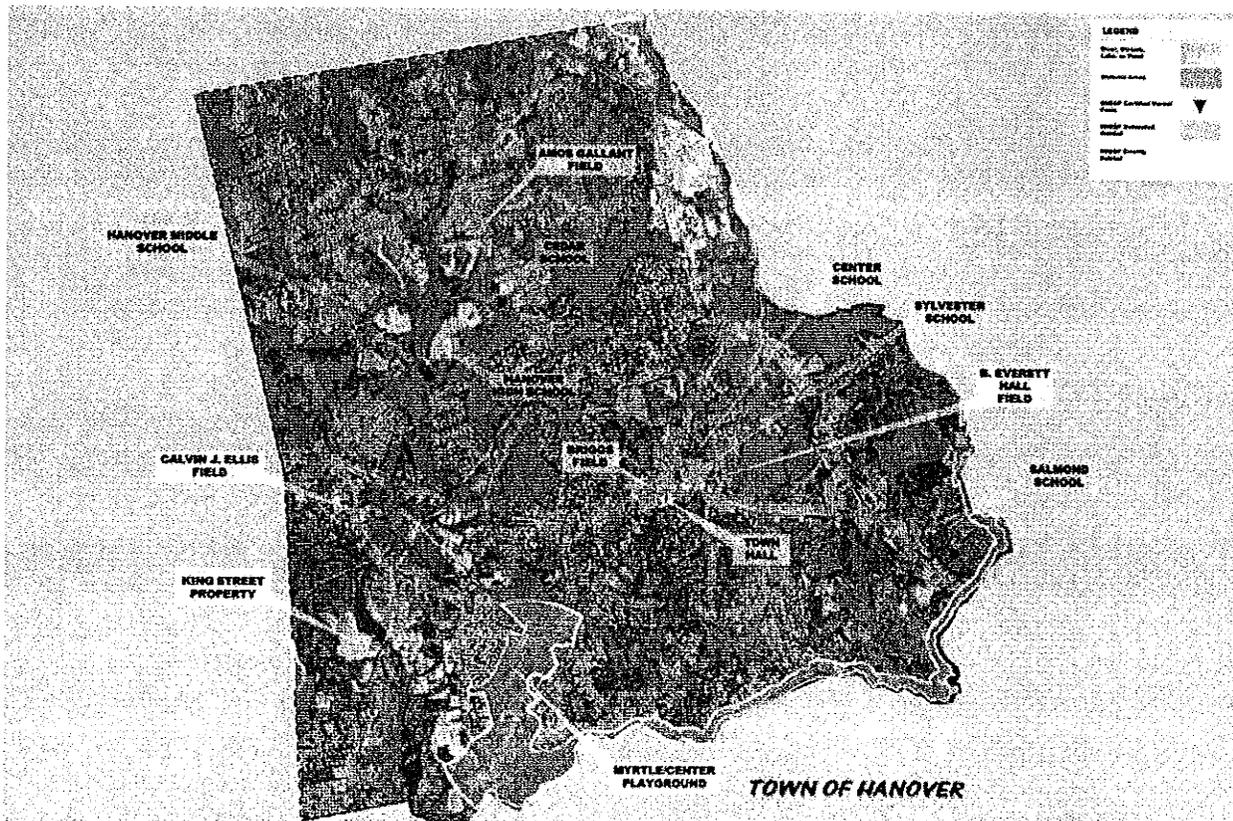
Janet Devine
Joe Devine
Mark MacNeill
Maura Mcauley



Introduction

The Hanover Parks and Recreation Committee retained Weston & Sampson during the spring of 2007 to complete this comprehensive park and recreation master plan. The work has been financed through a private donation and an award from the Hanover Community Preservation Committee. The purpose of the master plan was to assess current Parks and Recreation Committee properties and other Town properties that provide recreational resources to residents of the community.

It is important to note that recreation needs relate not just to court and field facilities and the corresponding sports/athletic programs that make use of them, but also to more passive or informal recreational pursuits that might include such activities as walking, sitting on a park bench, reading, flying a kite or interpreting the unique cultural, historical or environmental assets of a particular property. In addition, recreation is multi-generational and the final master plan will identify strategies for improving opportunities for those of all ages.



The image above identifies an aerial view of the Town of Hanover. The locations of the six parks and recreation properties and other school properties are indicated. Note that many of the facilities are clustered toward the central section of Town, with few facilities located toward the southeastern or northern parts. The green highlighting depicts School Department properties.

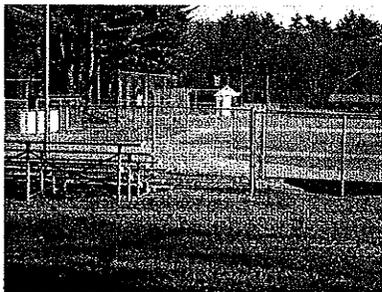
This master plan will serve as a guide for the future development of park and recreation properties, as well as a tool to secure funding from various private, Municipal, State and Federal sources.

The specific scope of work undertaken by Weston & Sampson has included:

- Compilation of base maps and plans suitable for the development of all conceptual design plans for each of the properties being considered
- Record and report on all existing conditions at each property
- Identify safety issues and site limitations, constraints and opportunities for each property
- Formulate a town-wide parks and recreation user survey to be made available on-line and on paper
- Compile survey results and identify the most critical recreational needs
- Engage the community in a public dialogue to further establish and confirm needs, preferences and priorities in relation to the future renovation and restoration of each property
- Develop concept plans for each property prepared specifically in response to community needs and preferences, and ultimately to be endorsed by both community participants and the Parks and Recreation Committee in the form of a “preferred” plan for each property
- Establish budgets and phasing, funding and implementation strategies for all desired property enhancements
- Develop and reproduce the final, finished preferred master plans

During the past several months, representatives of the Hanover Parks and Recreation Committee and Weston & Sampson have developed conceptual and final “Preferred” master plans for the properties that fall under their jurisdiction (see list of properties on the following page). The master plans were generated in response to the needs of the Town as expressed by various community representatives at a series of public hearings and through the issuance of a comprehensive Park User Survey. At the outset of the process and in conjunction with the master planning work, Weston & Sampson representatives frequently toured the properties in order to assess the existing conditions of all active and passive recreational facilities, current limitations, safety and maintenance issues and identify potential opportunities for providing improved facilities and improved user experience. Existing conditions assessments are included in the form of a series of photographs, plans and narrative descriptions contained later in this document.

The major points of the concept master plans for each property were presented in a preliminary manner to the Hanover Parks and Recreation Committee and to the general public at a series of open meetings held during the late spring of 2007. Final presentations in relation to the confirmation and acceptance of a “preferred” plan for each property were held during August and September 2007 for the Parks and Recreation Committee to vote for preferred plan approval. Information will also be presented to the Board of Selectmen, in anticipation of formal acceptance and approval.



It was clear that the desire of nearly all Parks and Recreation Committee members and others in the community is to enhance each property, for both active and passive recreational opportunities and to provide new facilities that meet the continuing needs of a growing town and of various recreational programs and community leagues. This written report represents the culmination of the master planning process.

This document contains narrative and graphic depictions of the preferred master plans with descriptions of potential improvements, potential phasing scenarios and implementation strategies. In addition to identifying new and refurbished facilities that meet the needs of various programs and activities, there was an attempt to identify other important initiatives that promote environmental stewardship and that create new pedestrian linkages to other open space resources, improved parking, site access and circulation, and improved landscape qualities that establish the characteristics inherent to first-class park and recreation facility properties. Implementation of the improvements outlined in this master plan will require significant effort. The Funding Opportunities section of the report identifies potential granting agencies, non-profit entities and other sources of capital dollars or in-kind services that might help with refurbishment of one or more of the properties.

It is important to note that a "master plan" is typically general and that the recommendations are not "cast in stone". It is fully intended that, as particular projects are implemented, the actual scope of improvements contained in this report will again be validated or refined to meet actual field conditions through a continuing public participation process.

Background

The master plan focuses primarily on six properties that fall under the jurisdiction of the Parks and Recreation Committee. The properties are located geographically toward the center of Hanover, with Briggs Field, B. Everett Hall and Myrtle/Center Playground being particularly close to the traditional town center (near Town Hall, the library, historic churches). The properties vary greatly in size, configuration and recreation offerings. For instance, Gallant and Briggs are small properties that host a single open field area. B. Everett Hall is the Town's most long-standing park and open space property, with extensive active recreational facilities, a community bandstand and opportunities for passive use and enjoyment. B. Everett Hall also hosts major town-wide events annually. Ellis and Myrtle/Center are community-wide recreation complexes that offer multiple sports fields, extensive undeveloped and environmentally sensitive lands, great opportunities for enhanced passive recreation, and potential linkages to other important open space properties. King Street, a former cornfield, has been recently acquired, with unlimited opportunities for passive and active recreational enhancements.



The new King Street Property

The list of properties and summary of basic assets is included below.

List of Parks and Recreation Committee Properties

Property	Address	Acres	Description of Facilities
Briggs Field Map 46 - Lot 014 Under control of Selectmen / Park & Recreation	Hanover / Center Streets	1.17	Small-scale facility located within the historic district near town center with a single field for T-ball and softball use.
B. Everett Hall Field (Sylvester Field) Map 47 - Lot 015 Under control of Selectmen / Park & Recreation	495 Hanover Street	20.33	Town's premier recreation facility, located within the historic district near town center, with extensive fields, courts (tennis, basketball and street hockey), children's playground, beach volleyball, bandstand and other related amenities.
Calvin J. Ellis Field Map 51 - Lot 004 Under control of Park & Rec.	750 Circuit Street (Approx.)	12.50	Major baseball field complex with facilities for most levels of competition.
Myrtle / Center Playground Map 69 - Lot 014 Under control of Park & Rec.	215 Myrtle Street (Approx.)	75.00	The Town's largest park facility in total area with basketball courts, a large and open multi-use field complex used for baseball, softball and soccer. Trails meander through large undeveloped woodland and wetland sections of the property.
Amos Gallant Field Map 21 - Lot 007 Under control of Selectmen / Park & Recreation	848 Main Street	2.74	Small-scale facility used for baseball and softball. Located behind the unused Curtis School on Main Street.
King Street Property Map 67 - Lot 001 Under control of Open Space / Park & Recreation	245 King Street (Approx.)	74.55	Recent acquisition, open fields that have been historically farmed. Recreation uses to be determined. This property falls under the jurisdiction of both the Parks & Recreation Committee and the Open Space Committee. The portion of the site under P&R Committee jurisdiction corresponds generally to the area that has been historically farmed near King Street (approximately 40 acres).

In order to fully understand the recreational needs of the community, it was important to identify other major properties that provide important public outlets for passive and active recreation. School properties clearly provide multiple active recreational facilities that help support their own sports programming, but also support other town sports programs. While not specifically under the jurisdiction of the Parks and Recreation Committee, several of the properties are in close proximity to park properties (Sylvester and Center Schools are located immediately adjacent to B. Everett Hall) and the School Department and Recreation Committee work closely to program the

sites in a way that helps support both school and town programming (through Parks and Recreation or Hanover Youth Athletic Association) needs. The school properties are identified below.

List of School Department Properties

<i>Property</i>	<i>Address</i>	<i>Acres</i>	<i>Description of Facilities (*)</i>
<i>Sylvester School</i>	495 Hanover Street	20.33	Fields used for softball, soccer and playground
<i>Center School</i>	65 Silver Street	12.91	Baseball field, multi-purpose field and playground
<i>Salmond School</i>	188 Broadway	6.66	Softball field and playground
<i>Hanover High School</i>	287 Cedar Street	23.41	Track, football, baseball, multi-purpose field and tennis courts
<i>Hanover Middle School</i>	45 Whiting Street	29.62	Multi-purpose field, playground
<i>Cedar School</i>	265 Cedar Street	48.80	Multi-purpose field, playground
		23.90	

() Schools also provide indoor facilities to support recreation programming activities offered during summer months and other seasons of the year.*



The image above identifies a "birds-eye" view of Sylvester School (left) and Center School (right). In the foreground is Parks and Recreation's B. Everett Hall site.



The image above identifies an aerial view of Hanover Middle School located on Whiting Street and Hanover High School located on Cedar Street; all recreational facilities shown in the image are under the custody and control of the School Department.

Basic Goals and Objectives

The basic goals of the master planning process in relation to the properties referenced above include the following:

- Engage community representatives in an organized and thought provoking dialogue in order to develop a series of concepts for the appropriate enhancement and future development of all designated properties.
- Analyze current recreation programming offerings and participation, identify shortages and limitations, and develop a strategy for providing new and refurbished facilities in order to specifically meet the burgeoning needs of various user groups, leagues and activities.
- Provide universal, barrier-free access to all important facilities and features located within a given property. Improvements will provide new opportunities for all park patrons, especially for the disabled and elderly within the community.
- Propose new amenities and facilities that are well-designed and that are durable, long lasting, easily maintained with limited resources, and economically feasible and that may be undertaken by using a combination of capital improvement funds and in-kind/volunteer services and donations.
- Develop plans that provide upgraded ancillary facilities such as drives, parking areas, pedestrian connections to facilities within the property and appropriate linkages to adjacent public/private non-profit open space properties. Eliminate vehicular/pedestrian conflicts and improve safety for all park users.
- In an era when our natural resources are becoming increasingly stretched and stressed, provide opportunities for implementing low impact development techniques, preservation and restoration of unique or important environmental features and enhanced stormwater management techniques that deliver rainfall runoff back to the earth beneath the various sites.

Public Participation and the Community Process

The master planning process included a comprehensive community participation process, with primary meetings identified in the chart located below. (Refer to Appendix for all meeting Agendas)

<i>Meeting</i>	<i>Subject</i>	<i>Date</i>
<i>Parks and Recreation Committee</i>	Project kick-off meeting, outline scope of work, review project schedule requirements	02/13/07
<i>Parks and Recreation Committee</i>	Further outline of project schedule, review initial requirements for recreation user survey, discuss project site visits	03/06/07
<i>Parks and Recreation Committee</i>	Review of final draft recreation user survey, review of project schedule, review of Senior Center project, review of existing conditions at parks and recreation sites	03/20/07
<i>Hanover Youth Athletic Assoc.</i>	Review of HYAA programs and facility needs	03/27/07
<i>Parks and Recreation Committee</i>	Continued reviews of existing conditions, safety issues, limitations and constraints at various parks and recreation sites	04/03/07
<i>Conservation Commission and Open Space Committee</i>	Review of Parks and Recreation Master Plan goals and objectives, confirmation of requirements for collaboration with Open Space Plan Development	04/04/07
<i>School Committee</i>	Review of Parks and Recreation Master Plan goals and objectives, review of School Department programs and facility needs, review of sports relocation plans (if High School is refurbished)	04/25/07
<i>Parks and Recreation Committee</i>	Review of preliminary concept plans for King Street, B. Everett Hall, Ellis Field and Myrtle	05/01/07
Hanover Annual Town Meeting	Informational meeting to update town residents on the master planning process, initial work completed to date and initial findings	05/08/07
<i>Parks and Recreation Committee</i>	Final review of existing conditions, concept plans, preliminary field matrix, and outline of DRAFT master plan document	06/05/2007

These meetings were held at the Town Hall, Salmond School, and Hanover High School and were attended by members of the community including park abutters and neighborhood residents, youth recreation league representatives, Selectmen, and Parks Committee Members. A series of presentation boards were displayed and discussed based on the specific subject of the particular meeting, as outlined above. Once the presentation concluded, comments were welcomed. At each

meeting the feedback was positive and the community concluded the process with clear preferences for a plan that best met both passive and active recreational needs.

Hanover Parks and Recreation History

Upon his death in 1926, B. Everett Hall gave to the town a bequest of his property “for the purpose of establishing and maintaining playgrounds for the children and public parks. Also for providing a game preserve in order that we may bring the birds back as of yore”. On March 24, 1930, Town Meeting voted to appoint a committee of three to develop a playground. The original committee consisted of Edmund Q. Sylvester, Stanley A. Briggs, and William A. Flynn.

Town Meeting in 1946 voted to raise and appropriate money for repairs to B. Everett Hall playground to be spent under the direction of the Playground Committee, said Committee to be appointed by the Moderator with the approval of the Selectmen. The first official Playground Committee consisted of Alfred G. Lovell, George L. Legg, and William Lloyd. This committee worked hard to keep B. Everett Hall field in playing condition, juggling the very popular baseball and football programs.

In 1951, the town accepted the deed of 12 ½ acres on Circuit Street from Calvin and Mildred Ellis as a playground in memory of their son, Calvin Ellis, Jr., who was killed in action in Germany in 1945. Calvin Ellis served on the playground committee in 1951 but passed away that same year before the field was completed. On Memorial Day, May 30, 1953, the Calvin J. Ellis Jr. Playground and Park was dedicated and the deed was turned over to the Playground Committee Chairman Alfred Lovell. Chairman Lovell announced, “it was the burning desire of Calvin J. Ellis, father of this hero, to build this beautiful playground in the memory of his son and to present it to the youth of today and tomorrow that they might enjoy the freedom his son loved so much.

In 1961, the town purchased the tract of land containing 60 acres or so on Myrtle and Center Streets for the purpose of a public playground under the direction of the Playground Committee.

Town Meeting in 1967 voted to enlarge the Playground Committee from 3 members to 6 and charged them with the duties and obligations as set forth in Massachusetts General Laws as amended, Chapter 45, Section 14. Town Meeting in 1971 voted to change the name of the Playground Committee to the Hanover Parks and Recreation Committee.



Parks and Recreation User Survey

A Park User Survey was sent out in the mail to all town residents. The survey was also available on the Parks and Recreation Committee's website. A total of 158 people responded and provided input on a variety of subjects that relate to overall park experience and perceptions of need.

The following is an overview of the people that responded and how they currently use the park:

PLEASE COMPLETE THIS IMPORTANT USER SURVEY

Related to the master planning effort is the development of a Community-wide Recreation Needs Assessment. To this end, the Parks & Recreation Committee has developed the following Park and Recreation User Survey. We hope you will participate in this survey so that the most important recreational needs of the community can be addressed through the development of new active and passive park facilities and amenities as funding becomes available. It is important to note that recreation needs relate not just to courts and fields and other active recreational facilities, but also to more passive or informal pursuits that might include such activities as walking, reading, flying a kite or interpreting the unique cultural, historical, or environmental assets of a particular property. *Your feedback will help us to plan the future of Hanover's valuable and diverse park properties. Please return your survey by April 20, 2007 to Ted Carroll (see other side).*

A. Personal Information

- Name (Optional): _____
- On which street do you live? _____
- How long have you lived at this location? _____
- How long have you lived in Hanover? _____
- Are there people under age 18 in your household? _____
If yes, please indicate the age brackets:
 0 - 4 5 - 9 10 - 14 15 - 18
- How many people over age 65 live in your household? _____
- How important is recreation to you and your family?
 Very Important Important Somewhat Important Not Important

B. Park and Recreation Usage

- Using the chart below, please:
 - Check the names of the park and recreation sites that you visit
 - Indicate the frequency in which you visit the particular property
 - Rate each facility in regard to overall user experience

Property & Address	1. Very Often	2. Often	3. Somewhat Often	4. Not Often	5. Never	6. Good	7. Fair	8. Poor
<input type="checkbox"/> Briggs Field Hanover Center Street								
<input type="checkbox"/> Sylvester Field 495 Hanover Street								
<input type="checkbox"/> Cabin J. Ellis Field 790 Circuit Street								
<input type="checkbox"/> Myrtle/Center Playgrnd. 215 Myrtle Street								
<input type="checkbox"/> Ames Gallant Field 868 Judd Street								
<input type="checkbox"/> Corvella / King Street 245 King Street								

- Check the names of school department recreation sites that you visit and indicate the frequency in which you visit the particular property:

School & Address	1. Very Often	2. Often	3. Somewhat Often	4. Not Often	5. Never	6. Good	7. Fair	8. Poor
<input type="checkbox"/> Sylvester School 495 Hanover Street								
<input type="checkbox"/> Center School 65 Cedar Street								
<input type="checkbox"/> Salmond School 188 Peabody								
<input type="checkbox"/> Hanover High School 28 Cedar Street								
<input type="checkbox"/> Hanover Middle School 45 Whiting Street								
<input type="checkbox"/> Cedar School 265 Cedar Street								

- List facilities used and/or activities pursued (check ALL that apply):

- | | |
|---|---|
| <input type="checkbox"/> Basketball | <input type="checkbox"/> Football |
| <input type="checkbox"/> Tennis | <input type="checkbox"/> Playground/Swings |
| <input type="checkbox"/> Volleyball | <input type="checkbox"/> Passive Recreation (reading, relaxing) |
| <input type="checkbox"/> Street Hockey | <input type="checkbox"/> Picnics |
| <input type="checkbox"/> Baseball | <input type="checkbox"/> Walking/Jogging |
| <input type="checkbox"/> Softball | <input type="checkbox"/> Dog Walking |
| <input type="checkbox"/> Soccer | <input type="checkbox"/> Biking |
| <input type="checkbox"/> Lacrosse | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Winter Uses | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Bandstand (at Sylvester) | |

- Describe/comment on the adequacy of facilities:

Briggs Field: _____

B. Everett Hall Field: _____

Ellis Field: _____

Myrtle/Center Playground: _____

Ames Gallant Field: _____

(Note conditions, facility design, facility availability, specific limitations or problems).

- Is parking adequate at the facility that you frequent (safe, convenient, sufficient quantity)? _____

(Note park/facility name)

- Is your neighborhood well served by current park and recreation programming and related facilities? Yes No

- Are facilities for seniors adequate? Yes No
If no, how could opportunities for seniors be improved? _____

User Survey Summary

- 65.6 % have children under the age of 9 living at home
- 81% have children under the age of 18 living at home
- 12% had people over the age of 65 living in the home
- 70.3% indicated that recreation is **very important** to their families
- 56% indicated that conditions were fair or poor at Myrtle
- 1/3 of respondents indicated that conditions are typically fair or poor at B. Everett Hall and Ellis
- 50% indicated that they use B. Everett Hall either 1-2 times per week or 2-4 times per week.
- Top three uses/facilities include children's playground, walking or jogging, basketball and baseball (tied)
- Top three facilities desired include woodland/nature trails, walking and jogging, biking and picnic amenities

An excerpt from the Parks and Recreation User Survey appears above

Existing Conditions

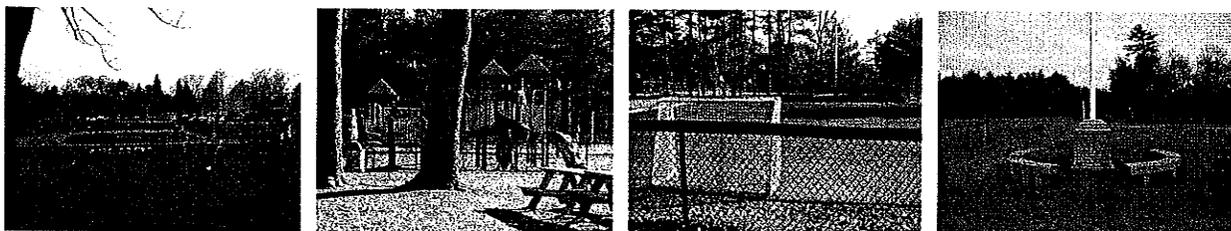
In order to present and describe the existing conditions of each site, at the initiation of the project, representatives of Weston & Sampson gathered available mapping and reports to support the master planning efforts. A variety of mapping sources were compiled for use in establishing a suitable base plan including the following:

- Aerial photography (numerous dates)
- Topographic and property line mapping related to certain sites
- Massachusetts (Mass) GIS mapping
- Town of Hanover GIS mapping



For the most part, the Hanover GIS topographic mapping and corresponding aerial photography proved most useful and appropriate for the development of existing conditions and proposed improvement plans. The mapping and photography were considered adequate for the purposes of this master planning effort. It should be noted however, that new and more precise topographic and detail mapping will ultimately be required in order to develop final design and construction bid documents for the implementation of actual improvements at any of the properties. In certain cases, additional property line information should also be compiled in order to ensure that all improvements are undertaken safely within the confines of town-owned properties.

Weston & Sampson staff members undertook extensive field reconnaissance work and met on site with representatives of the Parks and Recreation Committee in order to observe how properties are used, to better understand the physical characteristics of the land and to document the existing conditions of the natural and man-made features of each property. For each of the designated sites we assessed the type of facilities and amenities provided, their conditions, relevant dimensions and orientation, type and condition of surfaces and/or pavement, examined issues related to access and circulation, topography, drainage, utility infrastructure, lighting and irrigation and outlined other environmental resources and conditions. Following is an outline of the approach used to evaluate existing conditions at each site and a general summary of our findings.



Facilities and Amenities Provided

Under this heading, we describe the types of facilities and amenities at each site, their conditions and orientations, the surface conditions (turf, skinned infield, etc....) and their various programmed uses. The facilities and related amenities provide both active and passive recreational opportunities. At fields, orientation is analyzed for safety concerns and potential improvement. For example, baseball and softball fields are preferably situated with an imaginary line through home plate, the pitcher's mound and second base running generally in a northeasterly direction. Play fields (soccer, football, lacrosse etc.) are recommended to be oriented with the long axis in a north-south direction. Both of these orientations are due to sun angles and are recommended for safety and optimal play.

The uses at the sites vary, but generally included within the overall inventory are a community bandstand, facilities for form baseball, to softball, lacrosse, football, soccer, field hockey, street hockey, basketball, tennis and volleyball, children's playgrounds, and meandering walking and nature trails., Many different age groups make use of the facilities.in use by a full range of age groups. The orientation of the fields and courts vary from site to site. In many cases fields are situated within the recommended guidelines, although some are clearly not. The condition of condition of the finished surfaces (turf, skinned infield areas) also varied from site to site. The facilities currently in use generally had surfaces in fair to excellent condition; fields and surfaces that are in disrepair are generally not in use or are programmed for less intensive, less formal and less frequent use.

As with the surface conditions, the condition of ancillary facilities (fencing, seating, player's benches, drinking fountains, lighting etc.,) and other recreational amenities varied from site to site. The condition of all of these elements has been analyzed and summarized.

Access and Circulation



This section addresses both vehicular and pedestrian access to, from and within the site. In general, most people drive to the individual properties, while far fewer arrive by walking. This element is important for the safe use of a facility. Unsafe or non-compliant circulation can lead to negative impressions of a facility and cause decision makers to limit or propose to cease the use of a particular facility or activity.

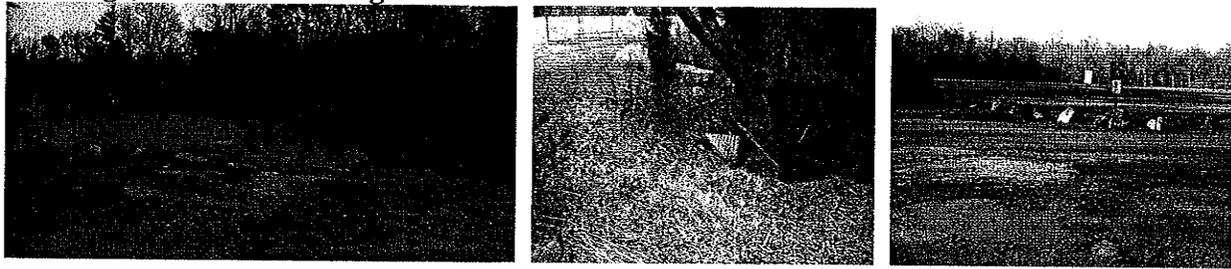
Access, parking and pedestrian circulation within the sites can be improved. Parking areas at most of the sites are informal and chaotic with no striping or defined travel lanes. Improvements would allow for safer vehicular and pedestrian circulation. There are no formal pedestrian pathways located within the confines of the parks to access the individual facilities. Pedestrian

and vehicular circulation is outdated at most sites, and could use updating. Pedestrian circulation in general does not conform to standards of Americans with Disabilities Act (ADA) guidelines and pedestrian and vehicular circulation separation standards conflict often. Weston & Sampson staff members have identified these problem areas for each site and have also identified potential recommendations for improving these conditions (later in the master plan).

Topography

Analyzing the topography of a site is key to the master planning process. While a particular site may appear to “fit” a particular facility or field, the topographic features of the site may limit the viability of creating the desired amenity. The topography (terrain) varies significantly from one property to the next and even within the confines of a single property. Significant changes in elevation within a given property can create obstacles to development. For instance, if a field is desired on a property that contains steep slopes, a great deal of grading would be required in order to create the level areas that are suitable for field development. In this case costs might be prohibitive. In a similar way, land that is excessively flat may require fill materials and grading in order to create suitable pitch and positive flow of drainage away from field areas.

Drainage, Utilities and Irrigation



Proper drainage allows for fields to be “playable” shortly after a rainfall. Proper drainage also will reduce the amount of turf related problems associated with soil and root, such as compaction and the development of turf fungi and other turf diseases. Utility connections are essential to recreation facility development both for comfort of the participants and maintenance. A few of the sites have drainage issues with moist conditions due to possess areas that are poorly draining due either to their proximity to wetlands or the fact that the fields are too flat, with not enough positive pitch to allow water to properly drain away from the facility.

Due to the nature of the sites, either on school property or currently developed, The Town of Hanover operates on well water and has no sewer system, therefore all the sites would require a well for irrigation if desired, and septic systems for any proposed restroom facilities.

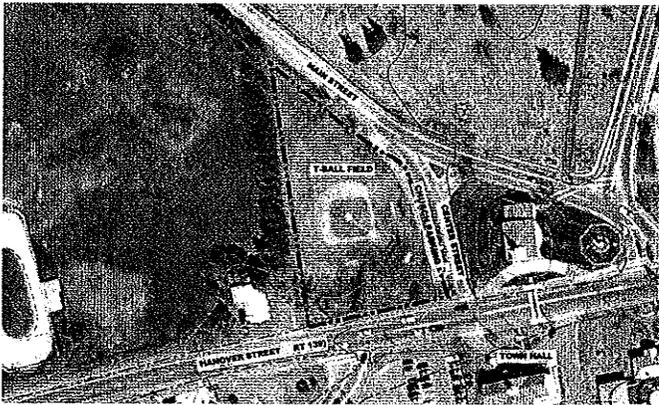
Environmental Conditions



Nearly all of the sites are previously developed recreational facilities and the surrounding environmental conditions and physical features include wetlands, streams, woodlands and residential lots. There are very limited environmental constraints to recreational development of the sites. Most of the sites allow for reconfiguration and/or improvements within the existing developed areas. There are few environmental constraints to recreational development of these particular sites.

The narratives that follow describe the existing conditions for each individual parks and recreation properties, as observed and recorded by our during our site visits and from available information provided as described to Weston & Sampson by other town representatives.

Briggs Field



The images above show views of Briggs Field, located at the intersections of Hanover Street, Center Street and Main Street. Town Hall is across Hanover Street to the South.

Briggs Field is a 1.17-acre site within the historic district near town center and is located directly across the street from Town Hall and next to the First Congressional Church on Hanover Street. The Selectmen and Parks and Recreation currently own the site. It contains the beloved one hundred year old ball field mainly used today for T-ball. The field is located at the busy intersection between Main Street, Hanover Street, and Center Street, with the Briggs horse farm to the west.



This panoramic image depicts Briggs field from Town Hall parking lot during a summer evening T-ball game, the First Congressional Church is to the right.

Facilities and Amenities Provided

The only facility provided at the site is the T-ball field with Little League dimension of 60' base paths. Young children, from age 4 to 6 mainly use the ball field. The field orientation may be considered sub-optimal by certain standards. Situated in a northwest orientation, the glare from the setting sun causes problems for batters and spectators during sunset. The ball field has a short right field due to the small site, limiting it's use to T-ball and an occasional softball game. There is a backstop provided for the field in fairly new condition. There is a single five-row bleacher system behind the backstop for spectators. This site offers an ideal setting for early evening games. Parents gather and talk about events, while the children enjoy their first experiences with the game.

Access and Circulation



The images above show pedestrian access to Briggs Field, Note the lack of pedestrian crossing opportunities from the Town Hall parking lot, to the right in both photos.

Vehicular access is accommodated via approximately 25 parking spaces along Center Street. The parking is owned by the Church. This however, does not create a conflict as games are not played when the Church is having service. The site is easily accessed by pedestrians approaching from the North side of Hanover Street. However, approaching from the South side of the Street and from the Town Hall parking lot is difficult due to a sole crosswalk located in front of the church. There is no formal barrier between the field and Hanover Street. This causes concern for the safety of small children running around near Hanover Street. During horse shows the field is used for parking, which leads to damage to the field and infield.

Topography

There is a slight topographic change from the adjacent streets to the field of approximately five to six feet. After this slight slope the field is flat pitching gradually to the Northwest. This topography change also allows for spectators to sit on the hill to watch games and allows for the viewing of games from vehicles in the parking spaces along the street.

Drainage, Utilities and Irrigation

There is no irrigation for the fields and there are no sanitary facilities or utilities at the site. Sheet flow surface drainage sends storm water runoff to the Northwest.

Environmental Conditions.

Environmental conditions do not come into play at this site with the exception of providing environmentally sound maintenance practices.

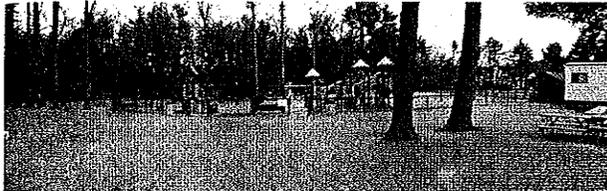
B. Everett Hall Field

B. Everett Hall Field is the town's premier recreational facility and is located immediately adjacent to the historic district near town center. It is an approximately 20.33 acre site owned by the Selectmen and Parks & Recreation. Hall is the current focal point of parks and recreation in the town of Hanover. Mostly referred to as Sylvester, it is a classic old town concept of a center-of-town multi-purpose facility used for many different events and activities including the frequently used bandstand. Located on Hanover Street just east of Town Hall, it is adjacent to two schools, Sylvester School to the West and Center School to the northwest. To the east there is a wooded area and a residential neighborhood. The School and park fields mesh together appearing as one large facility and making delineation between the properties difficult if even necessary. Using funds donated to the Town by the estate of the Hall family, a trust is currently in place which allows for the maintenance and future improvements at the site.

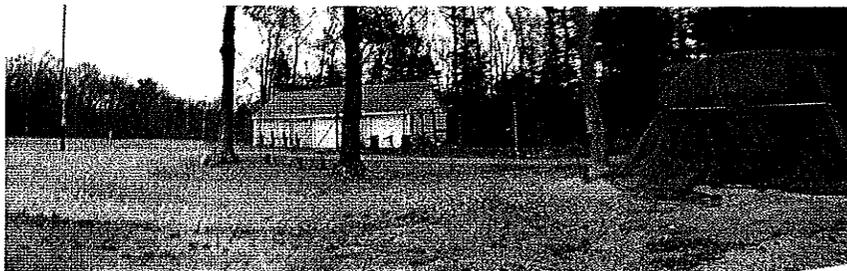


Facilities and Amenities Provided

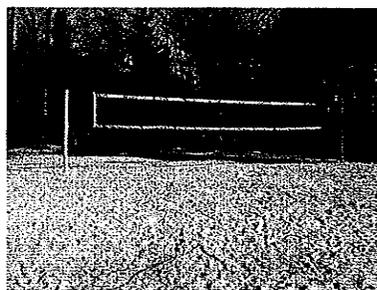
There are both historic and new facilities and amenities at B. Everett Hall. The facilities include a performance bandstand, full size baseball field, football field, little league field, street hockey, tennis courts, basketball, beach volleyball, playgrounds, picnic area and support buildings. The Town's six-week summer program also takes place on site. All of the facilities listed above are in fairly new condition, with the exception of the support buildings.



Currently, a hodgepodge of support buildings is located on the property. From the outset of the master planning process, there was a desire to merge as many uses as possible into a single community building and to eliminate the myriad of storage containers, trailers, restroom facilities and related structures in order to improve site aesthetics, ease upkeep and maintenance requirements, update to current ADA standards and requirements, and provide more useful and conveniently situated facilities to park users.



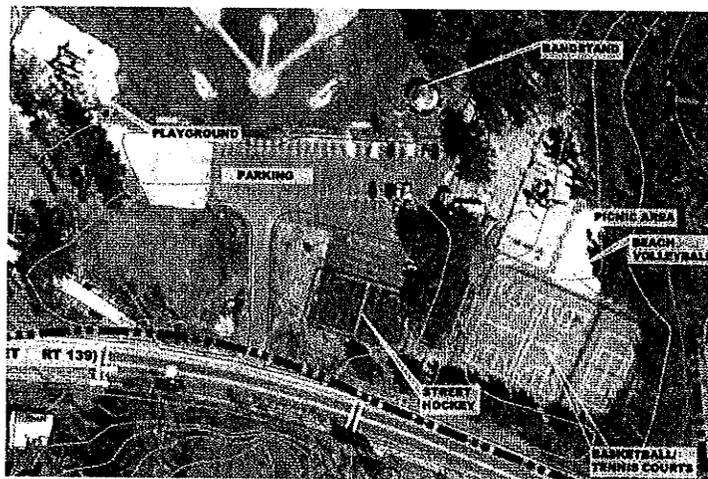
The bandstand orientation is a problem, with glare from the setting sun directly affecting the performers. There is also a conflict between the bandstand and baseball use. Currently a baseball game and a small concert cannot go on at the same time due to their close proximity to each other. The baseball field is in a non-optimal, though adequate northern orientation. The backstop is in close proximity to the parking lot, which does not allow for circulation behind the backstop when vehicles are parked behind the field. A stray foul ball also could wreak havoc on a parked car's windshield. The facility is used for youth football practice on the outfield of the baseball field. Space is limited and inadequate for practice. The use also diminishes the quality of the turf for baseball use. This facility is not used for football games. Old light poles are currently in use to light the field for practice. The Town bonfire also takes place on the adjacent Center School field.



Access and Circulation

A single paved parking area is provided off of Hanover Street. The parking lot in the center and to the East has well defined travel lanes and delineated painted parking spaces. The parking area to the west is chaotic with no formal striping for parking or safe vehicular circulation. The street hockey rink adjacent to the parking lot was planned to provide overflow parking, however the layout and frequency of use of the hockey rink does not allow for overflow parking. There is a single access point on Hanover Street. This causes difficult situations during busy concert times and during drop off and pick up for the summer program. Some park patrons make use of the now abandoned drive between the parking area and Sylvester School as an exit point.

Although there are sidewalks on Hanover Street that would facilitate pedestrian access to the site, there are no walkways from the sidewalks into the park proper; a pedestrian currently has to follow the travel lane of the entrance drive or walk on the lawn area that leads into the park. There are also no formal pathways located within the confines of the site. This greatly limits accessibility for seniors and disabled persons and limits opportunities for passive recreation uses of the park property. The addition of formal pathways would provide vastly improved and safe pedestrian access for all park users and would help to create a true multi-generational park experience.



The above image shows the existing parking and access configuration at the site. The current vehicular access and circulation configuration does not allow for efficient circulation during larger events such as concerts and the summer program.

Topography

The site is flat gradually sloping from West to East. The only visual topography is a drastic change in elevation between the Center School fields and the Hall site.

Drainage, Utilities and Irrigation

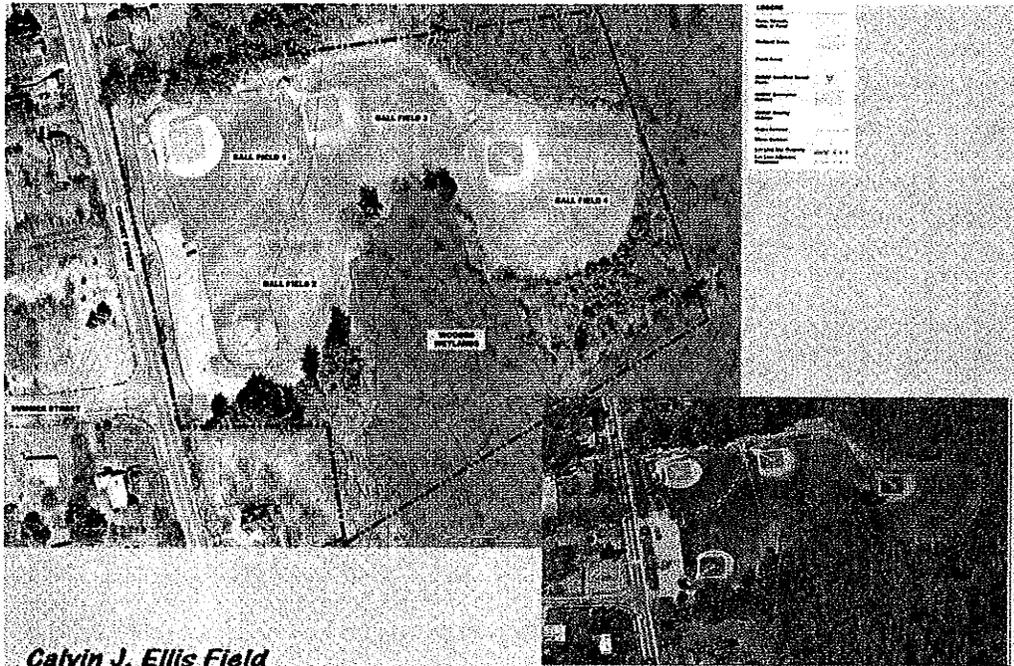
There is no formal drainage system on the site; sheet flow surface drainage sends storm water runoff to the southeast. There is no irrigation for the fields, nor has there been water available for a well. There is a restroom at the site. Elaborate.....

Environmental Conditionss.

Environmental conditions do not come into play at this site with the exception of the need to provide environmentally sound maintenance practices.

Calvin J. Ellis Field

Calvin J. Ellis Field is the town's premier site of HYAA baseball. At approximately 12.5 Acres located on Circuit Street, the facility is owned by Parks & Recreation. Primarily used for Little League Baseball with an occasional youth soccer practice or game in the outfields. The fields are primarily surrounded by wetlands to the east and south, Circuit Street to the West and a residence to the north. Not too far to the east is the old rail bed that the town is one day hoping to use to turn into a bike/walking trail.

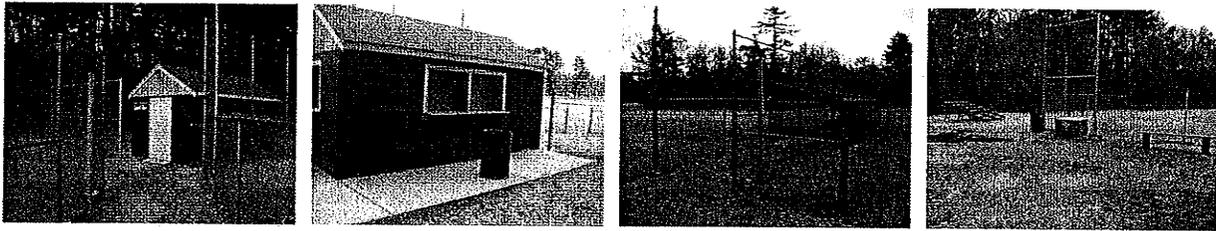


Calvin J. Ellis Field

Facilities and Amenities Provided

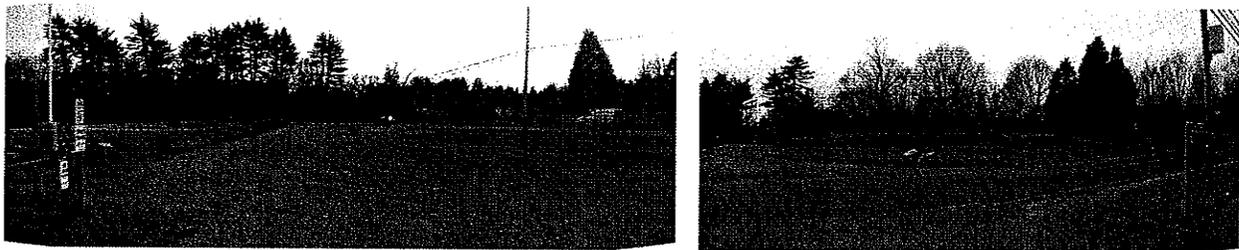
The site consists of four little league baseball fields. Each field has outfield fencing, a backstop, and bleachers; fenced in dugouts are provided at fields 1 and 3. A concession stand is tucked behind field 3. The fields and fencing are in fair to good condition. Field 4, located in the rear of the site has undulations in the outfield lawn area due to settling, reducing it's use for optimal play. This field can also be wet at times. Even though it is the largest field on the site, it is used for the youngest players due to this undulating outfield lawn area. There are old and new bleachers on the site available for spectator seating, however all do not meet today's bleacher regulations and standards. All the fields are located tightly together and lack adequate viewing areas, warm up areas and places for children to play. The closest together of the ball fields, 1 and 3, are the fields primarily used by the little league. These regulation Little League fields possess 200-foot outfield fence dimensions and are maintained in very good condition by league representatives and town forces. The close proximity of the fields will further become a problem as Little League nationally is starting to move towards suggesting 210' outfield fences. Ball fields 1, 3 and 4 are not at ideal orientations, this may not be a problem unless morning games are desired. Ball field 2, while situated at the ideal north/northeast orientation, is the smallest of the four fields. Pitcher's mounds provided on the fields are higher than regulation. Batting cages

are provided along the third base side of ball field 3 and are about 3 years old; players make frequent use of these for warm up. Of notable interest is the fact that the facility lacks a playground for use by younger siblings during games.

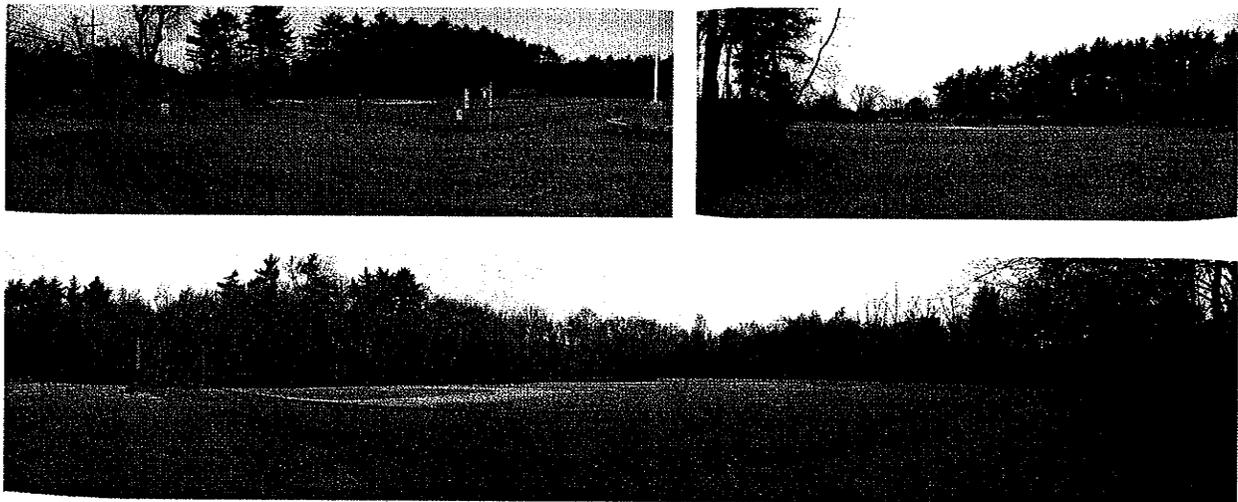


Access and Circulation

This facility lacks adequate parking. The current parking area is a gravel lot with no defined spaces or vehicular travel lanes. This causes park patrons to park in a haphazard manner, sometimes parking too far apart resulting in fewer vehicles fitting in the available area. Patrons also park in areas that may block pedestrian and emergency vehicle access to the site. Patrons are also currently parking in a vacant lot across Circuit Street and crossing this busy street to use the fields creating an unsafe situation.



There are also no formal pathways located within the confines of the site. This greatly limits accessibility for seniors and disabled persons and limits opportunities for passive recreation use within the park. The addition of formal pathways would vastly improve pedestrian access for all park users and would help to create a true multi-generational park experience. The presence of pedestrian circulation throughout the site would allow for easier access to what now seems a remote field 4, and allow for maintenance and emergency vehicle access.



Topography

The site is relatively flat, sloping gradually from west to east. There is no significant topographic change throughout the site, with the exception of the eastern edges, where the fill area provided to establish field 4 tapers off by about three to five feet.

Drainage, Utilities and Irrigation

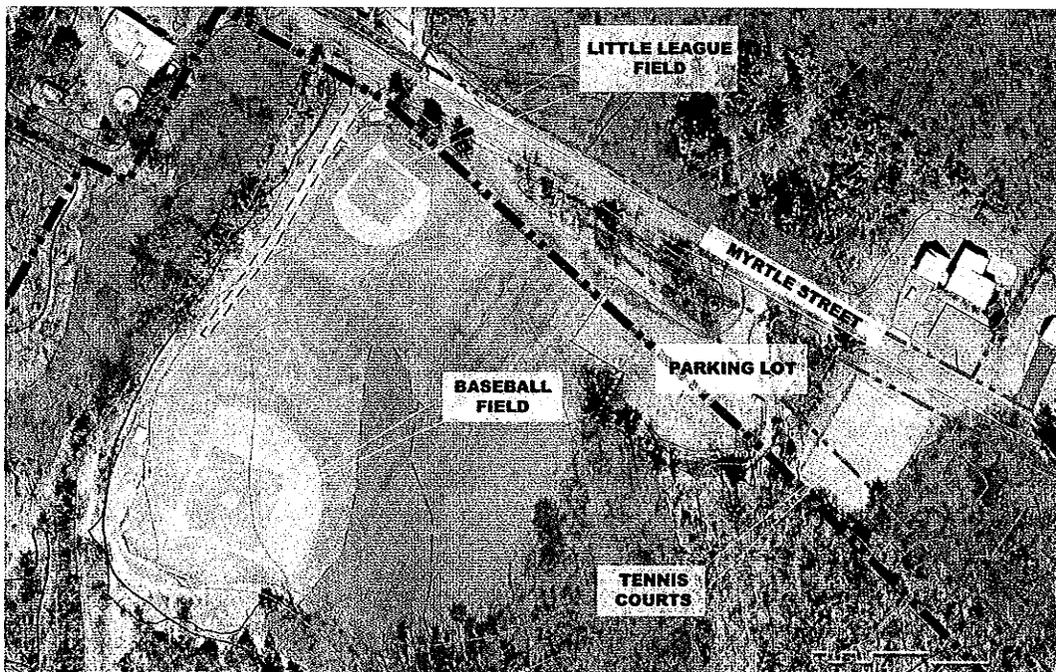
There is no formal drainage system on the site; sheet flow surface drainage sends storm water runoff to the southeast. There is no irrigation for the fields. This facility has water and electric at the concession area. There are no sanitary facilities at the site.

Environmental Conditions

The facility is almost completely surrounded by wooded wetlands to the east and south with the park proper and built assets taking up a majority of the upland area. Any renovations to the site will require a wetlands permit from the town’s Conservation Commission. There appear to be no NHESP Priority Habitats in this area, as indicated by the available resource material. s.

Myrtle/Center Playground

The town’s largest park facility in total area, Myrtle/ Center Playground is a 75-acre site located in the southwestern area of the town between Winslow’s Crossing and South Hanover. The site is situated on the south side of Myrtle Street and the west side of Center Street. Heavily wooded property and the Stockbridge Road residential neighborhood lie to the southwest. The Fireworks neighborhood lies to the west. Myrtle/Center playground is owned by Parks and Recreation.

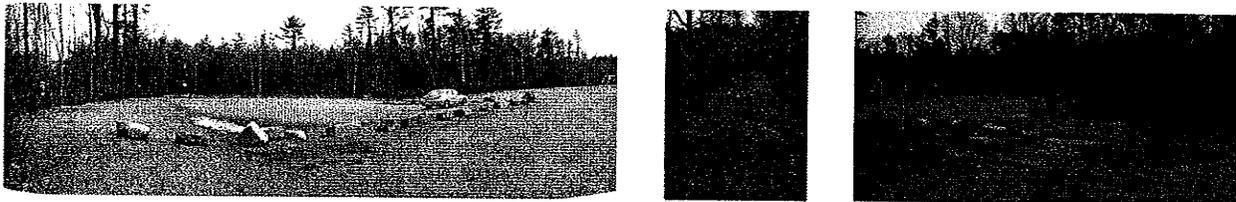


Facilities and Amenities Provided



The flat upland portion of the site along Myrtle Street is already developed for athletic use. The remainder of the natural portion of the site is used for nature trails. The facility is primarily used for basketball, baseball, softball, soccer, lacrosse and passive recreation. The built fields are wet in early spring when lacrosse is primarily played. The baseball and little league fields are mainly used for little league practice, women's softball, and men's baseball. Boys and girls Lacrosse mainly make use of the open field area. In order to provide for use of the multi-purpose field area, the ball fields are not enclosed by fencing. The player's bench area is screened off from the field of play by just a chain link fence. There are no fenced in dugouts provided to separate players from spectators.

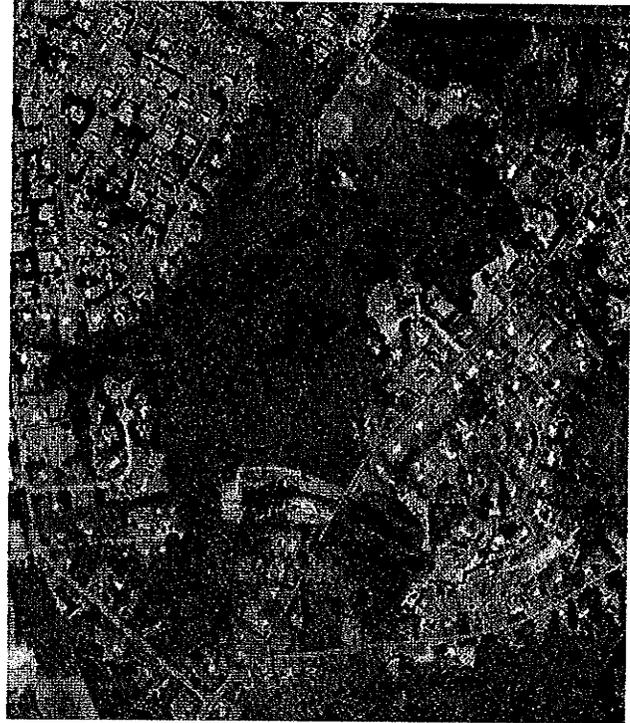
Access and Circulation



The current parking area is a gravel lot with no defined spaces or vehicular travel lanes similar to Ellis Field. This causes park patrons to park in a haphazard manner and sometimes park too far apart resulting in fewer vehicles fitting in the available area. Patrons also park in areas that may block pedestrian and emergency vehicle access to the site. The site also has no formal pedestrian pathway system for access to the facilities or nature trails. This, along with the informal parking area, does not allow for accessibility for the handicapped and elderly.

Topography

The portion of the site that is renovated for athletic use is relatively flat, sloping gradually from north to south away from Myrtle. On the remainder of the site there is very significant topographic change throughout the site. At certain areas, the meandering trails throughout the site traverse very rugged terrain. This undeveloped portion of the site to the south provides excellent opportunities to enhance the existing nature trails and provide new ones.



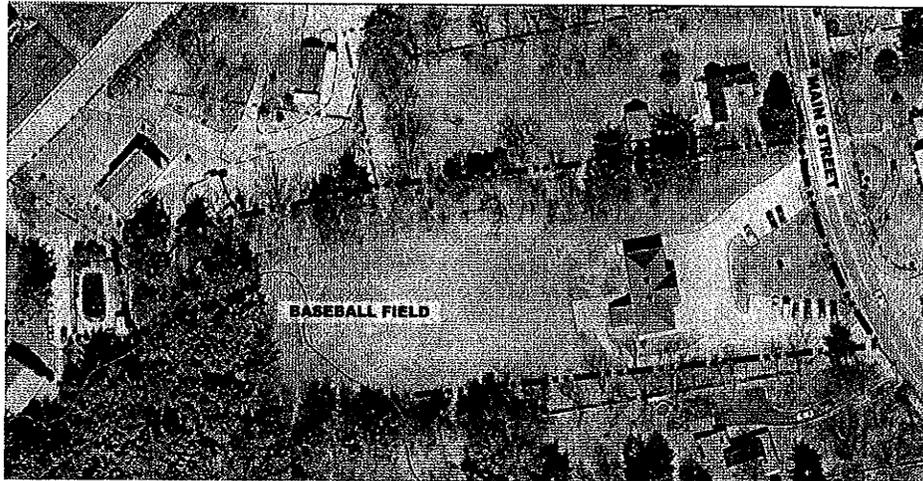
Drainage, Utilities and Irrigation

There is no formal drainage system on the site; sheet flow surface drainage sends storm water runoff to the southeast and southwest. There is no irrigation for the fields. The facility has water and electric near the Little League field and there are no sanitary facilities at the site.

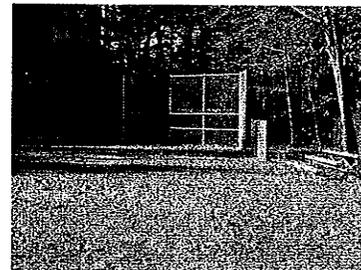
Environmental Conditions

The facility is almost completely surrounded by wooded areas and wetlands to the east and south. Any renovations to the site will require a wetlands permit from the town's conservation commission. The entire site lies within designated NHESP Priority Habitats.s.

Amos Gallant Field



Amos Gallant Field is a small property located towards the Northern part of Town. Located on Main Street, it is a 2.74 acre site owned by the Selectmen and Parks and Recreation. There is a single, vacant building on the site that housed the former Curtis School. The building is not currently viable for any Town use. For recreation purposes, the site has a single Little League field located towards the back of the property. Vehicular access to the site is via the driveways and parking area for the old school building. The site is generally flat, slightly sloping from east to west.



As in most of the sites, there is no formal drainage collection system at the site. Sheet flow “country drainage” discharges stormwater toward Main Street and to the wooded area to the back (western) end of the site.



King Street Property

A Recent acquisition of the Town, the King Street property is a 74.55 acre site, with 34.38 acres under the jurisdiction of the Open Space Committee and 40.17 acres under the jurisdiction of Parks and Recreation. The area of the site under the jurisdiction of the latter is mainly comprised of open fields that have been historically farmed. Located on King Street in the southwestern portion of the town, the site has many natural characteristics. Forge Pond abuts the property to the east.

Facilities and Amenities Provided

There is no current programmed use by the town. Current nature trails and connections exist throughout the site in order to connect the existing greenway and to access the cranberry bog. The Town of Hanover Greenway currently runs adjacent to, and through the site.

Topography

Though the entire site appears generally flat, there is about a ten-foot topographic change from one end of the site to the other in the “flatter” portion of the site. There is a significant topographic change along the bank of Forge Pond.



Needs Assessment

In order to assess the best use of each property it was important to consider the most pressing needs of the entire Hanover community. This Needs Assessment represents a synthesis of the information obtained during the hosting of nearly a dozen public meetings and of the data generated during the master planning process. In order to compile the array of needs, a variety of methods and tools were used including those summarized below:

- Parks and Recreation User Surveys
- Information obtained at general public forums
- Information obtained at meetings with specific user groups
- Meetings with the Hanover Youth Athletic Association (HYA) and additional information furnished by HYA
- Information and advice from the Hanover Parks and Recreation Committee and Staff
- Data furnished by the School Department
- Other anecdotal data
- Analysis and inventory of existing facilities and conditions throughout the Hanover Parks and Recreation system
- Recognized parks and recreation related standards and requirements

In regard to the last two items, comprehensive inspections were conducted at each of the six primary park and recreation properties in order to inventory the quantity of various facilities and assess their conditions. The physical condition of a facility can often be a strong indicator of the degree of use or overuse, especially in a community like Hanover where significant efforts are expended in regard to upkeep and the maintenance of fields and other facilities. Extensive wear and tear exhibited within a field or court or related recreational amenity always identifies a need, whether it be a need for additional fields to accommodate the extent of users, or the need for fields that are properly constructed and properly maintained.



In the end, the User Survey, information compiled during the master planning meeting process, the inventory of current facilities and the analysis of existing conditions were most critical in determining the needs of the community. The resulting Needs Assessment also takes into account the availability of numerous School Department properties. However, the ability for

significant town recreation needs to be accommodated at these locations is limited due to the scheduling of school related activities.

It is also important to note that there was disparity between the information obtained in the Recreation User Survey and information gleaned through the various public meetings and meetings with key user groups. For instance, accommodations for walking, jogging and biking, improved children's playgrounds and improved restroom facilities were high on the list of many respondents to the User Survey. But at public meeting after public meeting, the need for additional fields quickly rose to the top of the list of pressing needs as expressed by attendees.

Also of note, recreation does not occur simply on tracks and fields, courts and playgrounds. Less obvious and less formal recreation pursuits might often include the reading of a book under the canopy of a shade tree, fishing in a pond or stream off the shoreline or a deck, flying a kite, tossing a Frisbee, taking a picnic lunch within a woodland or observing wildlife adjacent to a wetlands resource area.



While elaborate and costly facilities are not often required to accommodate these activities, it is important to identify the need for these pursuits within a recreation needs assessment and to make provisions for them, as capital improvements are considered for each of the properties. (Cross-reference to Open Space Committee report and recommendations here and elsewhere as appropriate...)

Other factors playing into the development of an appropriate recreation needs assessment for Hanover include the following:

Current Trends- the popularity of certain recreational activities decreases and increases over time. For instance, lacrosse is experiencing incredible growth in many New England communities, including Hanover. Soccer continues to maintain great popularity. In some communities, tennis is gaining popularity after many years of decline.

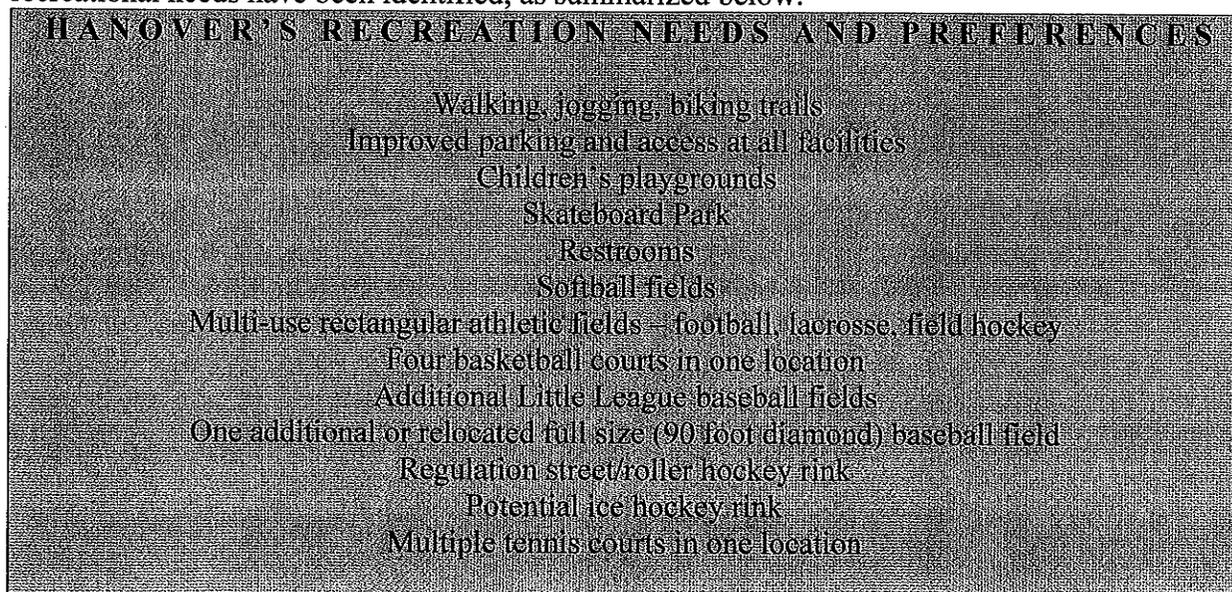
American colleges, through their admissions policies, increasingly promote the need for well-rounded students that are immersed in both academics and extra curricular activities. This, in addition to a national movement toward improving "wellness" through better diets and activity has been cited as a possible contributor to the increase in athletic participation rates in many suburban towns, including Hanover.

Unique Hanover Characteristics- Hanover's population is growing, albeit at a modest rate of increase. But many towns experience transitions in their populations. In Hanover's case, the pressure on schools caused by the increased numbers of children might be an indication that long time residents may be moving on and that younger individuals with school age children may be replacing them. New, large housing developments, the increased participation in the various youth sports programs and a corresponding lack of venues to accommodate these activities seems to reinforce this phenomenon.

Increasing Athletic Field Usage – Be it due to the increase in popularity of athletics, Title 9 for womens sports, or the increase in Hanover’s population, or a combination of the three, the number of the users of the active recreation (mainly athletic fields) facilities is increasing. From 700 students participating in Spring Soccer to and 270 girls playing softball, Hanover just does not have the facilities to support the usage. Lacrosse participation has increased from 75 boys in 1998 to 240 boys and girls in 2007, this amounts to 455 scheduled events a year, 33 per week during the season, with no new field construction over this period of time.

Aging America- we are simply living longer. Americans are living well into their retirement in unprecedented numbers. This creates increasing needs for recreational facilities that are multi-generational or that are specifically geared toward seniors. A park setting that is truly multi-generational can be the most rewarding of environments with great benefits provided through the interaction of park users ages 1 to 100.

Given all of these factors, and as a result of the survey and master planning process, many basic recreational needs have been identified, as summarized below:



It is anticipated that the Town will require additional facilities in the future to meet the continued town-wide increase in recreational activity and an anticipated future population increase. The “preferred” plans developed for each of the Hanover park and recreation sites attempt to address those needs that are most pressing, most widely supported and most realistic given the nature of the properties that are available and given the fiscal realities of the community and the Parks and Recreation Department.

Three of the expressed needs are worthy of separate discussion due to the potential complexity of achieving their implementation as summarized below:

Ice Hockey Rink- Ice hockey is a very popular youth sport within the Hanover community. Players must travel to rinks in surrounding towns in order to participate in the sport. Many of the hockey rinks in Massachusetts tend to be owned by either the State (DCR), colleges/private schools or other private entities. While some municipalities own and operate hockey rinks, the

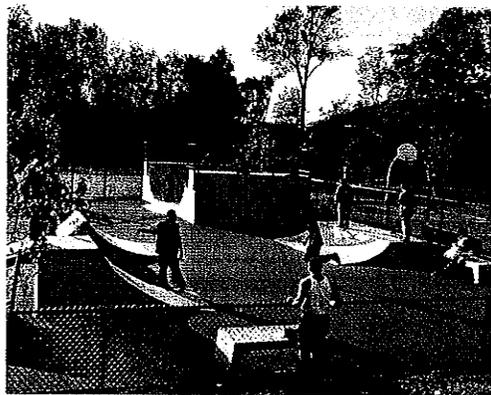
size of the community tends to be significantly larger than Hanover. The financial viability of a hockey rink is always in question. Can the fees generated through the sale of ice time offset the original capital cost associated with construction of such a facility and with the continued maintenance, upkeep and operation of such a facility? The goal in most situations is for the facility to be financially independent and self-sustaining. In many situations this is not the case, and the hockey facility ends up being subsidized by the owner/operator.

A hockey rink is a large facility, requiring a significant area of land. A typical DCR rink encompasses an area that is approximately the size of a football field and often contains a lobby, locker rooms, a concession, storage and equipment spaces, restrooms and other spaces or areas. Add in exterior parking, access drives, setbacks and landscaping requirements and the need for a property that encompasses at least 3 or 4 acres becomes apparent.

The recreation master plan makes no specific recommendation in regard to the development of a hockey rink in Hanover, beyond recording that the need for one has been identified within the User Survey and at public meetings. The properties that have been considered under this effort do not necessarily lend themselves to the development of a hockey venue. Most of the sites are either too small or nearly fully developed with no additional room for such a large facility. Other sites, like Myrtle and Center and the new Kings Street property possess sufficient acreage, but the nature of that land may not be suitable (wetlands, steeply sloping uplands...) or the surrounding land use context (widely dispersed residential properties) may not be completely compatible with the development of a large structure of this sort.

Proposals are also based on current property available to the Parks and Recreation Committee. It is recommended that the Town seek out additional property that can be designated for future Parks and Recreation use, particularly in the northern and southeastern portion of town.

Skateboard Parks- Skateboard park developments have been successful in some communities and unsuccessful in others. Communities that constructed facilities 8-12 years ago are considering reworking or refurbishing their facilities. Many communities have closed their facilities due to issues related to security, misuse, liability for injuries, deteriorated conditions and other unanticipated problems that have developed.



Skateboard parks are not land intensive and typically fit within an area that is roughly the size of a single tennis court. Important considerations in regard to the siting and construction of a skateboard park facility include the following:

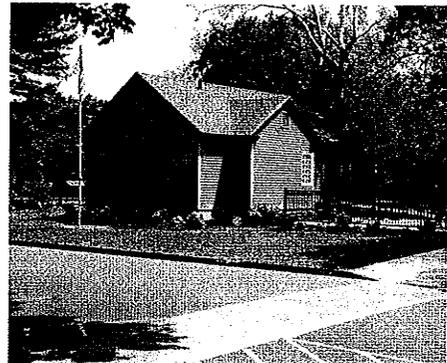
- Available Budget
- Type of construction preferred (concrete, wood, composite materials)
- Long term maintenance and upkeep
- User Safety / Emergency Phones
- Municipal Liability
- Staffing requirements
- Security and fencing

- Noise generation
- Surrounding land use
- Trash and debris generated by users

Of particular note, 210 middle school students signed a petition urging that a skateboard park be constructed in Hanover. The location for such a facility has not been identified in this study, although a location that is highly visible, centrally located, in close proximity to emergency personnel and comfortably away from residential properties and other incompatible uses is preferred. Communities continue to pursue the development of skateboard park facilities, with a better understanding due to the lessons learned from earlier projects in other communities, some of which have failed in the end. Facilities that have been carefully planned, designed and constructed continue to provide enjoyment to the myriad of users that seek out these venues.

Park Support Buildings-

Residents responding to surveys and attending meetings expressed a desire to provide park support buildings at various locations. In general, a park support building would provide space for restrooms and storage and some might contain a concession facility to support various leagues and programs. Concession facilities can generate revenue that is important in keeping user costs affordable and in aiding in the upkeep and maintenance of park and recreation facilities. The preferred plans developed for the individual sites identify potential locations for park support buildings.



Repeatedly mentioned in this regard was the lack of bathroom facilities at such venues as Ellis Field and the deteriorated and substandard conditions of the park support structure at Everett B. Hall Field. The construction of a park support building brings along unique and important considerations as follows:

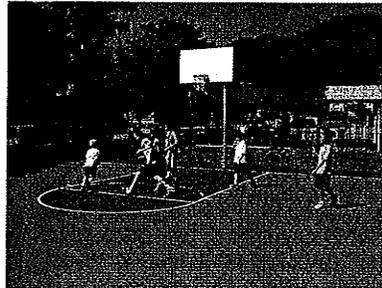
Method of Construction- buildings constructed through a municipal building process can be extremely expensive (\$250/foot of area is not uncommon). Buildings constructed through alternate means by donors and volunteers can cost half as much, but this method is not achievable in all communities.

Hours of Availability- Due to issues surrounding security and vandalism, most park support structures are open only when activities are occurring at a given site. Keys are often made available to community representatives that are involved in a sports event or special event for the purposes of opening the facility at the outset of the event and closing the facility at the conclusion of the event.

Maintenance and Upkeep- Municipalities frequently do not have the staff to maintain and operate park support buildings. As a result the cleaning and upkeep responsibilities often fall to volunteers. If these efforts are not performed, unsanitary and undesirable conditions can quickly occur.

For the review of other expressed needs and preferences (which tend to be much more easily attainable), refer to the preferred master plan section of this report.

The Master Plan Narrative Descriptions of Potential Improvements



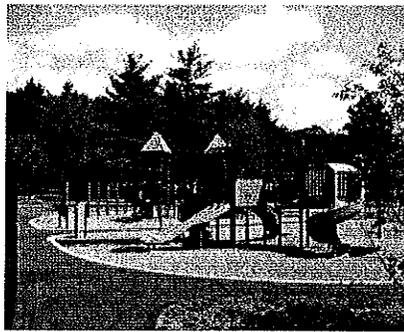
General Themes for Improvement

The master planning effort provided a unique opportunity to assess the Town of Hanover's major park, recreation, open space and athletic facility properties for the purposes of developing a series of thoughtful and achievable enhancements that will provide benefits to all members of the community.

In undertaking the planning process and in developing the concept plans, a number of basic, recurring (from site to site) improvement themes became apparent. Included below is a summary of these basic improvement themes, to be implemented potentially at all or most properties as capital improvements are planned and constructed.

Pathways, Trails & Picnic Areas - The preferred master plans call for incorporating new (and upgrading where applicable) pathways, trails and picnic areas at all park locations. These types of passive recreational amenities provide opportunities for enjoyment by residents of all ages, backgrounds and abilities and they compliment the traditional active recreational facilities at a given property. At most sites, pathways could be constructed in a manner that is ADA compliant due to the typically gentle terrains that prevail. Pathways (especially pathways that form a loop around the perimeter of a property) often become one of the most appreciated park amenities and become attractive for walking, jogging, roller blading and biking. The distances of potential new paths around the particular sites vary, however measured markers could be installed to facilitate an individual exercise regimen. The following recommendations are set forth in order to provide user benefits and convenience, and environmental stewardship in conjunction with the installation of new paths and trails.

- Place benches for rest and for interaction at logical social gathering points along pathways and trails and within other peaceful and attractive settings.
- Install interpretive signage to describe a site's unique environmental, cultural and/or historical characteristics.
- Provide tree plantings to lend greater shade to the pedestrian corridors, to provide enhanced wildlife habitat and to improve overall site aesthetics.
- Provide picnic areas where desired and applicable



New play structures at Park Hill Park, Fitchburg, MA and new swings at Roosevelt Playground - Framingham, MA (left)
(Weston & Sampson)

Children's Playgrounds - The user survey process identified the need for Children's playgrounds at each of the properties and correspondingly the preferred master plans call for new or relocated playgrounds. Playgrounds provide a destination for neighborhood children and their parents and as such often become hubs of community life. Playgrounds also provide outlets for the siblings of children involved in other recreational activities (like a baseball, soccer or lacrosse game) at the same property. General recommendations for the proposed play areas at each of the park locations include:

- Installation of new, attractive and exciting play equipment and swing sets for use by various children's age groups
- Installation of new and/or expanded playground infrastructure including edging, surfacing and utilities
- Installation of seating, signage and other furnishings
- Installation of tree planting, landscaping and shade shelters/picnic areas

The play areas that are geared for younger children should be enclosed with attractive fence treatments. Safety surfacing must be a combination of poured-in-place rubberized surfacing, in critical fall and landing zones, and an engineered wood fiber for the rest of the playground areas. The new play areas must be compliant with all ADA requirements and with all current safety regulations. In addition to new play equipment, all required utility infrastructure (drainage, sub drainage, water service etc.) must be in place and new site furnishings that include park benches, drinking fountains, signage, trash receptacles, tree planting and related landscaping should be included.

Access and Linkages - Provide new and improved opportunities to access the public properties (by foot or by car), provide convenient and appropriately scaled parking amenities and reduce conflicts between pedestrians and drivers. Provide logical, ADA compliant linkages between various site features and facilities within a given park/school/open space property.

The preferred master plans identify a series of improvements that focus on the primary park entrances and the parking areas near the core of each property. Primary recommendations include the following:

- Potential development of new park entrances. Reconfiguring of drives and parking areas to allow for clearer travel patterns, more clearly defined parking spaces, more efficient use of the space overall and an increase in the quantity of parking spaces.

- Complete reconstruction of the parking areas to include new pavements or porous surfaces, low impact approach to storm drainage, curbing and edges and striping in order to provide ADA compliance and eliminate any badly deteriorated and difficult to maintain existing conditions.
- Installation of traffic calming measures to slow vehicular traffic and to provide for safe movement throughout the area by pedestrians. Measures might include speed bumps, “tabled” (raised) crossings, special surface textures and colors to delineate areas of pedestrian use and traffic related signage.
- Establishment of pedestrian connections from all reconstructed parking areas to provide safe, convenient and ADA compliant access to all major park facilities and park areas.



Pedestrian and maintenance circulation at Princeton Soccer Fields - Princeton, MA (Weston & Sampson)

Support Buildings – Potential locations of park support buildings are indicated on most of the preferred master plans. Support buildings would contain at least restroom and storage accommodations. Where appropriate, slightly larger structures might contain a concession room or space. Refer to additional discussion pertaining to the issues surrounding the development of park support buildings that is contained in the Needs Assessment section of this document.

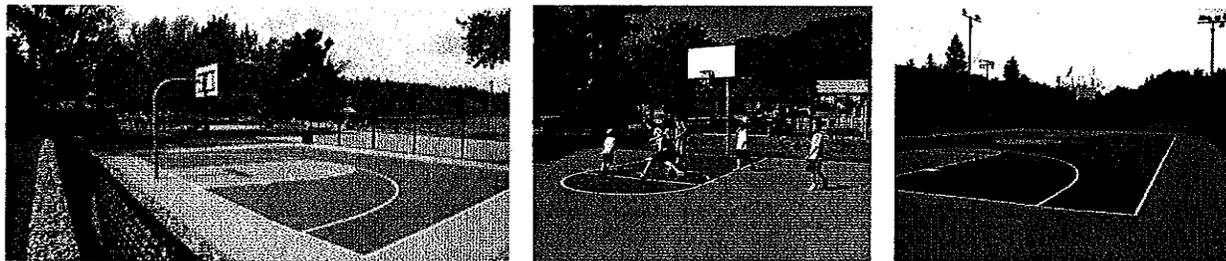


Leary Field, new full size baseball field (upper left and bottom) and Nipper Maher Park (upper right) - Waltham, MA (Weston & Sampson)

Athletic Fields and Courts - The master planning process identified the need for providing new and refurbished athletic facilities (fields, diamonds, courts...) in order to better support the myriad of sports programs that operate within the community. At present, based on participation rates for various activities, there are simply too few fields to accommodate the sheer number of users. The resulting problem is two fold in that certain programs cannot be adequately served and the desired field conditions cannot be maintained due to heavy programming and use. ***This situation is expected to worsen when field facilities go off line in conjunction with a major reconstruction project at Hanover High School.*** To this end, the preferred master plans:

- Recognizes the desire of community members to provide sports facilities that are first-class, that are attractive and that can be maintained with reasonable ease in a manner that fits the Town’s (and league’s) abilities to operate and maintain such facilities.

- Identifies the need to develop facilities that are properly oriented, properly designed and that contain appropriate setbacks and buffers to ensure user safety.
- Recognizes surrounding land use context and recognizes the need to be a good neighbor by developing safe, attractive park and recreation amenities that respect the needs of abutter property owners.
- Provides perimeter fencing and appropriate gates to enclose the facilities, limit access, control use and to help maintain high quality court, turf and infield surfaces.



New basketball facilities at Sandy Pond Beach, Ayer, MA (left), Bartley-Nolan Playground, Fitchburg, MA (center), Park Hill Park – Fitchburg, MA (left) (Weston & Sampson)

Informal Playing Fields – Within all communities there is always a need for informal play fields for pick up games, less formal practices, kite flying, Frisbee tossing etc. The proposed Master plans address these needs as space allows. Also, when not programmed, some fields can be used for open play. The Parks and Recreation Committee may want to limit this use, however, due to the need to occasionally rest the fields.

Basic Park Aesthetics and Inherent Natural Qualities - The preferred master plans identify improvements that help to protect, preserve and enhance the aesthetics and inherent natural qualities and features of a given property and that improve sustainability. Recommendations that focus on improving the overall aesthetics of the park properties include the basic elements listed below. Note that these types of improvements can be implemented as funds become available within certain geographic sections of the parks. It is important to establish a standard that becomes easily recognizable as the Hanover Parks and Recreation “look” or theme for improved overall park aesthetics and for making potential repair, replacement or expansion of a particular facility or feature easier.

- Enhance all park and recreation property edges through the installation of new fencing, tree plantings and associated landscaping.
- Remove, replace and/or otherwise upgrade all interior park fence lines and systems to replace deteriorated systems and to make use of more visually appealing alternatives.
- Enhance and upgrade the settings surrounding buildings and play areas.
- Undertake park-wide planting and vegetation management programs to include the removal of invasive or diseased tree and shrub species, pruning of desirable species and installation of new plantings to lend shade, better define spaces within a park, improve park aesthetics and enhance wildlife habitat.
- Install information and interpretive signage park-wide. Establish a consistent theme that becomes easily recognizable as the Hanover Parks and Recreation motif.
- Install additional site furnishings (benches, picnic tables, shade shelters, trash receptacles, bike racks and the like) park-wide to offer new conveniences to park patrons and to improve park aesthetics.

Utility Upgrades - As capital projects are planned and implemented it will be important to confirm requirements for utility infrastructure upgrades to ensure that existing systems are replaced in a timely fashion and in a manner that does not disturb recent park improvements, or will not disturb future improvements. Several primary considerations in this regard include:

- Provide wells (where feasible) for new or refurbished bathrooms, concessions and potential field irrigation systems.
- Improve stormwater management systems in order to replace deteriorated facilities and in order to develop stormwater management techniques that are environmentally friendly and appropriate within the context of the particular park setting. In general, new systems should be designed to disperse stormwater within a site and to return stormwater to the soils located below, in lieu of directing untreated runoff to nearby wetlands, roadways or parking areas.
- Provide septic/leach field systems at each property for wastewater disposal.
- Remove overhead electric services to below ground in order to improve site aesthetics and to comply with the requirements of various granting agencies.

The preferred master plans that are contained on the following pages identify the proposed configuration of all site features at each property. It is important to note that the vast majority of recommendations suggest the refinement, enhancement or refurbishment of existing facilities within the properties. However, the plans also recommend the development of a modest level of new facilities and amenities that would provide new or expanded opportunities for public use and enjoyment. Importantly, the potential development of extensive new recreational amenities at the new King Street property creates new opportunities to eliminate problems and conflicts at the other parks and recreation properties.

It is also important to note that the Hanover Parks and Recreation Committee endorsed the preferred master plans and associated scope of improvements through a comprehensive and collaborative design and review meeting process. In addition, the public at large contributed to the development of the plans by offering their advice at several well-attended hearings. The narratives are intended to support the preferred master plans, which graphically depict the basic scope of improvements and which have been included immediately follow the respective narratives. The preferred master plans and related descriptions are organized by site, beginning with Briggs Field.

Briggs Field

Access, Circulation and Parking

Vehicular Access to the Property and Parking

Pedestrian Access and Circulation

Park Facilities

Courts

Playgrounds

Fields

New Park Support Buildings

Overall Park Aesthetics and Landscape/Environmental Enhancements

B. Everett Hall Field

Introduction- B. Everett Hall Field is in many ways the Town's signature park and recreation facility due to the sheer size of the property, age of the property (the bequest of the land to the Town dates to 1926) and the wide range of passive and active recreational offerings contained within its grounds. It's highly visible location within the traditional center of the community, with the library, Town Hall, fire station, major schools and historic church structures all within close proximity adds further importance. The preferred master plan (located below) seeks to strike a balance between active and passive recreational offerings within a setting that respects the unique historical, cultural, social and recreational values of the property that are inherent.



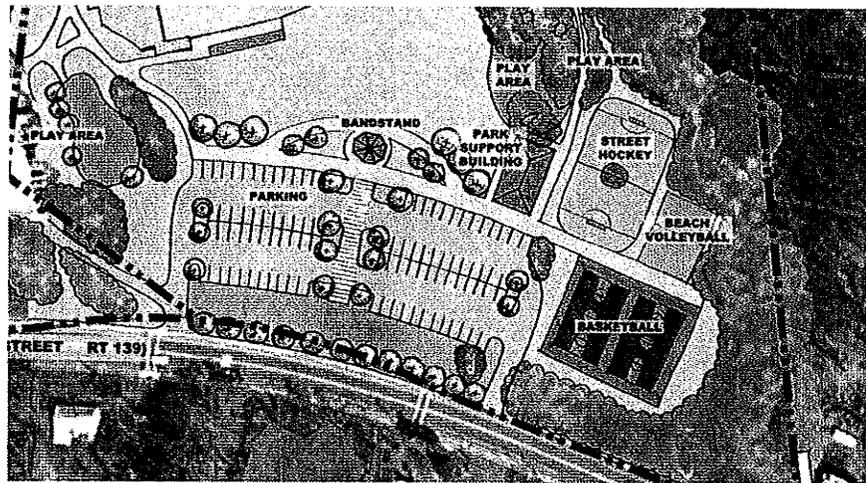
B. Everett Hall Field, along with the adjacent Sylvester and Center School properties combine to form a large open space venue with both passive and active recreational opportunities. The internal property lines (represented by the red dashed lines) are approximate only. Future plans might include expansion of the Center School and conversion of the Sylvester School to another use. Both school and town recreational programs must continue to be accommodated at the site.

Access, Circulation and Parking

Vehicular Access to the Property and Parking

The preferred master plan identifies the potential for establishing two new access points from Route 139/Hanover Street into the park property. The circulation and parking is designed to work as a 2-way system typically, although for certain events it could be organized such that one enters through the eastern most entrance (near the proposed basketball court footprint) and exits at the western end of the parking area near the Sylvester School. The development of a second egress point would require cooperation and collaboration with the school department, as the entrance would provide a link to the Sylvester School and might traverse a small wedge of the Sylvester School parcel.

The design of the parking area, within the same basic park location, allows for a significant amount of on-premises queuing of vehicles during summer camp drop-off periods and for other special events. The parking area design also increases total vehicular capacity to 98 vehicles with overflow parking for an additional 24 vehicles possible within the open lawn area at the park edge along Hanover Street.



In order to calm traffic and slow circulation within the parking area, a central pedestrian corridor is established through the center of the parking area (in a south to north direction), which would include specially colored and textured pavement treatments that serve to alert drivers of the pedestrian nature of the property. This corridor would connect to the relocated Bandstand and all other park facilities. Landscaping and tree planting would help to reduce the scale of the parking area.

Pedestrian Access and Circulation

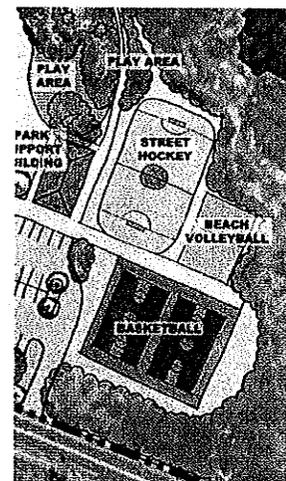
Pedestrian pathways are indicated on the preferred master plan throughout the park. Pathways would provide direct connections to all major park facilities, thus making the site friendlier to seniors and in compliance with ADA. An outer loop path would allow users to encompass a distance of approximately ½ mile within the confines of the park property.

Pathways would also be available for service vehicle use and use by emergency vehicles. A hierarchy of pathway widths would be established, with the narrowest of paths to be minor pedestrian links and the widest of paths to be intended for pedestrians and service vehicular use.

Park Facilities

Courts

Proposed or renovated facilities include two basketball courts; one volleyball court with sand surfacing and one full sized street hockey court. The court facilities are located within the same general geographic section of the park, although the street hockey court in particular would take over the area now dedicated to the children's playground. The street hockey court layout represents a significant upgrade from the much smaller existing facility that is located immediately adjacent to the parking area near Hanover Street.



Playground

A multi-use, multi-event children's playground is indicated in an area that is just to the north of the proposed parking area and park support building. The play area would be nestled within a stand of mature deciduous and evergreen tree plantings that would lend important shade to users. Structures might include relocated equipment as well as new equipment and amenities that support age appropriate activities by children up to 12 years of age. The new playground would include safety surfacing, drainage, edging, perimeter pathways and seating areas, park benches, fencing at the perimeter of the tot's area and landscaping.

Fields

Within the park proper, it is suggested that renovation efforts include the following:

- Relocation and reconstruction of the full-sized baseball field within the approximate geographic center of the property. The alignment of the field would be altered slightly to achieve the near perfect orientation of north / northeast. Improvements would include the construction of all ancillary facilities such as player's benches and dugouts, bleachers, backstops, foul poles and the like.
- Relocation and reconstruction of the Little League field to achieve a more preferable north / northwest orientation and construction of all ancillary facilities.
- Development of a rectangular shaped multi-use field, a portion of which would overlap the Little League field.

In order to support town and school use, it is also recommended that two softball fields be reconstructed within the Sylvester School and Center School properties that are immediately adjacent to the B. Everett Hall property. As the demarcation between the three properties is not obvious to users, the area appears and functions as a single large scale recreational complex and for this reason, fully improved and reconstructed facilities would provide the greatest value to town residents.

In order to protect and preserve the baseball, multi-use and softball venues once they are refurbished, it is recommended that the area presently dedicated to youth football practice be eliminated and that a new venue be established at the King Street property.

Similarly, it is recommended that a more formalized bonfire “pit” be established beyond the limits of the Center School softball field. Stonedust surfacing could be installed and maintained in place from year to year in order to accommodate this activity.

New Park Support Building

A single, park support building is shown in an area that is just to the north of the parking area, approximately at the current bandstand site. The children’s playground, community bandstand and court facilities are all located in close proximity to the proposed building footprint. The support building would potentially contain the following spaces:

- Concession facility for leagues and for special events
- Storage for use by leagues, recreation department and public works department
- Restrooms
- Office space and meeting room for Parks & Recreation
- Utility Room

The building would eliminate the badly outdated restroom/concession building located near the current children’s playground and the storage facility that is currently located toward the northern end of the property. From an operations standpoint, the new location would provide convenient and direct access from Hanover Street and eliminate the need for the service vehicular movements that penetrate deep into the property, thus reducing potential conflicts with pedestrians.

Overall Park Aesthetics and the Bandstand

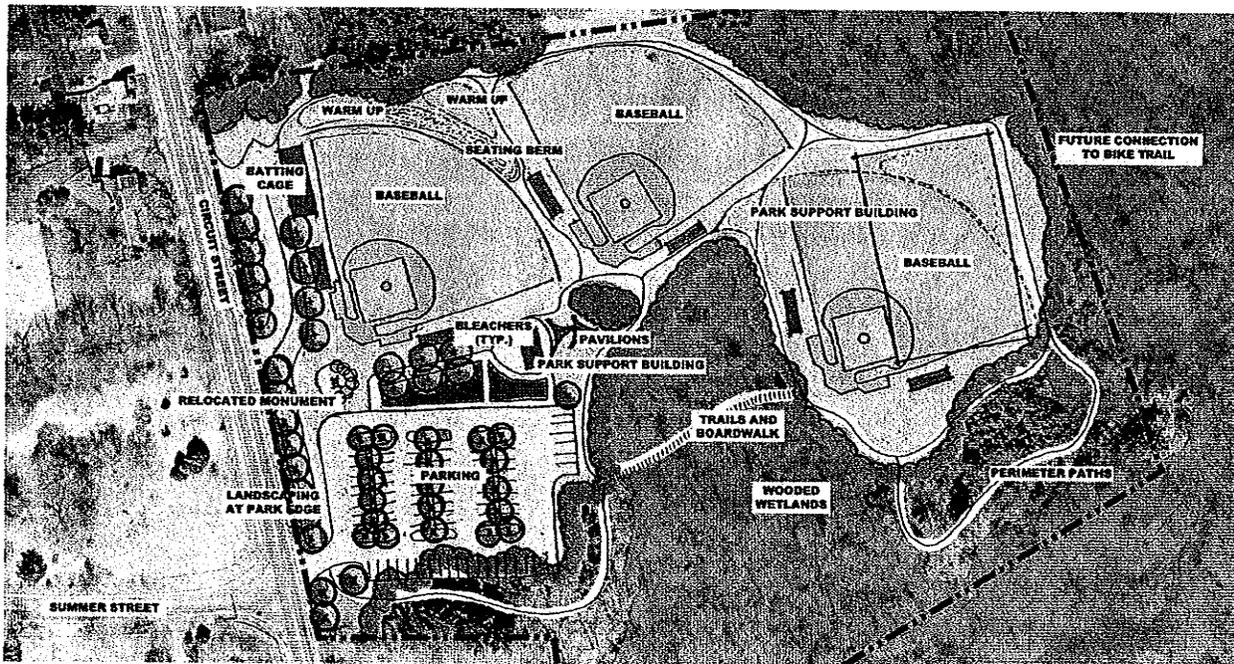
B. Everett Hall Field is the original town park, and a source of great pride and tradition within the Hanover community. To this end, it is envisioned that any capital improvement opportunity would include an effort to upgrade the overall landscape qualities of this premier public park. Additional tree plantings and landscaping, attractive park benches, fencing and signage and other typical park amenities would help to enhance the overall setting, particularly in those high visibility locations along Hanover Street.

The signature feature within the property has long been the bandstand. The preferred plan identifies a new, prominent location for this focal element, with abundant open lawn for use by spectators at concerts, plays and other cultural events. As the structural condition of the bandstand has come into question, further analysis is required to determine the feasibility of successfully relocating and restoring it, or whether construction of a new structure is warranted.

Ellis Field

The second oldest park and recreation property in Hanover, Ellis Field was donated to the Town in 1951. The field is enormously busy and popular during spring and early summer months as the primary venue for Hanover Little League Baseball. In fact, the popularity of the park has caused conflicts between drivers and pedestrians, critical parking shortages have created safety issues for those crossing busy Circuit Street to get to the park, and the cramming in of 4 fields within a limited area has negated the opportunity to achieve better field alignments and configurations.

The preferred master plan sets forth a strategy to improve overall field conditions, reduce safety concerns for pedestrians and drivers alike and to provide new passive and active recreational opportunities that would allow Ellis Field to emerge from being just a Little League venue. The potential to develop new fields at King Street, would allow us to eliminate one baseball playing field and help to solve the critical parking and vehicular/pedestrian circulation issues at the site.

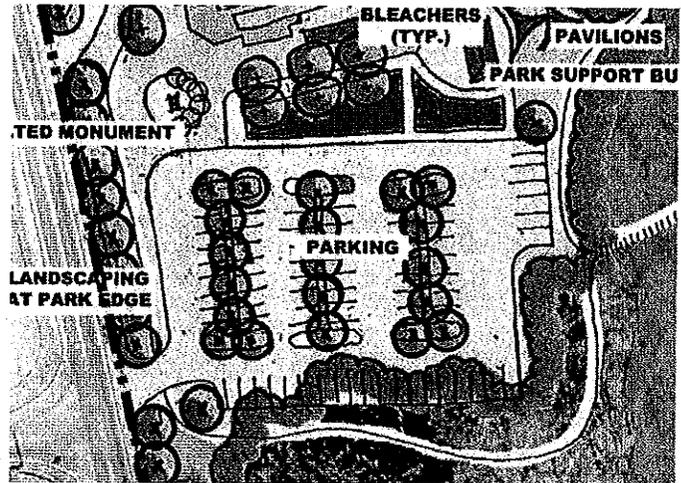


The elimination of one of the baseball fields at the Ellis Field complex creates new opportunities to solve chronic traffic, parking and pedestrian circulation conflicts and to provide new passive and recreational amenities.

Access, Circulation and Parking

The preferred master plan identifies the potential for establishing one primary entrance from Circuit Street (opposite Summer Street) and a separate drop-off area located between Circuit Street and the northwestern Little League Field. The elimination of the southern Little League field allows for the development of a new, clearly articulated, two-way parking area. The development of the drop-off loop off of Circuit Street would eliminate some of the conflicts that presently occur within the narrow, tight confines of the existing parking area, and eliminate the present drop-off tendency that occurs along the edge of busy Circuit Street.

The design of the parking area, within the same basic park location, allows for drop-off to also occur in a safe and efficient manner along the northern side of the parking area. The parking area design also increases total vehicular capacity to 62 vehicles with the potential for additional parking within a town-owned parcel at the corner of Circuit Street and Summer Street.



In order to clearly articulate traffic flow within the parking area, a series of median planting areas are established (running in a south to north direction), which would include native tree plantings and opportunities for the treatment of stormwater runoff in a low impact development manner. The median areas and associated landscaping and tree planting would also help to reduce the scale of the parking area. Since the facility is used primarily during warm weather months, snow plowing would not be a major concern. If desired, the plowing of one parking bay would provide easy access to the property for winter activities that might include snow shoeing or cross country skiing.

Pedestrian Access and Circulation

Pedestrian pathways are indicated on the preferred master plan throughout the park. Pathways would provide direct connections to all major park facilities, thus making the site friendlier to seniors and in compliance with ADA. An outer loop path would allow users to encompass a distance of approximately $\frac{3}{4}$ mile within the confines of the park property and would introduce a new type of recreational use to the park. In order to traverse a large primarily wooded wetland area, the plan identifies an extensive boardwalk system that would link the western and eastern sides of the property and form a key link within the perimeter loop path system. The boardwalk would provide a unique experience to users and an opportunity to observe and appreciate interesting wetlands plant species and associated wildlife species. It has also been noted that plans are in the making for a new bike trail that will pass by the northeastern section of Ellis Field. At that time, there will be an opportunity to consider linking Ellis Field to the bike trail, and in that way the parking area would serve as a trailhead with appropriate user information to be included on a suitable kiosk.

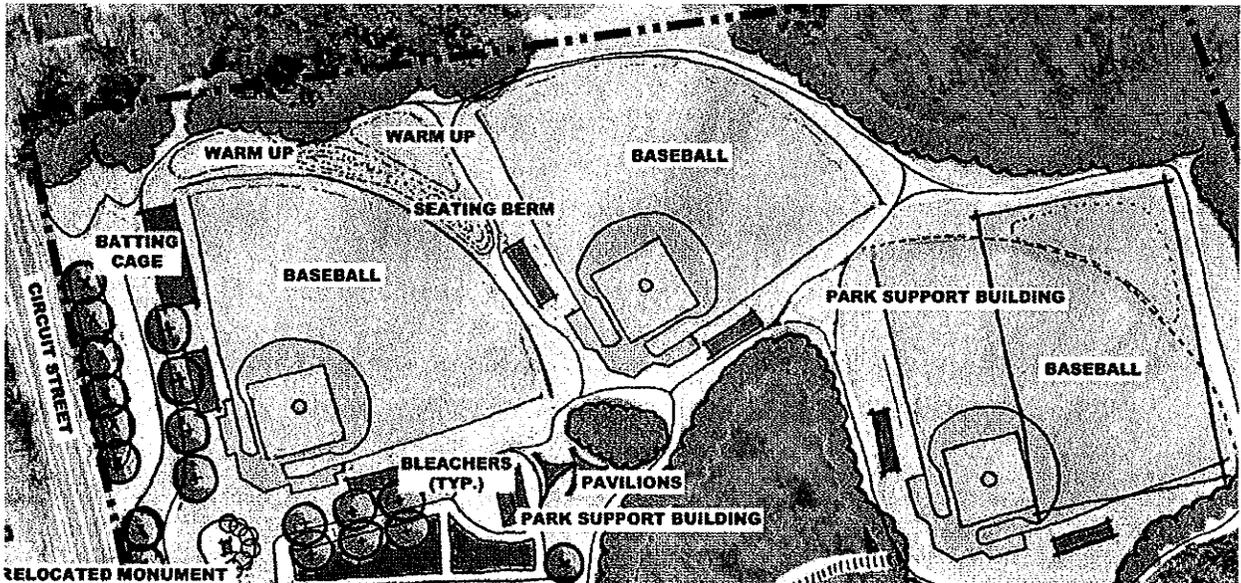
Pathways would also be available for service vehicle use and use by emergency vehicles. A hierarchy of pathway widths would be established, with the narrowest of paths to be minor pedestrian links and the widest of paths to be intended for pedestrians and service vehicular use.

Park Facilities

Fields

Long the primary athletic and recreational offering within the Ellis Field property, it is suggested that the Little League field renovation efforts include the following:

- Relocation and reconstruction of three Little League baseball field playing venues. The two fields located toward the eastern side of the property would be enclosed by fencing to allow that great sensation that a player experiences by hitting a home run. The eastern most field would be slightly less formal, and would not contain outfield fencing. This eastern field will require complete regrading, sub drainage system installations (the ground has been chronically wet during certain times of the year) and a new irrigation system. The alignment of all three fields would provide for the preferred orientation of north / northeast to be achieved. Improvements at all fields would include the construction of all ancillary facilities such as player's benches and dugouts, bleachers, backstops, batting cages, bullpens, foul poles and the like.
- Within the eastern side of the property, the preferred plan delineates a small rectangular shaped multi-use field, a portion of which would overlap the Little League field. The elimination of outfield fencing allows for the establishment of this field that could accommodate a series of both informal and formal recreational activities.
- As new fields are designed and implemented, the on-site well or wells should be analyzed for their capacity to support new irrigation systems and the new park support building.

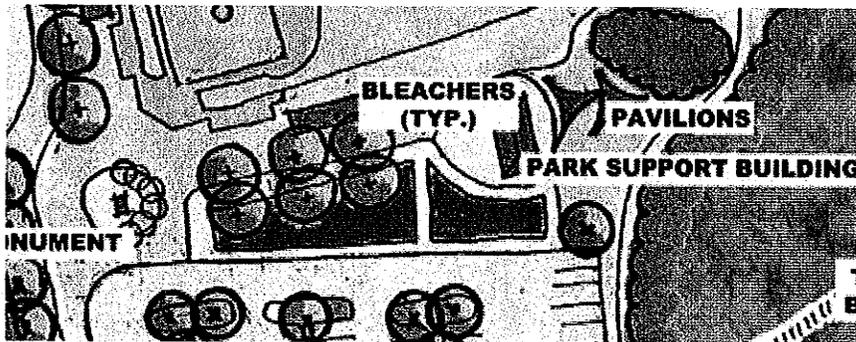


New Park Support Building

A single, park support building is shown in an area that is just to the north of the parking area, centrally located between two Little League fields. Access from the third, eastern most field is accomplished by traversing the unique boardwalk system. This park support structure would potentially contain the following spaces:

- Concession facility for leagues and for special events
- Storage for use by leagues, recreation department and public works department
- Restrooms
- Utility Room

The building would eliminate the small concession structure that is located along the northern edge of the property. From an operations standpoint, the new location would provide convenient and direct access from Circuit Street and the new parking area and eliminate the need for the service vehicular movements that penetrate deep into the property, thus reducing potential conflicts with pedestrians.



Playgrounds

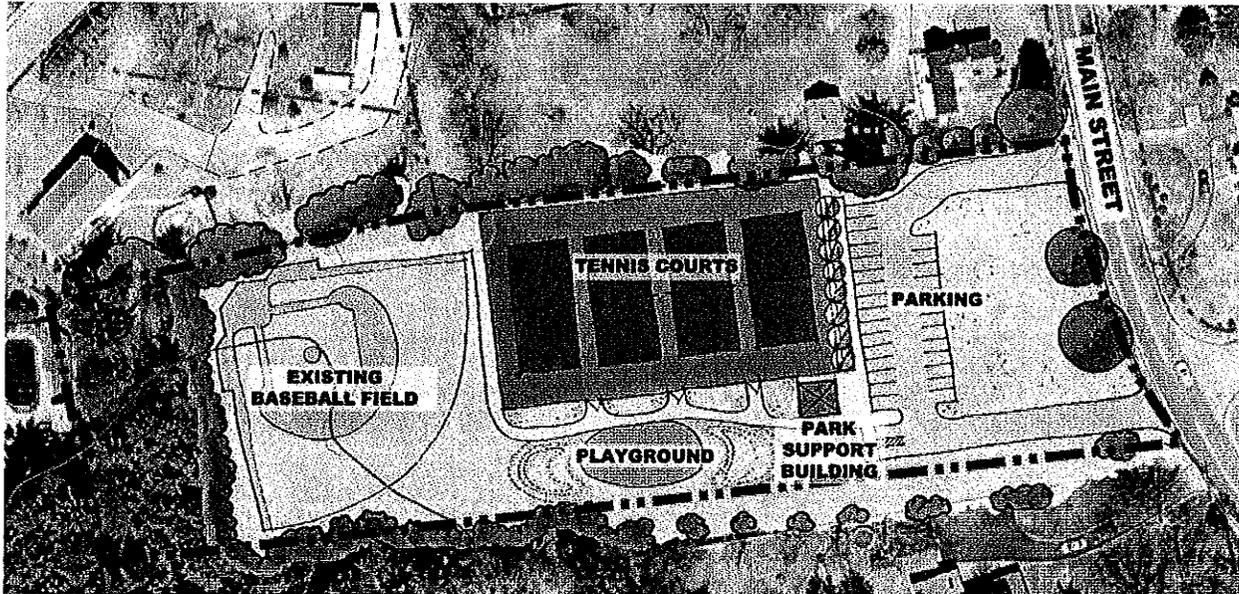
In order to occupy the attentions of siblings of players making use of the fields, and in order to provide new recreational opportunities within this park setting (particularly for neighboring residents) the preferred master plan introduces a new children's playground amenity to be located in close proximity to the parking area at a location that is highly visible from Circuit Street. The playground would include age appropriate play equipment (swings and multi-event play structures) and other typical related amenities and infrastructure.

Overall Park Aesthetics and Landscape/Environmental Enhancements

At present, the most visible and prominent feature within the property (especially to passersby on Circuit Street) is the myriad of chain link fencing that forms the perimeter of the Little League fields. There is a great opportunity to improve overall site aesthetics by considering the use of black vinyl clad chain link fencing (heavy gage), especially in areas that are easily viewed from Circuit Street and surrounding residential properties. In addition, the preferred master plan suggests the "greening" of the entire Circuit Street edge through the installation of native, deciduous shade trees. Attractive signage, park style benches and enhancement to the Ellis Memorial would also help to improve the park appearance.

Gallant

Gallant playground is located in the underserved northern side of Hanover. With the removal of the former school building being seriously discussed, the Recreation Committee felt it was important to plan for an expanded facility that made use of the land previously occupied by the school. The plan below identifies a modest range of improvements that would establish a small-scale neighborhood playground.



The Gallant property is a long, rectangular-shaped parcel that extends into a residential area characterized by single family homes with large lots. Existing vegetative buffers would be retained as new recreational offerings are developed within an area previously occupied by the school building.

Access, Circulation and Parking

Vehicular Access to the Property and Parking

Under the plan, access to the property is provided at two locations from Main Street. In essence the parking area works as a loop, making dropping off a relatively simple and safe operation. Parking is provided for 28 vehicles, although the open lawn area to the front could accommodate an equal amount of overflow parking.

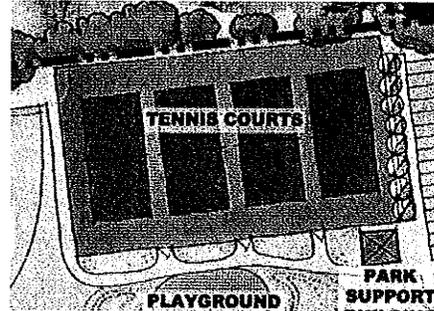
Pedestrian Access and Circulation

Pedestrian access is simple and straightforward as one connected pathway provides connections to the tennis courts, playground and baseball field. All pathways would be ADA compliant.

Park Facilities

Courts

The removal of the old school building provides the opportunity to establish a new 4-court tennis complex along the northern side of the property. Tennis activities tend to be somewhat low key, with limited noise and a small number of players per court (16 players maximum playing doubles tennis on 4 courts) and as such are compatible with a small-scale neighborhood playground. The concept of grouping tennis courts in threes, fours, or sixes is an important one, as users will tend to drive to a multiple court facility and not to a facility with just one or two courts for fear of not finding a court vacant and for the slower turn-over rates associated with fewer courts.



An existing vegetation buffer that separates the tennis courts from the residential properties to the north would be retained and reinforced with new plantings.

Playground

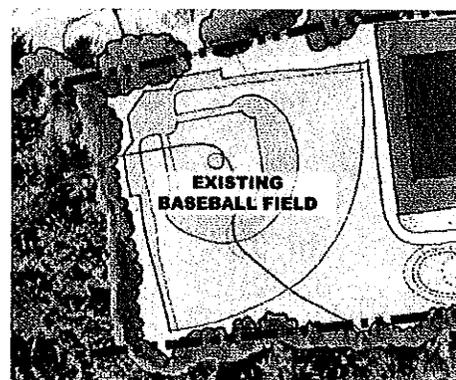
The preferred master plan identifies a small children's playground along the southern edge of the property. The playground would provide opportunities to occupy the attentions of siblings of players making use of the adjacent Little League field, or of parents or older siblings making use of the adjacent tennis courts. The playground also establishes a pleasant, new gathering place for neighborhood residents, and like all playgrounds it would foster community participation and interaction. The playground would include age appropriate play equipment (swings and multi-event play structures) and other typical related amenities and infrastructure.



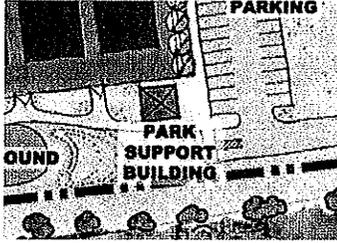
Little League / Multi Purpose Field

Several years ago the baseball field was shifted to its current location. Under the preferred plan, the field is maintained in its current location and expanded to include an upgraded infield with enhanced ancillary facilities (players' benches, bleachers...).

Without outfield fencing, the field becomes multi-purpose with opportunities for less structured and more informal play for activities that might include tossing a Frisbee, playing flag football or flying a kite.



New Park Support Structure



The preferred plan identifies the potential location of a park support building. It is important to note that the development of all other site amenities (parking, field, courts and playground) works well with or without the structure. The park support structure, if constructed, might include bathrooms and storage. A small concession might be optional and based ultimately on how the baseball field is programmed.

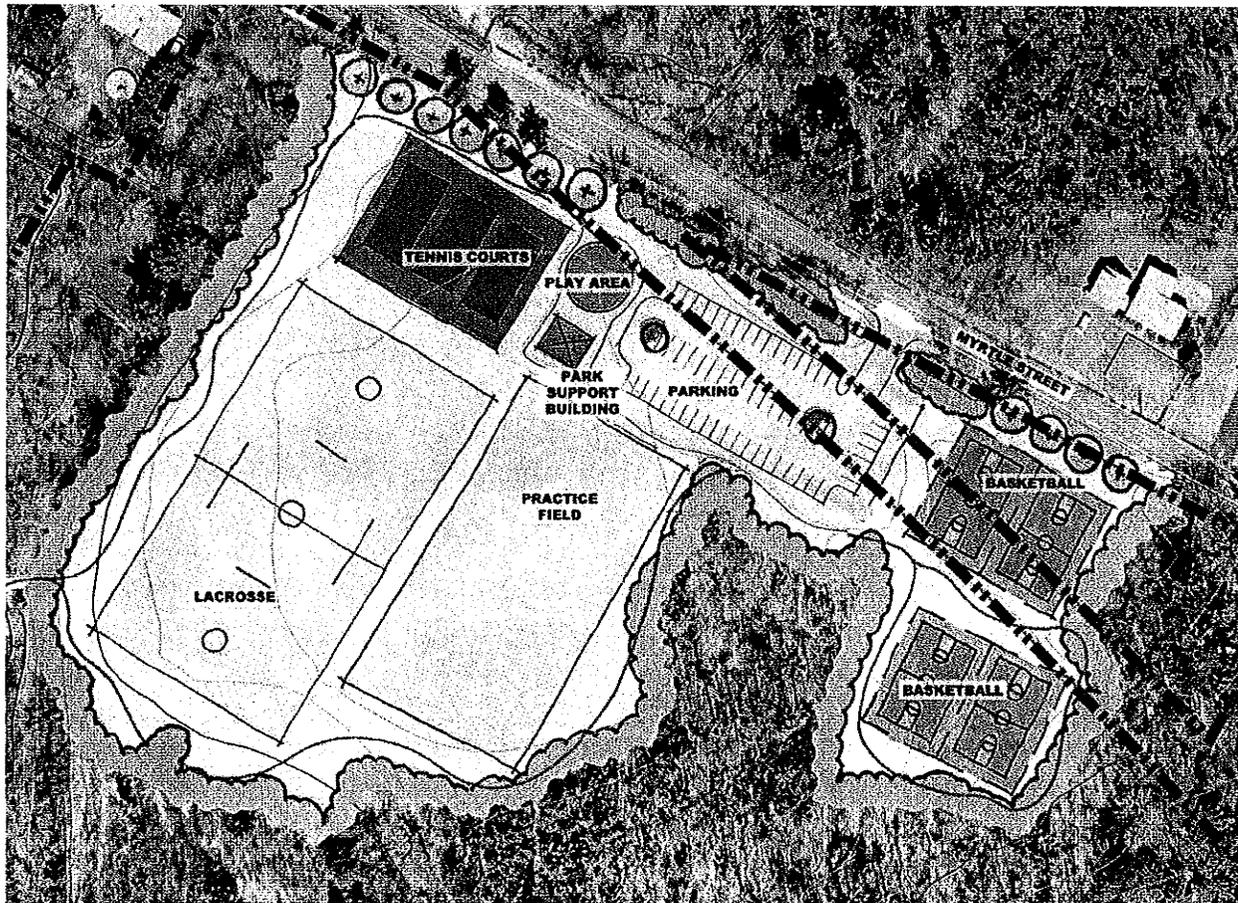
In lieu of a traditional building, an open-air rain or picnic shelter could also be provided at the same location. This would provide relief from rain and from the hot summer sun and a convenient location near to the tennis courts and children's playground.

Overall Park Aesthetics and Landscape/Environmental Enhancements

There is an opportunity to establish Gallant as that quaint, small-scale and traditional neighborhood playground which serves as a recreational and social gathering place for surrounding residents. The park, with limited formal facilities would be landscaped attractively and include groupings of shade trees, additional vegetative screening at property edges and open lawns. At Main Street, the park would read as a green oasis to passersby with a large open "front lawn" to the property. Whereas the school presently blocks views into the property (many town residents probably do not know that the baseball field exists), the new plan would allow for unrestricted views to all recreational amenities.

Myrtle and Center Street

The Town's largest park facility in terms of total area, approximately 75 acres, Myrtle Center Playground currently consists of a large and open multi-use field complex used for baseball, softball, lacrosse and soccer. The field is also used for Little League practice. Basketball courts sit in the upper northeast corner of the site, close to parking and to Myrtle Street. Trails meander through the large undeveloped woodland and wetland portions of the property. The fields are very wet in the spring and into the summer months. The full size baseball field is currently underused due to the wet conditions and the field's condensed and substandard configuration. Boys and girls lacrosse has increased sharply in popularity within the town and the Myrtle property has become the main venue for this activity in Hanover. This site is also ideal for hiking and nature trails. The Preferred Master Plan for Myrtle/ Center Playground identifies a series of fields and other recreational amenities that would replace the underused fields with lacrosse, tennis, basketball court and nature trail complex. The plan includes updating each facility to provide the required design elements and space for each.



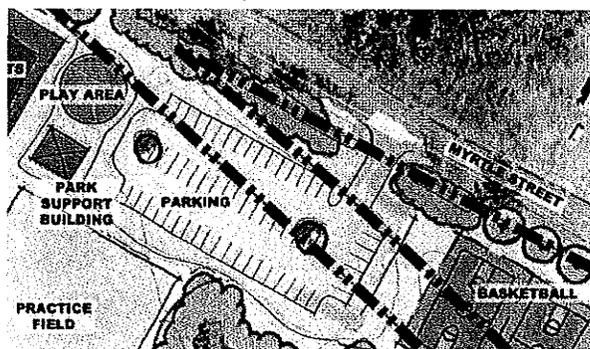
The property is referred to as Myrtle and Center. What is obvious is that the park extends to the edge of Myrtle Street, with access to parking and all facilities provided at this location. What is not so obvious is that the large, undeveloped woodland and wetland sections of the property extend all of the way to Center Street (located down and to the right in the image above).

Access, Circulation and Parking

Vehicular Access to the Property and Parking

The proposed plan identifies a fully reconstructed parking area within the same geographic area of the park. This location remains central to the active recreation facilities, and would allow for convenient access to the existing and proposed nature trails and pathways. The parking area would be reconfigured and expanded in order to meet all current standards (widths and depths of parking spaces and travel ways) and ADA requirements. The parking area would have the capacity to accommodate up to 57 vehicles, which represents a 25% estimated increase. A single, 2-way, entrance from Myrtle Street would be retained and the parking area would be set back from the street to allow for more meaningful park edge improvements that would include signage and tree and shrub planting.

Circulation would be 2-way and circular, with no dead ends, this would allow for a vehicle to exit and enter easily, particularly if no parking space was found. This configuration also allows for easy drop-off and pick up. ADA parking spaces would be provided. Pathway linkages would provide safe and convenient pedestrian access to all adjacent facilities.



For maintenance and emergency vehicles, a curb opening and service drive connection are provided near the proposed park support building at the western end of the parking area. This service entrance would supplement or replace the current gated entrance at the northwestern corner of the property.

Pedestrian Access and Circulation

At present, the park suffers from a lack of safe, clearly articulated and attractive pedestrian entrances and pathways. The preferred plan identifies the development of a pathway system to include a major loop path that encircles much of the built facilities at the perimeter. This system will provide direct connections to all major park facilities and nature trails. The loop path will provide opportunities for walking, jogging, hiking and possibly biking. The path would also provide convenient access for maintenance vehicles and equipment.

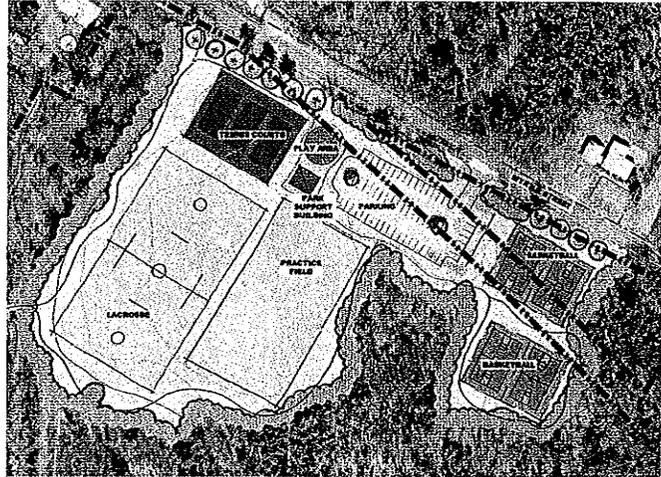
There is also an opportunity to incorporate interpretive signage within this park area in order to describe in both words and images the unique historical, environmental and recreational assets of this park property and the surrounding area. A more formalized, secondary entrance would also be provided at Center Street with direct connections to all of the nature trails.

The pathway system and nature trails would provide much needed multi-generational recreational opportunities and dramatically improve access to the site and to all associated facilities and amenities from both Myrtle Street and Center Street.

Park Facilities

Courts

The plan calls for the two basketball courts to be fully reconstructed within the same approximate location. The courts would be reoriented with the longer axis in a north-south direction. The plan also calls for new construction of two basketball courts to the south of the existing courts. This would provide the town with new programming opportunities and a much-needed facility that consists of four courts and that was clearly identified in the needs analysis. Three tennis courts are identified in the preferred plan to be constructed within the same approximate location of the current Little League infield. Work at this and all courts would include asphalt pavement, color seal-coating, black vinyl chain link fence, seating for users, and enhanced landscaping to partially screen the spaces from adjacent residential abutters and Myrtle Street to the north.



Playground

In an area that is just to the north of the park support building nestled between the parking area and the tennis courts is a multi-use children's playground. Structures would include new equipment and amenities that support age appropriate activities for children up to 12 years of age. The new playground would include safety surfacing, drainage, edging, perimeter pathways and seating areas, park benches, fencing at the perimeter of the tot's area and landscaping.

The playground provides important activity for the children or siblings of players making use of the active recreational facilities located throughout this park area.

Fields

The relocation of the existing baseball field and Little League field to other properties in town would allow for the reconstruction and reconfiguration of the current multi-use field. In its existing configuration, in order to allow for the baseball and Little League fields, the multi-use field is situated in a non-optimal east-west orientation. Also, this configuration allows for only one field. Lacrosse and soccer fields also require a fence at each end of the field to prevent balls from getting lost and to help protect other park users.

The preferred plan identifies the re-configuration of the game field to an ideal northeast orientation. This orientation would also allow for a smaller practice/open-play field to the east of the game field. This renovation could occur without much reconstruction and could be accomplished largely by the conversion of the baseball and Little League infield-mix areas to grass. However, to provide maximum long-term use and opportunities for quality at the play, the current poor drainage conditions must be addressed. Addressing this issue may involve a more

elaborate re-construction effort to include a sub-drainage system. The plan also identifies new fencing in key locations to prevent stray balls from leaving the play field proper. On the north end of the game field, the new tennis court fencing would serve this purpose.

New Park Support Buildings

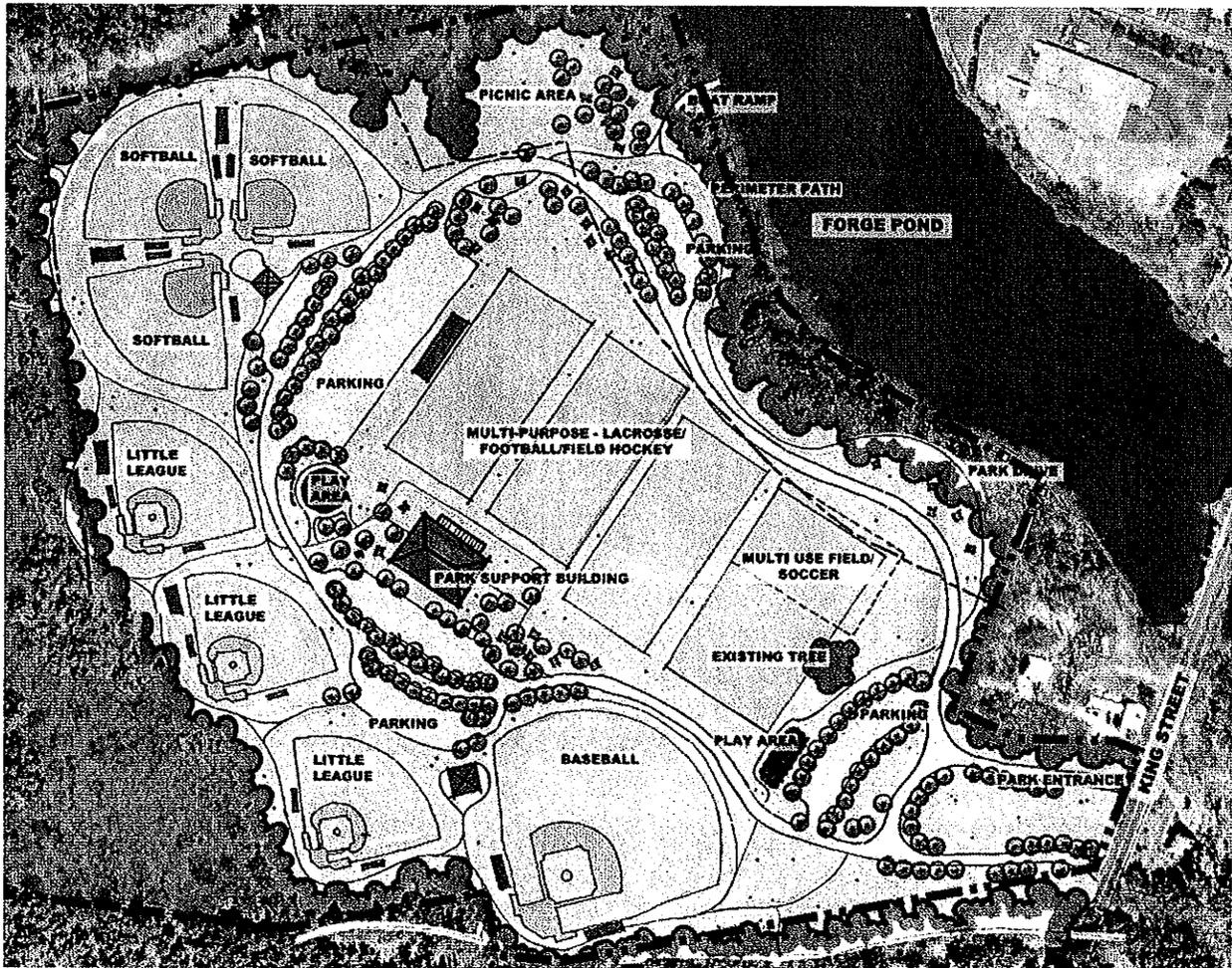
A proposed new field support building, approximately 36 feet by 36 feet has been sited in a central location and in fairly close proximity to the all existing or proposed facilities. The building will house concessions and restrooms and include children's playground and picnic facilities immediately adjacent to the structure.

Overall Park Aesthetics and Landscape/Environmental Enhancements

Myrtle/ Center Playground offers one of the best opportunities in the Town to upgrade and enhance walking and nature trails. Another priority related to improving both recreational and educational opportunities at the site relates to the establishment of narrative and graphic depictions that present the site's unique environmental resources. The entire site is an NHESP designated Priority Habitat. Opportunities exist to educate the public in regards to rare and endangered species. The existing nature trails can be enhanced and new trails carved out if desired. Boardwalk construction would allow for negotiating wetlands and other sensitive environmental areas. Way finding signage can be incorporated throughout the site to allow trail users to navigate the site easier. Signage can also be used to keep patrons within the site to avoid trespass onto abutters' property. Select trails can be made ADA compliant to allow for use by all. Seating areas could be placed in strategic locations to allow for rest, wild life viewing and/or contemplation. If desired, barriers could be placed at the trailheads to prevent access by motorized vehicles.

King Street Property

The recently acquired King Street property, formerly known as the Cervelli property, provides the Town with its largest overall open space and recreational property. The site currently consists of wooded wetland areas with trails and open fields that have historically been farmed. The site provides the town with a large, already cleared and relatively flat open area, ideal for the development of recreational fields. The preferred plan identifies the opportunity for development of the site into Hanover's premier park and recreation destination. Although at quick glance the plan reads as if it is primarily an athletic complex, the large rectangular fields will ultimately read and appear to passersby as open green grassland. Baseball and softball fields, requiring significant runs of fencing, are kept to the perimeter of the property and buffered by the drive and plantings. This is recommended to maximize the extent of contiguous green space. The entrance drive is also strategically located so that one's first impression of the park is that of open green space with trees interspersed. The park entry experience is greatly enhanced by a "great lawn". The great lawn will allow for open play, small concerts and other less formal activities and also help to reinforce and establish the park-like atmosphere. This element also gives the park a significant identification from King Street. The major elements of the preferred Master Plan are further described in the sections below.



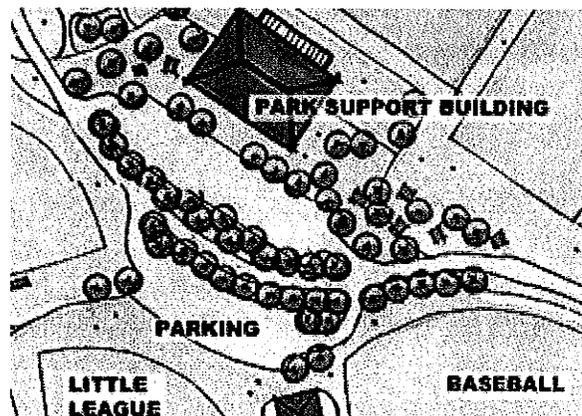
The preferred plan identifies a balance of passive and active recreational amenities that would complement the unique environmental qualities of the site (cranberry bogs, Forge Pond, woodlands, wetlands...). A meandering, loop drive provides for a progression of views to those traveling to various destinations within the property.

Access, Circulation and Parking

Vehicular Access to the Property and Parking

It became apparent during the master planning process that a destination facility of this nature would require an access drive that provides safe, convenient and aesthetically pleasing connections to all major facility. It is simply not practical to walk long distances to active recreation venues where there is a need to transport a significant extent of equipment. Accommodations in the form of park drives and parking areas are also necessary for park maintenance vehicles and buses delivering children to the various athletic venues and activities. Parking areas must also serve as trailheads for those traveling to the site to enjoy the sites' extensive system of and nature trails. As the plan indicates, vehicular drives and parking areas are kept to the edge of the property in order to minimize conflicts between pedestrians and drivers and to maximize the extent of contiguous green space within the park. The preferred master plan recommends a minimal, meandering park-like access drive in the tradition of Frederick Law Olmstead, the famed landscape architect and designer of such notable properties as Central Park in New York and Franklin Park in Boston. To this end, drives are shown weaving through the site. Pedestrian walks and tree-lined edges along the park drives will reinforce the park qualities and atmosphere. With the exception of the large parking area near the softball and multi-use field complex, small-scale, destination specific parking areas are interspersed throughout the site providing access to all park amenities. This will allow ADA access to the facilities as well as provide reasonably convenient parking for park patrons.

In each of the parking areas the vehicular movement would be 2-way and circular, with no dead ends. This would allow for a vehicle to exit and enter easily and safely, particularly if no parking space was found. This configuration also allows for easy drop-off and pick up. ADA compliant handicap parking spaces would be provided. Pathway linkages would provide safe and convenient pedestrian access to all adjacent facilities.



For maintenance and emergency vehicles, curb openings and service drive connections are provided near the proposed park support buildings at the field complexes.

Amenities are desired to be park-like with appropriate styles of lighting, signage, fencing and gates, pedestrian connections and landscaping. Utility system will be installed including storm drainage, electrical and telephone/cable systems. Electrical and telephone systems, in particular, must be placed below ground throughout the park limits in order to be eligible for Division of Conservation Services funding.

If extensive lighting systems cannot be afforded at the time of park drive and parking area installations, empty conduit systems should be placed, with the wiring systems to be pulled through, and above ground features (light fixtures, posts and bases) installed, at a later date as funding becomes available. If nighttime use is not planned for either the short or long-term, then

the installation of the underground components for a park road lighting system should be forgone.

Pedestrian Access and Circulation

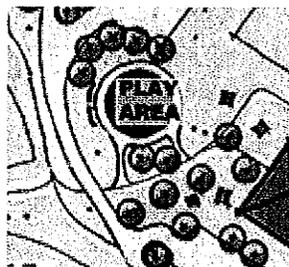
Incorporating pedestrian pathways and trails throughout the park is an important and intrinsic part of the preferred master plan. Connections to the existing adjacent Hanover Greenway will enhance the character of the park and its connection to the Hanover community. The system of pedestrian ways throughout the park will double as access to the facilities and exercise and jogging trails. It is recommended that trailheads be established and well designated; connecting the developed portion of the park with the abutting assigned open space, and integrating the two and creating a well articulated sense of place.

Park Facilities

Courts

In order to meet Hanover's very significant field needs, opportunities for the development or renovation of tennis, basketball and street hockey courts have been pursued at other park and open space properties in order to focus on the development of fields at the King Street property. In addition, court facilities provide opportunities for both informal neighborhood use and more formal use by youth organizations. Other park and open space properties are more centrally located within the community and therefore more conducive to functioning as neighborhood playgrounds. The King Street property is more remote and therefore more difficult to access by neighborhood residents and the youth of the community either on foot or by bike. In addition, a balance needed to be achieved at the King Street property, where surplus areas (beyond the limits of fields) are preserved generally as open space and not paved for the purposes of providing courts. This allows the park development to better complement the character and quality of other significant wetlands and woodlands.

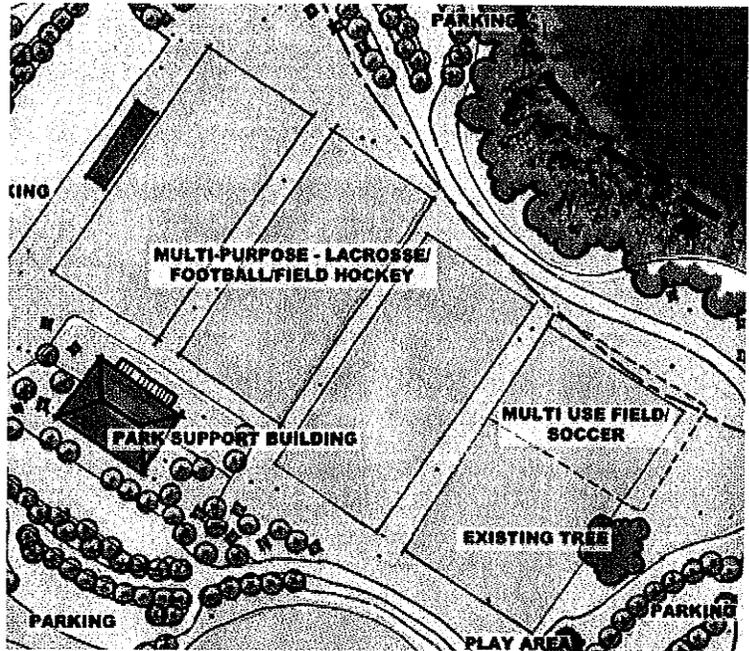
Playgrounds



The preferred plan recommends the placement of at least two multi-use, multi-event children's playgrounds at locations central to the core activities of the facility. As described in the General Themes for Improvement section, the play areas would provide activity for siblings and children of park patrons participating in other activities. As proposed at the other parks, structures would include new equipment and amenities that support age appropriate activities for children up to 12 years of age. The new playground would include safety surfacing, drainage, edging, perimeter pathways and seating areas, park benches, fencing at the perimeter of the tot's area and landscaping. If funding allows, it is recommended that smaller mini, play areas be located near each facility such that a parent can allow one sibling to play while the other is participating in an athletic event.

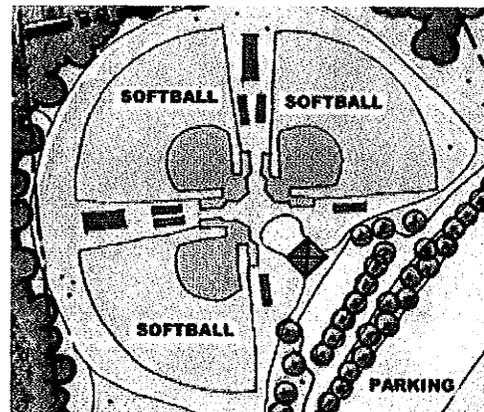
Fields

The new King Street facility provides the town with the opportunity for a major multi-field athletic complex in a rural area that has very few residential abutters. The preferred Master Plan identifies the recommendation to provide one contiguous open field in the center of the property. Within this area several rectangular fields can be laid out. For example, the preceding image of the plan shows three lacrosse/football fields and one large soccer field. Various configurations can be laid out to accommodate different sports or activities depending on the season. This area could also be used as a large fair ground or event tent area.



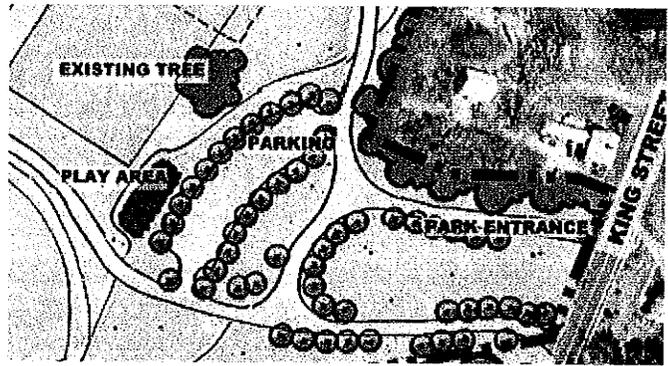
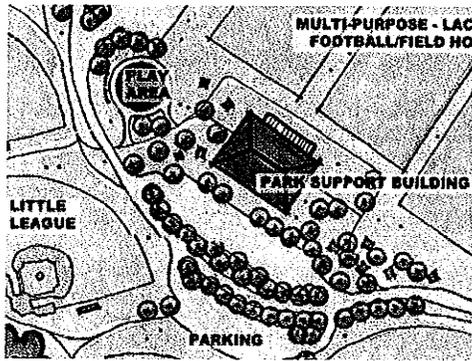
The Preferred Master Plan identifies a full size (90-foot base paths) baseball field at the property. This field would replace the current field at Myrtle Street and accommodate the need for another full size field in Town. This type of facility can also be rented to local leagues and regional teams for practice.

A complete three-field softball facility is proposed in the northwest corner of the site providing the Town with the much-needed Parks and Recreation softball facility. Three new Little League fields are proposed to be located along the western wooded border to complement the three fields at Calvin J. Ellis Field. These facilities would include all ancillary facilities including bleachers, player's dugouts, batting cages, backstops, foul poles and the like.



New Park Support Buildings

A proposed new community building would meet the much-needed requirements expressed in the survey. This would support various community activities and programs and would include a pavilion as part of the building structure. The building would support concessions, storage, restrooms, and other uses for park patrons and the public. Two separate park support buildings, in fairly close proximity to the fields would facilitate regular sports activities and programs.



Overall Park Aesthetics and Landscape/Environmental Enhancements

The preferred master plan addresses the need for locating the various park program elements in a configuration that preserves the aesthetic character of this large area. The proposed configuration encourages an open layout with fenced elements and fields located toward the periphery that frees up the central area creating an open expansive green space. This also provides for locating circulation and walking trails along the periphery. This approach of locating the divergent program spaces on the landscape succeeds in delineating active and passive recreational uses and minimizes use conflicts. The logistics of overall drainage and stormwater management within the site would be studied and tailored to best fit the site's environment while accommodating optimum drainage patterns for the fields and ancillary spaces.

B. Everett Hall Field (Sylvester Field)

The following table depicts cost considerations for the B. Everett Hall Field property. Some of these considerations may be applied to the other sites as needed. The table represents potential implementation of the Recreation Master Plan preferred option.

Recommended Master Plan improvements:

Improvements	Budget	Materials/ Notes
1. Parking Area Improvements Refurbished approximately 42,500 SF area	\$190,000	(Including drainage, pavement, curbing, striping and tree planting)
2. Fields Relocated Baseball Field Refurbished Little League Field Refurbished Softball Fields (2) New Multi-Purpose Practice Field Beach Volleyball	\$200,000 \$50,000 \$100,000 \$80,000 \$10,000	(Including drainage, irrigation, surfacing materials and layout, fencing and bleachers)
3. Courts Refurbished Basketball Courts (2) New Street Hockey Rink (1)	\$40,000 \$160,000	
4. Perimeter Path New Pathway System	\$80,000	
5. Street Improvements & Amenities Landscaping at Park Edge Refurbished Bonfire Area Relocate Existing Bandstand	\$30,000 \$4,000 \$10,000 \$4,000	(Including drainage, grading, tree and shrub planting)
6. Play Area New/ Refurbished 15,000 SF Multi-use Play Areas (2)	\$70,000	(Std. play equipment and wood chip surfacing)
7. Building New 3,200 SF Park Support Building	\$560,000	(Office/Concessions/Storage/Restroom)
8. Estimated Design Fee*	10%	Approximate 10% of total projected Project cost

Calvin J. Ellis Field

The following table depicts cost considerations for the Calvin J. Ellis Field property. Some of these considerations may be applied to the other sites as needed. The table represents potential implementation of the Recreation Facilities Master Plan preferred option.

Recommended Master Plan improvements:

Improvements	Budget	Materials/ Notes
1. Parking Area Improvements New approximately 32,000 SF area	\$140,000	(Including drainage, pavement, curbing, striping and tree planting)
2. Fields New Baseball Field (3) New Multi-Purpose Practice Field New Batting cage	\$900,000 \$30,000 \$20,000	(Including drainage, irrigation, surfacing materials and layout, fencing and bleachers)
3. Perimeter Path New Pathway System	\$20,000	
4. Street Improvements & Amenities Landscaping at Park Edge Relocate Existing Monument	\$20,000 \$5,000	(Including drainage, grading, tree and shrub planting)
5. Play Area New 5000 SF Multi-Use Play Areas	\$70,000	(Std. play equipment and wood chip surfacing)
6. Building New 800 SF Park Support Building Pavilions (2)	\$140,000 \$6,000	(Concessions/Storage/Restroom) (Fabric Shade Structures)
7. Estimated Design Fee*	10%	Approximate 10% of total projected Project cost

Myrtle/Center Playground

The following table depicts cost considerations for the Myrtle /Center Playground property. Some of these considerations may be applied to the other sites as needed. The table represents the potential implementation of the Recreation Master Plan preferred option.

Recommended Master Plan improvements:

Improvements	Budget	Materials/ Notes
1. Parking Area Improvements New approximately 24,000 SF area	\$100,000	(Including drainage, pavement, curbing, striping and tree planting, etc)
2. Fields Refurbished Lacrosse Field & Misc. Refurbished Practice Field	\$20,000 \$10,000	
3. Pathways and Natural Trails New Athletic Field Pathways New Nature Trail improvements	\$10,000 \$30,000	
4. Courts Refurbished Basketball Courts (2) New Basketball Courts (2) New Tennis Courts (3)	\$40,000 \$100,000 \$120,000	(Including clearing, grading, etc.)
5. Play Area New 2000 SF Multi-use Play Area	\$20,000	(Std. play equipment and wood chip surfacing)
6. Building New 800 SF Park Support Building	\$140,000	(Concessions/Storage/Restroom)
7. Estimated Design Fee*	10%	Approximate 10% of total projected Project cost

Amos Gallant Field

The following table depicts cost considerations for the Amos Gallant Field property. Some of these considerations may be applied to the other sites as needed. The table represents the potential implementation of the Recreation Master Plan preferred option.

Recommended Master Plan improvements:

Improvements	Budget	Materials/ Notes
1. Parking Area Improvements New approximately 7800 SF area	\$35,000	(Including drainage, pavement, curbing, striping and tree planting, etc)
2. Fields Refurbished Baseball Field in Existing Location	\$30,000	
3. Pedestrian Pathways New Pedestrian Pathways	\$10,000	
4. Courts New Tennis Courts (4)	\$160,000	(Including clearing, grading, etc.)
5. Play Area New 2800 SF Multi-use Play Area	\$40,000	(Std. play equipment and wood chip surfacing)
6. Building New 800 SF Park Support Building	\$140,000	(Concessions/Storage/Restroom)
7. Improvements and Amenities Landscape within Park Limits	\$20,000	
8. Estimated Design Fee*	10%	Approximate 10% of total projected Project cost

King Street Property

The following table depicts cost considerations for the King Street property. Some of these considerations may be applied to the other sites as needed. The table represents the potential implementation of the Recreation Master Plan preferred option.

Recommended Master Plan improvements:

Improvements	Budget	Materials/ Notes
1. Parking Area Improvements New Parking Areas (5) approx. 90,000 SF and Loop Driveway	\$1,230,000	(Including Grading, drainage, pavement, driveway, curbing, striping, tree planting, etc)
2. Fields New Multi-purpose Field (3) New Multi-purpose Practice Fields (1.5) New Little League Fields (3) New Softball Fields (3) New Baseball Field	\$600,000 \$250,000 \$600,000 \$750,000 \$800,000	(Lacrosse/Football/Field Hockey) (Soccer and Practice Field) (Including clearing, grading, drainage, irrigation, surfacing, bleachers, etc.)
3. Pathways and Natural Trails New Athletic Field Pathways New Nature Trail Improvements	\$100,000 \$200,000	(Including Boat ramp, picnic areas)
4. Landscape Improvements Entrance and Park Edge Areas	\$40,000	(Including trees, plantings etc.)
5. Play Areas New (2) approx. 8000 SF Multi-use Play Areas	\$200,000	(Std. play equipment and wood chip surfacing)
6. Building 1 Pavilion/Park Support Building 2 Park Support Buildings	\$560,000 \$280,000	(Community Building and Support buildings to include: Pavilion Concessions /Storage /Restroom)
7. Estimated Design Fee*	10%	Approximate 10% of total projected Project cost

* The estimated design fee of 10% projected Project cost for each property would roughly cover design services for site survey, wetlands delineation, testing, permitting, site plan design refinement with public participation, final layout and drainage design, specifications and site design details.

Funding Opportunities and Implementation Strategies

Funding Opportunities

There are many potential sources of funding from both public and private entities that could help to pay for potential improvements to all the recreation and open space sites in Hanover. Donations, both large and small, can be lumped together to create the financing needed to undertake meaningful improvements. The Town of Hanover Parks and Recreation Committee will aggressively pursue a variety of funding and implementation strategies that could include:

- **Traditional Public Bidding-** Develop plans, specifications and estimates for the desired improvements, publicly advertise, receive bids and award a construction contract to the lowest qualified bidder. Projects typically range from small (say \$50,000 or so) to very large (many hundreds of thousands of dollars).
- **In-house Services-** Implement improvements making use of Town labor forces, materials and equipment. This method is typically appropriate for projects that are limited in scope, such as the construction of a parking area or driveway, or refurbishment of adjacent Town sidewalks. As funding, materials, equipment and human resources permit, other minor improvement efforts can be planned and undertaken. The removal of dead or diseased trees, pruning of healthy trees, and the installation of benches, trash receptacles, fencing, signage, or a small run of masonry wall are examples of the types of minor enhancements that can be provided using Town forces and materials.
- **Donations / Corporate Sponsorships / Community Build-** Implement improvements for projects through a variety of means that might include, construction of a children's playground by a corporation or community group or construction of a park feature or facility with funding generated through linkage or mitigation arrangements (often originating from the approval of a large area development). In certain cases, improvements can also be undertaken by contractors looking to donate their services.

For consideration, a number of potential funding sources and mechanisms have been identified. Many of the governmental sources identified allocate millions of dollars per year for parks, open space and athletic facility improvement programs, but competition is intense. The actual improvements are then implemented through a public design, bid and construction process.

Partnerships

Partnerships can also play an important role in the overall plan to improve, manage and maintain park properties. As an example, there are many privately managed sports leagues in Hanover with impressive track records for supporting certain maintenance and capital improvement initiatives for numerous facilities. Towns are increasingly relying on public/private partnerships to create facilities and related playing conditions needed to support sports programming.

The Town might also consider partnerships with such entities as the Massachusetts Audubon Society, or Massachusetts Urban and Community Forestry Program in order to preserve, protect and enhance the unique environmental qualities, like existing mature woodland, to provide new passive recreational opportunities in the form of environmental education and awareness. The latter also offers matching grant opportunities to help fund urban forest management projects.

Commonwealth of Massachusetts - Division of Conservation Services (DCS)

This state agency has funded hundreds of park, open space and recreation projects throughout Massachusetts over the past several decades. Each June, the agency receives applications from municipalities for improvements to parks, playgrounds, athletic facilities or assistance in the acquisition of open space properties. DCS administers several programs including the “*Self-help*” program, which generally funds acquisitions and limited enhancements to open space properties. The funds for acquisitions are designed to protect natural resources by eliminating threatened development. The “*Urban Self-help*” program typically funds the renovation of parks, playgrounds and athletic facilities in larger communities that have fewer outlets for recreation. Demographics play a role in the grant award process. Communities that are more urban in nature with high percentages of low-income residents tend to fare better in the decision-making process as compared to smaller communities with fewer low-income residents. For projects in smaller communities such as Hanover, a case must be made that the improvements for which funding are being sought are of a regional significance. The case could probably be made for improvements to a property like B. Everett Hall or King Street, while other smaller facilities would likely not be eligible.

DCS also receives Federal Land and Water Conservation Funds for distribution to communities that are considering park improvements or land acquisitions as described above. The allocation for Massachusetts for the upcoming year has not been determined, although the funds, when available, may be used to supplement both the Self-help and Urban Self-help programs.

Community Preservation Act Funding

Hanover has passed the Community Preservation Act, which allows the Town to generate funds through an added property assessment for improvements related to affordable housing, historic preservation and certain types of park/open space acquisitions and enhancements. Funding generated locally is matched by an equal amount of state dollars. This program could become the primary source of local capital funding for the implementation of recommended improvements established by the master plan.

Stormwater Management Grants

Funding is made available by the Commonwealth of Massachusetts Executive Office of Environmental Affairs for stormwater management, water quality protection and enhancement efforts. This funding could be a source for environmental improvements to the park, like the stormwater improvements that would be necessary to construct more paved and more defined parking areas.

Other Alternative Methodologies for Implementing Improvements

The Town of Hanover, through the DPW, receives annual quotations for a variety of public improvements that can be ordered on an as-needed basis. The installation of fencing, bituminous concrete pavements for roadways/parking areas, and curbing are examples. As deemed appropriate, ordering work through this method could be used to complement or support improvements that are accomplished through other means.

Implementation Strategies

> **King Street Property:**

- Construct the access road or a portion of the access road, to possibly include only the gravel base course in the short-term
- Construct the full size baseball field, one or two little league fields and potentially the softball complex or a portion of it including access paths and amenities
- Construct nature trails and passive recreation elements

> **Myrtle/Center Playground:**

- Construction of the ball fields at King Street will allow for the relocation of the existing full size baseball field and little league field
- Renovate the fields for lacrosse and construct the tennis courts and potentially the parking area
- Basketball courts could be constructed at a later date when the need arises and funding is available
- Construct nature trails and passive recreation elements

> **Ellis Field:**

- The construction of the Little League fields at King Street will allow for the elimination of one little league field at Ellis
- Construction of a permanent or temporary parking area at the Field Number 2 location
- Construction of the remaining fields may be phased in as funding becomes available

> **B. Everett Hall:**

- The construction of the Tennis courts at Myrtle/Center Playground will allow for the commencement of construction at Everett Hall

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APPENDIX A

HANOVER'S EXISTING PARKS & RECREATION FIELDS AND FACILITIES

Under Custody of Parks & Recreation

No. (Map ID)	Field/Facility Name	Map-Lot(s)	Total Acres	Street Address and/or Cross Streets	Ownership/Responsible Party	Available Fields
1	Briggs Field	46-014	1.17	Hanover/Center Street	Selectmen / Parks & Recreation †	T-Ball / Softball
2	B. Everett Hall Field	47-015	20.33	495 Hanover Street	Selectmen / Parks & Recreation †	Tennis/Basketball/Playground/ Football/Bands/stand/Volleyball/ Baseball Field
3	Calvin J. Ellis Field	51-004	12.50	Approx. 750 Circuit Street	Parks & Recreation	Baseball
4	Myrtle/Center Playground	69-014	75.00	Approx. 215 Myrtle Street	Parks & Recreation	Basketball/Baseball/ Soccer/Softball
5	Amos Gallant Field	21-007	2.74	848 Main Street	Selectmen / Parks & Recreation †	Baseball/Softball
6	Cervelli	67-001	66.63	Approx. 245 King Street	Open Space / Parks & Recreation	Recent Acquisition (To be Determined)
Total Acres (Approximate):			178.37			

† Joint Care & Custody with Board of Selectmen

Under Custody of School Department

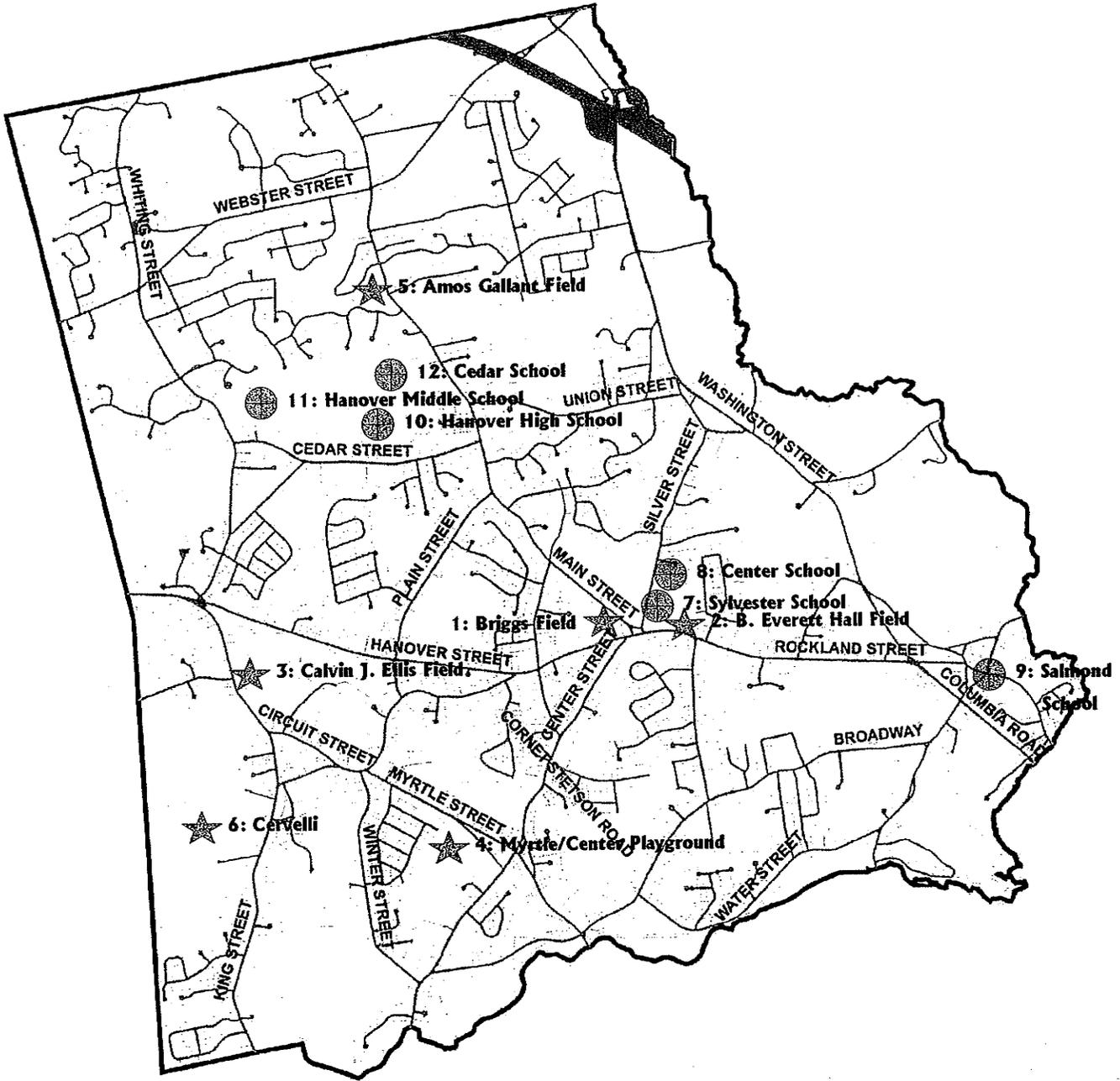
No. (Map ID)	Field/Facility Name	Map-Lot(s)	Total Acres	Street Address and/or Cross Streets	Ownership/Responsible Party	Available Fields
7	Sylvester School	47-015	20.33	495 Hanover Street	School Department	Softball/Playground/Soccer
8	Center School	47-003	12.91	65 Silver Street	School Department	Playground/Baseball/Multi-Purpose
9	Salmund School	57-076	6.66	188 Broadway	School Department	Playground/Softball
10	Hanover High School	27-005 + 27-002	23.41 23.90	287 Cedar Street	School Department	Track/Tennis/Baseball/ Football/Multi-Purpose
11	Hanover Middle School	26-007	29.62	45 Whiting Street	School Department	Playground/Multi-Purpose
12	Cedar School	27-001 + 27-002	48.80 23.90	265 Cedar Street	School Department	Playground/Multi-Purpose
Total Acres (Approximate):			189.53			

APPENDIX D

Field Usage
Estimated Field / Facility Usage

Sport	# of Participants	# of Teams	# of Practices Per Team Per week	# of Games Per Team Per Week	Total # of Games Per Week	Total # of Practices Per Week	Total Per Week Scheduled Use	# of Weeks in Season	Total Seasonal Use
Spring Soccer	700	70	1	1	35	70	105	8	840
Spring Baseball	600	46	1	2	46	46	92	10	920
Summer Baseball	200	14	2	2	14	28	42	8	336
Spring Softball	150	14	1	2	14	14	28	8	224
Summer Softball	75	5	2	2	5	10	15	7	105
Summer Basketball	150	15	0	2	15	0	15	5	75
Fall Soccer	625	64	1	1	32	64	96	8	768
Football	180	6	3	1	3	18	21	11	231
Cheerleading	80	3	2	1	2	6	8	11	83
Girls Softball	270	20	1	2	20	20	40	11	440
Boys & Girls Lacrosse	240	13	2	1	7	26	33	14	455
Winter Basketball	600	44	2	1	22	88	110	10	1100

TOWN OF HANOVER - GEOGRAPHIC INFORMATION SYSTEM



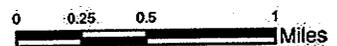
- ★ Parks & Recreation Fields
- School Department Fields

MAP LEGEND

- ▭ Parcels (July 2006)
- ▭ Town Line (Surveyed)
- ▬ Roads

NOTES & SOURCES:

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. This map was created using the Town of Hanover ArcReader 3.1 GIS Viewer. For more information, contact Andrew R. Park, Town Planner for the Town of Hanover, at (781) 825-7441. Photogrammetric landbase data and GIS coverages provided by Environmental Partners Group (EPG) in 2004. Initial source data provided by the Assessors Department and Department of Public Works. Additional layers were created by MassGIS and the Town Planner in 2006.



BUILDOUT AREAS REMAINING IN HANOVER

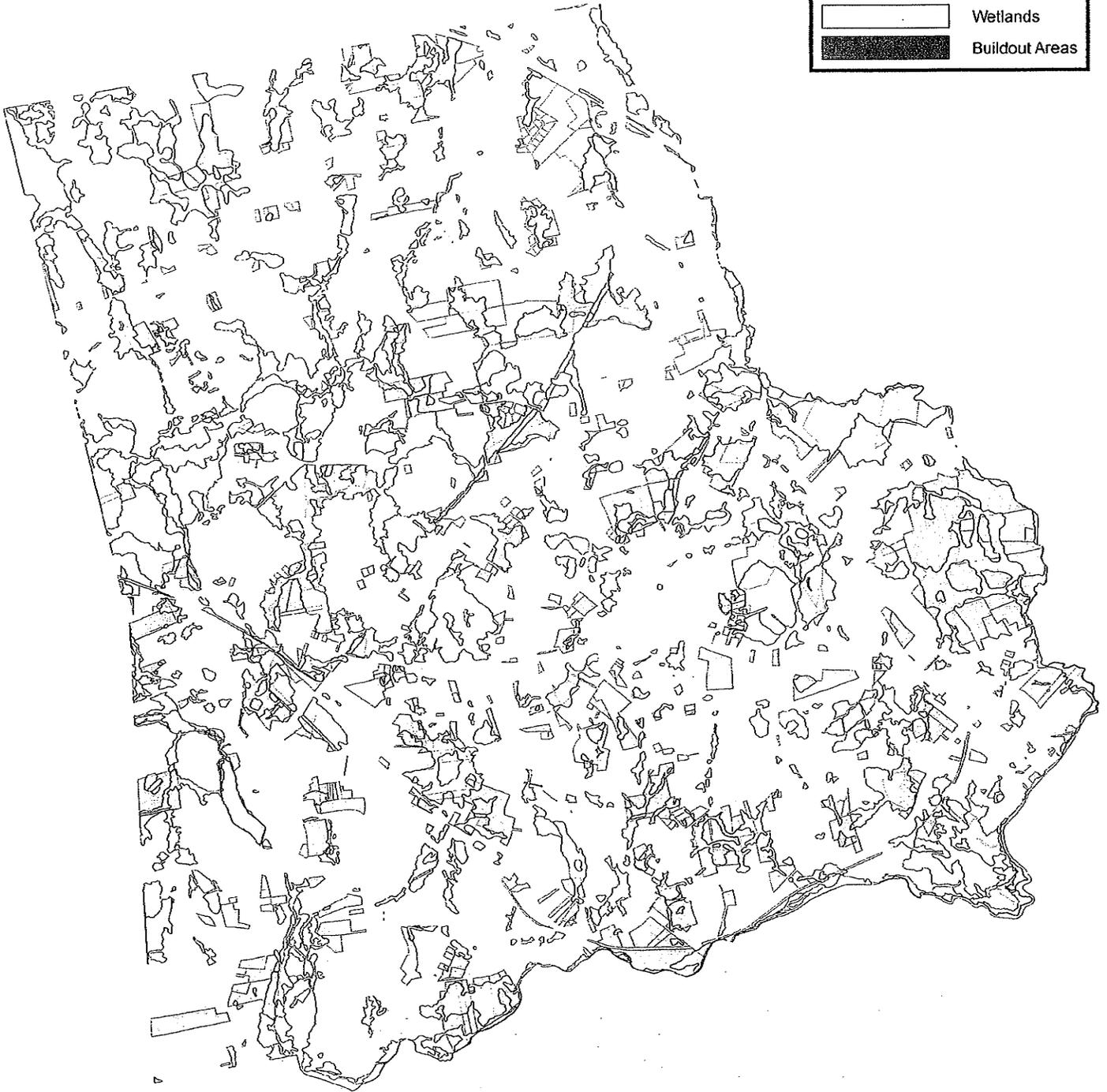
MAP LEGEND



Wetlands



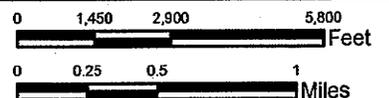
Buildout Areas



HANOVER GIS
TOWN OF HANOVER
PLANNING DEPARTMENT

NOTES & SOURCES:

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analysis. This map was created using The Town of Hanover ArcReader 9.2 GIS Viewer. For more information contact Andrew R. Port, Town Planner for the Town of Hanover, at (781) 828-7641. Photogrammetric landbase data and GIS coverages provided by Environmental Partners Group (EPG) in 2004. Initial source data provided by the Assessors Department and Department of Public Works. Additional layers were created by MassGIS and the Town Planner in 2004-2007.





Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

May 18, 2007

Mary C. McCrann
Senior Environmental Planner
Beals and Thomas, Inc.
144 Turnpike Rd
Southborough, MA 01772-2104

Re: Hanover Open Space and Recreation Plan; **02-11316**
BTI Project # 1256.01

Dear Ms McCrann:

In response to your request for information for the Open Space Plan for the town of Hanover from the Natural Heritage and Endangered Species Program, we are sending information on the rare species, ecologically significant natural communities, and other information on biodiversity that we have documented in the Town. The most important areas of Hanover to protect to maintain biodiversity are the areas around the North and Indian Head Rivers – all in BioMap Cores shown on the enclosed map.

Enclosed is a list from our database of all rare species currently known to occur or to have occurred in Hanover. The enclosed list has species protected under the Massachusetts Endangered Species Act (MESA), and other, not regulated, indicators of local biodiversity, including Watch Listed species, delisted species, and uncommon and exemplary natural communities reported from Hanover. Any species with a most recent observation date within the past 25 years is considered to be current. Fact Sheets describing some of the species and their habitats, are available on our website at <http://www.mass.gov/dfwele/dfw/nhesp/nhspecies.htm>.

Of the rare species currently known from Hanover, many are associated with the very uncommon Freshwater Tidal Marsh (note name change since 1997, with the 2001 *Classification of Natural Communities of Massachusetts*) and the Indian Head and North Rivers. These include all the plants and dragonflies on the list: the plants are pretty much habitat specialists to FW Tidal Marshes (one occurs more commonly in Calcareous Fens in western Massachusetts). The Spine-crowned Clubtail (dragonfly) is a river specialist, although the Umber Shadowdragon is a pond and slow water species. The now historic in Hanover, Eastern Pond Mussel lives in ponds and slow moving water. Found scattered throughout Hanover, Eastern Box Turtles spend most of their adult lives in Oak Pine forests, but juveniles live in wetlands and adults stay around wetlands in the hottest part of the summer. Hanover supports several populations of Eastern Box Turtles. The best are included in Priority Habitat 121, which includes the Indian Head River. In Massachusetts, the best and most viable populations of Eastern Box Turtles are in the southeastern part of the state: to adequately protect the species, habitat around current occurrences should be protected to the extent possible. The recently delisted Spotted Turtle



Natural Heritage & Endangered Species Program

North Drive, Route 135, Westborough, MA 01581 Tel: (508) 389-6360 Fax: (508) 389-7891

favors wetlands and adjacent forests, and the open sandy areas for nesting. They are often associated with Vernal Pools. Hanover has an 21 Certified Vernal Pools and more Potential Vernal Pools (identified from aerial photographs, needing verification on the ground). And areas of swamps will provide habitat for rare and common vernal pool species.

Hanover has an impressive amount of town conservation land in BioMap Core 1079, around the Freshwater Tidal Marsh along the Indian Head River. Continuing to work with surrounding towns and land trusts to protect remaining open land in that area and west and north along the river system would protect significant areas of biodiversity and maintain ecosystem functioning in the rivers and riparian areas. The BioMap core area is particularly valuable in ecological terms, and important to the conservation of a variety of species. Completing conservation protection of remaining unprotected land in that area, with buffers included, would enhance the viability of these special areas - size and continuity of open space is particularly important for supporting wildlife populations. Preventing habitat fragmentation is vital in protecting the ecosystem, for the rare species on the enclosed list, as well as for additional common species, particularly reptiles and amphibians.

Southeastern Massachusetts is the main area in Massachusetts for Atlantic White Cedar Swamps, which have limited distribution in New England and are priority natural communities for protection in Massachusetts. Hanover contains areas that are at least partially Atlantic White Cedar Swamps, according to interpretation of aerial photographs by MassGIS's excellent interpreter, but there is no evaluation of quality of the relatively small sites (shown on an enclosed map and available from MassGIS as VCPeat (vegetative communities, peat) at <http://www.mass.gov/mgis/natveg.htm> . Increasing protection around these areas will help maintain the biodiversity of the Town and state.

The habitats for these rare species and good examples of the uncommon natural communities that occur in Hanover support important biodiversity. The most important way to protect the Freshwater Tidal plant communities and their constituent species is to protect the water regime that maintains them, particularly allowing tidal influence to continue. Also important is the relatively large sizes of these wetlands. More detailed descriptions of community types from the *Classification of Natural Communities of Massachusetts* are available on our website as are fact sheets for the two types of globally uncommon Freshwater Tidal communities, under Natural Communities <http://www.mass.gov/dfwele/dfw/nhosp/nhcommun.htm> . Also enclosed are maps showing locations of Priority Natural Community occurrences and Potential Vernal Pools in Hanover.

Hanover has many probable vernal pools (Potential Vernal Pools, PVPs) identified through interpreting aerial photographs, available as a datalayer from MassGIS at <http://www.mass.gov/mgis/pvp.htm> , and twenty-one certified vernal pools, several in clusters.. Certifying the PVPs would provide more protection to these wetlands and the species that use them, particularly those in the BioMap core area. There are several clusters of PVPs/CVPs, which provide extra habitat value for the species that use them since each pool is somewhat different and provides alternate habitats in different years and seasons. A cluster that is also on likely primary forest (described below) is likely to be particularly important for biodiversity – there an example of this combination occurs in the northwestern part of Town. Lands that are primary forest with CVPs/PVPs would make particularly good acquisitions for protecting the biodiversity of the Town.

Hanover is one of the Towns with maps showing areas forested in the 1830s, areas of possible Primary Forest, untilled woodlots and wooded pastures. Such lands have greater biodiversity than areas that have been tilled. These are not Old Growth, they have been harvested and

pastured, but the ground may not have been tilled. Harvard Forest digitized maps from the 1830s that the Massachusetts legislature mandated that the Towns make. Hanover's map exists and shows areas that were forested in the 1830s. NHESP GIS staff took those data and combined them with information from MassGIS' landcover datalayer made from 1999 aerial photos. Although a great deal will have gone on in those areas in the time between the map dates, some areas that were forested in both times won't ever have been tilled. Surveys of the soil structure in the individual sites are necessary to determine whether those sites are primary forest. The importance of primary forest is that such sites retain more native biodiversity than sites that have been tilled: soil fauna and flora, microorganisms and plants that reproduce primarily vegetatively contribute to the higher biodiversity. In addition, a variety of species of wildflowers are more common in untilled forests than previously tilled lands. The areas of 1830s forest on private land would be good targets for conservation acquisition to maintain the biodiversity of the Town and region. The Harvard Forest website contains information on the 1830s forest datalayer and copies of papers with discussion of the information.

<http://harvardforest.fas.harvard.edu/data/p01/hf014/1830readme.html>

Harvard Forest. 2002. 1830 Map Project. Harvard Forest Archives, Petersham, MA.

Hall, B., G. Motzkin, D. R. Foster, M. Syfert, and J. Burk. 2002. Three hundred years of forest and land-use change in Massachusetts, USA. *Journal of Biogeography* 129: 1319-1335.

Enclosed is a small map showing the BioMap and Living Waters core areas. The report can be downloaded from the NHESP website at

<http://www.mass.gov/dfwele/dfw/nhESP/nhtwnreports.htm> . BioMap and Living Waters cores were produced by NHESP to identify the areas of most importance for biodiversity: they are based on known locations of rare species and uncommon natural communities, and incorporate the habitats needed by rare species to maintain the local populations. BioMap focused on species of uplands and wetlands; Living Waters focused on aquatic species. Large unfragmented conservation land provides the best opportunities to maintain populations of species and limit further species loss from the Town. Land protection by towns that ties in with open space in other municipalities, and other protected open space, public or private is one way to provide important large areas of biodiversity protection. BioMap and Living Waters polygons are also available from MassGIS at <http://www.mass.gov/mgis/biocore.htm> and <http://www.mass.gov/mgis/lwcore.htm> We encourage inclusion of the BioMap report and a map identifying the core areas in the Open Space Plan.

Just to differentiate the BioMap and Living Waters core areas from the following Priority and Estimated Habitats: BioMap and Living Waters core areas identify areas particularly important for conservation planning purposes. Priority and Estimated Habitats are regulatory. However they are updated regularly, and the BioMap / Living Waters report is static, so misses some of the most recently identified rare species areas.

The NHESP produces maps for use under the Wetlands Protection Act (Estimated Habitat maps, provided to the Conservation Commission and shown in reduced form in the Natural Heritage Atlas, and the Massachusetts Endangered Species Act (also in the Natural Heritage Atlas). These data layers are also available from MassGIS, requiring access to some form of GIS to view them, at <http://www.mass.gov/mgis/wethab.htm> and <http://www.mass.gov/mgis/prihab.htm>. These two sets of maps are created for regulatory use. Estimated Habitats are a complete subset of Priority Habitats that focus on habitat of rare wetlands wildlife. Priority Habitats are drawn for all rare species. Early planning and review of development projects under the Wetlands Protection Act regulations and Endangered Species

Act does play a very positive role in protecting rare species habitats. Town commissions and boards are encouraged to request the assistance of the Natural Heritage and Endangered Species Program in reviewing any project proposed in the habitat areas of the regulatory areas of the maps in the Natural Heritage Atlas.

Management and monitoring of conservation lands become important as acquisition and protection are accomplished. All wetlands particularly need to maintain their natural water regime, including normal fluctuations and connections with the uplands and other wetlands. Water quantity and quality are ongoing issues for wetlands. Another aspect of managing conservation lands that is important in many areas is controlling invasive non-native species that alter the habitat and occupy space that native species would otherwise use. We strongly recommend monitoring conservation land, and removing non-native species before they become a problem and impact native species.

Please note that this evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. Should new rare species information become available, this evaluation may need to be reconsidered.

Please do not hesitate to call me at (508) 389-6352 if you have any questions.

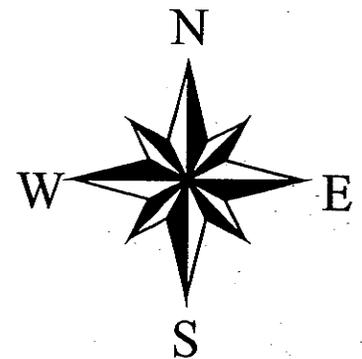
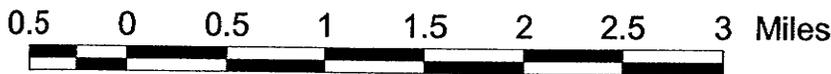
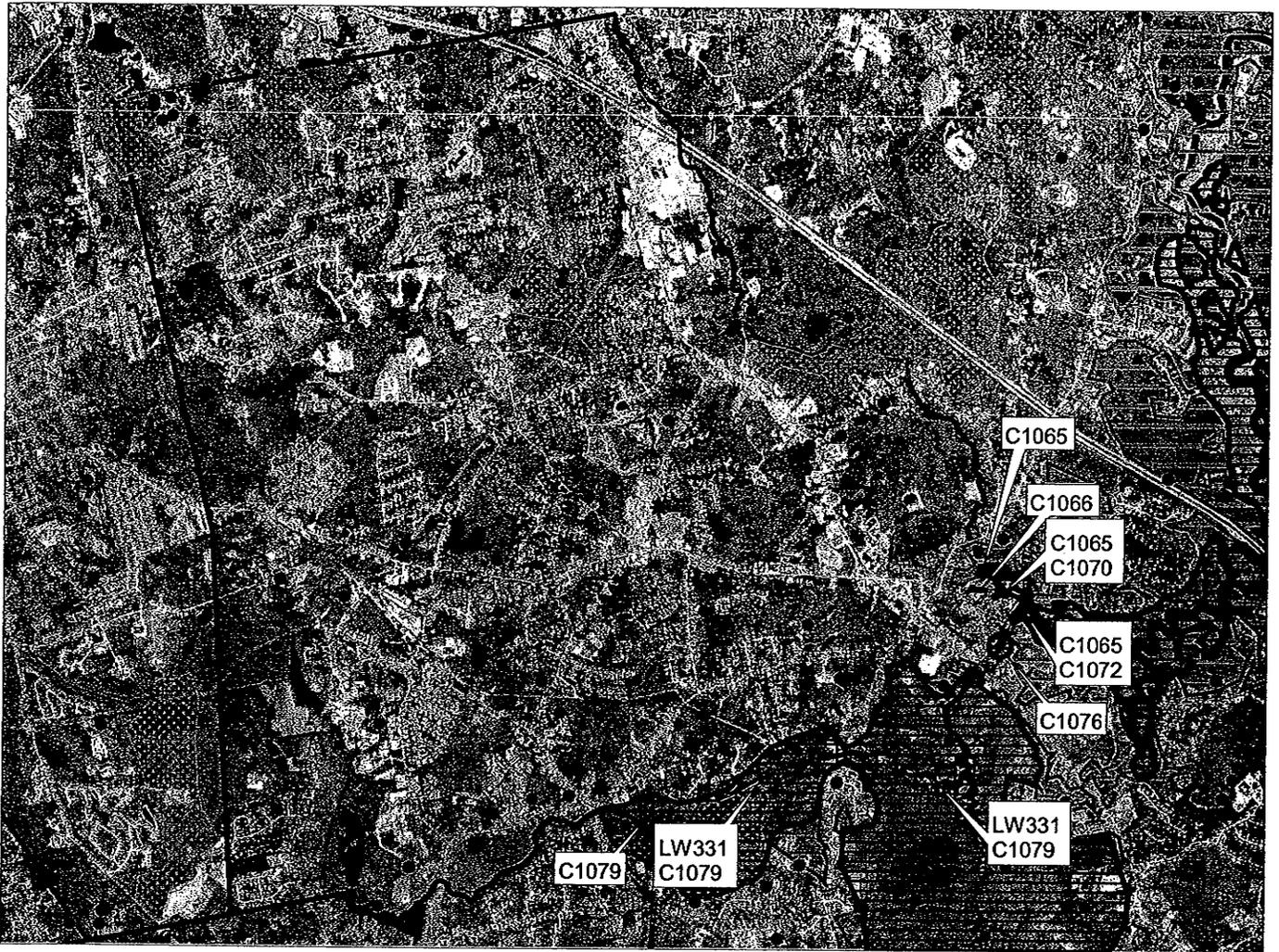
Sincerely,



Patricia C. Swain, Ph.D.
Ecologist

cc: Melissa Cryan, EOE

BioMap and Living Waters: Guiding Land Conservation for Biodiversity



- * Certified Vernal Pools Hanover May 2007
- Potential Vernal Pools, from aerial interpretation
- ▨ Forested 1830 and current
- ▤ Living Waters Core Habitat
- ▥ Riparian Areas for Living Waters Core Habitat
- ▧ BioMap Core Habitats
- ▩ BioMap Supporting Natural Landscape (SNL)
- ▭ MA Town Boundaries

Data Sources:

Living Waters Habitat and Riparian Areas: Created by NHESP 2003.

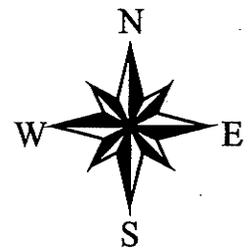
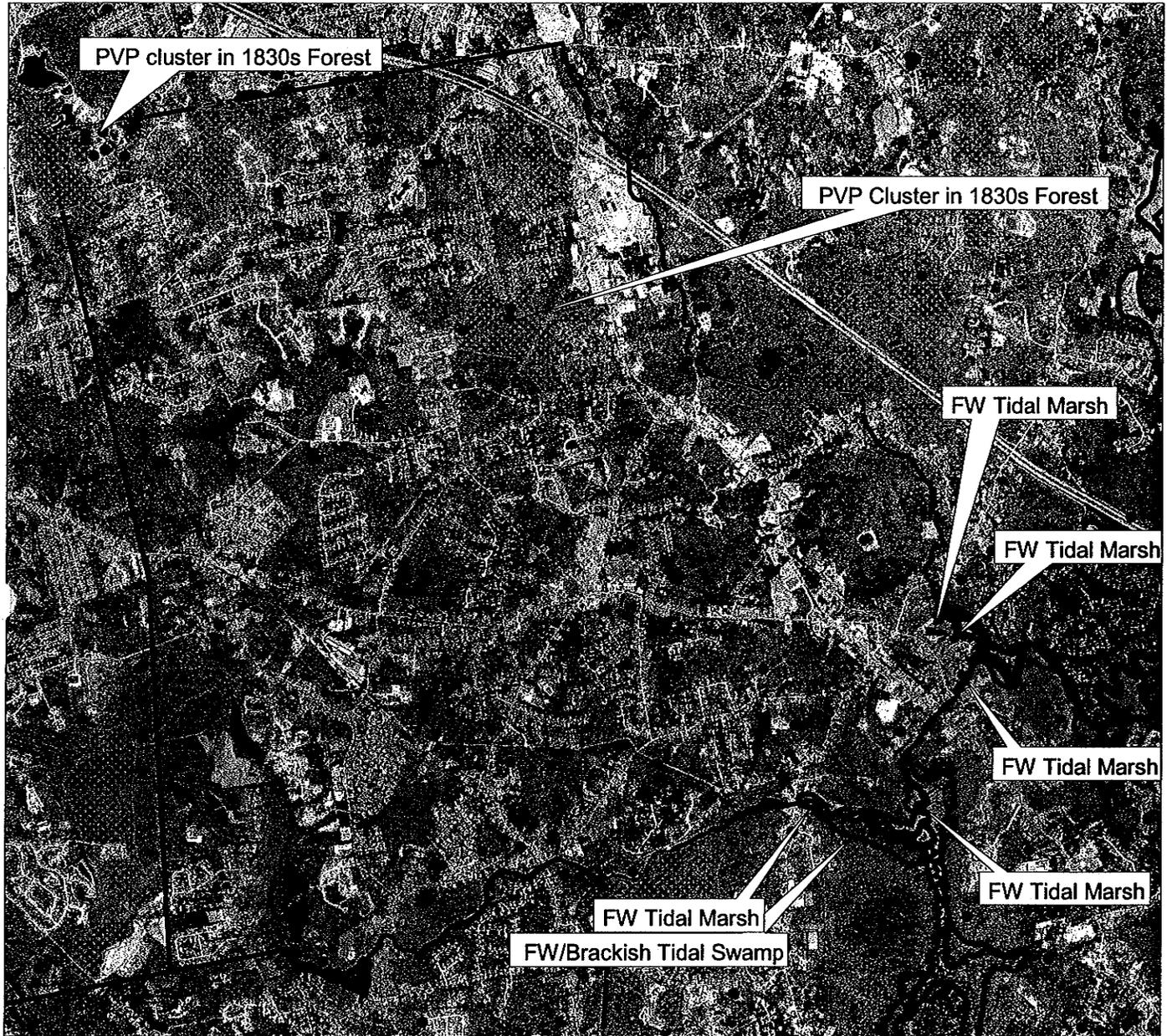
BioMap Core Habitat and SNL: Created by NHESP 2001.

MassGIS

Map printed May 17, 2007

Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries & Wildlife

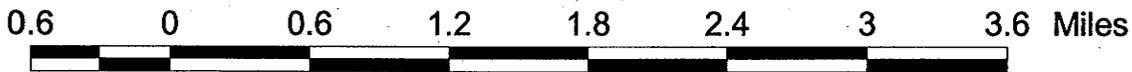
NHESP Natural Communities and Vernal Pools



- * Certified Vernal Pools Hanover May 2007
- Potential Vernal Pools, from aerial interpretation
- ▭ NHESP Natural Communities
- ▨ Forested 1830 and current
- ▭ MA Town Boundaries

Data Source: MassGIS and NHESP
May 17, 2007

Important Natural Communities from Interpretation of Aerial Photos



- Potential Vernal Pools, from aerial interpretation
- ▨ Forested 1830 and current
- ▩ MassGIS Riparian vegetative communities
- ▭ MassGIS Communities on peat
- OpenSpace by Ownership
- ▨ Federal
- ▩ DCR-State Parks & Recreation
- ▨ Department of Fish & Game
- ▩ Municipal
- ▨ Public Non-Profit
- ▩ Land Trust
- ▨ Conservation Organization
- ▭ MA Town Boundaries

Data: MassGIS
Map printed May 17, 2007



Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

Rare Species and Natural Communities Documented in the Town of Hanover AS OF May 17, 2007

<u>Scientific Name</u>	<u>Common Name</u>	<u>MESA Status</u>	<u>Most recent Year</u>
VERTEBRATES			
Clemmys guttata	Spotted Turtle	delisted	2003
Hemidactylium scutatum	Four-toed Salamander	SC	2007
Terrapene carolina	Eastern Box Turtle	SC	2006
INVERTEBRATES			
Gomphus abbreviatus	Spine-crowned Clubtail	E	2004
Ligumia nasuta	Eastern Pondmussel	SC	1953
Neurocordulia obsoleta	Umber Shadowdragon	SC	2003
VASCULAR PLANTS			
Bidens beckii	Water Marigold	WL	
Bidens hyperborea var. colpophila	Estuary Beggar-ticks	E	2003
Conioselinum chinense	Hemlock Parsley	SC	1998
Eriocaulon parkeri	Estuary Pipewort	E	1997
Sagittaria subulata	River Arrowhead	E	1928
NATURAL COMMUNITIES			
Estuarine intertidal: fresh/brackish tidal swamp	S1		1998
Estuarine intertidal: freshwater tidal marsh	S1		2001
CERTIFIED VERNAL POOLS			
Certified vernal pool (21)			2005

This list does not include data sensitive species. Watch List dates are not available.

KEY TO STATUS - DFW RANK: E = Endangered. T = Threatened. SC = Special Concern. WL = unofficial Watch List, not regulated. Natural Communities are not regulated. S (state abundance) ranks are on a 1 to 5 scale, with S1 being considered vulnerable, generally having 1 to 5 good occurrences, and S5 being demonstrably secure. Community types ranked S1, S2, and S3 are priority for conservation protection.



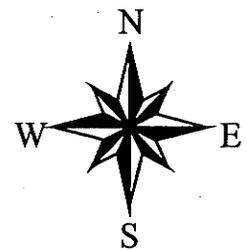
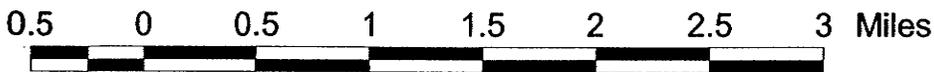
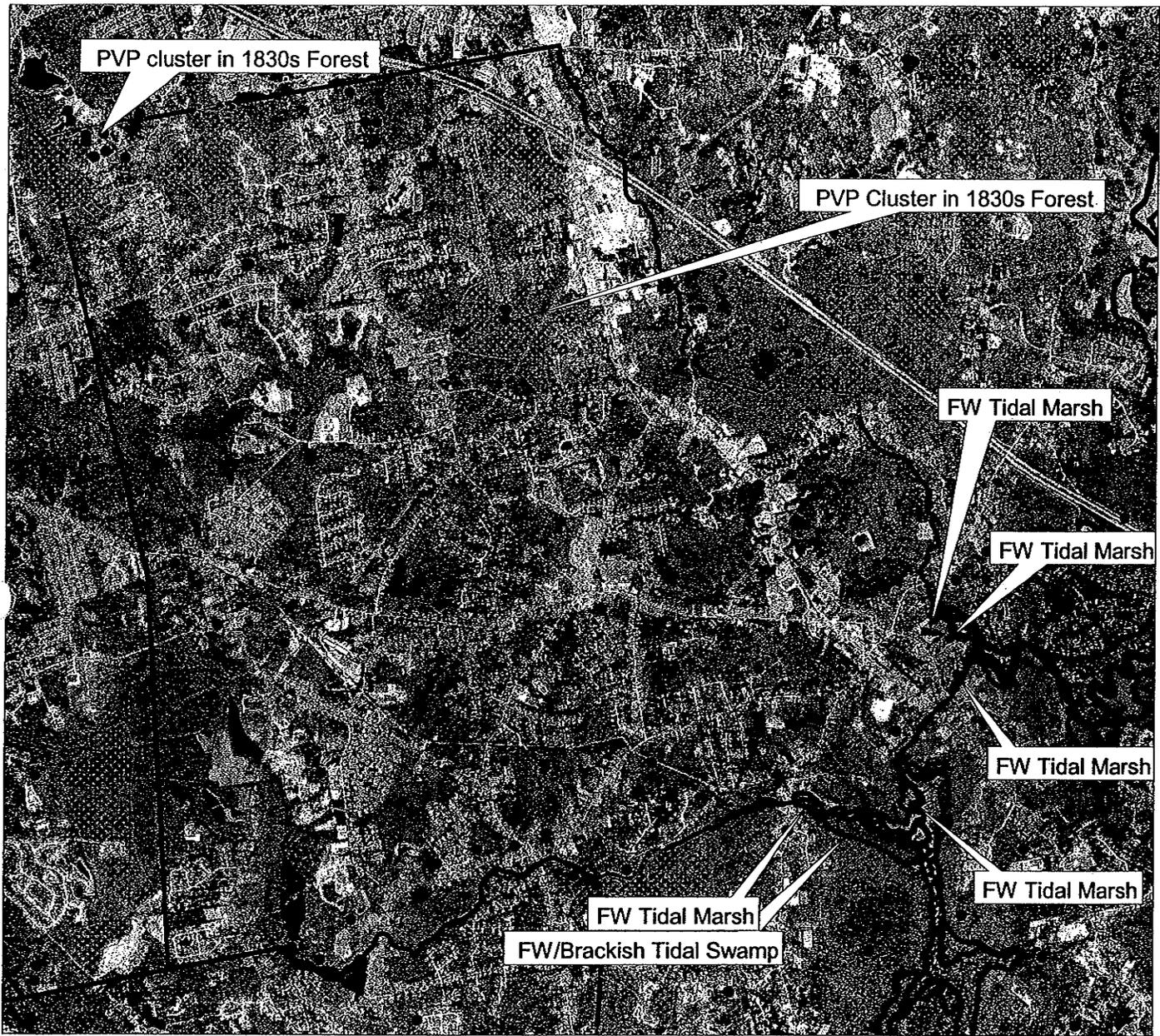
Natural Heritage & Endangered Species Program

Field Headquarters, Westborough, MA 01581 Tel: (508) 389-6360 Fax: (508) 389-7891

An Agency of the Department of Fish & Game

<http://www.nhesp.org>

NHESP Natural Communities and Vernal Pools



- * Certified Vernal Pools Hanover May 2007
- Potential Vernal Pools, from aerial interpretation
- ▭ NHESP Natural Communities
- ▨ Forested 1830 and current
- ▭ MA Town Boundaries

Data Source: MassGIS and NHESP
May 17, 2007

Important Natural Communities from Interpretation of Aerial Photos



0.6 0 0.6 1.2 1.8 2.4 3 3.6 Miles



- Potential Vernal Pools, from aerial interpretation
- ▨ Forested 1830 and current
- ▨ MassGIS Riparian vegetative communities
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Data: MassGIS
Map printed May 17, 2007



Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

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<u>Scientific Name</u>	<u>Common Name</u>	<u>MESA Status</u>	<u>Most recent Year</u>
VERTEBRATES			
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INVERTEBRATES			
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<i>Ligumia nasuta</i>	Eastern Pondmussel	SC	1953
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VASCULAR PLANTS			
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<i>Bidens hyperborea</i> var. <i>colpophila</i>	Estuary Beggar-ticks	E	2003
<i>Conioselinum chinense</i>	Hemlock Parsley	SC	1998
<i>Eriocaulon parkeri</i>	Estuary Pipewort	E	1997
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NATURAL COMMUNITIES			
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Natural Heritage & Endangered Species Program

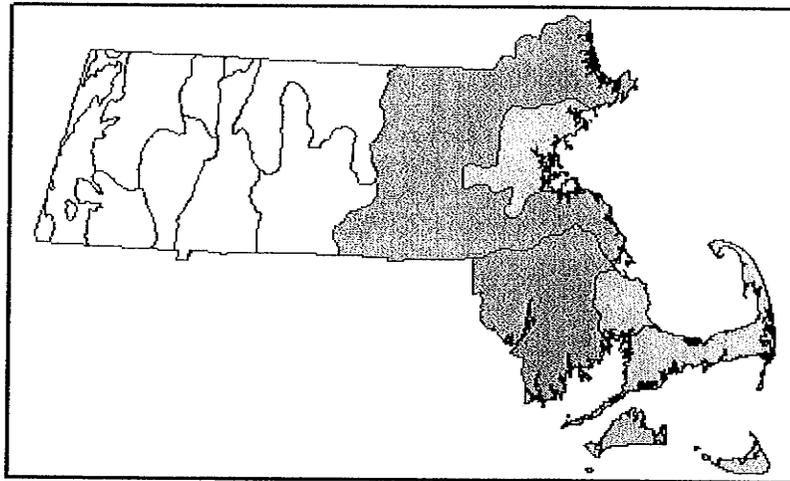
Field Headquarters, Westborough, MA 01581 Tel: (508) 389-6360 Fax: (508) 389-7891

An Agency of the Department of Fish & Game

<http://www.nhesp.org>

Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife

Community Name: ESTUARINE INTERTIDAL: FRESH / BRACKISH TIDAL SWAMP
Community CODE: CE1A000000
SRANK: S1



Concept: Low stature forested wetland located along coastal rivers, at the upper limit of tidal influence, and flooded by daily tides. Dense shrub understory and unusually rich herbaceous layer.

Environmental setting: Tidal swamps occur along free-flowing coastal rivers, occurring upstream of freshwater tidal marsh, within the upper limits of tidal influence. The community represents an ecotone from tidal marsh to more typical non-tidal forested wetlands. Another variation of this community occurs along smaller streams at the upper limit of tidal influence. Tidal amplitude may range from 0 to 40 cm or more (estimated), and average annual salinity is less than 0.5 ppt. in freshwater areas, with gradients to 5 ppt. Brackish occurrences (average annual salinity (0.5) 5 - 18 ppt.) are also believed to occur, although more study is required. The best known occurrence of the community occurs along the edge of a freshwater tidal marsh, at the transition to a large Atlantic white cedar swamp.

Vegetation Description: Swamp white oak (*Quercus bicolor*) and red maple (*Acer rubrum*) occur on elevated hummocks, and form an open forest canopy. The shrub layer is often very dense, and typically includes arrowwood (*Viburnum dentatum* var. *lucidum*), winterberry holly (*Ilex verticillata*) and silky dogwood (*Cornus amomum*). Large mucky hollows flooded by daily tides support a diverse assemblage of herbs and graminoids. Most of these are typical of the nearby freshwater tidal marsh habitat, and include jewelweed (*Impatiens capensis*), sensitive fern (*Onoclea sensibilis*) and wild rice (*Zizania aquatica*). A similar association is dominated by more dense stands of Atlantic white cedar (*Chamaecyparis thyoides*).

Associations:

Habitat Values for Associated Fauna: The size of the swamp and structure produced by the forest and shrubs present are more important to most animals that would use a tidal swamp, than are the slight fluctuations in water levels on a daily basis.

Associated rare plants:

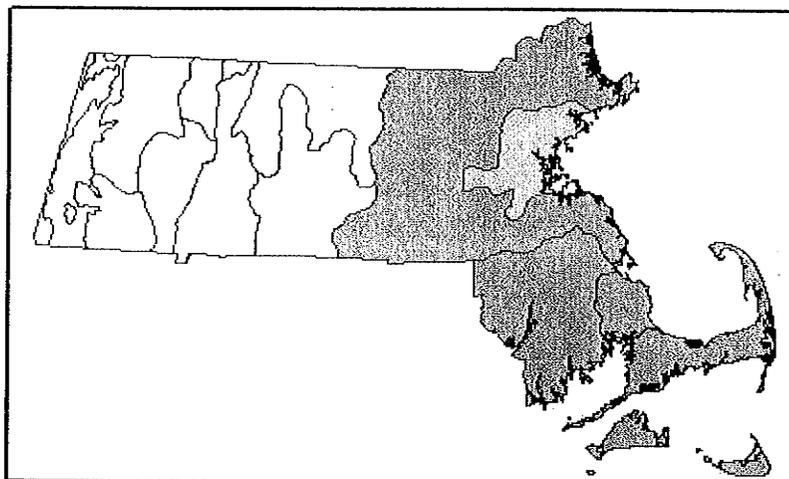
CARDAMINE LONGII	LONG'S BITTER-CRESS	E
CONIOSELINUM CHINENSE	HEMLOCK PARSLEY	SC
LYCOPUS RUBELLUS	GYPSYWORT	E

Associated rare animals:

NONE KNOWN

Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife

Community Name: ESTUARINE INTERTIDAL: FRESHWATER TIDAL MARSH
 Community CODE: CE2B400000
 SRANK: S1



Concept: Mixed herbaceous marsh flooded by daily tides, and occurring in the freshwater reach of coastal rivers.

Environmental setting: Freshwater tidal marshes occur along free-flowing coastal rivers. Tidal amplitude may range from 0 to 150 cm, and average annual salinity is less than 0.5 ppt. [from 0.5 ppt. to 5 pp. salinity, there is a gradient of species to the more clearly brackish, which has an average annual salinity of 5-18 ppt.]. This community occurs upstream of brackish tidal marsh, in the upper limits of tidal influence. The community may often be structurally diverse, including high marsh, low marsh, mud flats, rocky shore, ditches and seepages.

Vegetation Description: Dominant species include: blue joint (*Calamagrostis canadensis*), sedges (*Carex stricta*), narrow-leaved cattail (*Typha angustifolia*), wild rice (*Zizania aquatica*), smartweeds & tearthumbs (*Polygonum punctatum*, *P. arifolium*), jewelweed (*Impatiens capensis*), climbing hempweed (*Mikania scandens*) and sweet flag (*Acorus calamus*). Shrubs such as buttonbush (*Cephalanthus occidentalis*) and silky dogwood (*Cornus amomum*) may occasionally be present. Inundated False Pimpernel (*Lindernia dubia* var. *inundata*), which occurs in this community, is globally ranked by The Nature Conservancy but not listed in Massachusetts.

Associations: Caldwell & Crow (1992) describe eight cover types from a freshwater tidal area of the Merrimack River: (1) *Spartina alterniflora*; (2) *Sagittaria graminea*; (3) *Scirpus tabernaemontani*; (4) *Spartina pectinata*; (5) *Amaranthus cannabinus*; (6) *Scirpus pungens*; (7) *Acorus calamus*; (8) *Zizania aquatica*. That study area did not have a well developed high marsh area. Three of the TWINSpan types were on rocky substrate, but within the freshwater tidal influence: (4) *Spartina pectinata*; (5) *Amaranthus cannabinus*; and (6) *Scirpus pungens*.

Habitat Values for Associated Fauna: This community provides outstanding general wildlife habitat, with abundant food sources for migratory and wintering waterfowl, and is generally associated with river reaches with spawning habitat for anadromous fisheries. It tends to have more vertebrate species than do the Brackish Tidal Marshes, such as freshwater snakes and muskrats.

Associated rare plants:

BIDENS HYPERBOREA VAR COLPOPHILA	ESTUARY BEGGAR-TICKS	E
CARDAMINE LONGII	LONG'S BITTER-CRESS	E
CONIOSELINUM CHINENSE	HEMLOCK PARSLEY	SC
CRASSULA AQUATICA	PYGMYWEED	T

Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife

ERIOCAULON PARKERI	ESTUARY PIPEWORT	E
SAGITTARIA SUBULATA VAR SUBULATA	RIVER ARROWHEAD	E
SCIRPUS FLUVIATILIS	RIVER BULRUSH	SC

Associated rare animals:

CININNATIA WINKLEYI	NEW ENGLAND SILTSNAIL	SC
LITTORIDINOPS TENUIPES	COASTAL MARSH SNAIL	SC

Examples with Public Access: Best examples are along the North River, and the Merrimack River. Smaller examples on the South, Palmer, Mashpee, Agawam and Parker Rivers.

Threats: Invasive plants purple loosestrife (*Lythrum salicaria*) and yellow flag (*Iris pseudacorus*) are established in some systems, although long-term threat is unknown. Alteration of river hydrology from excessive water withdrawal may have significant effect on plant communities. Development associated with recreational activity (*docks, landings*) may threaten rare plants in tidal shore habitat. In the past dams were often placed in rivers below the upper reaches of the tidal influence and so reduced the areas with tidal influence.

Management needs: Monitor invasive plant populations. Determine hydrologic requirements, and develop system for monitoring hydrologic stress. Prevent alteration of tidal shores.

Synonyms

USNVC/TNC: Includes: Eriocaulon parkeri Tidal Herbaceous Alliance -- Eriocaulon parkeri - Polygonum punctatum Herbaceous Vegetation [CEGL006352]; Nuphar lutea Tidal Herbaceous Alliance -- Nuphar lutea ssp. advena Tidal Herbaceous Vegetation [CEGL004472]; Peltandra virginica - Pontederia cordata Tidal Herbaceous Alliance -- Mixed Forbs (High Marsh) Tidal Herbaceous Vegetation [Provisional] [CEGL006325]; Zizania aquatica Tidal Herbaceous Alliance -- Zizania aquatica Tidal Herbaceous Vegetation [CEGL004202]; Amaranthus cannabinus Tidal Herbaceous Alliance -- Amaranthus cannabinus Herbaceous Vegetation [CEGL006080].

MA (old name): FW Tidal Marsh [formerly Southern New England FW Tidal]

ME: Freshwater Tidal Marsh

NH:

NY: Includes: part of Brackish intertidal mudflats; part of Freshwater Intertidal Mudflats; Freshwater tidal marsh; Freshwater intertidal shore; Freshwater Tidal Marsh; understory of Freshwater tidal swamp.

CT: Includes: Eriocaulon parkeri - Polygonum punctatum Community; Peltandra virginica - Cyperus strigosus; Pontederia cordata low forb vegetation; Eupatorium - Ludwigia palustris community; Hypericum mutilum - Gratiola aurea community; Zizania aquatica - Pontederia cordata community; Acorus calamus tall grasslands; Typha latifolia tall grasslands (semipermanently flooded); Peltandra virginica - Scirpus fluviatilis - Typha Community; Onoclea sensibilis - Scirpus fluviatilis - Typha spp. Community; Carex lacustris - Calamagrostis canadensis - Elymus canadensis community.

RI: Part of: Brackish intertidal mud flat [not in RI as such, no Eriocaulon parkeri]; Freshwater tidal marsh.

Other:

Author: B. Reid; P. Swain 1/25/2000

Date: 6/18/99

Reportable Release Lookup

The search returned 62 results. Search Keywords >> Town: "HANOVER" | Sorted by: "Town, Address, RTN" | Data last updated: 06/05/2007

RTN	City/Town	Release Address	Site Name/Location Aid	Reporting Category	Notification Date	Compliance Status	Date	Phase
<u>4-0014223</u>	HANOVER	1465 BROADWAY	NO LOCATION AID	TWO HR	10/2/1998	RAO	12/12/2001	PHASE II
<u>4-0011333</u>	HANOVER	CEDAR ST	HANOVER HIGH SCHOOL	72 HR	4/24/1995	RAO	8/11/1995	
<u>4-0010457</u>	HANOVER	CIRCUIT ST	EAST SIDE OF CIRCUIT ST	120 DY	5/15/1994	RAO	7/16/1997	PHASE IV
<u>4-0013425</u>	HANOVER	342 CIRCUIT ST	HALLIDAY GRAPHICS FMR	120 DY	10/6/1997	RAO	2/9/1998	
<u>4-0014127</u>	HANOVER	342 CIRCUIT ST	NO LOCATION AID	120 DY	9/4/1998	RAO	9/7/2004	PHASE IV
<u>4-0016984</u>	HANOVER	342-348 CIRCUIT ST	WAREHOUSE	72 HR	4/4/2002	RAO	6/13/2002	
<u>4-0013293</u>	HANOVER	218 COLUMBIA	SUNOCO SERVICE STATION	120 DY	8/11/1997	RTN CLOSED	4/23/1998	
<u>4-0000093</u>	HANOVER	309 COLUMBIA RD	NORTH RIVER ARCO STATION	NONE	5/22/1986	RAO	4/1/1995	
<u>4-0000965</u>	HANOVER	218 COLUMBIA RD RTE 53	CAPEWAY SUNOCO STATION	NONE	6/20/1991	REMOPS	11/22/2005	PHASE V
<u>4-0016251</u>	HANOVER	228 COLUMBIA RD RTE 53	PARKING AREA BEHIND ROCKLAND TRUST CO	TWO HR	5/15/2001	RAO	7/11/2001	
<u>4-0016817</u>	HANOVER	26 DAVIS ST	NO LOCATION AID	TWO HR	1/7/2002	RAO	3/3/2006	PHASE IV
<u>4-0017322</u>	HANOVER	26 DAVIS ST	NO LOCATION AID	72 HR	9/12/2002	RTN CLOSED	3/14/2003	
<u>4-0010882</u>	HANOVER	123 FAIR ACRES DR	NO LOCATION AID	72 HR	10/25/1994	RAO	6/23/1995	
<u>4-0000090</u>	HANOVER	FRG POND INDUSTRIAL PARK	FIRWORKS I	NONE	1/15/1987	TIER 1A	10/20/1997	PHASE III
<u>4-0001225</u>	HANOVER	1222 HANOVER ST	SKIPS AUTO SERVICE	NONE	7/15/1993	RAO	3/12/1999	PHASE II
<u>4-0010032</u>	HANOVER	592 HANOVER ST RTE 139	NO LOCATION AID	72 HR	10/18/1993	RAO	2/28/2006	PHASE III
<u>4-0017379</u>	HANOVER	INTERSECTION OF RTE 53 AND 123	NO LOCATION AID	120 DY	9/25/2002	URAM	9/25/2002	
<u>4-0010194</u>	HANOVER	50 KAREN RD	NO LOCATION AID	TWO HR	1/11/1994	RAO	3/11/1994	
<u>4-0015783</u>	HANOVER	KING ST	FIREWORKS FMR	TWO HR	9/27/2000	RTN CLOSED	11/28/2000	
<u>4-0001130</u>	HANOVER	149 KING ST	CRI TECH INC	NONE	7/15/1993	LSPNFA	8/5/1997	
<u>4-0000562</u>	HANOVER	176 KING ST	SRC MEDICAL INC	NONE	10/15/1988	LSPNFA	8/8/1995	
<u>4-0010388</u>	HANOVER	313 KING ST	NORTH/WEST SIDE OF HOME	TWO HR	3/23/1994	STMRET	1/29/2004	
<u>4-0014268</u>	HANOVER	1 ML POND DR	NO LOCATION AID	72 HR	10/20/1998	RAO	2/12/1999	
<u>4-0018612</u>	HANOVER	PLEASANT AND WEST ST	NO LOCATION AID	TWO HR	8/17/2004	RAO	11/12/2004	

4-0013759	HANOVER	ROCKLAND ST	POLE #29	TWO HR	3/28/1998	RAO	5/20/1998	
4-0020171	HANOVER	RT-53	HANOVER MALL	TWO HR	11/20/2006	RAO	1/18/2007	
4-0010100	HANOVER	RTE 3 SOUTH @ RTE 53 EXIT	EXIT RAMP	TWO HR	11/21/1993	RAO	11/22/1994	
4-0016993	HANOVER	RTE 53	RTE 3	TWO HR	4/9/2002	RAO	11/25/2002	
4-0018660	HANOVER	RTE 53	NORTH END BLDG - FRM AMES	72 HR	9/3/2004	RAO	8/4/2005	
4-0012597	HANOVER	SALT WIND DR	POLE #3	TWO HR	10/25/1996	RAO	12/18/1996	
4-0018503	HANOVER	SHARON DR	POLE 4	TWO HR	6/24/2004	RAO	8/19/2004	
4-0010086	HANOVER	187 STONEGATE LN	NO LOCATION AID	TWO HR	11/17/1993	RAO	10/24/1994	
4-0015716	HANOVER	WASHINGTON ST	RTE 53	72 HR	8/31/2000	RAO	11/3/2000	
4-0015791	HANOVER	WASHINGTON ST	POLE 67A2	TWO HR	10/3/2000	RAO	12/1/2000	
4-0006006	HANOVER	376 WASHINGTON ST	ST COLETTAS SCHOOL	NONE	12/29/1993	RAO	3/26/2001	PHASE II
4-0010490	HANOVER	579 WASHINGTON ST	SOUTH SHORE JEEP AND EAGLE	TWO HR	5/17/1994	RAO	7/14/1994	
4-0000931	HANOVER	778 WASHINGTON ST	HANOVER PRINTING CO	NONE	6/15/1990	DEPNFA	9/20/1996	
4-0000722	HANOVER	849 WASHINGTON ST	PRESTIGE DODGE	NONE	10/15/1989	RAO	2/27/1998	
4-0013569	HANOVER	849 WASHINGTON ST	PRESTIGE DODGE	72 HR	12/18/1997	RAO	2/27/1998	PHASE II
4-0013168	HANOVER	922 WASHINGTON ST	DB LOCATION NUMBER 14	120 DY	7/7/1997	REMOPS	3/3/2005	
4-0001341	HANOVER	962 WASHINGTON ST	MARTINIZING DRY CLEANERS	NONE	10/1/1993	RAO	10/30/2003	
4-0010197	HANOVER	1307 WASHINGTON ST	MILL ST @ RTE 53	TWO HR	1/12/1994	RAO	9/29/1995	
4-0001012	HANOVER	1363 WASHINGTON ST	NE WILLIAMS MUNICIPAL GARAGE	TWO HR	10/15/1992	RAO	5/10/1996	
4-0014541	HANOVER	1376 WASHINGTON ST	MILL ST&WASHINGTON ST	120 DY	2/9/1999	RAO	2/9/1999	
4-0001007	HANOVER	1451 WASHINGTON ST	MOBIL STATION 01 E3E	NONE	1/15/1992	REMOPS	12/28/2006	PHASE V
4-0012584	HANOVER	1451 WASHINGTON ST	MOBIL	72 HR	10/21/1996	REMOPS	12/4/2000	PHASE V
4-0019075	HANOVER	1451 WASHINGTON ST	MOBIL GAS STA NO 10838	120 DY	5/5/2005	RAO	5/5/2006	
4-0015367	HANOVER	1485 WASHINGTON ST	NO LOCATION AID	120 DY	3/17/2000	RAO	2/26/2001	
4-0010396	HANOVER	1775 WASHINGTON ST	SEARS AUTO	72 HR	4/7/1994	RAO	10/17/1994	
4-0011273	HANOVER	1775 WASHINGTON ST	SEARS AUTO - HANOVER MALL	120 DY	4/6/1995	RAO	4/12/1996	
4-0000803	HANOVER	1808 WASHINGTON ST	DANNYS TEXACO STATION	NONE	1/15/1990	RAO	11/12/1996	PHASE III
4-0017188	HANOVER	1808 WASHINGTON ST	TEXACO SERVICE STATION	120 DY	6/28/2002	RAO	6/19/2003	
4-0010487	HANOVER	2117 WASHINGTON ST	ROUTE 53 & ROUTE123	120 DY	5/11/1994	RAO	6/26/1996	PHASE II
4-0010432	HANOVER	2122 WASHINGTON ST	RT 53, WASHINGTON ST/WEBSTER ST	72 HR	4/22/1994	RAO	5/9/2001	PHASE III
4-0017303	HANOVER	2122 WASHINGTON ST	NO LOCATION AID	120 DY	8/19/2002	RAO	12/18/2002	
4-0014790	HANOVER	WEBSTER ST	POLE 195	TWO HR	6/12/1999	RAO	8/13/1999	
4-0010616	HANOVER	145 WEBSTER ST	FRM BOSTON WHALER FACILITY	120 DY	7/20/1994	RAO	6/27/1995	
4-0010606	HANOVER	580 WEBSTER ST	BAPTIST CHURCH	72 HR	7/15/1994	RAO	7/14/1995	

4-0000091	HANOVER	WEST SIDE OF KING ST	FIREWORKS 2 SEVIGNY CANDY	NONE	1/15/1987	PENNFA	12/8/1996
4-0000240	HANOVER	WHITING ST	MANN BROOK SWAMP	NONE	4/15/1987	LSPNFA	7/28/1995
4-0010785	HANOVER	183 WHITINGS ST	ANDERSON PROPERTY	72 HR	9/21/1994	RAO	12/19/1994
4-0000426	HANOVER	219 WINTER ST	PETERSON & NASH INC	NONE	1/15/1988	RAO	8/7/1996

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The Hanover Greenway Project

Initial Plan of the Hanover Open Space Committee

Doug Thomson
Pat Beers
Chris Keegan
Deborah McKie
Bruce Ryerson
Hal Thomas

April 1999

1 Goal

This project is undertaken to establish a continuous walking trail which maximizes recreation potential, public access and linkage of existing town land.

2 Overview

Would you enjoy a safe bikepath route along the old railroad bed from Pembroke to Rockland with a stop for a picnic lunch along the water in Luddam's Ford park? Can you picture relaxing with a leisurely walk from the High School to Ellis field along a secluded woodlands trail? Would you appreciate a continuous path that extended more than ten miles, winding through the most beautiful open space in town. While this might seem unattainable, it is actually already in the works.

The central charm of Hanover has always come from its fairly rural character. However, this comfortable style, coupled with ease of access to Boston, has been the major attraction that led to heavy development. As Hanover residents are showing renewed commitment to the preservation of the town's image, the Open Space Committee is leading efforts to protect new property and improve recreational access to existing conservation land. With the support of the residents, far more through volunteerism than dollars, the Hanover Greenway project can be a reality.

We are quite fortunate to be the beneficiaries of strong land preservation efforts by numerous townspeople in the 1960s and 1970s. Through purchases and some generous donations, the town amassed more than 900 acres of land that is permanently protected as conservation property. The town also has many large parcels that are owned by the School Department, Water Department and Parks and Recreation Department. This land totals more than 700 acres. With an additional 140 acres of property held by the private land trusts of the South Shore Natural Science Center and the Wildlands Trust, a total of 1760 acres of land is available for public recreation.

However, most of these properties stand alone, unlinked, their potential not fully realized. The Hanover Greenway Project can transform these isolated oases into a network of nature trails. When completed, the greenway will be a showpiece that preserves our rural character and joins our community.

The Hanover Greenway Project seeks to link numerous town, state and privately owned properties throughout Hanover to create a long, continuous walking trail. While the town has experienced significant development, strong potential for such a trail still exists. This plan sets forth a prioritized task list including studies, acquisitions, conservation restrictions, trail improvement, trail cutting and bridge building which can ultimately lead

to a Hanover Greenway. Where possible, the plan seeks to link existing town land and to maximize the natural setting of the trail. In limited areas, where other options are not available, the trail may run briefly along low traffic public roads. In all cases, it will be the active involvement of individuals and civic organizations that will be necessary to create our greenway.

The plan is presented in three phases to permit attainable goal setting and valuable interim progress milestones. Various spur linkages will also be pursued as part of this work. The main phases include:

- Phase I: Linking the Hanover High School to Ellis Field
- Phase II: Linking Ellis Field to Winter Street through Factory Pond
- Phase III: Complete Linkage from Hanover High School to Luddam's Ford

The complete proposed greenway is shown in Figure 1 and Figure 2.

3 Overall Planning Approach

The Greenway phases will generally be pursued sequentially, as discussed. However, it should be recognized that the status of properties important to later phases should be tracked to ensure that opportunities for their acquisition are not missed. It should further be noted that this initial plan makes many assumptions, which should be viewed as preliminary as discussed in more detail in Section 5.

Several general efforts are required to realize this plan, maximize community involvement and minimize adverse impacts and cost. Specific action items will include the following:

- Property and trail mapping – Building on the new open space map developed by the Conservation Commission, all existing and new trails and properties should be incorporated to assist public access.
- Trail Guides – Beyond the maps, written trail guides which discuss access, trail lengths, points of interest and local history should be created. Local naturalists and civic organizations should be involved to provide the most informative and interesting guides.
- Access Improvement – The properties making up the Greenway should be studied to assess and improve access. Most importantly, a strong effort is required to ensure safe parking and handicapped access.
- Public participation/outreach - A plan should be developed which includes identification of civic organizations that can assist and action items which will require coordination of multiple groups and/or departments. This plan should include promotion and publicizing of Greenway benefits so as to increase community participation in its construction.
- Grant opportunities – Funding opportunities should be researched for any and all action items. Opportunities other than acquisition, such as easements and conservation restrictions, must also be considered.

This plan is intended as a working document which will evolve as tasks are completed and additional information becomes available.



Figure 1: Hanover Greenway Project



Figure 2: Hanover Greenway Project (cont.)

4 Greenway Phases

4.1 Phase I: Linking the Hanover High School to Ellis Field

The first phase of the greenway project is to provide a continuous walking trail from Hanover High School to Ellis Field. This trail is outlined in Figure 3, with the main trail shown in the bold line and feeder trails shown in dashed lines. The total length of this proposed trail will be approximately 2.5 miles.

The trail will begin at the high school, where abundant parking is available. Numerous trails are already in place throughout this large property which includes the Hanover High School, Cedar Elementary School, Hanover Middle School and the Wildlands Trust's Melzer Hatch Reservation. Further, potential exists to work with the Wildlands Trust to extend this trail through the reservation and out to the new Gilman Farm development. This could potentially yield a connection to the large Hell Swamp property. It is recommended that the Open Space committee solicit mapping of these trails by a civic organization in town.

The main trail will run from the high school along the existing cross country trails to the middle school. Continuing down the driveway of the middle school, the route will cross Whiting Street and proceed either into the newly acquired Colby conservation property located between #30 and #88 Whiting Street or along the conservation land access to the south of #30 Whiting St. An existing trail will be improved running roughly along the Drinkwater River and then turning to join the main trail of the large Colby-Phillips conservation land. Most of this beautiful trail already exists but is used minimally, if at all.

The Colby-Phillips parcel is abutted to the east by the large Melody Woods property owned by the South Shore Natural Science Center. It is important to coordinate the trail networks in the two properties for mutual benefit. Further, as the Science Center is a prominent local environmental organization, their input will be solicited on the proper location of new trails to minimize impact and maximize recreation and education potential.

An important feeder trail could join this new trail. Three lots on Schoolhouse Lane are currently listed as unbuildable. These lots all abut the Colby-Phillips conservation property. A trail through any part of these lots would connect the Anderson Farm development to the Hanover Greenway Project.

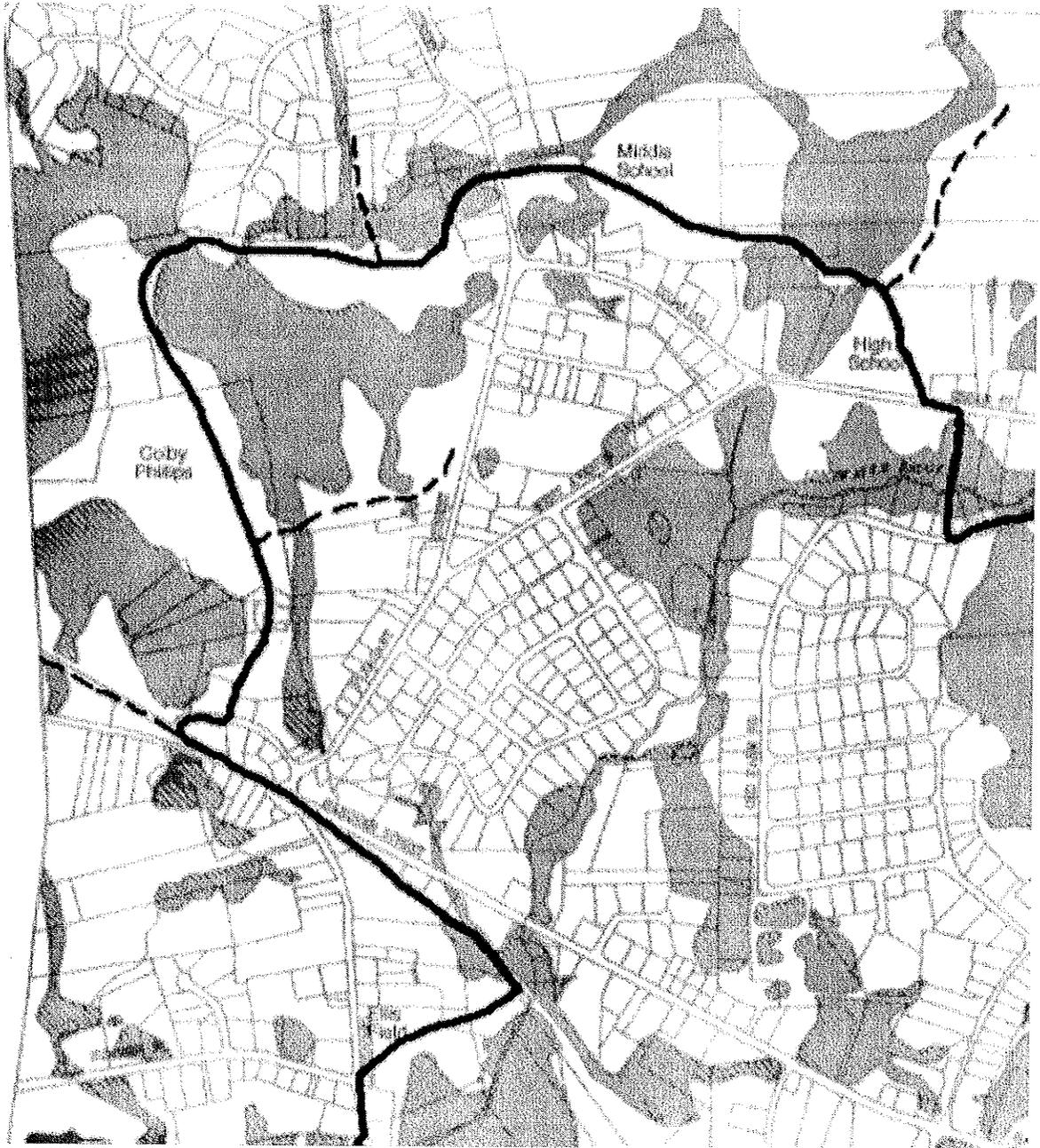


Figure 3: Phase I: Hanover High School to Ellis Field

The key impediment to a continuous trail in this area is Cushing Brook. From early summer through the fall in most years, the stream can be crossed on stepping stones by agile walkers. However, this crossing is difficult in higher water and wholly inadequate for full public access. The largest project of this phase will be the design and construction of a footbridge across this stream. A study should soon be undertaken to evaluate the bridge size and location and to determine the steps necessary to receive approval from the Conservation Commission and other required town boards.

After crossing Cushing Brook, the main trail of the Colby-Phillips conservation property is a high quality cart path extending out to the dead end section of Circuit Street, ending as a dirt driveway between #959 and #969. Turning right on Circuit Street, a short walk is required to reach the cul-de-sac. At this point, the trail will continue east along the right-of-way (ROW) for the former Hanover Branch Railroad. This ROW has high potential for eventual conversion to a bikepath into Rockland and partially into Hanover.

The ROW soon crosses the intersection of Route 139 and Circuit Street and proceeds into the industrial park on Mayflower Drive off of Circuit Street. Prior to this industrial park, the tracks cross a bridge over the Drinkwater River which opens into a small down stream pond. About fifty feet before this bridge, a path leaves the tracks to the right, passing through property recently purchased by Graphic Developments, Inc. from Clyco Realty Corporation. This path leads into the rear of the Ellis Field property providing public access and parking at this end of the Phase I trail.

Action Items:

1. Create a map of the existing trails on the schools and Melzer Hatch properties.
2. Plan and re-establish the trail into the Colby-Phillips property across from the middle school.
3. Plan, design and construct a foot bridge over Cushing Brook to join the newly re-established trail to the main trail of the Colby-Phillips property.
4. Work with the South Shore Natural Science Center to join trails on their property abutting Colby-Phillips.
5. Work with the owners of the unbuildable lots on Schoolhouse Lane to establish a feeder trail either through land acquisition or conservation restriction.
6. Acquire the former Hanover Branch Railroad right-of-way from the Rockland line to Mayflower Drive from the Massachusetts Bay Transportation Authority.
7. Clean up the right-of-way and facilitate access from the dead end section of Circuit Street.
8. Acquire or obtain a conservation restriction or easement on all or part of the intervening property between the railroad and the rear of Ellis Field from Graphic Developments, Inc.
9. Provide Greenway markers along the complete trail.

10. Provide maps of the complete trail at the Town Hall, Curtis Library and on the Hanovermass.com website.

4.2 Phase II: Linking Ellis Field to Winter Street through Factory Pond

The Summer Street conservation property is a 102 acre parcel bordered by Summer and Circuit Streets and the Rockland town line. It encompasses significant wetlands including the Drinkwater River from Circuit Street to Forge Pond, French's Stream from Summer Street to the Drinkwater River, the northern portion of Forge Pond and a substantial amount of swamp. The Phase I trail, which ends at Ellis field, could be continued into this property by crossing Circuit Street and entering the land on either side of #676 Circuit Street or, less desirably, by proceeding along Summer Street and entering nearer the Rockland town line. The potential Phase II trail is shown in Figure 4. It will extend the Phase I trail to result in a continuous greenway approximately 4.3 miles long with an additional mile of trails in the Factory Pond property.

Given the amount of wetlands in this property, a fairly comprehensive walking survey is required to identify the most desirable trail locations. It is most likely that the trail will pass to the right of #676 Circuit Street, following the best land. At some point, a footbridge over French's stream will be required to reach the back portion of the land. Elevated walkways may also be necessary to traverse swampland in some areas. Ideally, the trail will track at or near the southwestern bank of Forge Pond.

The location of a continuous trail depends largely on the long term status of the Cervelli farm property on King Street. This property is, without exception, the premium piece of large open space remaining in the town of Hanover. Located on the west side of King Street, it encompasses most of the southern shore of Forge Pond. Approximately half of this nearly 70 acre property is high quality open farmland which would provide ample active recreation space. The back area is ideal for walking trails and would provide the connection between several large conservation properties creating nearly 300 acres of contiguous, town-owned open space.

If the Cervelli property is obtained by the town, it would, among many other passive and active recreation uses, permit the trail to continue along the southern bank of Forge Pond and reach King Street along the existing town owned access to the Clark property. Town ownership of the Cervelli property would permit a park along the pond, ample sports fields, and use of the many cart paths which traverse the rear of the property and extend into open space in Rockland. A feeder trail may also be possible through conservation land out to Clark Circle. Public parking would obviously be made available at such a site. If the town is unable to obtain the entire Cervelli property, it would still be possible to purchase a section of the back land to permit a trail connecting the Summer Street and Clark properties.

Crossing King Street, the Greenway trail would enter the Conservation Commission owned 130 acre Factory Pond property. Significant trails exist on both sides of the Drinkwater River and Factory Pond from King Street to the Hanson town line. It is expected that trail clearing work and marking will be required to facilitate public use of this area. Some small footbridges are also likely to be necessary. A study of this property will be required to determine the actual scope of the project.

Potential access points to the Factory Pond property include the tax title parcels at the end of Industrial Way and the Department of Public Works garage on Ames Way. It is highly desirable to establish a path around the DPW garage as parking would be available on Ames way and public access would be facilitated for residents on Winter Street and in the large development commonly known as Indian Head or the Airport.

Action Items:

1. Survey the Summer Street conservation property and identify the most desirable trail locations.
2. Plan, design and construct a footbridge over French's stream and elevated walkways as required through the Summer Street site.
3. Actively pursue acquisition of the Cervelli farm land property. Alternately, pursue acquisition of a walking trail connecting the Summer Street and Clark conservation properties through the back land of the Cervelli property.
4. Study the Factory Pond property to map trail locations, prioritize improvements and identify necessary stream crossings.
5. Re-establish the continuous walking trails through the Factory Pond property.
6. Establish a walking trail access beside the Ames Way DPW garage.
7. Evaluate access potential through the tax title properties at the end of Industrial Way.
8. Provide Greenway markers along the complete trail.
9. Provide maps of the complete trail at the Town Hall, Curtis Library and on the Hanovermass.com website.

4.3 Phase III: Complete Linkage from Hanover High School to Luddam's Ford

The Phase III trail will primarily consist of linking the existing greenway through to the Myrtle Street Field property and along the ROW of the former Hanover Branch Railroad to Luddam's Ford. This potential trail is shown in Figure 5. While this plan cites the end point of the Greenway at Luddam's Ford, it may be possible to continue along the railroad bed to Broad Oak Way. As a part of this phase, the project will also work to establish a short trail across from the high school through to Old Farm Rd. This would extend the greenway through to Bailey Rd. and in to the Plain Street conservation property via Aspen Drive. When complete, the continuous Greenway could extend more than ten miles from Plain Street to the intersection of Broadway and Columbia Ave. (Route 139/53).

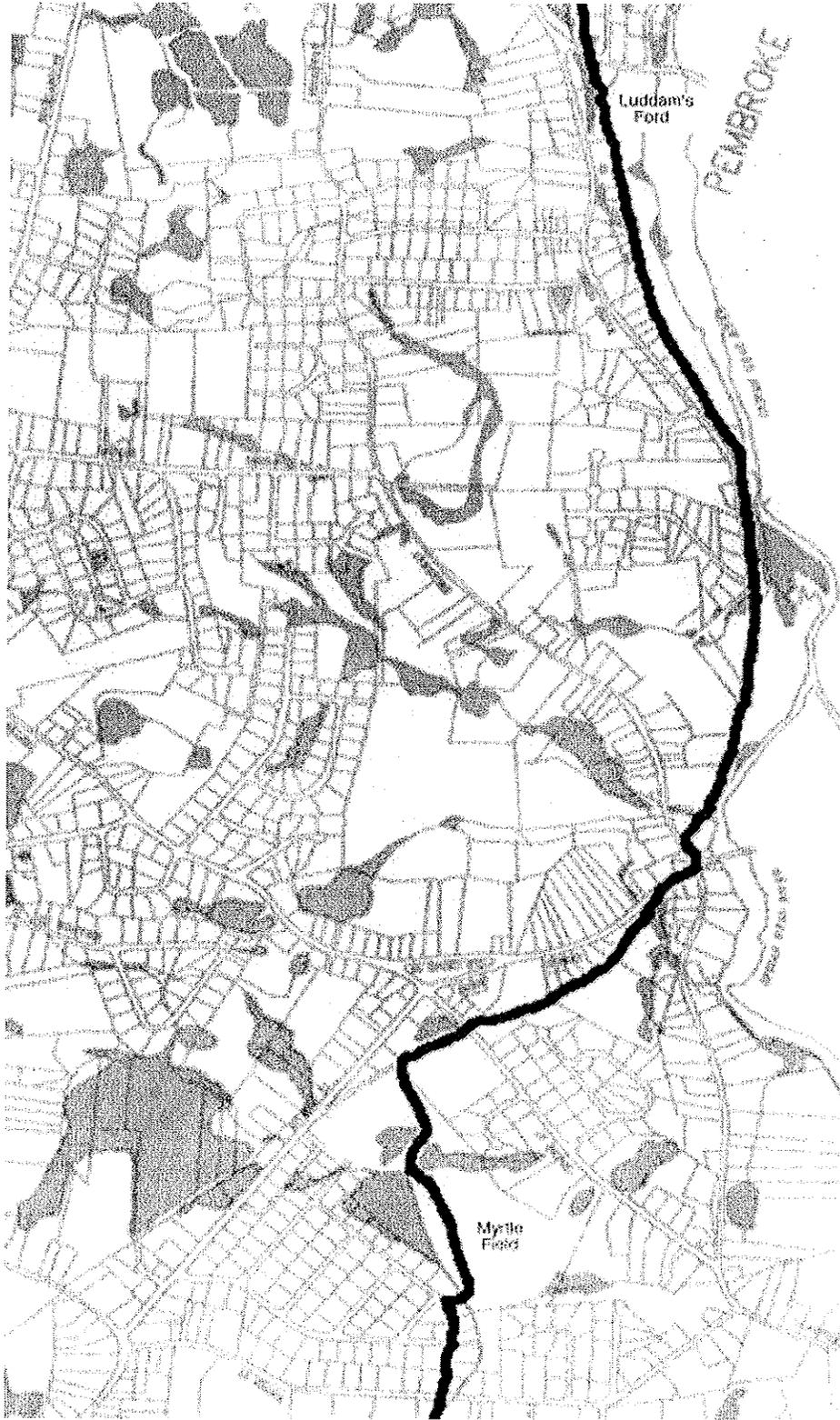


Figure 5: Phase III: Winter Street to Luddam's Ford

Beginning from the Ames Way DPW garage, the Phase III route will cross Winter Street and enter the development (commonly known as Indian Head or the Airport) along Samoset Drive. Two options may be available for connection to Myrtle Field. The closest would be along the paper road shown on the assessor's maps between #67 and #83 Samoset Drive. This option is preferable to the greenway but may be unacceptably adverse to the abutters. The second option would require a longer walk along Samoset Drive and entering off the end of King Philip Lane. Preferably, both access points would be established.

From the large Myrtle street field property, the remainder of the main trail will follow the former Hanover Branch Railroad. For the purposes of this plan, presumptions of property ownership are made based on the extensive title search conducted by the North and South River Watershed Association in their 1995 report. It should also be noted that a feeder trail should be established through the rear of the Myrtle field property out to its frontage on Center street.

The rail bed is owned by the successors of the National Fireworks Company from Myrtle field to Center street. It is privately owned by Mr. Joseph Polsinello from Center street to the Tindale Bog conservation property. The town then owns to the intersection of Cross street and Broadway. From this intersection to Luddam's Ford, it is primarily owned by Mr. Polsinello, interrupted by a few short pieces of town owned conservation property and private properties on Water street. These will need to be bypassed by walking along the road side. Clearly the success of Phase III will depend heavily on establishing a working plan with Mr. Polsinello, who has expressed strong support of the project goal. Ideally, the entire Phase III section would ultimately be transformed into a paved bike path with support from the federal Rails to Trails program.

Three additional trails are also considered part of Phase III. First, as the Greenway crosses the intersection of Cross St. and Broadway, markers should indicate access to the Merry property and Morrill Allen Phillips Sanctuary. This conservation property provided a beautiful walk and a direct connection out to Alden Rd. Second, the Hanover Branch Railroad bed actually continues past Luddam's Ford, along property owned by Mr. Polsinello. This would provide a connection out to near the intersection of Broadway and Columbia Ave. (53/139) at Broad Oak Way.

Phase III will also include a short connecting trail at the opposite end of the greenway. Across from the Hanover High School is a large piece of open space, which was recently divided into six residential lots. Along the extreme easterly border, a path could be easily created directly opposite of the Cedar School entrance road. With a footbridge over Bailey Brook, this path would continue through a town-owned unbuildable lot. And enter Old Farm Road between #406 and #436. Such a trail would provide convenient access to the schools from this large development. The six lots are owned by a group of heirs. Thus,

securing this path is currently difficult although there is conceptual agreement from the lead representative of this group of heirs.

From the path through to Old Farm Road, the greenway route would pass through the end of the cul de sac and along a short path on to Bailey Road. Following Bailey Road, and turning right on Aspen Drive, the route would pass through the end of the cul de sac and into the Plain Street conservation property. This property already has excellent cart path trails. An additional trail could be cut out to Plain street through the town owned frontage to improve access. This would also permit connection to the trail network of the empty nester housing complex planned for the former Toth property across Plain street. The developers of this complex have expressed the desire to keep these trails open to the public.

Action Items:

1. Study potential connections from the Indian Head development through to the Myrtle Field property.
2. Resolve ownership of the railroad right-of-way from Myrtle St. to Center St.
3. Work closely with Mr. Joseph Polsinello to establish a walking trail and bike path along the ROW of the former Hanover Branch Railroad extending from the Myrtle Field property to Luddam's Ford.
4. Continue pursuit of a short trail across from the high school through to Old Farm Rd.
5. Track development of the empty nester housing complex to pursue connection to its trail system.
6. Provide Greenway markers along the complete trail.
7. Provide maps of the complete trail at the Town Hall, Curtis Library and on the Hanovermass.com website.

5 Greenway Impact

This plan is presented as an initial outline for development of a Hanover Greenway. As such, it contains a number of assumptions and speculative plans. The project has high potential for success, but it is important for residents to appreciate that specific trail locations are not finalized. The Open Space Committee welcomes any and all input to the project. At this planning stage, the following initial disclaimer is appropriate.

It is recognized and recommended that several detailed studies be undertaken to appropriately assess the trail potential as it is influenced by geographic features such as wetlands. The plan also discusses use of a number of parcels which are currently in private ownership. No assumptions should be made at this time as to whether or not the town will be able to acquire or use these parcels. Such a trail may also present concerns to abutters of currently under-utilized town land. Throughout the development and execution of this plan, the Open Space Committee will strive to make every effort to publicly discuss and mitigate any potential adverse impact. As this greenway is primarily

intended to join the community of Hanover, widespread support from the residents is essential to its construction and ultimate success.

It should further be noted that a separate subcommittee of the Hanover Open Space Committee will pursue a potential bike path along the former Hanover Branch Railroad right-of-way under the federal Rails to Trails program. This effort is not discussed in detail in this plan. In bike path locations, multi-use paths will be constructed to welcome bikes, roller blades, walking, cross country skiing and other forms of recreation.

6 Concluding Summary

There is strong potential for fully realizing the goal of the Hanover Greenway Project and establishing a continuous walking trail. The initial plan provided here is the first step in a multi-phase project that will require a committed group effort from numerous civic organizations and the citizens of Hanover as a whole. The resulting recreational network will be a major asset to the quality of life in our town.