Town of Westford's
EAST BOSTON CAMPS
MASTER PLAN

The East Boston Camps Master Plan dated April 26, 2007 consists exclusively of the fourteen pages that are so designated. The remainder of the documents are background materials and informational articles as well as summaries of the Committee's discussions, presented and provided for informational and reference purposes only. The Plan being presented for a vote by Town Meeting consists of these fourteen pages only, which contain a brief introduction, four specific Goals, fourteen Policies and various Implementation items. All other items are not part of the Plan being voted on by Town Meeting. The fourteen-page Plan has previously been referred to as the "Summary" the "Executive Summary" and "Goals and Recommendations".

April 26, 2007

TABLE OF CONTENTS

EAST BOSTON CAMPS MASTER PLAN COMMITTEE

Kirk Ware (Chairman)	Citizen Representative
Dini Healy-Coffin	Board of Selectmen
Denise Brunelle	Citizen Representative
George Fletcher	Citizen Representative
Angela Harkness	Citizen Representative
Daniel Lamb	Citizen Representative
Toody Healy	Community Preservation Committee
Peter Mahler	Conservation Commission
Mary Ellen Tynan	Parks and Recreation Commission
Leslie Thomas	Water Commission
Nancy Rosinski	Westford Land Preservation Foundation

Consultants

Giezentanner Associates – Master Plan
- Bill Giezentanner
- Daphne Politis, Community Circle
- Rick Taintor, Taintor & Associates, Inc.
- Philip Benjamin, Benjamin Forestry Services, Inc.

Keeping Track, Inc. – Wildlife Management
- Sue Morse

Centurion Group – Building Assessment

Goldsmith, Prest & Ringwall, Inc. – Land Survey

Staff

Steve Ledoux	Town Manager
Norman Khumalo	Assistant Town Manager
Pat Savage	Parks, Recreation, and Cemetery Department

Acknowledgements

The East Boston Camps Master Plan Committee would like to thank the following individuals and organizations for sharing their knowledge, experience, and expertise in the effort to develop the East Boston Camps Master Plan.

Max Steiner	Citizen (Served as Co-chair)
Paul Cully	Citizen
Marian Harman	Citizen
Jim Lauzano	Lowell YMCA
Carol Shestok	Westford School Dept. 5th Grade Camp
East Boston Social Centers	

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EVOLUTION OF THE EAST BOSTON CAMPS MASTER PLAN

The Town of Westford acquired the East Boston Camps property on March 31, 2005 after a unanimous vote at a February 7, 2005 Special Town Meeting. The East Boston Camps Master Plan Committee was established with the charge of developing a master plan for the site (excluding an area for future recreation use off Nutting Road).

From 2005 to 2006, the Committee worked with the Board of Selectmen to develop and post interim regulations for the use of the site, developed a website to disseminate information about the Master Plan and use, contracted for a perimeter survey, contracted for a building assessment, engaged a wildlife specialist and a forester to advise on property use and management, developed a history of the property, and contracted with a consulting group to assist in the preparation of the Master Plan.

The East Boston Camps Master Plan presents information about the site's natural and cultural resources and a vision for its future, discusses and evaluates alternatives, and presents a framework for future decisions and actions. The community and the Master Plan Committee developed the plan through an open process that included numerous meetings and a series of public forums. The plan establishes guidelines and makes recommendations for the future of the site; some of those recommendations can be implemented immediately others will only be implemented as resources become available.

Community Participation

The community was actively involved in developing the plan through a series of public forums, meetings, site walks, suggestion boxes, a website devoted to the plan, notices and flyers, and the development of fact sheets and issue summaries.

Visioning Session—October 26, 2006

The first public forum was held to develop a vision for the future use and management of the East Boston Camps site. Over 100 people attended the meeting. Results of the meeting were written up and made available in the library and on the Committee's website. Based on this session, the Committee developed a vision statement, goals, and objectives for the Master Plan and began to explore different options for reaching those goals.

Options Exploration Session—February 1, 2007

The second public forum was held to assist the Committee in choosing among options for the future use and management of the East Boston Camps site. Approximately 40 people attended the meeting. Again, results of the meeting were written up and made available

in the library and on the Committee's website. The Master Plan is a direct result of these two meetings and reflects the Committee's efforts to be guided by this public process.

COMMUNITY VISION FOR THE EAST BOSTON CAMPS PROPERTY

Leading up to the Town's acquisition of the East Boston Camps site and during this planning process Westford residents often stated what an important treasure this site is, and how much they hope it will remain a place of natural beauty, peace, and serenity.

The following vision statement was developed from the first public forum held in October 2006. Approximately 100 people attended and participated in facilitated discussions to develop a common vision and goals for the future of the site.

VISION STATEMENT:
The East Boston Camps property will be open and accessible to all Westford residents. The property's natural features – including the forest, wildlife and water quality – will be protected and environmental impacts of human activity will be minimized. The feeling of serenity, peacefulness and quiet will be preserved. The camp tradition will be continued in some manner. Group use of the site will be allowed and managed by the Town.

Goals, Policies, and Implementation Recommendations

The following summary presents the goals developed by the community and a series of policies and implementation steps to achieve each goal. A brief synopsis highlighting the background information collected and discussed follows each of the goals. Several implementation steps are repeated because they help achieve more than one goal.

Goal 1: Preserve the natural resources and scenic beauty of the site.

Goal 2: Increase access for Westford residents engaging in passive recreation activities.

Goal 3: Continue summer camp programs, with a goal of including children of low-income families from the Town of Westford as well as urban areas, and other camp programs.

Goal 4: Establish an appropriate management structure to ensure that the goals for the site are met.

Goal 1:

Preserve the natural resources and scenic beauty of the site.

Policy 1a: Take actions to preserve the site's serenity, quiet, and peacefulness, as well as its natural beauty and pristine character.

Implementation:

- The Conservation Commission, the East Boston Camps Advisory Committee[1], and the holder of the Conservation Restriction shall engage in a program of public information and education about the natural resource assets of the property, and how the Conservation Restriction and other actions can protect those assets for future enjoyment.
- Enforce the Conservation Restriction by making use of the site's Caretaker, the holder of the Conservation Restriction, and the Westford Police Department, when necessary.
- Limit access on roads to authorized vehicles only. Provide signs indicating these areas are closed to unauthorized vehicles.
- Minimize use of roads by authorized vehicles.
- There shall be one central unpaved parking area.
- Roadways shall remain unpaved where possible and practical.
- Establish and maintain a "pack it in – pack it out" policy for managing trash and litter.

Policy 1b: Take actions to protect water quality in Burge's Pond, Keyes Brook, and Stony Brook.

Implementation:

- Establish an ongoing program to monitor water quality, particularly the potential presence of invasive aquatic weeds.
- Continue a "carry-in, carry-out" policy for boating[2] to reduce the possibility of introducing invasive weed species to Burge's Pond.
- There will be no organized town beach at the site.

[1] To be established. See Goal 4 on management structure.
[2] Only small boats that may be carried in to the pond will be permitted.

Policy 1c: Take actions to protect and increase wildlife diversity, and sustain and improve scenic vistas.

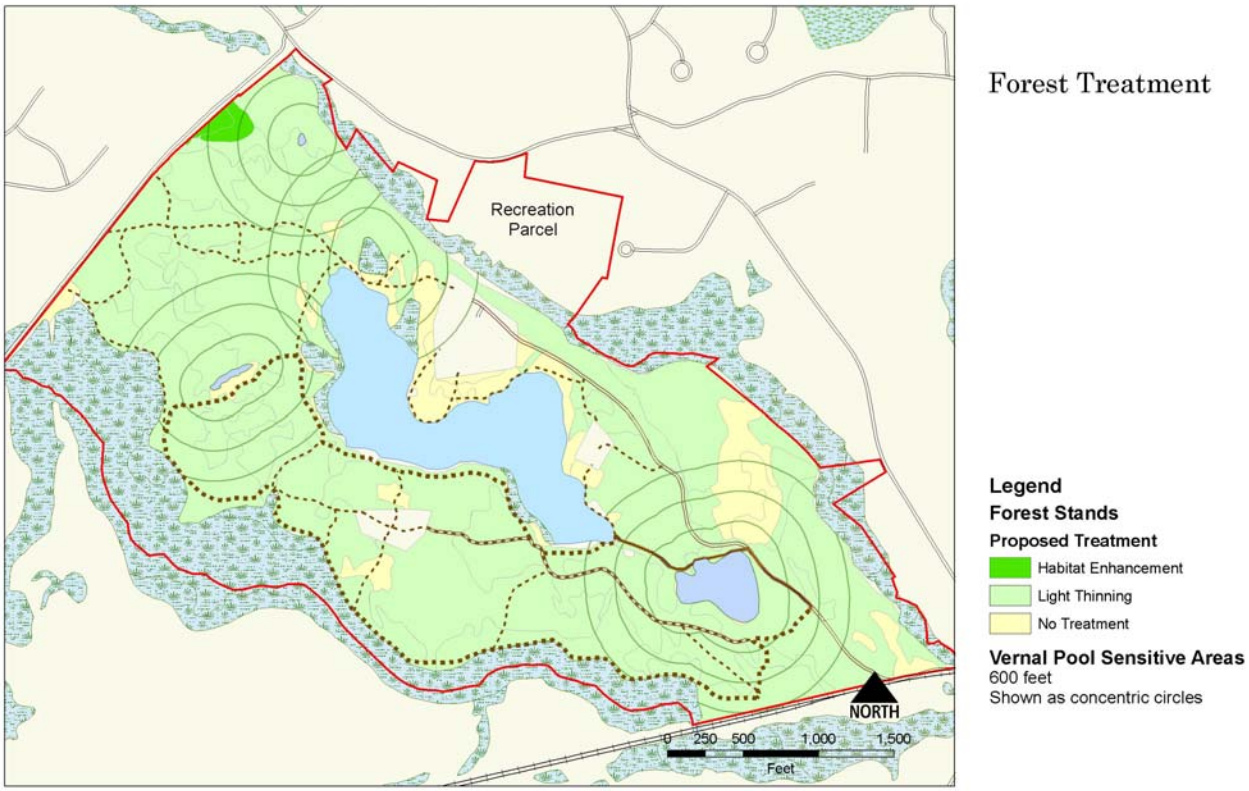
Implementation:

- Implement wildlife management actions proposed by Sue Morse, Keeping Track, Inc. (See Wildlife Management Report.)
- Establish a volunteer stewardship group to help monitor and maintain the property.
- Establish a 600-foot sensitive wildlife area around vernal pools. This area does not extend beyond the master plan area and is intended to maintain suitable upland habitat, but does not prohibit maintenance of roads, trails or forest management activities.

Policy 1d: Take actions to maintain and improve the health and diversity of the forest.

Implementation:

- Implement the forest management plan. (See Forest Management Plan.)

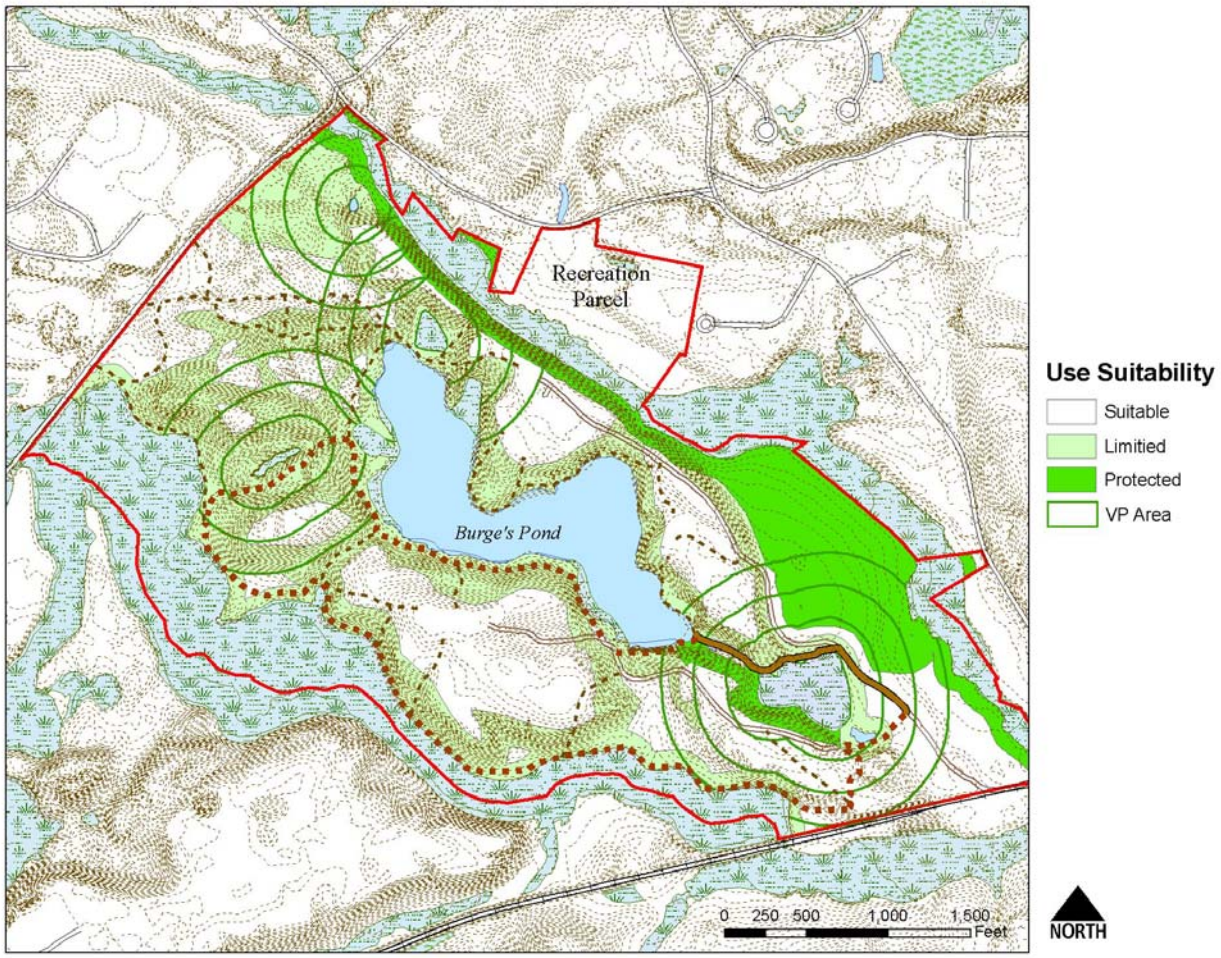


Map 1 – Forest Treatment

Policy 1e: Take actions to minimize disturbances of ecologically sensitive areas.

Implementation:

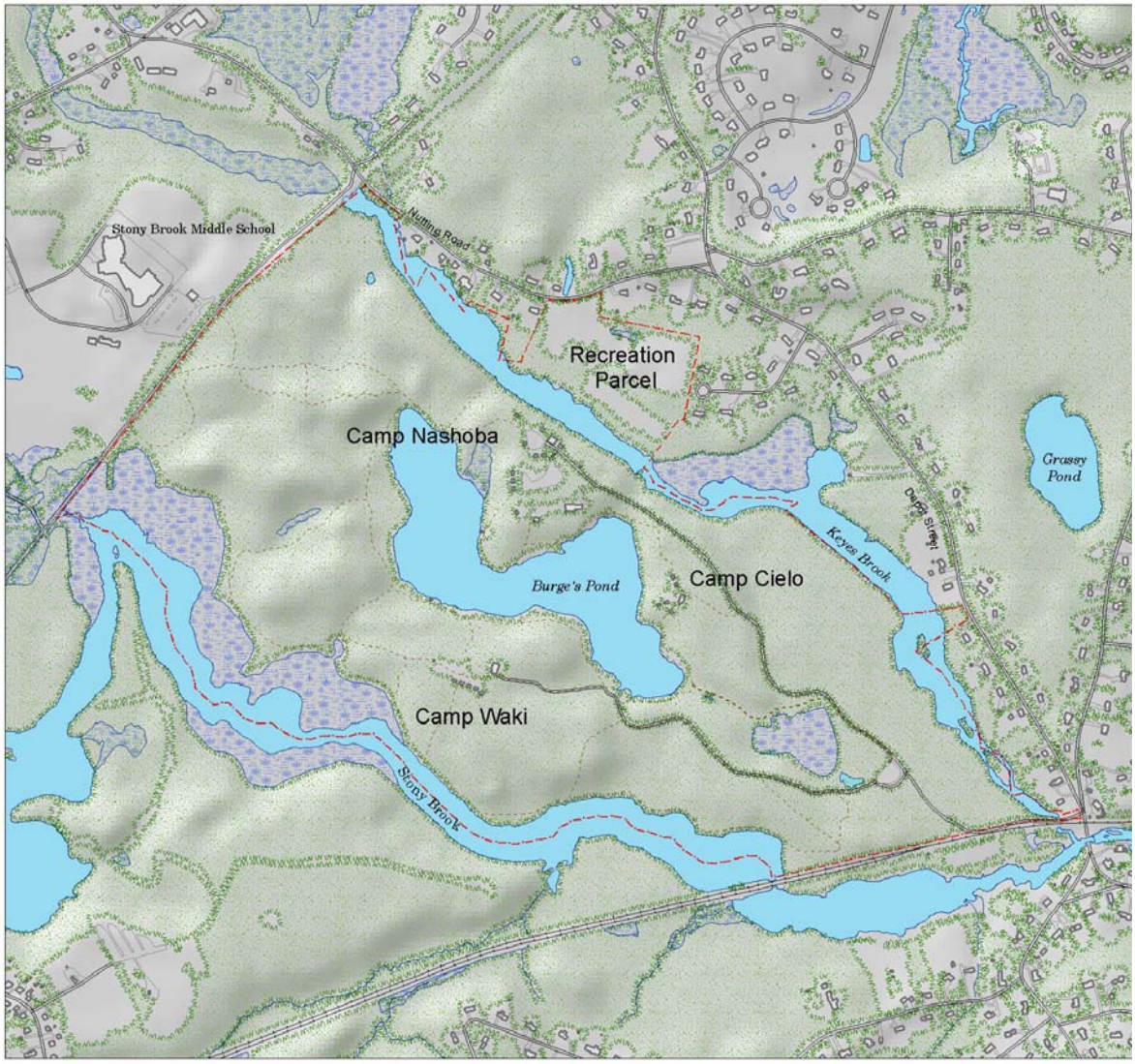
- Establish and follow guidelines of the "Use Suitability Designation" map.
  - Designate areas appropriate for trails and other activities (Suitable)
  - Limit uses adjacent to wetlands and on steep slopes (Limited)
  - Protect ecologically sensitive areas (Protected)
    - Exclude future trails and most other activities
  - Protect vernal pools and wetlands (VP Areas)
    - Allow maintenance activities, trails and interpretation of natural resources
    - Allow carefully controlled forestry operations



Map 2 – Use Suitability Designations

Suitable = areas suitable for anticipated uses and trails
Limited = areas suitable for limited uses and trail development – steep slopes and wetlands
Protected = ecologically sensitive areas

Natural Resources & Scenic Beauty Discussion Highlights



Map 3 – Site Map

Natural Resources

Spectacular Site

- Stony Brook
- Keyes Brook
- Pristine Burge's Pond
- Wildlife
- Place of beauty, peace, and quiet

Importance to Town water supply

Recognized by conservation restriction

Burge's Pond Preservation

Biggest Threat

- The accidental introduction of invasive weeds from boats could spread rapidly and choke pond
- Very expensive to control

Wildlife Management

Wildlife Requirements

- Food, water, space, cover, and nesting sites

Increase attractiveness of site for wildlife

- Maintain and provide a greater diversity of habitat components
    - Vegetative diversity—more food plants, etc.
    - Structural diversity—such as dead snags, nest boxes, and brush piles

Forest Management

Existing forest is the result of past forest management and 1938 hurricane

- There has been some selective thinning of trees about every 20 years

Forest Management Plan

- Forest lacks structural diversity—many trees are about the same age
- Much of the forest is currently suitable for some degree of selective thinning

Goals of Forest Management Plan

- Improve wildlife habitat
- Increase structural diversity (create more age classes of trees, leave dead snags, create brush piles, etc.)
- Create one or two 1½ -acre clearings to encourage berries and other food plants
- Create a more open appearance in certain limited areas
- Continue to maintain a more diverse forest as an important feature of the site

Goal 2:

Increase access for Westford residents engaging in passive recreation activities.

Policy 2a: Ensure adequate year-round public access to the property for passive recreation.

Implementation:

- All summer camp activities shall be located on the north side of Burge's Pond leaving the south side available to the public year-around.
- If capacity is required, sleeping cabins may be moved from the south side of the pond to the designated areas on the north side of the pond. Bath facility and lodge on the south side of the pond may be retained and remodeled for group uses or may be demolished.

Policy 2b: Manage and limit use of facilities and buildings by organized groups.

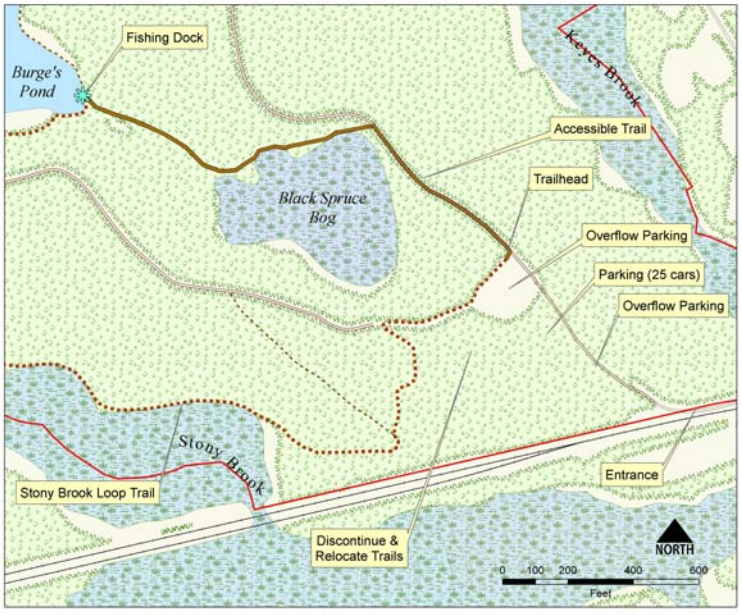
Implementation:

- Regulate organized group use of building facilities and large group use of property through a permit system that includes user fees.

Policy 2c: Improve and clarify parking, vehicle access, and pedestrian circulation.

Implementation:

- Improve the existing gravel parking area.
- Improve grading and drainage and mark handicap spaces.
- Provide bike racks.
- Limit motorized access on roads to authorized vehicles only. Provide signs indicating that roads are closed to unauthorized vehicles.
- Minimize the number of camp vehicle trips to limit negative



Map 4 – Parking Area Improvements

impact on the property.

- Roadways shall remain unpaved where possible and practical.
- Establish a central trailhead, clarify trail system, and mark trails.
- Relocate the welcome kiosk to the new central trailhead at the entrance and include a trail map, regulations governing the property and information about the site.
- Delineate and clearly mark the existing loop trail on the south side of the property and encourage its use by the public when camp is in session.
- Develop a trail management and maintenance system.

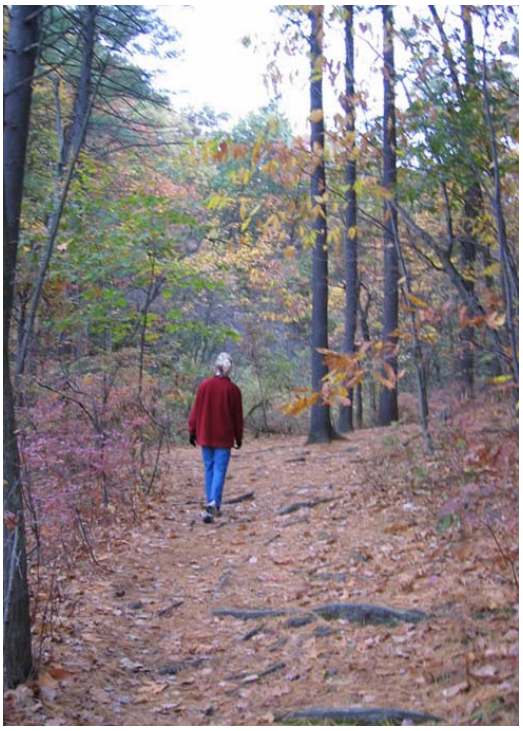
Improved Public Access Discussion Highlights

Remove Camp Facilities From South Side of Burge's Pond

- Make this attractive area more accessible to visitors
- Minimize area of site used for daily summer camp activities
- Remove specific buildings from south side of Burge's Pond (option—retain lodge and bathhouse for public use)

Improve Existing Parking

- Safety
- Convenience
- Minimize impacts on natural resources
- Approximately 25 spaces including HP
- Some overflow parking for special events, etc. (along access road and in grassy clearing)
- Minor grading
- Natural drainage swales
- Gravel
- Log wheel stops
- Centralized trailhead and information kiosk
- Signs to prevent unauthorized vehicle access



Improve Handicapped Access

- Improve existing path along black spruce bog to "Ice House" beach
- Graded 8'-wide pathway
- Crushed stone finish
- Two benches along pathway
- Floating dock with anchor pilings (also available for launching small boats)

Minor Improvements to Trail System & Signs

- Safety
- Convenience
- Make the site more inviting
- Relocate some trails near parking to clarify trailhead
- Mark main loop trail along Stony Brook and Burge's Pond

Goal 3:

Continue summer camp programs, with a goal of including children of low-income families from the Town of Westford as well as urban areas, and other camp programs.

Policy 3a: Continue the tradition of the Westford schools fifth grade camp.

Implementation:

- Support the Westford Public School system in their continuing efforts to carry on an educational outdoor camp.

Policy 3b: Continue the tradition of an overnight summer camp managed by an outside operator where possible and practical. Continue the tradition of a summer day camp conducted by an outside operator or by the Town of Westford.

Implementation:

- The camp operator shall make every effort to provide camp opportunities for low-income, urban children with a goal of at least 20 to 25% of the camper population being in this category.
- All camp operations shall be conducted so as to minimize the negative impact on the land and camps should include an environmental education component.
- Overnight and day camp facilities shall be limited to the north side of Burge's Pond and be conducted for up to eight weeks during the summer (plus a staff training session). If required for security purposes, the road through the camps may be closed to the general public during the camp season.
- The maximum number of campers at any given time shall not exceed 200, with the exception of the Westford Public School's camp.
- Camp and group user fees, donations and/or grants shall pay for all camp operating costs and the costs of maintaining the buildings used for camp activities.
- If capacity is required, sleeping cabins may be moved from the south side of the pond to the designated areas on the north side of the pond.

Camp Discussion Highlights

Program

- Current overnight program includes seven to eight weeks of summer camp divided into one-week and/or two-week sessions
- The overnight camp for boys and girls (number of campers limited by current capacity of septic systems) could be run in a consolidated Camp Nashoba (north side) site with a boys' cluster and a girls' cluster of cabins (sleeping cabins relocated from south side of Burge's Pond)
- Camp operator could also run coeducational day camp sessions at Camp Cielo
- There could also be a one-week counselor training session at the beginning of the summer.

Staff

- Staffing for the camps is regulated by the state. Existing buildings provide accommodations for a limited number of overnight camp staff.

Facilities

Camp Cielo, the existing day camp, has 9 buildings located on the north side of Burge's Pond:

- A dining hall/activities building,
- Bathhouse,
- Five cabins,
- A store, and
- The director's residence,
- The day camp could operate out of these buildings and use the day-camp beach.

Camp Nashoba currently has 17 buildings located on the north side of Burge's Pond, including

- The boathouse,
- Main lodge,
- Infirmary,
- Office,
- Six cabins,
- Bathhouse,
- Cook's residence, and staff duplex,
- Activities lodge, and
- Three storage/ maintenance buildings,
- The addition of the girls' cabins may require a new bathhouse. Overnight boys and girls could share the main lodge and other facilities.

Camp Waki, located on the south side of Burge's Pond, currently has 7 buildings including five cabins, a lodge, and a bathhouse.

Goal 4:

Establish an appropriate management structure to ensure that the goals for the site are met.

Policy 4a: Management structure must ensure future protection of the site's natural resources and the public water supply.

Implementation:

- Ownership of the property shall be transferred from the Board of Selectmen to the Conservation Commission.
- The Conservation Commission shall be the manager of activities on the property and will coordinate with the Parks and Recreation Commission and other relevant Town bodies and volunteers.

Policy 4b: Management structure should take advantage of the expertise available from existing Town resources and provide for ongoing public involvement.

Implementation:

- An advisory committee that may include representatives of all stakeholders (Community Preservation Committee, Board of Selectmen, Water Department, Parks and Recreation Commission, Conservation Commission, the holder of the Conservation Restriction and several at large members with relevant interest and/ or expertise) shall meet on a periodic basis, as necessary, to discuss policy and operating issues affecting the property and shall make recommendations to the Conservation Commission.

Policy 4c: Provide for management and control of camp and group use activities.

Implementation:

- The Conservation Commission, as manager of the activities on the property, shall use the expertise of the Parks and Recreation Commission when appropriate.
- A plan for responses to emergencies should be established and posted.

Policy 4d: The management structure must provide for future fundraising to support the property.

Implementation:

- Encourage the establishment of a "friends" group for fundraising and volunteer efforts.

Management Structure Discussion Highlights

Future Good Management Is Critical

Management Goals

- Protection of natural resources
- Protection of Town water supply
- Environmental education/camp activities
- Minimize costs to taxpayers

Considerations For Future Management

Importance of Natural Resources

- Protecting site's natural resources a priority
- Wildlife habitats
- Sensitive resources
- Part of a series of wildlife corridors
- Forest management

Importance of Water Supply

- Protecting Town's water supply
- Understanding the importance of the aquifer

Future Camp Operations

- Maximize public access and enjoyment of entire site
- Expertise in camp operations

Expertise of Existing Town Resources

- Town Manager's Office
- Selectmen
- Conservation Commission
- Water Commission
- Parks and Recreation Commission
- Need to have one body responsible

Continuing Public Involvement and Fundraising

- Many residents care about the East Boston Camps site
- Future financial support from taxes is unacceptable to many taxpayers
- Other models
    - Friends Groups
    - Roudenbush Center

Ongoing Property Management Costs

Responsibilities for ongoing care and maintenance will increase as use increases

Approximate annual cost

- At least $50,000

SECTION 1: SUMMARY OF EXISTING DOCUMENTS AND REPORTS

The following reports were provided and reviewed in the process of preparing the East Boston Camps Master Plan. The complete documents are included as part of the Appendices by reference. A short narrative with the major implications of the most relevant of these documents follows:

Conservation Restriction to Westford Land Preservation Foundation, Inc., 2005

A History of East Boston Camps: from Glacial Retreat to Preservation, by Marian Harman, 2005

Open Space and Recreation Plan, Westford, MA 2002

The Westford Master Plan Policies and Directions, May 1995

The Westford Master Plan Implementation Strategy, May 1995

Town of Westford, Massachusetts Zoning Bylaw, 2005

Forest Stewardship for Watershed Health Grant Application, February 18, 2005

Drinking Water Supply Protection Grant Program Application Materials

Massachusetts Historical Commission Project Notification Forms

2005 Special Town Meeting Community Preservation Funds Appropriation

Certificate of Record Title

Town of Westford, Massachusetts, General Bylaws, 2005

Agreement by and Between the Town of Westford and the Westford Land Preservation Foundation, Inc.

Closing Documents/East Boston Camps, Brackett & Lucas

East Boston Camps: Proposed Rehabilitation and Additions to Camp Facility – 2000, prepared for the East Boston Social Centers

Proposal for the Future of the East Boston Camps – 2001 prepared by the East Boston Social Centers

Baseline Inventory of the East Boston Camps Site – 2005 prepared for WLCF

Conservation Restriction

The most definitive document for the future management of the East Boston Camps site is the Conservation Restriction. It prescribes the purposes for town ownership of the site, permitted activities and facilities, and prohibited uses and actions. A complete copy is included by reference and major elements are summarized in Section 3: Summary of Opportunities and Constraints. It also establishes an approval process for uses or actions that may significantly impair the conservation values of the site.

Approval Process

The Town of Westford shall notify the Westford Land Preservation Foundation, Inc. in writing at least sixty days before the planned commencement of any of the uses or activities subject to approval or any use or activity that may significantly impair the environmental interests or conservation values of the site or be inconsistent with the purposes of the Conservation Restriction.

A History of East Boston Camps: from Glacial Retreat to Preservation

Material from this document will be summarized in the Site Inventory section of the report (Section 2).

Open Space and Recreation Plan, Westford, MA 2002

The 2002 Open Space and Recreation Plan stated "Public protection of the East Boston Camps would provide recreation access to Burge's Pond and another canoe access to Stony Brook as well as a high-yield aquifer protection." It also identified the Stony Brook corridor, including the East Boston Camps site as an important wildlife corridor. The East Boston Camps site was also identified as an important scenic resource.

The 1995 Westford Master Plan

The Westford Master Plan identified open space as a key factor, and recommended efforts to protect the East Boston Camps site and other key unprotected parcels in town.

Town of Westford, Massachusetts Zoning Bylaw, 2005

The East Boston Camps site is located in both a Residence A zone and Water Resource Protection District 1. In general, the Conservation Restriction is more limiting and relevant to the site.

Forest Stewardship for Watershed Health Grant Application, 2006

This application outlines the development of a Forestry Management Plan for the East Boston Camps site. The amended scope of services for East Boston Camps Master Plan includes this element.

Drinking Water Supply Protection Grant Program Application

This application outlines the water supply protection justification for the purchase of the East Boston Camps site and state reimbursement under the Drinking Water Supply Protection Grant Program.

Massachusetts Historical Commission Project Notification

This form notifies the Massachusetts Historical Commission of the purchase and intended use of the East Boston Camps site.

East Boston Camps: Proposal for Rehabilitation and Additions to Camp Facility

This architect's report was prepared for the East Boston Social Centers in 2000. It includes a detailed plan for improving the camp facilities with schematic designs and cost estimates. It is a useful overview of how facilities might be improved.

Plan for the Future of the East Boston Camps

This plan was prepared by the East Boston Social Centers before the land was sold to the Town of Westford. It outlines their vision for the future of the camps prior to the sale of the land to the town.

East Boston Camps Baseline Inventory

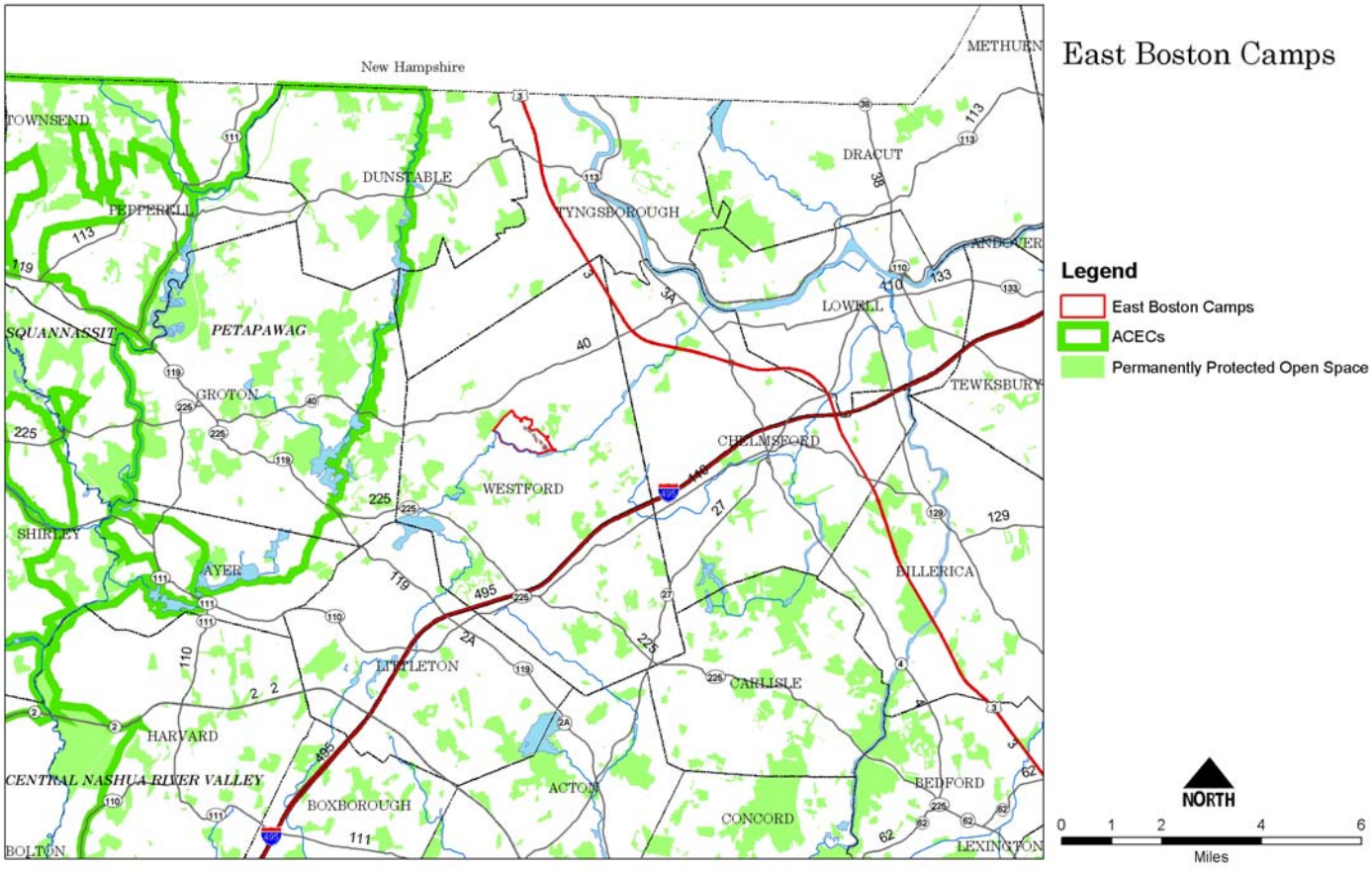
Inventory report prepared for the Westford Land Preservation Foundation, Inc.

SECTION 2: SITE INVENTORY – WHAT IS "AS IS"?

Throughout the public meeting process prior to the purchase of East Boston Camps site, many of Westford's citizens expressed a common opinion—to have the property remain "AS IS." The following sections are an inventory of the existing cultural and natural resources of the site including: a general description, history and cultural resources, land resources, water resources, ecological resources, natural communities and wildlife, and open space resources.

Description, Size, Location, Access, and Surroundings

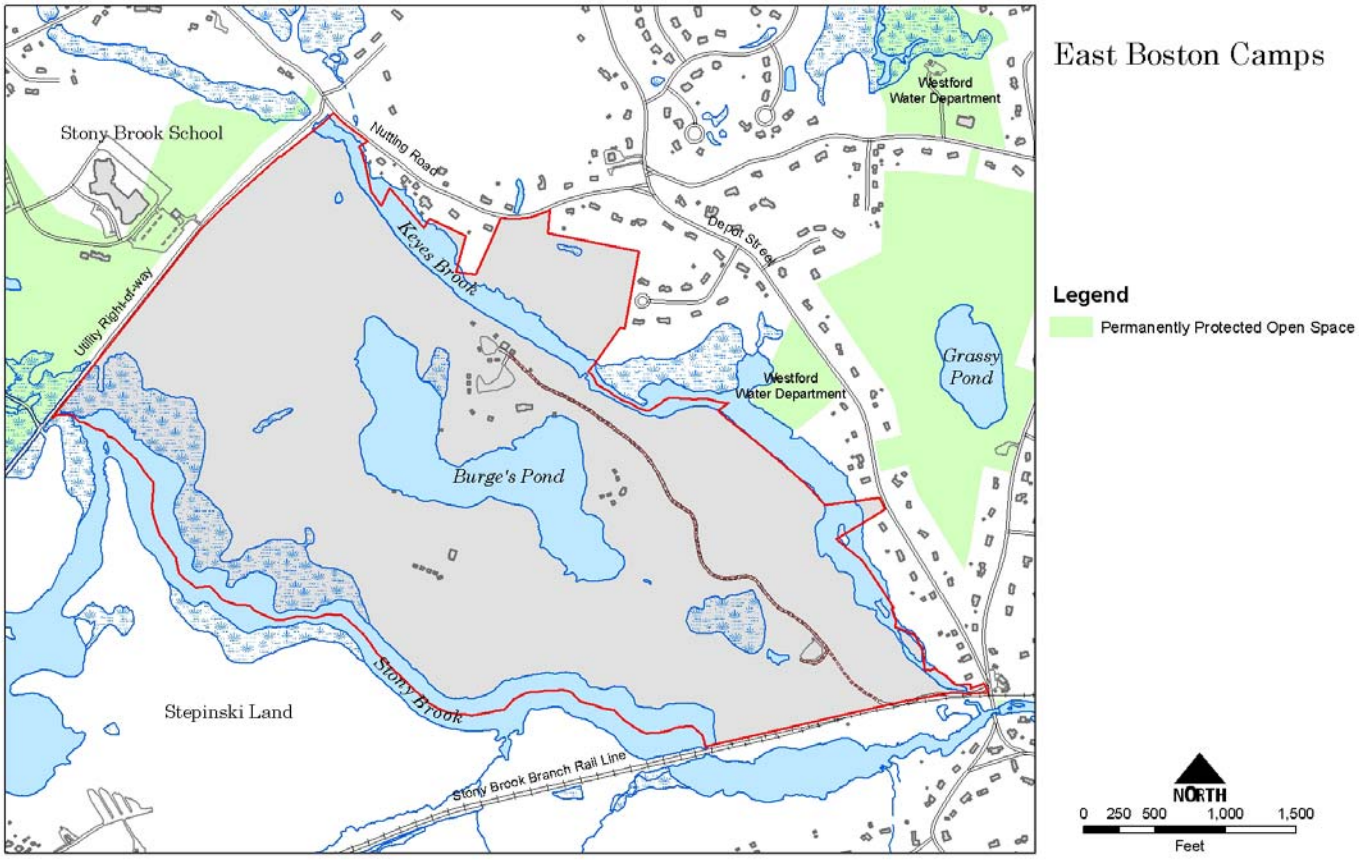
The Town of Westford acquired the East Boston Camps on March 31, 2005 after a unanimous vote at a February 7, 2005 Special Town Meeting. A recent survey indicates that the total area including Burge's Pond is 337 acres. A 29-acre portion of the site was designated for recreation use by the Town Meeting and is not part of this Master Plan. The East Boston Camps site is located near the center of Westford, Massachusetts in northwestern Middlesex County.



The site is the historic location of a summer "Fresh Air Camp" managed by the East Boston Social Centers and the Hyams Foundation since the 1930s. The site is significant because it is on top of an important town drinking water supply and is a wildlife corridor

linking other important habitat areas. It is less than three miles from the edge of the Petapawag Area of Critical Environmental Concern (ACEC) in Dunstable and Groton that connects to the Squannassit and Central Nashua River Valley ACECs. An ACEC receives special recognition in Massachusetts because of the quality, uniqueness and significance of its natural and cultural resources. The permanent protected open space shown on the map provides reservoirs of habitat for wildlife. Many of the animals in those reservoirs use the streams and river corridors, like Stony Brook, to move from one area to another.

Access to the site is a gravel road off the intersection of Depot Street and the Stony Brook Branch Rail Line at the confluence of Stony Brook and Keyes Brook. There is presently a small parking area and information kiosk.



The majority of the site is surrounded by Keyes Brook to the north and Stony Brook to the south. Several houses are along the northern boundary between Depot Street and Keyes Brook. Stony Brook School and an electric power line, along an abandoned rail line, are along the western boundary. The mostly forested Stepinski land, about 115 acres, lies to the south of Stony Brook. The Stony Brook Branch Rail Line runs along the southern boundary. This line is used for hauling freight.

History and Cultural Resources

An excellent and very complete history of the East Boston Camps site has been prepared by Westford resident Marian Harman, and is available for downloading at

http://www.ebcwestford.net/history.php. The following is a brief summary of that information and a more detailed inventory of the facilities, programs, and services currently provided at the East Boston Camps site.

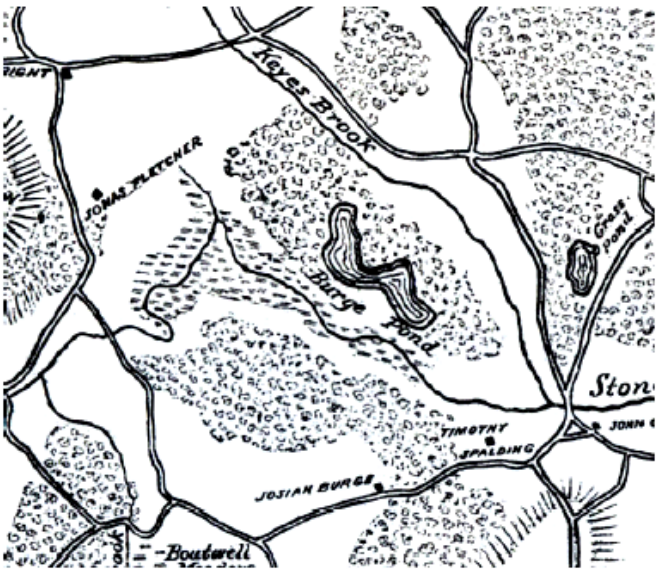
Pre-Colonial History

For nearly 16,000 years after the end of the last Ice Age, the rivers and uplands in Westford and the surrounding region provided a favorable ecological setting for local hunters and gatherers. The rivers provided access to estuarine resources, smaller streams, and lakes and ponds that teemed with fish and other aquatic species. The region's, wetlands and forested uplands provided adequate food and cover for a wide range of resident and transient wildlife throughout the year.

Hundreds of prehistoric sites in Eastern Massachusetts attest to the region's ecological viability throughout prehistory. Clearly, the indigenous inhabitants recognized the region's potential and took advantage of the opportunities it offered. The existing archaeological record documents the resilience of the local peoples; it is a nearly 16,000-year old record of changing climates and ecological settings to which they responded by adjusting and adapting their cultural systems. In so doing, they were enormously successful at living in harmony with their environment.

Sometime between 3,000 and 1,700 years ago, during what is called the Early Woodland Period, rich alluvial soils along the rivers were found to be suitable for raising newly domesticated maize, beans and squash (sometimes referred to as "the Three Sisters"). This led to more permanent settlements and a growth in population spurred by a more reliable food supply. Numerous artifacts at the Westford Museum provide evidence that tribes camped and grew crops along the flat plains to the south of Stony Brook every summer.

After the arrival of the first European ships to the Bay Colony, it took only a few short years for those 16,000 years of cultural adaptation to come to an end. The local Native American populations were ravaged by a series of devastating plagues (1616-1617, 1633-1634). Further cultural disruption was caused by conflicts with the European settlers, and finally internecine warfare left much of Massachusetts largely depopulated of its indigenous people by the end of the 17th Century.



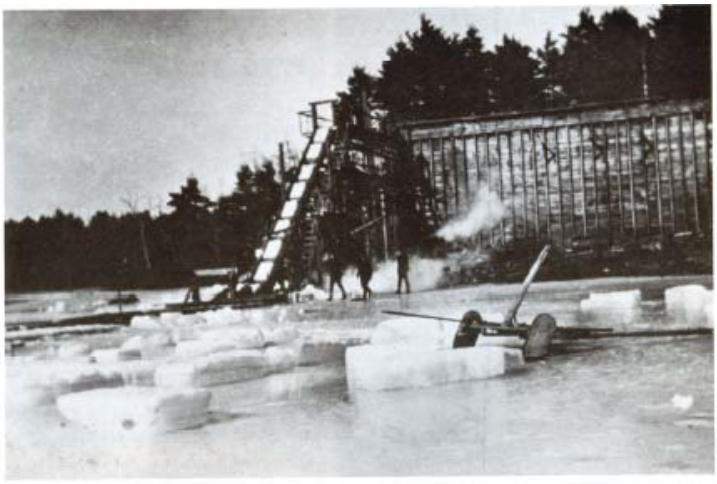
1730 Map of Westford (detail)

European Settlement

The 1730 map of Westford shows five settlers living near Burge's Pond: Josiah Burge, Timothy Spalding, Jonas Fletcher, Jacob Wright, and John

Comings (also spelled Cummings). All of these families eventually owned parcels in the East Boston Camps area. Burge's pond was actually named for a cousin of Josiah, by the name of Samuel Burge. The 1730 map and all subsequent maps show the area between Stony Brook and Keyes Brook as being wooded, and it is likely that it was always used as a woodlot and for turpentine production. At the time settlers were farming and Stony Brook was being harnessed to power manufacturing. An iron forge, lumber mill, and gristmill were located nearby and the dams on Stony Brook necessitated efforts to preserve the passage of shad and alewives from the Merrimack River to Forge Pond. In 1848 the Stony Brook Rail Line was opened to connect Lowell to New York. Timber from the East Boston Camps land and other nearby forested areas was shipped out by the railroad. By 1916 it is reported that most of the marketable timber at what is now the East Boston Camps land had been cut off.

The railroad also facilitated the shipping of ice from Burge's Pond. Ice from spring-fed New England ponds was cut in the winter and transported to ports, packed in straw in ships, and sent to markets around the world where it was considered the best for chilling drinks because it was so pure.



Johnson Ice Operation on Burge's Pond c.1900

Many other ponds in Westford were involved. In 1881 Westford shipped 35,000 tons to Boston and stored an additional 50,000 tons for more local distribution.

History of the East Boston Camps Through 2006

Isabel and Sara Hyams and the Hyams Foundation, seeking to help Boston and Chelsea children at a time when tuberculosis was a grave concern, purchased the land around Burge's Pond in 1937 for a "Fresh Air Camp." Most of the existing camp buildings were built of lumber obtained from the site. The 1938 hurricane took down many trees and threatened the opening of the camp the following summer, but the East Boston Social Centers has run the camp continuously since 1937.

Originally, there were three overnight camps; one for the 6-9 age group of boys and girls, a separate boys' camp for 10-15 year olds, and another girls' camp for ages 10-15. There were four two-week sessions in July and August. Approximately 80-125 children would attend each session.

Programs: According to the East Boston Social Centers website in 2006, there were seven weeks of camp, seven one week sessions of day camp, and three two-week sessions of overnight camp. The one-week day camp sessions at Camp Cielo served boys and

girls aged 6-14, including children from Westford and surrounding communities. Girls aged 8-14, attended Camp Waki, the overnight camp for girls. And Camp Nashoba, the overnight camp for boys, also served ages 8-14. According to the East Boston Camps Social Centers, close to 350 day and overnight campers attended each summer, including Westford campers. They also hosted a weeklong Senior Picnic and Senior Camp the last week of June. The East Boston Social Centers has also run a Playschool summer camp, a day camp for children in their city program. Traditionally, the camps were also made available as the location for the very popular weeklong nature day camp for Westford's 5th grades.

Camper with Spotted Turtle

There was also family camping on Memorial Day weekend and Labor Day weekend, where cabins were rented to families. Some families had been coming for over 25 years, and their children now bring their own kids. There was also a counselor-in-training retreat and alumni retreat. Times other than these weekends were available for group rentals in the spring and fall. Rental income supported the East Boston Camps program.

In addition to the camp use, walkers and picnickers have used the site for years on an informal basis. In March 2005 the Town of Westford purchased the site from the Hyams Foundation and public use has increased. Boaters, swimmers, fishermen, dog walkers, horseback riders, mountain bikers, and hikers have all been enjoying the increased accessibility.

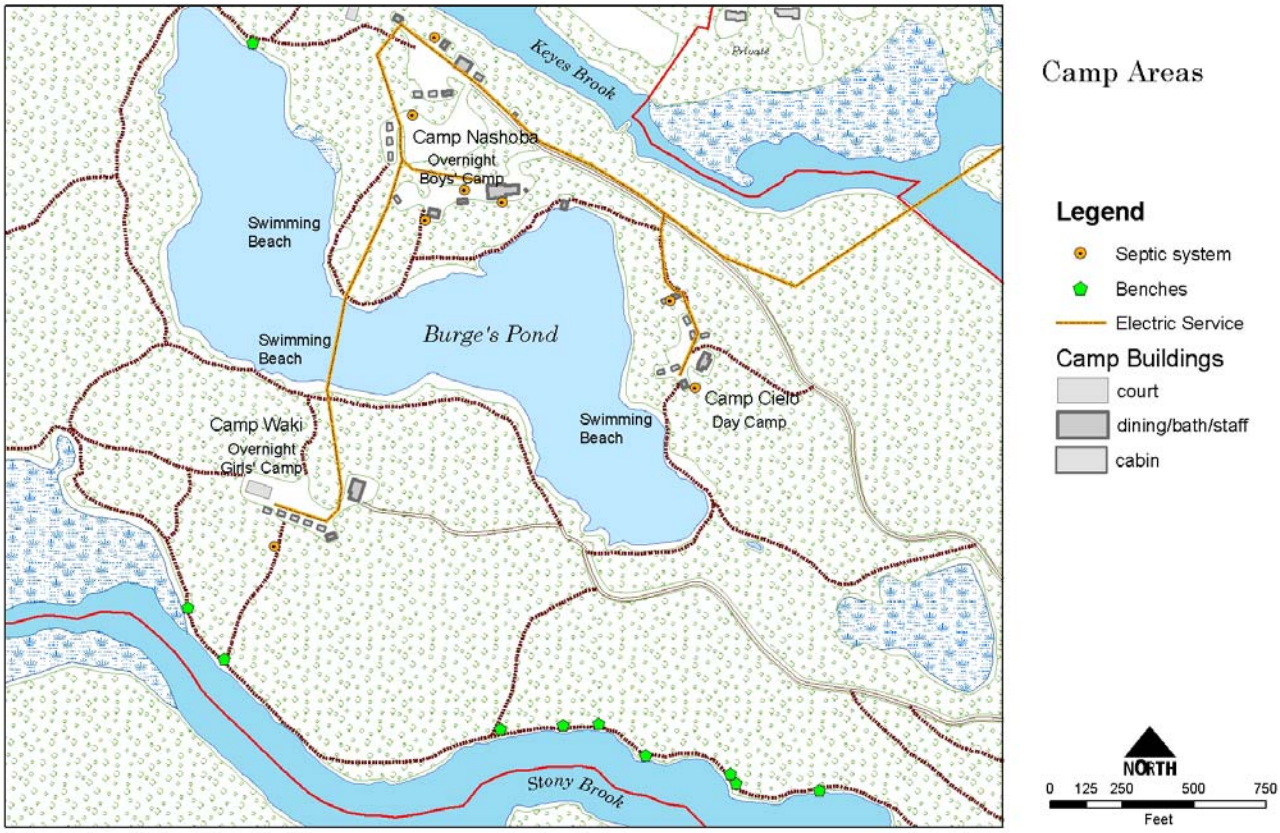
Facilities: Camp Cielo, the day camp, has 9 buildings including a Dining Hall/Activities Building, Bath, five Cabins, a Store, and the Director's Residence; with a total of 4,094 square feet. Camp Waki, the girls' camp, has 7 buildings including a Dining Hall, Bath, and five Cabins totaling 4,395 square feet. Camp Nashoba has 17 buildings including the

Camp Nashoba Cabins

Camp Waki Cabins

Boathouse, Main Lodge, Infirmary, Office, six Cabins, Bath, Cook's Residence, Staff Duplex, Activities Lodge, and three storage/ maintenance buildings, with a total of

11,191 square feet. All together there are 19,680 square feet of buildings, as well as a tennis court and a basketball court, both in poor condition.



Main Lodge/Dining Hall at Camp Nashoba

The Centurion Group has done a building assessment. They found that considering the buildings are seventy years old, they are in relatively good condition. Their general findings are summarized below:

Building Elements/Systems	Condition
Framing, roofs, and foundations	Good
Doors, windows, and vents	Fair to poor
Fieldstone chimneys	Good
Brick chimneys	Good to fair
Walkways and entrances	Good to fair
Electrical service	Poor to fair
Lighting fixtures	Poor to good
Plumbing	Good

It should also be noted that none of the buildings would meet current accessibility requirements. The Centurion Group estimated that it would cost about $270,000 to refurbish the existing buildings without addressing the accessibility and other possible code requirements.

There are three swimming beaches at the camps—one each at Camp Cielo, Camp Nashoba, and Camp Waki. None are intended as a public beach. Each beach is semi-circular in shape and about 4,000 square feet in area. Each has floats and benches which are the property of the East Boston Social Centers.

Utilities: There are eight separate septic systems in the camps—one for the Camp Waki bathhouse and lodge (1,870 gallons), three in Camp Cielo (bathhouse – 1,145 gallons; staff cabin – cesspool; cabin – cesspool), and four in Camp Nashoba (kitchen/dining hall – 1,470 gallons; bathhouse – 1,470 gallons; infirmary – 444 gallons; staff cabin duplex – unknown) these systems all passed a Title 5 Inspection in October 2005 and are indicated on the Camp Areas Map.

Electricity is provided on poles from the Westford Water Department well building off Depot Street. The overhead line crosses Keyes Brook and runs through the woods to the camp road between Camp Nashoba and Camp Cielo. Power is provided from Camp Nashoba to Camp Waki by a line under Burge's Pond that remains underground from the pond to the buildings. Telephone lines are presumed to follow the power lines.

Water comes in from the Mass Electric right-of-way on the northern boundary. There is a fire hydrant on the northern edge of Camp Nashoba. The meter and shutoff are located in a concrete pit near this hydrant. Water lines, mostly two feet underground, serve each camp area. The line to Camp Waki runs under Burge's Pond. All of the shallow lines are drained in the winter. The only exception is the Infirmary, which is kept open and heated all year.

Trails: There are currently a total of 6.6 miles of official trails—5.3 miles of woods trails and the two camp roads provide an additional 1.3 miles of walking. In addition there are a few little-used, unofficial trails.

The site also has ten granite benches that memorialize or honor individuals that have had an association with the site.

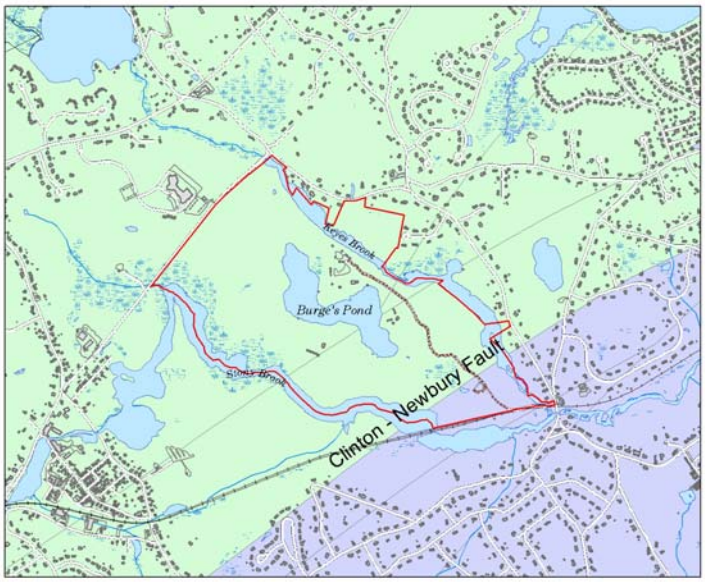
Granite Bench along Stony Brook

Swimming Beach

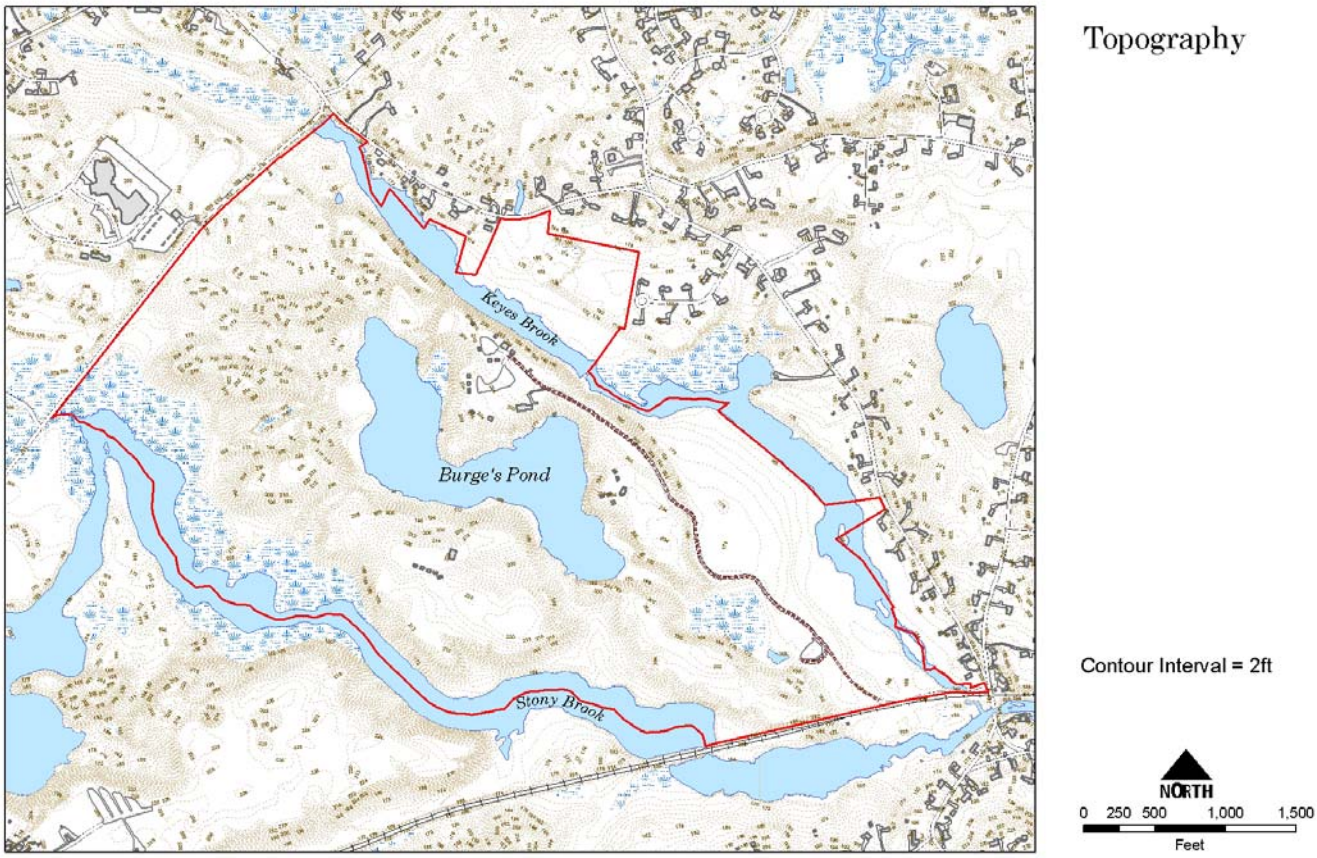
Land Resources

Geology, Topography, and Soils

A thin layer of glacial deposits covers the underlying bedrock in most of New England. Most of the East Boston Camps lies to the north of the Clinton-Newbury fault line that runs through Westford. Granite predominates the underlying bedrock material to the north while metamorphic rocks predominate to the south. The granite in this area, known as Chelmsford Granite, is well formed and much sought after for architectural and ornamental use. Granite is formed from molten material of volcanic and plate tectonic origin that has cooled. The metamorphic rocks, like schist, sandstone, and siltstone, are the result of extreme pressure.



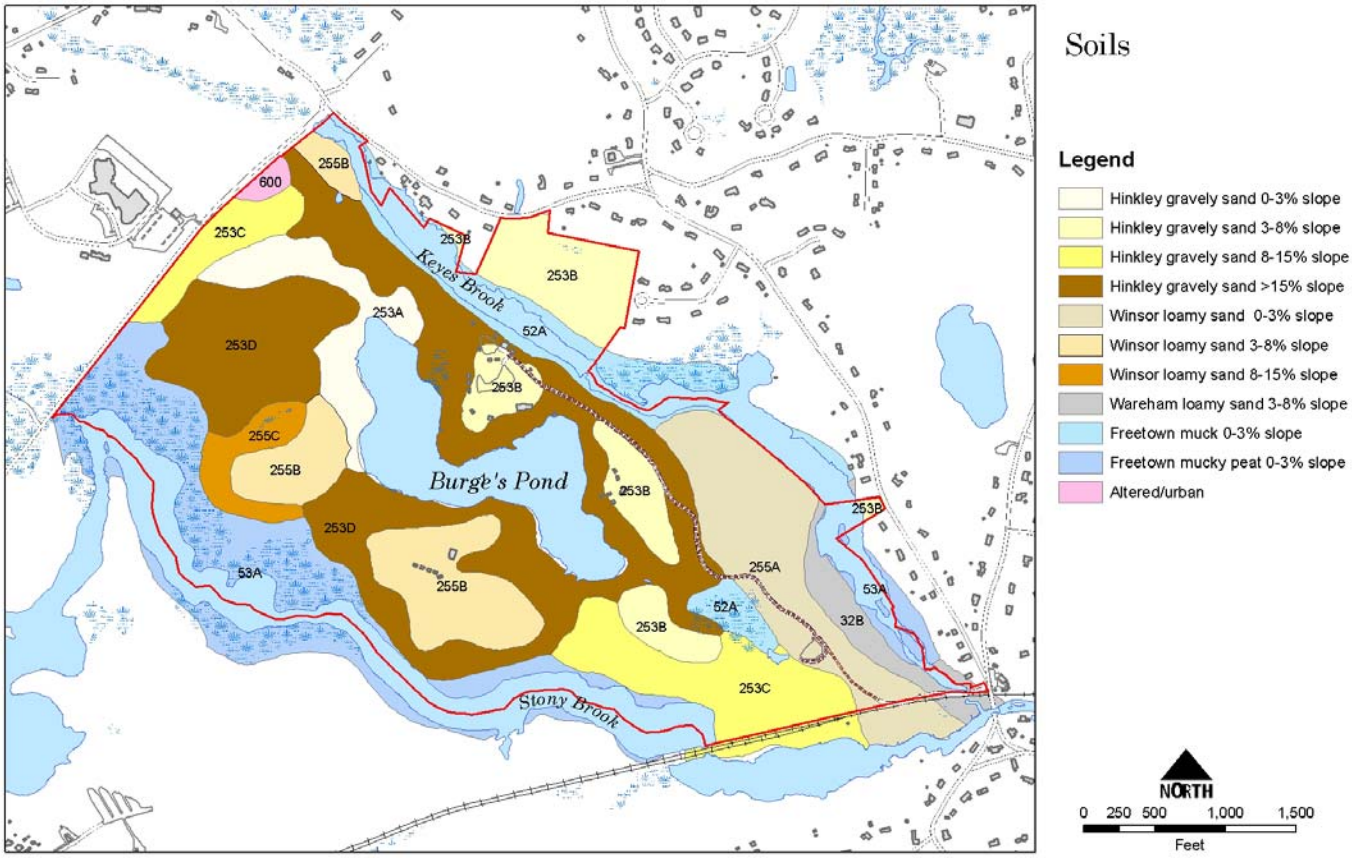
Approximately 65,000 years ago New England was covered with a layer of ice. As the two-mile thick layer of ice moved south it scraped the solid bedrock beneath it and carried along rocks and soil. After about 19,000 years ago, the temperature began to rise and the ice slowly retreated, leaving behind this glacial till. As the ice melted, it and the melting water also deposited sand and gravel referred to as outwash. Much of Westford



is either part of this outwash material or till that has been further modified by erosion and human use. In general, the outwash materials are more susceptible to erosion. The surficial geology map shows that the entire East Boston Camps site is sand and gravel outwash with a few small areas of alluvial deposits laid down by slowly moving water along the edges of Keyes Brook.

The East Boston Camps has varied topography, with some relatively level areas, rolling hills and ridges, and steep slopes. The topography is visually interesting and lends much to the appeal of the area. It also creates portions of the site that are suitable for activities, such as the camp areas, separated from each other by steep slopes that are unsuitable for any intensive use other than trails that are carefully designed in order to avoid erosion. The highpoint is 234 feet, located to the west of Burge's Pond, and the low-point is 162 feet at the confluence of Keyes Brook and Stony Brook. Burge's Pond is at 168 feet.

The upland areas of the East Boston Camps site consists of Hinckley, Windsor, and Wareham soil types while the wetlands along Keyes Brook and Stony Brook are made up of Freetown muck.



Windsor Soils (255A—30 acres, B—28 acres, and C—7 acres): Located between the camp road and Keyes Brook and the hilltops between Burge's Pond and Stony Brook, this very deep, excessively drained soil formed in sandy glacial outwash. Windsor soils are on glacial outwash plains, deltas, and on the tops of glacial stream terraces. They are generally well suited for agriculture with irrigation and for woodland. Windsor soils generally have few limitations for development. They are often associated with aquifer recharge areas and measures should be taken to protect the underlying aquifer.

Hinckley Soils (253A—15 acres, B—21 acres, C—31 acres, and D—89 acres): Located on both sides of Keyes Brook, on the steep slopes and the hilltops north of Burge's Pond and to the west of Burge's Pond, this very deep, excessively drained soil formed in gravelly fluvial deposits. Hinckley soils are on terraces, deltas, kames, eskers and large, broad areas on outwash plains. These soils are poorly suited for agricultural and woodland productivity due to droughtiness. Hinckley soils have few limitations for development. They are often associated with aquifer recharge areas and measures should be taken to protect the underlying aquifer.

Wareham Soils (32B—7 acres): Located along Keyes Brook near the entrance road. Very deep, nearly level, poorly drained soil formed in sandy glacial fluvial materials derived from granite and gneiss. Wareham soils are found in depressions of glacial outwash plains, deltas and stream terraces. Poorly suited for most agricultural and forest

uses mainly due to wetness. Poorly suited to development due to seasonal high water tables at or near the surface for prolong periods of time.

Freetown Muck and Freetown Muck, Ponded (52A—14 acres and 53A—47 acres): Located in the wetlands along Stony Brook and Keyes Brook and the bog area at the eastern end of Burge's Pond. Very deep, nearly level, very poorly drained organic soil formed in more than 51 inches of highly decomposed organic material. Freetown soils are formed in depressions, kettle holes, along streams and rivers or on flat, level areas of uplands or outwash plains. Poorly suited for most agricultural and forest uses mainly due to wetness. Poorly suited to development due to seasonal high water tables at or near the surface for prolong periods of time.

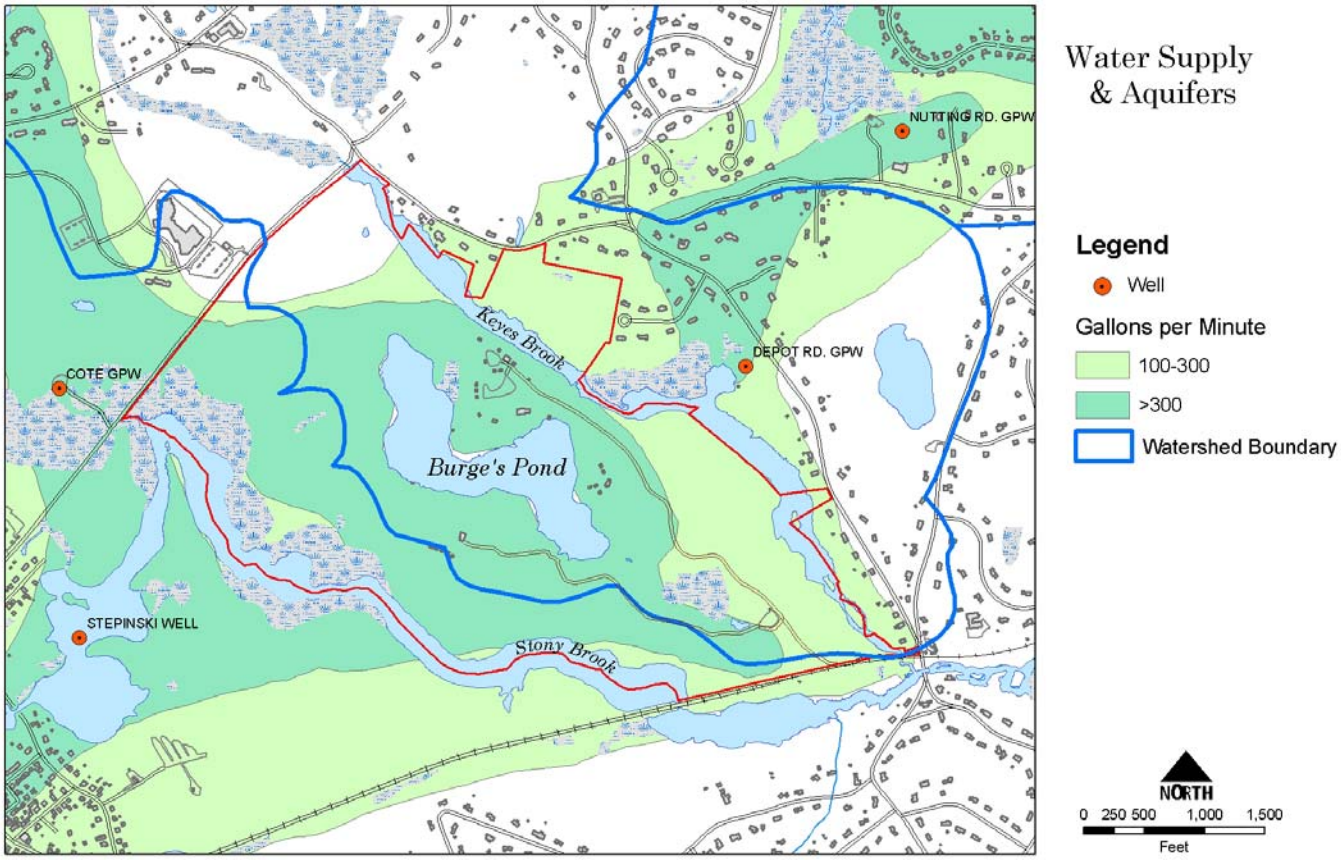
A small, former gravel pit area (600) is located along the power line right of way to the northwest of the site.

Water Resources

Water resources include both groundwater and surface water. The East Boston Camps have an abundance of both types of water resources.

Groundwater

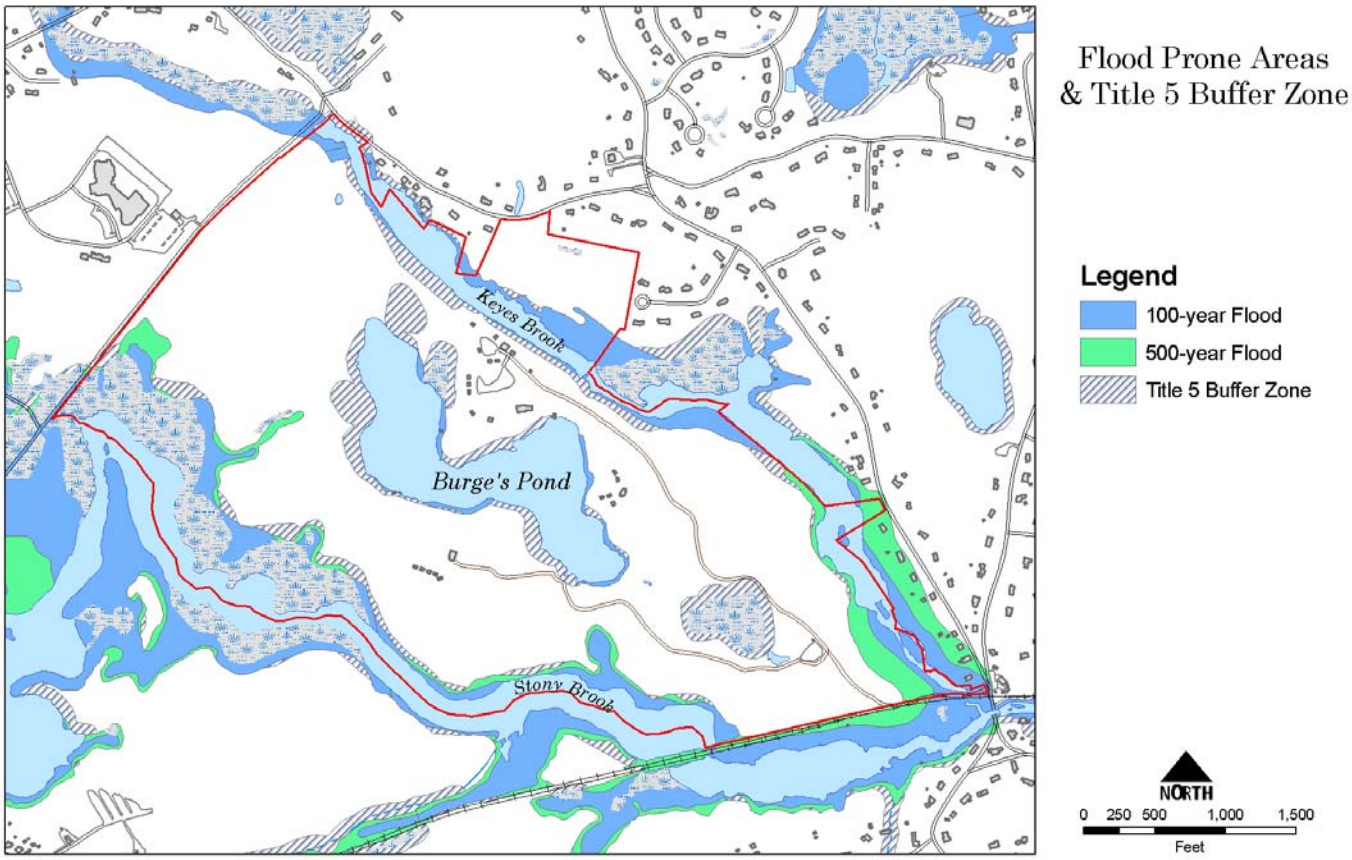
This is a critical area for Westford's groundwater supply. The East Boston Camps are on the boundary between two sub-watersheds that both drain into the Merrimack River—the



Keyes Brook Watershed and the Stony Brook Watershed. As noted above, Hinckley and Windsor Soils are often associated with aquifer recharge areas and the map above shows Westford's aquifers and their high yield areas. These aquifers contribute to all eight of Westford's wells and three gravel-packed wells are within ½ mile of the East Boston Camps site—the Cote Well, the Depot Road Well, and the Nutting Road Well. The Stepinski well is not town-owned.

Surface Water

In addition to being important for water supply the East Boston Camps site includes wetlands and surface water areas that are important wildlife habitats and play a role in reducing the hazards of a flooding further downstream. Stony Brook, Keyes Brook, Burge's Pond, and a variety of associated wetlands constitute the sites surface water resources. Burge's Pond is perhaps the site's most striking surface water feature. The map below shows flood prone areas in the immediate vicinity and the Title 5 Buffer Zone around wetlands and surface water bodies. Installation of onsite septic systems is prohibited in this buffer zone to help protect the surface waters from being contaminated by sewage. The following section will discuss the habitat aspects of the surface water features



In addition to the facts about water supply and flooding the water resources of the site include aesthetic values. Stony Brook, Burge's Pond, Keyes Brook and their associated wetlands offer some of the most enjoyable views in Westford. These views and the

quietness of the surrounding woods challenge the visitor to realize that they are in fact in a suburban town near Lowell and Boston, rather than in a wild area far from the mundane concerns of home and work.

Burge's Pond in Winter

Stony Brook in Summer

Ecological Resources and Natural Communities

The East Boston Camps site and the surrounding area is arguably the richest ecological area in Westford. Ecological resources can be defined as natural resources that benefit society, wildlife, humans and the economy. Ecological resources can encompass a broad range of categories. The categories that are directly relevant to the site inventory of the East Boston Camps are upland forests and groundwater and surface water resources (groundwater and flooding covered above). The site is rich because of the combination of these resources and because both Stony Brook and Keyes Brook form corridors that link this site to much larger ecological areas both upstream and down.

A natural community is an assemblage of plants and animals that coexist in the same locale and interact with each other and such environmental factors as climate, geology, soil, fire, and human influence. The following descriptions of natural communities are based on the forest stand descriptions prepared by forester Phillip Benjamin and on the "Classification of Natural Communities of Massachusetts" by Patricia C. Swain and Jennifer B. Kearsley of the Massachusetts Natural Heritage and Endangered Species Program. In the following descriptions species of plants and animals that were found during our inventory or are known to occur at the East Boston Camps site are listed in **bold**. Invasive non-native species are listed in ***bold italics***. There is also a list of both the common name and Latin name of the plant species found at the site with its value for wildlife in the appendix.

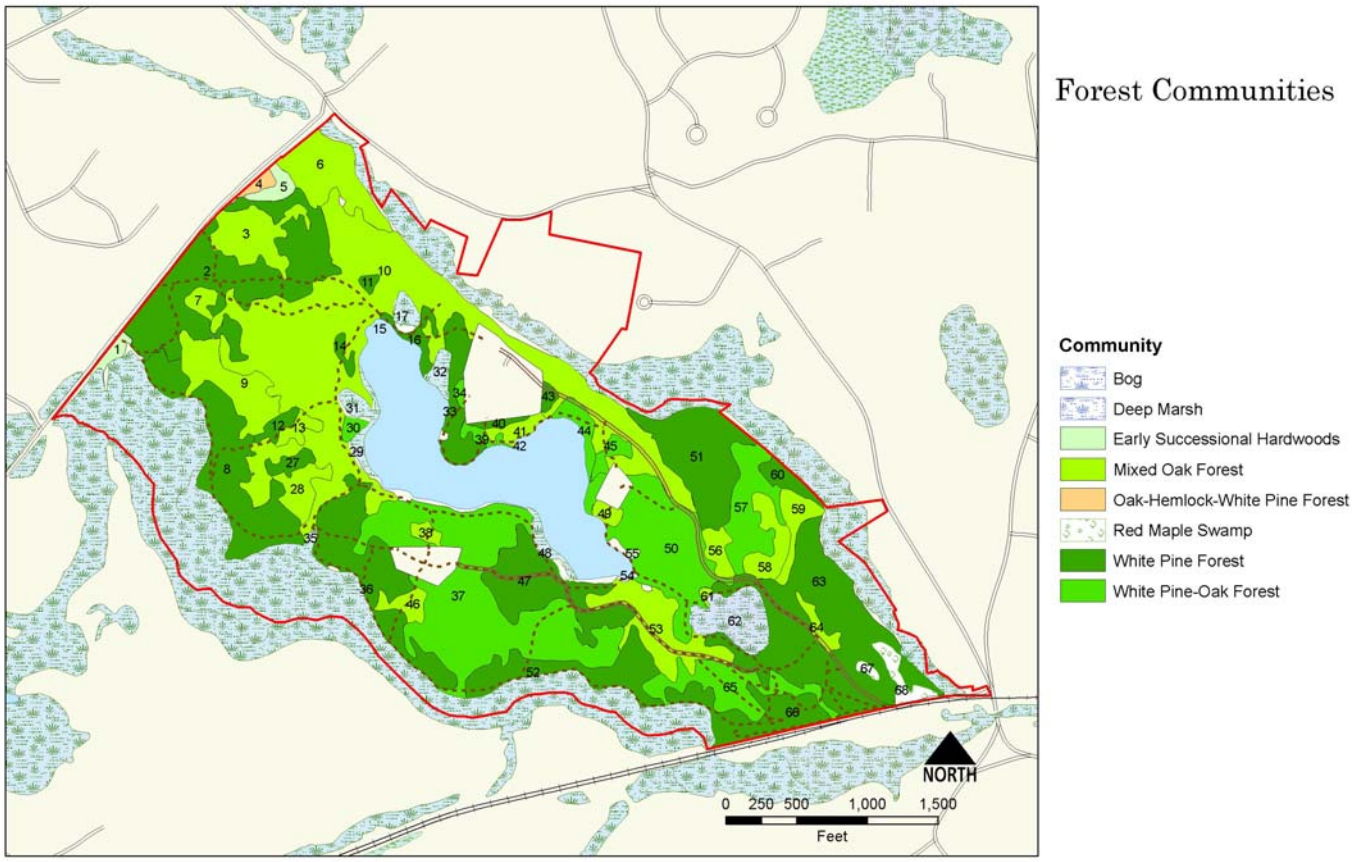
Forest Communities and Wildlife

Excluding the area to the north of Keyes Brook and the camp areas, there are 236 acres of several forest and forested wetland types. The forest has a variety of community types including stands of white pine-oak forest, red maple swamp, white pine forest, and successional northern hardwoods.

White Pine-Oak Forest

Stand numbers: 30, 34, 37, 39, 44, 45, 50, 57, and 65
Total area: 48.5 acres.
Percent of total forested area: 21%.
This broadly defined community is common on dry moraine or till soils. Often this community also occurs in areas that regularly burn.

White pine and oak species, including **black oak**, **red oak**, and **white oak**, are the dominant trees of the canopy. Scarlet oak and chestnut oak can also occur. **Pitch pine**, **hemlock**, **red pine**, **red maple**, **gray birch**, **hickory**, **sassafras**, **paper birch**, and black birch also occur regularly in low numbers. The understory consists of saplings of the canopy species as well as black cherry, aspen, **big-toothed aspen**, and often includes **American chestnut** sprouts. There is also a prominent shrub layer with **lowbush blueberries**, **highbush blueberries**, **beaked hazelnut**, **serviceberry**, **juniper**, **swamp azalea**, **maple-leaved viburnaum, huckleberry**, mountain laurel, wild raisin, **sheep laurel**, **sweet fern, poison ivy,** raspberry, ***bittersweet***, black raspberry, and **sprirea** or meadowsweet. A sparse herbaceous layer often consists of bracken fern, wild sarsparilla, **Canada mayflower**, **starflower**, **wintergreen**, **pipsissewa**, **partridgeberry**, **rattlesnake plantain**, goldenrods, **pink lady's slipper**, **princess pine**, whorled loosestrife, and grasses.



Most animals in this forest are widespread generalists. **Grey squirrels** and **eastern chipmunks** are both abundant. Typical birds are **pine warblers**, **gray catbirds**, **eastern towhees**, **chipping sparrows**, **common flickers**, **brown thrashers**, **great horned owls**, **brown creepers, white-breasted nuthatches, red-breasted nuthatches, warbling vireos, golden-crowned kinglets, hairy woodpeckers, red-bellied woodpeckers, piliated woodpeckers**, **blue jays**, and **mourning doves**. More generalist species such as **black-capped chickadees** and **American robin** are also likely to occur here along with a large variety of other birds and mammals that will occasionally pass through this habitat.

Red Maple Swamp

Stand numbers: 17, 29, 31, 32, 35, 48, 67, and 68.
Total area: 5 acres.
Percent of total area: 2%.
Red Maple Swamp is the most common forested wetland in Massachusetts. It occurs in a variety of hydrogeologic settings, including areas along streams or lakes, areas with high ground water, hillside seeps, and areas of overland water flow. At the East Boston Camps site it is located in small areas near the entrance and along the trail beyond Camp Nashoba.

Red maple is usually strongly dominant in the canopy often providing more than 90% of the cover. Other canopy trees include a mix of **oaks**; especially swamp white oak, **tupelo**, white ash, **big-tooth aspen**, **white pine**, **pitch pine**, **gray birch**, **sassafras**, and **American elm**. The understory is often dense and consists of saplings of the canopy species as well as **sweet pepperbush**, ***swamp loosestrife***, **swamp azalea**, **common winterberry**, spicebush, **buttonbush**, arrow-wood, **highbush** and **lowbush blueberry**, huckleberry, elderberry, buckthorn, Japanese barberry, poison ivy, chokeberry, alternate-leaved dogwood, wild raisin, grapes, **sheep laurel**, speckled alder, nannyberry, and poison sumac. **Sedges**, **ferns**, **skunk cabbage**, **arrow arum**, **princess pine**, swamp dewberry, false hellebore, spotted touch-me-not, marsh marigold, **sphagnum moss**, and grasses occur in the herbaceous layer.

Yellow warblers, Louisiana waterthrushes, alder flycatchers, blue-gray gnatcatchers, and **barred owls** are typical of this forest type. More generalist species such as **red-winged blackbirds**, **black-capped chickadees**, **common grackle**, and **eastern tufted titmouse** are also likely to occur here along with a large variety of other birds and mammals that will occasionally pass through this habitat.

White Pine Forest

Stand numbers: 2, 8, 11, 12, 14, 16, 27, 33, 36, 40, 43, 47, 51, 52, 60, 63, and 66.
Total area: 100 acres.
Percent of total area: 43%.
Also known as Successional White Pine Forest and Old-field White Pine Forest. This community type develops on abandoned agricultural land, usually pasture and hurricane damaged areas. The forest floor in is typically carpeted with needles, often with only a sparse layer of herbaceous plants. **White pine** dominates the canopy but a variety of other scattered species can include **white oak**, **red oak**, **tupelo**, **black cherry**, **pitch**

pine, **red pine, hemlock, black spruce**, **tupelo**, **black birch**, **paper birch**, **yellow birch**, **gray birch**, **big-toothed aspen, American elm, sugar maple**, and **red maple**. The shrub layer can vary in density from sparse to thick. It may include saplings of the canopy species and **huckleberry**, **blueberries**, witch hazel, **sheep laure**l, **juniper**, bayberry, sweet fern, elderberry, **maple-leaved viburnum, serviceberry, winterberry, hawthorn, raspberry, beaked hazelnut**, and often non-native species such as ***buckthorn, Norway maple, Japanese barberry***, honeysuckle, and/or multiflora rose. A variety of blackberry vines (often forming thickets), and **poison ivy** often covers the ground near openings or in formerly open disturbed areas. The herbaceous layer is variable; large patches of **Canada mayflower**, and **starflower** with **clubmosses** or **princess pine** are particularly common on formerly plowed soil. Bracken fern is often common on drier sites. **Partidgeberry**, **sarsaparilla, pipsissewa, arrowwood, alternate-leaved dogwood, spicebush, Virginia creeper, grapes, rattlesnake plantain, Indian cucumber root, sweet pepperbush, wild raisin, whorled loosestrife, nettles, arrow arum, starflower, swamp azalea**, **wintergreen**, **ferns**, fringed polygala, **grasses**, and **pink lady's slipper** grow in many longer established sites.

This community type, if large enough, is often a preferred habitat for blackburnian warblers, **ovenbirds**, **yellow warblers**, and Cooper's hawks. **American crows,** a variety of hawks, and **great-horned owls** are likely to use large white pines as roosting perches or nesting sites. More generalist species such as **black-capped chickadees**, **common ravens**, **pine warblers**, and **red-breasted nuthatches** are also likely to occur here along with a large variety of other birds and mammals that will occasionally pass through this habitat. Beaver damage is apparent along the streams and pond.

Successional Northern Hardwoods

Stand numbers: 1, 5, and 55.
Total area: 2 acres.
Percent of total area: 1%.
These stands of **gray birch** and **big-toothed aspen** are early successional communities. They are the results of disturbance or the process of succession from abandoned fields. Stand 5 is the result of clearing and gravel removal a few decades ago. It has a canopy dominated by **big-toothed aspen** with **gray birch**, **white ash**, **aspen, paper birch**, **red maple**, mixed **oaks**, **willows**, **black locust, pin cherry**, **black cherry**, **white pine**, and **pitch pine**. The understory often includes saplings of the canopy species along with huckleberry, **lowbush blueberry**, **raspberry**, **maple-leaved viburnum, beaked hazelnut, whorled loosestrife, blackberry**, **pussy willow**, smooth sumac, hay-scented fern, **sweet fern**, wild indigo, wild sarsaparilla, spreading dogbane, whorled loosestrife, winterberry, chokeberry, elderberry, **Virginia creeper**, **poison ivy**, **sheep laurel**, and ***buckthorn***. Other non-native, invasive species can include ***bittersweet, multiflora rose, Japanese knotweed***, and autumn olive. Their herbaceous layers include **goldenrods**, **Canada mayflower**, **partridgeberry**, **pink lady's slipper**, bluets, **grasses**, and **wintergreen**.

The structure of successional communities changes quickly and the animals that use them change as the vegetation grows. For the first 10 years trees may be dense but small with

an understory of blackberry. Chestnut-sided warblers and mourning warblers prefer these early stages. Grouse and woodcock are also often found in this community type. **New England cottontail** is a mammal that is often found in this community. More generalist species such as **black-capped chickadees**, **eastern bluebird**, **brown-headed cowbird**, and **gray catbird** are also likely to occur here along with a large variety of other birds and mammals that will occasionally pass through this habitat.

Mixed Oak Forest

Stand numbers: 3, 6, 7, 9, 10, 13, 28, 38, 41, 46, 49, 53, 56, 58, 59, 61, and 64.
Total area: 76 acres.
Percent of total area: 32%.
This forest community often occurs on dry soils and exposed slopes that are frequently subject to periodic burning. The community is dominated by a variable mix of **oak** species including black oak, scarlet oak, **red oak**, chestnut oak, and **white oak**. Occasional **red maple, hickory, paper birch**, **black cherry**, **gray birch**, **pitch pine**, aspen, big-toothed aspen, black birch, **hemlock**, **white ash**, **chestnut** sprouts, and **gray birch** are also found in the canopy and understory. Small pockets of **white pine** may also occur. **Blueberries**, **huckleberry**, sweet fern, scrub oak, **pin cherry**, **maple-leaved viburnum**, **beaked hazelnut**, **swamp azalea**, **sheep laurel**, **witch hazel**, **sweet pepperbush**, **Virginia creeper**, **serviceberry**, ***buckthorn***, **juniper, poison ivy**, **hop hornbeam**, and mountain laurel are also found in dense patches. A scattered herbaceous layer often includes sedges, **wild sarsaparilla**, grasses, ferns, **pink lady slippers**, **Indian cucumber root**, **whorled loosestrife**, **princess pine**, **pipsissewa**, **wild raisin**, **rattlesnake plantain**, **winterberry**, **wintergreen, striped wintergreen**, **Canada mayflower**, **starflower**, and **partridgeberry**.

Acorns are an important food for wildlife including **white-tailed deer, black bear, gray squirrels**, and other small mammals. Many species of animals also use the understory berries. Birds include **wild turkey**, **red-eyed vireo**, **ovenbird**, **black-and-white warbler**, scarlet tanager, great crested flycatcher, **downy woodpecker**, hairy woodpecker, and **red-bellied woodpecker**. Amphibians expected include northern redback salamander and spotted salamander. Ringneck snake would also be expected. **Beaver** damage is apparent in areas close to the streams and pond.

Oak-Hemlock-White Pine Forest

Stand numbers: 4.
Total area: .5 acres.
Percent of total area: >1%.
This mixed conifer – hardwood community often occurs on dry soils. **Oaks**, **gray birch**, black birch, black cherry, **pin cherry**, **aspen**, and **big-toothed aspen** are found in association with hemlock, **pitch pine**, and **white pine**. The understory often includes saplings of the above and witch-hazel, mountain laurel, lowbush blueberry, maple-leaved viburnum, **spireas**, **blackberry**, ***autumn olive, bittersweet***, and **smooth sumac**. The sparse herbaceous layer often includes grasses, **goldenrods**, **Queen Anne's lace**, **sweet fern**, **creeping dewberry**, Indian cucumber root, wintergreen, wild sarsaparilla, starflower, and Canada mayflower.

The animals found in this community are similar to those found in the mixed oak forest described above.

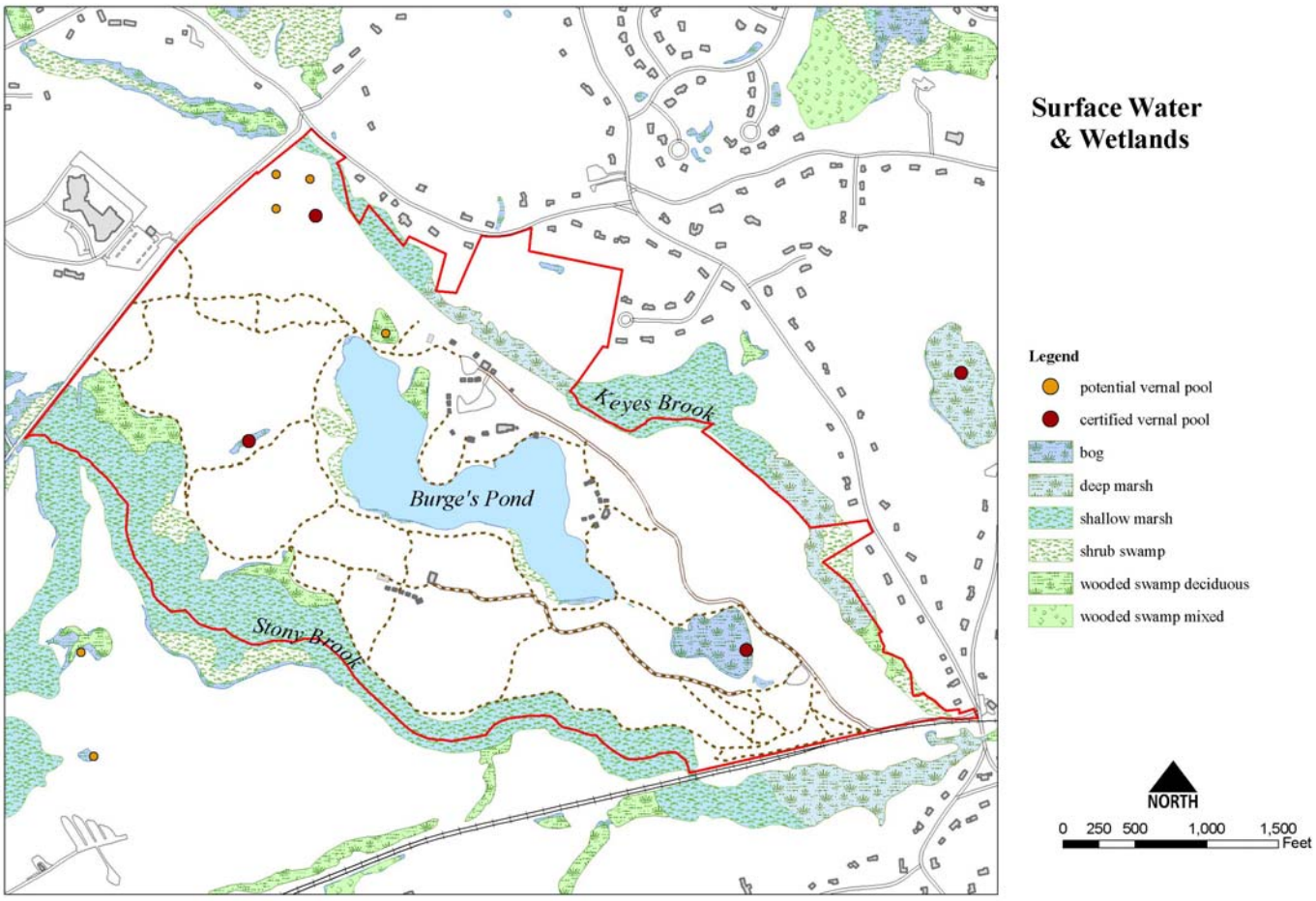
Surface Water and Wetland Communities and Wildlife

The East Boston Camps site has a variety of surface water habitats including a kettle-hole bog, both certified and potential vernal pools, a spring-fed pond, two brooks, deciduous wooded swamps, shrub swamps, deep marshes, and shallow marshes. Each of these habitat types or natural communities provides a unique set the critical requirements for a particular suite of wildlife—food, cover, water, and space. The following is a description of each of these communities. In some cases the acreage includes areas outside of the boundary of the East Boston Camps in order to give a sense of the size of the total contiguous habitat.

Burge's Pond

Total area: 28 acres.
Perimeter: 1.4 miles.
Elevation above sea level: 168 feet.
Limnologists usually consider a pond to be a quiet body of water that is so shallow that rooted plants grow completely across it. Hence Burge's Pond would be considered a small lake where the water is too deep for plants to grow except around the shore. The temperature of the water in such a lake is relatively stable from day to day. Temperature "layering" occurs in summer when the surface water absorbs the sun's heat and warms faster than the water below. The warmed water is less dense so it floats on the cool lower layers. In the fall, the upper layer cools until it approaches the temperature of the water below. Aided by winds, the surface water sinks causing circulation from top to bottom—called "fall overturn." In the winter, the cover of ice prevents circulation and the lack of light and oxygen may result in "winterkill." When the ice melts in the spring and the surface water warms wind aids in another mixing called "spring overturn." Lakes and ponds have several habitats that are exploited by a variety of animals and insects. The ***surface film*** is habitat for air-breathing and floating animals. Some kinds of beetles, water bugs, and free-floating plants, like duckweed, are adapted to life only on the upper side of the film. The larvae of some beetles and flies, like mosquitoes, spend much of their time hanging on the underside of the film with a breathing tube to the surface. Surface-dwelling animals feed on floating plants, prey on one another, or eat insects or other animals that drown and then float on the surface.

Open-water life consists of large, free-swimming animals, such as fishes, and of small microscopic plants (phytoplankton) and animals (zooplankton) that drift suspended in the water. These drifters are the basic food source in ponds and lakes. The kinds and numbers of plankton vary seasonally but are usually most abundant in spring. Turtles, birds, and large fishes frequent this open water area. Small fish usually remain among rooted plants near the shore.



The ***bottom*** of ponds and lakes offers another habitat with a variety of conditions that provide a diverse set of possibilities for plants and animals. Snails, earthworms, and insects may inhabit shallows and sandy areas. Crayfish and the aquatic nymphs of mayflies, dragonflies, and damselflies are some of the many kinds of animals that burrow into the bottom mud. Others live among the rooted plants where food is plentiful and where they can hide from predators. Deep bottom areas provide little cover, have low levels of dissolved oxygen and few animals can live in these conditions. Some worms, small clams, and insect larvae may be present. Bacteria that act to decay organic materials that settle into these deep areas play an important role in returning chemicals to the cycle of life.

While there is no available inventory of the chemical and physical conditions of Burge's Pond and no inventory of the plant and animal species that occur, the following plants have been noted as present at Burge's Pond or in the adjacent wetlands; **ribbon-leaf pondweed, *purple loosestrife*, swamp milk weed, wild rice, pickerelweed, water hemlock, swamp rose-mallow,** and **white water buttercup**. **Beaver** activity along the pond's edge is very evident.

Stony Brook and Keyes Brook

The open water areas of Stony Brook and Keyes Brook provide similar habitats to the open water and bottom areas of Burge's Pond. Mass Wildlife stocks Stony Brook with trout. Other fish are likely to include smallmouth bass, largemouth bass, chain pickerel and a variety of other warm water species. **Beaver** are also active along Stony Brook.

Woodland Vernal Pools

There are three certified vernal pools at the East Boston Camps site. Another four potential vernal pools have been identified and need further investigation. Woodland vernal pools are small, shallow depressions that are isolated from other surface waters. They flood in the spring and sometimes in the fall, but they are typically dry in the summer. They often have hydric soils. When dry, woodland vernal pools can often be recognized by a layer of stained leaves covering the dry depression.

Woodland vernal pools often have little or no vegetation, but upland trees or shrubs, such as sweet pepperbush, ring them. Other forested and non-forested wetland community types can function as vernal pool habitat if they have two to three months of standing water. See habitat values description under other community descriptions.

Vernal pools provide important habitat for amphibians and invertebrates. Since vernal pools are temporary bodies of water, they do not support fish. **Wood frogs**, eastern spade-foot toads, and four local species of mole salamanders have evolved breeding strategies intolerant of fish predation on their eggs and larvae; the lack of fish populations is essential to the breeding success of these species. Other amphibian species use vernal pools but they do not depend on them; those species include **American toads**, **green frogs**, and red-spotted newts. Vernal pools also support a diverse invertebrate fauna, including fairy shrimp that complete their entire life cycle in vernal pools.

Rare animals that are associated with vernal pools include Jefferson salamander, blue-spotted salamander, marbled salamander, four-toed salamander, **spotted turtle** (recently de-listed), wood turtle, Blanding's turtle, intricate fairy shrimp, Agasszi's clam shrimp, and American clam shrimp.

Kettle-hole Bog

Total Area: 3.9 acres
Perimeter: 1,796 feet
The wetlands include a relatively large kettle-hole bog located near the parking area. Kettle-hole bogs occur in ice-block depressions (commonly called kettle-holes) in sandy glacial outwash. They are typically small (< 3 acres), round, and they lack inlets and outlets. Vegetation is typically in ringed zones. Often the outer wet moat is dominated by a mixture of **highbush blueberry** and swamp azalea bordered to the interior by a ring of rhodora. The interior mat has a mixture of tall and short shrubs that are predominantly members of the Heath family. Leatherleaf is dominant. Other typical shrubs include rhodora, **sheep laurel**, bog laurel, bog rosemary, Labrador tea, and low-growing large and small cranberry. Scattered, stunted coniferous trees, primarily tamarack and **black**

spruce occur throughout. A mixture of specialized bog plants grows on the hummocky **sphagnum** surface, often including carnivorous pitcher plants and sundews.

The high acidity and low oxygen content of the water in bogs make them inhospitable to most reptiles, fish, and amphibians. However, several state-listed rare plants and animals can be found in kettle-hole bogs. These include three-leaved Solomon's seal, Jefferson salamander, blue spotted salamander, **spotted turtle** (recently de-listed), pale green pinion moth, and pitcher plant borer moth.

Deep Marsh

Total Area: 17.4 acres
Deep marsh areas are located along Keyes Brook and along Stony Brook just upstream of the confluence of the two streams south of the railroad (8.5 acres not within the boundary of the East Boston Camps). Deep marshes generally form in broad, flat areas bordering low-energy rivers and streams or along pond and lake margins. The soils are a mixture of organic and mineral components. There is typically a layer of well-decomposed organic muck at the surface overlying mineral soil. There is standing or running water during the growing season and throughout much of the year. Water depth averages between 6 in. and 3 ft. Deep emergent marshes are associated with shrub swamps, and the two communities can grade into each other.

Tall graminoids, like broad-leaved cattail and phragmites, often form extensive dense stands. Other characteristic graminoids include wool-grass, common threesquare, Canada bluejoint, rice cutgrass, and tussock-sedge. Herbaceous associates include arrow-leaf tear-thumb, **bulblet water hemlock**, swamp-candles, beggar ticks, bedstraw, **common arrowhead**, slender-leaved goldenrod, and marsh-fern.

Deep marshes are excellent waterfowl habitat and also provide important habitat for frogs and newts, especially leopard frogs, pickerel frogs, **green frogs** and **bullfrogs**, and red-spotted newts. **Wood frogs** may use areas of deep marsh that are free of fish. Rare species of plants are associated with deep marshes include foxtail sedge, round-fruited false loosestrife, strigose knotweed, and river bulrush. Rare animals include **great blue heron**, American bittern, northern harrier, marsh wren, **spotted turtle** (recently de-listed), wood turtle, Blanding's turtle, common moorhen, least bittern, pied-billed grebe, king rail, and water shrew. ***Purple loosestrife***, an aggressive non-native plant and phagmites can be invasive problems in deep marshes.

Shrub Swamp

Total area: 10 acres.
Shrub swamps are common and widespread. They occur in basin depressions, at pond margins, and along river and streamsides. They can be found in any flat area where the water table is at or above the soil surface for most of the year. Soils are generally well-decomposed organic mucks that are permanently saturated but only seasonally or temporarily inundated. Shrub swamps are often found in the transition zone between deep marshes and swamp forests. At the East Boston Camps they are located along Keyes Brook and Stony Brook and along the south shore of Burge's Pond.

Shrub swamps typically have a mixture of the following shrub species: speckled alder, smooth alder, **highbush blueberry**, meadowsweet, buttonbush, winterberry, sweet gale, swamp azalea, silky dogwood, northern arrow-wood, **maleberry**, and the non-native shrub European alder-buckthorn. Scattered **red maple** or **gray birch** saplings also occur. Richer shrub swamps are often dominated by spicebush. Some shrub swamps are dominated by a single species, such as black willow riverside thickets, highbush blueberry thickets, or buttonbush swamps. Since shrubs often form dense thickets, the herbaceous layer of shrub swamps is often sparse and species-poor. A mixture of the following species is typical: **common arrowhead**, skunk cabbage, cinnamon fern, sensitive fern, and royal fern, sedges, and **sphagnum moss**.

Shrub swamps often function as vernal pool habitat in sections that have extended periods of ponding (2-3 months) and lack fish; these sections provide important amphibian breeding habitat. Rare species of plants associated with shrub swamps include small beggar ticks and bog willow. Rare animals include Jefferson salamander, blue-spotted salamander, marbled salamander, **spotted turtle** (recently de-listed), wood turtle, Blanding's turtle, eastern spade-foot, four-toed salamander, elderberry long-horned beetle, and the water willow stem borer.

Red Maple Swamp

Total Area: 8.5 acres

Also known as deciduous wooded swamps, they occur in a variety of physical settings. The red maple swamps at East Boston Camps are located along the edges of Stony Brook and Keyes Brook and on the north shore of Burge's Pond and receive water primarily from stream and lake overflow. This hydro-geologic setting is the primary determinant of the plant community structure and composition. Soils have shallow to thick organic layers overlying mineral sands/silts.

Red maple is usually strongly dominant in the overstory, and often provides more than 90% of the canopy cover. A variable mixture of tree species co-occurs with red maple, including yellow birch, black gum or **tupelo**, white ash, **white pine**, American elm, **hemlock**, pin oak, and swamp white oak. The shrub layer of red maple swamps is often dense and well developed, generally with >50% cover but it can be variable. In eastern Massachusetts, sweet pepperbush and swamp azalea are the dominant shrubs. Other common shrubs are **highbush blueberry** and common winterberry, which are often dominant, and spicebush. In richer areas, northern arrow-wood, speckled alder, nannyberry, and poison sumac also occur. The herbaceous layer is highly variable, but ferns are usually abundant. Cinnamon fern is common; other ferns include sensitive fern, royal fern, marsh fern, and spinulose wood fern. Graminoids are common, mixed with a variety of herbaceous species. Some of the most common herbaceous species are skunk cabbage, false hellebore, spotted touch-me-not, swamp dewberry, marsh marigold, and the bugleweeds.

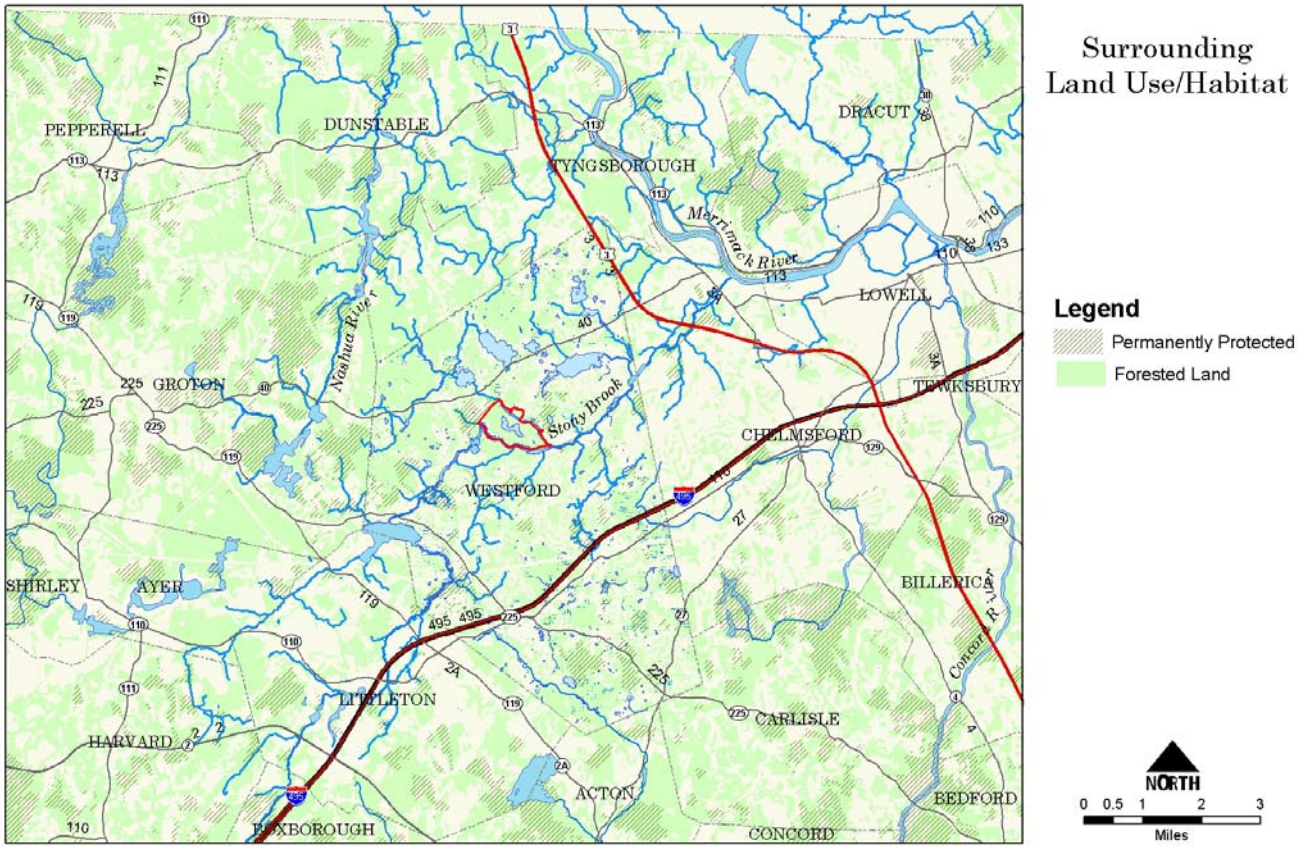
Parts of red maple swamps that have two or three months of ponding and lack fish can function as vernal pools; these sections provide important amphibian breeding habitat.

Rare species of plants associated with red maple swamps include crooked-stem aster, Gray's sedge, narrow-leaved spring beauty, hemlock parsley, broad waterleaf, great blue lobelia, gypsywort, white adder's mouth, swamp lousewort, sweet coltsfoot, swamp oats, and Britton's violet. Rare animals include Jefferson salamander, blue-spotted salamander, marbled salamander, **spotted turtle** (recently de-listed), northern harrier, elderberry long-horned beetle, Blanding's turtle, spring salamander, four-toed salamander, water-willow stem borer, and water shrew.

Open Space Resources

Open space is land set aside for conservation and some kinds of recreation. Thanks to action by the citizens of Westford, the East Boston Camps site is now a permanently protected open space. Perhaps as importantly it is part of a vast network of forest, wetlands, ponds, streams, and rivers—some protected and some not in a suburbanizing region. Its place at the confluence of Stony Brook and Keyes Brook makes it a crossroads for wildlife and thus it is part of natural wildlife corridors that connect other open spaces in Westford to large protected wildlife reservoirs along the Nashua River in Groton and Dunstable and beyond, and up Stony Brook to areas in Littleton, Harvard and beyond.

Suburban development can disrupt these connections if it occurs without regard for their existence and functions.



At a closer scale the East Boston Camps site is quickly becoming a popular destination and walkers especially enjoy the views of Burge's Pond and Stony Brook. The pristine nature of these views makes coming here especially attractive as a respite from daily life. Views across Keyes Brook and of Burge's Pond are not likely to change much in the future, however if the Stepinski land were developed the views of Stony Brook could be radically altered.

SECTION 3: SUMMARY OF OPPORTUNITIES AND CONSTRAINTS

Westford residents recognized that the East Boston Camps site was special when they unanimously voted to acquire it in 2005. They recognized its critical importance for the Town's present and future water supply; its unique ecological resources and wildlife, and its key potential for serving as a connection between other protected areas. Many also recognized its importance for its historic uses and its potential for future enjoyment. But perhaps most importantly many recognized its uniqueness as a place of unexpected peace and beauty. Any such site has opportunities and constraints—opportunities for serving the needs and desires of town residents and constraints in terms of continuing the very reasons it was protected.

The "tragedy of the commons" refers to the possibility that a resource that is shared by all is ultimately ruined when individual interests come in conflict with the common good. This concern is a major reason for the drafting of the conservation restriction that guides and limits the future uses of the site. It also has been a backdrop during the preparation of this master plan. The following is a brief listing of major opportunities and constraints for the future use of the East Boston Camps site. Future managers will undoubtedly encounter other unforeseen opportunities and constraints. The master plan committee can only hope that the goals, general guidelines, and philosophy established here will help those managers resolve future conflicts. The conservation restriction also sets up a procedure for on-going review by the Westford Land Preservation Foundation, Inc. (WLPF) of many management activities.

Opportunities

The Conservation Restriction contains a list of opportunities and purposes for the future use of the site.

Purposes

- Protect Water Supply
- Provide Open Space
- Provide Land for Recreation
- Preserve Historic or Archeological Resources
- Rehabilitation or Restoration of
    - Open Space
    - Water Resources
    - Land for Recreation
    - Historic Resources
- Protection of Wildlife and Wildlife Habitat
- Accommodate all **or** some of the following uses
    - Conservation
    - Protection of Water Recharge Area and the Quality and Quantity of Surface and Groundwater

- Active and Passive Public Recreational Uses
- Operation of an Existing Camp for Outdoor and Environmental Education, and
- Possible Future Municipal Water Supply Well

Permitted Activities and Facilities

Passive Recreation Activities

- Fishing
- Boating, limited to use of non-motorized boats. Electric watercraft allowed for certain management activities and to accommodate disabled individuals.
- Hiking
- Horseback Riding & Biking except in prohibited areas
- Cross-country Skiing
- Swimming
- Other non-motorized outdoor recreational activities that do not materially alter the landscape or degrade the site's environmental quality.

Camp Uses and Activities within the designated Camp Areas

Municipal Water Supply

- Wells along with access road, parking, and minimal accessory buildings

Management Activities

- Reasonable number of signs
- Forestry, selective cutting of trees is allowed for specific purposes
- Certain other management and maintenance activities are permitted

Constraints

The Conservation Restriction also contains a list of constraints for the future use of the site.

Permitted Activities and Facilities with Approval by WLPF

Trails

- The construction of new trails or the expansion of existing trails

Roadways

- Construction of new roadways, expansion of existing roadways, or paving of unpaved roadways

Fences

- Construction of new fences and expansion of existing fences

Parking Areas for Visitors

- Location and construction of pervious parking areas to serve trailheads and campsites
- Parking capacity shall be determined by environmental protection concerns rather than solely by use demands

Forestry

- Forest management plan and timber harvesting

- Limited timber harvesting consistent with purposes of CR and not for the sole purpose of generating revenue, is permitted

Wildlife Habitat Improvement and Management

Nuisance Vegetation Management in Water Bodies

Camp Uses and Activities
- Expansion or relocation of camp and educational structures
- Repair or replacements of septic systems servicing the camp

Miscellaneous Activities and Facilities
- Construction, maintenance, repair, and replacement of environmental education and passive recreation structures for use by the public, including but not limited to interpretive signs, exhibits, and benches
- Any new environmental education or recreation structures shall be limited in size and number and designed and located so as to be consistent with the purpose of the CR
- Use and maintenance of legal, temporary, portable, self-contained public facilities and alternative sewage disposal system

Prohibited Activities and Facilities

Recreation Activities
- Activities or facilities that are inconsistent with the purposes stated in the CR
- Motorized boats or other recreational vehicles (Note: Electric watercraft allowed for certain management activities and to accommodate disabled individuals.)

Forestry
- Timber harvesting for the sole purpose of generating revenue

Camp Uses and Activities
- Alteration of shoreline of Burge's Pond for expansion of swimming beaches

Municipal Water Supply
- An administrative office building or water treatment facility

SECTION 4: VISION, GOALS, AND OBJECTIVES

The following vision statement and goals were developed from the first public forum held in October 2006. Approximately 100 people attended and participated in facilitated discussions to develop a common vision and goals for the future of the site.

VISION STATEMENT:

The East Boston Camps property will be open and accessible to all Westford residents. The property's natural features – including the forest, wildlife and water quality – will be protected and environmental impacts of human activity will be minimized. The feeling of serenity, peacefulness and quiet will be preserved. The camp tradition will be continued in some manner. Group use of the site will be allowed and managed by the Town.

Goals and Objectives

- Preserve the natural resources and scenic beauty of the site.
- Increase access for Westford residents engaging in passive recreation activities.
- Continue summer camp programs, with a goal of including children of low-income families from the Town of Westford as well as urban areas, and other camp programs.
- Establish an appropriate management structure to ensure that the goals for the site are met.

Goal 1: Preserve the natural resources and scenic beauty of the site.

Objective 1a: Preserve the site's serenity, quiet, and peacefulness, as well as its natural beauty and pristine character.

Objective 1b: Protect water quality in Burge's Pond, Keyes Brook, and Stony Brook.

Objective 1c: Protect and increase wildlife diversity, and sustain and improve scenic vistas.

Objective 1d: Maintain and improve the health and diversity of the forest.

Objective 1e: Minimize disturbances of ecologically sensitive areas.

Goal 2: Increase access for Westford residents engaging in passive recreation activities.

Objective 2a: Ensure adequate year-round public access to the property for passive recreation.

Objective 2b: Manage and limit use of facilities and buildings by organized groups.

Objective 2c: Improve and clarify parking, vehicle access, and pedestrian circulation.

Goal 3: Continue summer camp programs, with a goal of including children of low-income families from the Town of Westford as well as urban areas, and other camp programs.

Objective 3a: Continue the tradition of the Westford schools fifth grade camp

Objective 3b: Continue the tradition of an overnight summer camp managed by an outside operator where possible and practical. Continue the tradition of a summer day camp conducted by an outside operator or by the Town of Westford.

Goal 4: Establish an appropriate management structure to ensure that the goals for the site are met.

Objective 4a: Management structure must ensure future protection of the site's natural resources and the public water supply.

Objective 4b: Management structure should take advantage of the expertise available from existing Town resources and provide for ongoing public involvement.

Objective 4c: Provide for management and control of camp and group use activities.

Objective 4d: The management structure must provide for future fundraising to support the property.

SECTION 5: FUTURE USE ALTERNATIVES

The East Boston Camps Master Plan Committee sponsored a public meeting on October 26, 2006 to help reach a consensus about a vision for the future of the East Boston Camps site in Westford. Since the Town's acquisition in March 2005, public use of the site has grown while the summer camp, founded in 1937, has been permitted to operate under the terms of the purchase and sale agreement that granted the East Boston Social Center the right to continue its operation for two years.

Approximately one hundred people attended the public meeting and participated in facilitated "focus groups" to discuss the future uses of the site. Prior to breaking into these groups there was a presentation on the site's current conditions, natural resources and history and a break during which there was an opportunity to visit stations with information about the Westford Parks and Recreation Department, the Lowell YMCA, and the East Boston Social Center. Each focus group was asked a set of the same questions to elicit opinions about the future use of the site. A write-up of the process and results is available in the appendix.

Areas of Consensus

There were three major areas of consensus:

1. Preserve the site's natural resources and beauty.
2. Improve/increase access to the site for town residents especially during the summer camp season.
3. Continue some forms of educational programs for children.

Much of the discussion revolved around the future use of the site for a summer camp with some strong opinions supporting the continuation of an overnight summer camp with an emphasis on less advantaged campers and some strong opinions supporting no future summer camp. However, the great majority supported the use of the site for the continuation of some form of camp experience so long as improved access to major areas of the site for town residents could be accommodated.

Options for Further Exploration – Camp Alternatives

Participants at the October Visioning Session were clear about wanting to continue some form of camp activity for children at the East Boston Camps site. The East Boston Camps Master Plan Committee developed three camp options for further consideration. All of these options could operate in a consolidated campsite on the north side of Burge's Pond to assure improved public access to the trails and pond on the south side of the pond. All three options could continue the very popular, weeklong 5th grade camp. Group uses could be controlled by the Town of Westford and limited to Westford residents and certain social service organizations like the boy and girl scouts with a Westford resident sponsor.

The East Boston Camps site includes about 337 acres and the actual camp facilities occupy less than 12 acres. The camp facilities, including cabins, dining halls, swimming

areas, etc. are separated into three areas (Camp Nashoba, the boys' camp; Camp Cielo, the day camp; and Camp Waki, the girls' camp) located on both sides of Burge's Pond. While there is more than enough area to include the camp and a high level of public access the current layout of the camp facilities inhibits access to some key areas. Consolidating all camp facilities on the north side of the pond could greatly improve public access and may also improve the efficiency of camp operations. Achieving the consolidation may require moving the Camp Waki cabins to an area near Camp Nashoba, moving or building a new bathhouse and demolishing or reusing the existing Camp Waki dining hall and bathhouse for group uses. The cabins could easily be moved on a flat bed truck and placed on new or moved foundation blocks.

The consolidation of the camps to the north side of the pond would greatly increase public access to the Stony Brook/Burge's Pond area allowing a loop walk that would not encounter any camp facilities. Also, many camps are located on land with complete public access and the American Camping Association makes no special requirements for camps in public settings. It does note that camp staff in such settings need some training in how to deal with a visitor to the site who approaches a group of campers and that campers should be escorted by camp staff at all times when they are in areas open to the public. If required for security purposes, the road through the camps on the north side of Burge's Pond could be closed to the general public during the camp season while providing public access to the south side of the pond.

The following options were presented for discussion at the February 1, 2007 public forum.

Option 1: Traditional Overnight Camp/Day Camp with Improved Public Access

One option is to continue operating the overnight camp and day-camp by an outside operator that could provide opportunities for East Boston and Chelsea campers and for Westford campers in a manner similar to the way the camp has operated for the past seventy years, but limited to the north side of Burge's Pond.

Programs: There could be seven to eight weeks of camp divided into one-week and/or two-week sessions. The overnight camp for up to approximately 84 boys and girls could be run in a consolidated Camp Nashoba site with a boys' cluster and a girls' cluster of cabins. The contracted camp operator could also run coeducational day camp sessions at Camp Cielo. Alternatively, the girls' cluster could be located at the Camp Cielo camp area. There could also be a one-week counselor training session at the beginning of the summer.

Staff: Staffing for the camps is regulated by the state. Existing buildings provide accommodations for a limited number of overnight camp staff.

Facilities: Camp Cielo, the existing day camp, has 9 buildings including a dining hall/activities building, bathhouse, five cabins, a store, and the director's residence; with

a total of 4,094 square feet. The day camp could operate out of these buildings and use the day camp beach.

The five cabins located at Camp Waki, the current girls' camp, could be moved to the north side of Burge's Pond. A new girls' bathhouse might be needed to serve these cabins. Existing septic systems are capable of handling the additional tie-in of the new bathhouse that could accommodate up to 42 campers. Camp Nashoba currently has 17 buildings including the boathouse, main lodge, infirmary, office, six cabins, bathhouse, cook's residence, staff duplex, activities lodge, and three storage/ maintenance buildings, with a total of 11,191 square feet. The addition of the girls' cabins and bathhouse could bring the total square footage to 13,646. Overnight boys and girls could share the main lodge and other facilities.

Capital Costs

Construct new accessible girls' bathhouse and connect it to existing septic system:

Estimated Cost: $60,000 to $75,000

Potential Sources of Funds: Fundraising, grants, Town of Westford, in-kind contributions, camp operator, use fees.

Note: This cost may not be necessary in initial phases of implementation. The existing bathhouses and septic system at the current day camp site, Camp Cielo, has the capacity to accommodate up to 32 overnight campers.

Move five girls Cabins from Camp Waki to Camp Nashoba:

Estimated Cost: $12,000 to $15,000

Potential Sources of Funds: Town of Westford—Note this cost is incurred to assure improved public access to the south side of Burge's Pond and is approximately equal to the cost of demolishing the cabins.

Meet Town's Accessibility Commitments for main lodge, day-camp lodge, boys' bathhouse, infirmary (including accessible toilet), and two cabins:

Estimated Cost: $30,000 to $35,000

Potential Sources of Funds: Fundraising, grants, Town of Westford, in-kind contributions, camp operator, use fees.

Operating Costs

All operating costs associated with the day camp and overnight camp, including the costs of maintaining the buildings, could be paid by camp fees, group use fees, and/or grants.

Option 2: Westford Parks and Recreation Department Day Camps with Improved Public Access

A second option could be to have the Westford Parks and Recreation Department operate a day camp utilizing the camp facilities on the north side of the pond. This town-run day camp could recruit campers from Westford and surrounding communities, and make an effort to have 25% low-income campers from East Boston and Chelsea.

Programs: The Westford Parks and Recreation Department could run seven to eight weeks of day camp divided into one-week and/or two-week sessions. There could be an Environmental Education Camp and sections of the Town's existing "Kids" program that runs at other facilities around Town. The Department estimates that the program would eventually grow to service 100 boys and girls. Campers could be recruited from Westford and surrounding communities, and 25% of the camper slots could be targeted for low-income campers from East Boston and Chelsea. There could also be a one-week counselor training session at the beginning of the summer.

Staff: Staffing for the camps is regulated by the state. The Parks and Recreation Department also has medical personnel and maintenance staff that could be used to supplement the maintenance duties of the site's caretaker.

Facilities: Camp Cielo, the existing day-camp, has 9 buildings including a dining hall/activities building, bathhouse, five cabins, a store, and the director's residence; with a total of 4,094 square feet. Camp Waki, the existing girls' camp, would be removed or partially removed if the lodge and bathhouse are retained for group use. Camp Nashoba has 17 buildings including the boathouse, main lodge, infirmary, office, six cabins, bathhouse, cook's residence, staff duplex, activities lodge, and three storage/ maintenance buildings, with a total of 11,191 square feet. All together there would be 15,586 square feet of buildings available for use by the Westford Parks and Recreation Department day camp after the removal of the buildings on the south side of Burge's Pond.

Capital Costs

Meet Town's Accessibility Commitments for main lodge, day-camp lodge, bathhouses, infirmary, and two cabins:

Estimated Cost: $25,000 to $30,000

Potential Source of Funds: Fundraising, grants, Town of Westford, in-kind contributions, camp operator, use fees.

Operating Costs

All operating costs associated with the day camp, including the costs of maintaining the buildings, could be paid by camp fees, group use fees, and/or grants.

Option 3: Traditional Overnight Camp and Parks and Recreation Department Day Camp with Improved Public Access

A third option was suggested at the Visioning Session by several discussion groups. It is a combination of the first two options. An outside operator could provide opportunities for low-income campers and for Westford campers in an overnight camp similar to the way the camp has operated in the past. The day camp could be run by the Westford Parks and Recreation Department and could make an effort to recruit day-campers from Westford, surrounding communities and East Boston and Chelsea.

Programs: There could be seven to eight weeks of camp divided into one-week and/or two-week sessions. The overnight camp, for up to approximately 84 boy and girls, could

be run in a consolidated Camp Nashoba site with a boys' cluster and a girls' cluster of cabins by a contracted operator. The Westford Parks and Recreation Department day camp sessions could be run at Camp Cielo and serve younger boys and girls. There could also be one-week counselor training session at the beginning of the summer.

Staff: Staffing for the camps is regulated by the state. Existing buildings provide accommodations for a limited number of overnight camp staff.

Facilities: Camp Cielo, the day camp, has 9 buildings including a Dining Hall/Activities Building, Bathhouse, five Cabins, a Store, and the Director's Residence; with a total of 4,094 square feet. The day camp could operate out of these buildings and use the day-camp beach.

The five Cabins located at Camp Waki, the current girls' camp, could be moved to the north side of Burge's Pond. A new girls' bathhouse could be needed to serve these cabins. Existing septic systems are capable of handling the additional tie-in of the new bathhouse. Camp Nashoba currently has 17 buildings including the boathouse, main lodge, infirmary, office, six cabins, bathhouse, cook's residence, staff duplex, activities lodge, and three storage/ maintenance buildings, with a total of 11,191 square feet. The addition of the girls' cabins and bathhouse could bring the total square footage to 13,646. Overnight boys and girls could share the main lodge and other facilities.

Capital Costs

Construct new accessible girls' bathhouse and connect it to existing septic system at Camp Nashoba:

Estimated Cost: $60,000 to $75,000

Potential Sources of Funds: Fundraising, grants, Town of Westford, in-kind contributions, camp operator, use fees.

Note: This cost may not be necessary in initial phases of implementation. The existing bathhouses and septic system at the current day camp site, Camp Cielo, has the capacity to accommodate 32 overnight campers.

Move five girls' cabins from Camp Waki to Camp Nashoba:

Estimated Cost: $12,000 to $15,000

Potential Source of Funds: Town of Westford, fundraising, in-kind contributions—Note this cost is incurred to assure improved public access to the south side of Burge's Pond and is approximately equal to the cost of demolishing the cabins.

Meet Town's Accessibility Commitment for main lodge, day-camp lodge, boys' bathhouse, infirmary (including accessible toilet), and two cabins:

Estimated Cost: $30,000 to $35,000

Potential Sources of Funds: Town of Westford, fundraising, in-kind contributions.

Operating Costs
All operating costs associated with the day camp and overnight camp, including the costs of maintaining the buildings, could be paid by camp fees, group use fees, and/or grants.

Evaluation of Camp Options
These three options for the future of the summer camps were presented at a second public meeting on February 1, 2007. About forty people attended and discussed the camp options and other management alternatives in facilitated small groups. Each focus group was asked a set of the same questions to solicit opinions about the future management of the site and the three camp options. A write-up of the process and results is available in the appendix.

There was a very clear consensus in support of the continuation of an overnight camp. Option 1, the traditional overnight camp/day camp, and Option 3, an overnight camp run under a contract with an outside contractor and a Westford Parks and Recreation Department run day camp, were effectively tied: Option 2, a Westford Parks and Recreation Department run day camp without an overnight camp was very clearly a third choice for a large majority of participants.

Other Use and Management Alternatives
Several other use and management alternatives were presented at the February public forum, including several actions to preserve or enhance the site's natural resources, increase public access, and develop a management structure for the future.

Preserve/Enhance Natural Resources Issues
Many participants at the Visioning Session in October commented on the area's beauty and value as a place of peace and quiet. They also noted the pristine quality and fragility of Burge's Pond. The spring-fed pond has no inlet or outlet, which means that contaminants can only be introduced by the activities of people or animals. Fortunately, the Conservation Restriction prohibits many activities that could compromise these values (See Section 3: Opportunities and Constraints). For example all motorized vehicles are prohibited except to facilitate approved management activities, provide access to the camps, or for handicapped access.

Burge's Pond Preservation
One of the major threats to the pristine character of Burge's Pond would be the accidental introduction of invasive weeds. Eurasian and variable leaf milfoils are among several invasive, aquatic plants that are often introduced from plant fragments that adhere to the bottom of boats that have been in infested waters. Once introduced these plants spread rapidly and often choke a water body and they can be very expensive to control.

What to do About Boat Access? The Master Plan Committee reviewed the following options for managing boat access to Burge's Pond and help prevent the introduction of invasive weeds:

Allow carry-in boats only
Allow boats and trailers to access the pond on a permit basis
Rent boats that are used only on Burge's Pond
Prohibit all boat access

Prohibiting all boat access, if it could be enforced, would almost guarantee that human activity would not introduce invasive weeds, but it would also greatly reduce enjoyment of the pond by fishermen and many others. Carry-in boats could still have weed fragments but their smaller size and less frequent use would minimize the likelihood of an accidental introduction. A carry-in/carry out policy has been in effect for the last two years.

The majority of participants at the February meeting stated they would like to continue the current policy of "carry in/carry out" as a way of limiting the potential for invasive weed contamination. Some residents advocated for more limits than currently exist and one wished for easier access than is currently enjoyed.

Wildlife Management

Several management practices could enhance the attractiveness of the site for a variety of wildlife. All animals have five basic requirements—food, water, cover, nesting sites, and space. In addition to providing these basic requirements a site will attract a larger diversity of wildlife species if it provides a diverse set of habitat components. These components can include both vegetative and structural diversity. Vegetative diversity can be provided by a variety of food plants while structural diversity can be increased by leaving dead snags, providing nest boxes and brush and rock piles.

The Conservation Restriction sets up a process to review and approve wildlife management activities in the future. For example, beaver activity is a threat to some of the trees on the edges of the brooks and pond. Wrapping tree trunks with wire can be an effective method of protecting individual trees to help preserve vegetative diversity.

A wildlife management expert, Sue Morse, was hired to recommend actions to protect and enhance the site for wildlife. Her recommendations will be summarized in the Concept Plan.

Forest Management

The existing forest at the East Boston Camps is largely the result of the 1938 hurricane, past management (forest thinning about every 20 years), and the underlying soils. Forest management can be used to enhance the wildlife diversity and aesthetics of a site. A forest management plan is being prepared. A recently completed forest inventory indicates that much of the East Boston Camps site's forest is suitable for some degree of selective thinning that would improve vistas, increase age and structural diversity of the forest, and create a more open and well-spaced appearance. The forest management plan may also recommend creating some small clearings to encourage berries and other food plants as a way of increasing use of the area by wildlife.

The large majority of the participants at the February meeting were in favor of implementing a forest management plan at the East Boston Camps property. Many expressed concerns regarding over-managing and clearing too much of the property, but were supportive of a good plan done by a qualified person. Such a plan is being prepared. It will include guidelines for protecting vernal pools and other sensitive areas.

Improved Public Access Issues

Participants at the October Visioning Session were clear about wanting improved access to the East Boston Camps trails, views, and special places. Since the Town purchased the land in 2005 walkers, cross-country skiers, fishermen, and others have increasingly enjoyed this spectacular natural area.

Improve Parking and Circulation

To address poor drainage and to make the site more inviting and minimize environmental impacts; grading, natural drainage, gravel, and demarking with log wheel stops can improve the existing parking area, near the Depot Street entrance to the site. The number of spaces can be maintained at approximately 20-25 cars, with designated handicapped spaces. Overflow parking could be provided in the grassy area and along the access driveway. Access to the remainder of the site could be limited to authorized vehicles only, with a gate/chain to indicate areas closed to unauthorized vehicles, and to maintain the conservation values of the site, preserve its quiet enjoyment, and prevent vandalism and trash. A centralized trailhead with a relocated information kiosk will help orient visitors.

Improve Handicapped Access

Developing a set of facilities for the disabled is another important means for increasing public access. These facilities begin with handicapped parking at the entrance and a short crushed stone trail with a gentle grade and a bench or two. The trail could begin at the centralized trailhead and follow an existing trail to the “ice house beach” where there could also be a fishing dock.

Clarification of Trail and Sign System

Several minor changes to the trail and sign system can improve visitor access and orientation. A centralized trailhead, where all trails start, will serve as point of orientation and beginning. A welcome kiosk can provide information about the site, regulations, and a trail map. Because of a lack of a trailhead, numerous trails now begin in the general parking/entrance area. Several of these trails could be closed to reduce visitor confusion and others re-routed to tie into the centralized trailhead. A 2-mile long main loop skirting Stony Brook and the south side of Burge’s Pond (the areas with the most spectacular views) should be prominently marked to serve as the major walking route.

A large majority of participants at the February meeting were in favor of making parking and circulation improvements, but emphasized the need to be mindful that these did not negatively impact the property and some made suggestions regarding the type of improvements that might help improve access while protecting the environment. Most

felt that the number of parking spaces should remain the same. Specific comments included the following:

- Parking area should make it obvious where you should park
- Include a bike rack
- Trails should be marked and keyed to a trail map at kiosk with lengths delineated; develop trail management system
- Increase obstructions to block vehicles (e.g. boulders, logs, gates, chains)
- Install gated barriers instead of chains tied to trees
- Whenever possible, including group use, all cars should park in parking area and not drive up the roads

Remove Camp Activities From South Side of Burge's Pond

Removing all of the camp activities from the south side of Burge's Pond will go far towards providing the public with access to the majority of the site without encountering areas frequented by overnight or day campers. For purposes of estimation the removal of the camp activities is assumed to require demolishing and removing the girls' camp dining lodge, bathhouse, five cabins, and tennis court and a minor amount of site restoration (re-grading and seeding). The two options for the future of the overnight camps could move the cabins to the north side of Burge's Pond.

Another option could be to retain the dining lodge and bathhouse for use by the public. This could require some initial investment and ongoing maintenance.

The Master Plan Committee and participants at the February public forum broadly supported this change in the location of the camp facilities. The renovation of the Camp Waki bathhouse and lodge for public use provides an opportunity for group use by the public during the summer camp season on the south side of Burge's Pond.

Manage Access to Camp Facilities by Group Users

Group use of the camp facilities, both overnight use and day use, was a concern expressed at the October meeting. In the past two years, as public use has increased, there has been a perception that there are sometimes conflicts between public access and group use of the camp facilities. Consolidating all overnight camp facilities on the north side of Burge's Pond will help reduce potential conflicts. In the past group use was managed by the East Boston Social Centers. Town management of group use was an objective of participants at the October Visioning Session. The Master Plan Committee presented an outline of a group use policy at the February meeting. The draft policy would be managed by the Town and include the following provisions:

- Institute a permitting process including a rental fee or fees
- Prohibit alcohol and smoking (same as in all other town-owned properties)
- Require sponsorship by a Westford resident

A large majority of the participants at the February meeting expressed their support for town-managed group use of the camp facilities. Specific comments included the following:

- Group use should not constitute an exclusive use of the property, public should still be able to walk loop around the pond even along the trail through the north camp
- Should have a different fee structure, i.e. lower rate for non-profit groups
- Should require a security deposit
- Good management is key
- Want a restriction on the number of vehicles going up the road, ideally none
- Should have a limit on the number of people that can attend a group function
- Want a limit on the number of rentals, e.g. rent it for a set percent of the available weekends

Management Structure

Good management of the East Boston Camps site is critical for its future and for the continuing enjoyment of visitors and campers. There is a need to define an appropriate management structure for the property in order to ensure that the goals are implemented and that the property is appropriately cared for over time.

The East Boston Camps Master Plan Committee has considered several criteria for developing a management scheme that would accomplish the management goals. These criteria include:

- Importance of protecting the site's natural resources
- Water supply protection
- Management of camp and group use activities
- The existing expertise of Town resources
- Continuing public involvement and potential fundraising

State law limits the entities in Town government that can own land. The relevant alternatives are the Board of Selectmen, Conservation Commission, Parks and Recreation Department, and the Water Department. These entities can choose to delegate maintenance and scheduling of the property they own to another entity, for example, the Conservation Commission has delegated management of the beaches to the Parks and Recreation Department.

The East Boston Camps Master Plan Committee has considered a management structure based in part on a model familiar to the Town (e.g. the Town Beaches). The proposed structure is:

- Conservation Commission would be the official owner and managing body with strong participation from Parks and Recreation Department.
- An Advisory Board could meet quarterly or as required. Its sole focus would be this property, potential membership could include: Westford Land Preservation Foundation (or holder of Conservation Restriction), Community Preservation Committee, Parks and Recreation Department, Water Department, Conservation Commission, and "at-large members". Its role would be to facilitate on-going communication about the management of the property and serve as a sounding board for policy changes.

- A “friends of group” would be an open membership body that would help with fund-raising and provide a source of volunteers.

A large majority of the participants at the February meeting expressed their general support for this management structure. Specific comments included the following:

- Some participants felt that there should be a separate advisory committee as outlined in the Committee’s policy consideration; others did not
- Need to raise outside money through Friends group

SECTION 6: CONCEPT PLAN AND RECOMMENDATIONS

Section 5 described a variety of alternatives for the future use and management of the East Boston Camps site. This section will detail a concept plan, including future uses/ program plan, a facilities plan, a habitat/forestry management plan, a management plan, and a business/marketing plan. The concept to be described is Westford's fortune for having such a gem. It offers so many opportunities for passive recreation, group uses, conservation, protection of the Town's water supply, and continuing the tradition of more than seventy years of providing a sometimes life-changing experience for urban youth.

Program Plan

The vision, stated in Section 4, outlined the foundation of the program plan.

- Those natural features – forests, wetlands, wildlife, and surface and ground water resources – will be protected for the enjoyment of future generations and the environmental impacts of human activity will be minimized.
- The feeling of serenity, peacefulness, and quite will be preserved.
- Westford residents will have year-round access to enjoy the site's natural features.
- The camp tradition will be continued, and
- Camp facility group use will not impede access to the site by Westford residents.

Some of these program elements will also be expressed in more detail in the facilities plan, management plan, and habitat and forest management plan.

Goal 1: Preserve the Natural Resources and Scenic Beauty of the Site.

There will be a habitat and forest management plan designed to preserve and enhance the site's natural resources (see subsection to follow). Participants at the February public meetings endorsed the concept of limited forest management and other activities to enhance wildlife habitat. Balancing demands for public use and preserving the site's natural resources will require on-going vigilance by the managers.

Over and over participants at the public meetings mentioned the importance of having a place, so close to home, where they could enjoy an escape from daily routines. Again, balancing the demands for public use and preserving this less tangible aspect of the site's uniqueness will require on-going efforts by the site's managers. Limiting vehicular access to the parking area and minimizing use of the roads by vehicles is a key to preserving this aspect of the public's enjoyment of the site.

Policy 1a: Take actions to preserve the site's serenity, quiet, and peacefulness, as well as its natural beauty and pristine character.

Implementation:

- The Conservation Commission, the East Boston Camps Advisory Committee[1], and the holder of the Conservation Restriction shall engage in a program of public information and education about the natural resource assets of the property, and how the Conservation Restriction and other actions can protect those assets for future enjoyment.
- Enforce the Conservation Restriction by making use of the site's Caretaker, the holder of the Conservation Restriction, and the Westford Police Department, when necessary.
- Limit access on roads to authorized vehicles only. Provide signs indicating these areas are closed to unauthorized vehicles.
- Minimize use of roads by authorized vehicles.
- There shall be one central unpaved parking area.
- Roadways shall remain unpaved where possible and practical.
- Establish and maintain a "pack it in – pack it out" policy for managing trash and litter.

Policy 1b: Take actions to protect water quality in Burge's Pond, Keyes Brook, and Stony Brook.

Implementation:

- Establish an ongoing program to monitor water quality, particularly the potential presence of invasive aquatic weeds.
- Continue a "carry-in, carry-out" policy for boating[2] to reduce the possibility of introducing invasive weed species to Burge's Pond.
- There will be no organized town beach at the site.

Policy 1c: Take actions to protect and increase wildlife diversity, and sustain and improve scenic vistas.

Implementation:

- Implement wildlife management actions proposed by Sue Morse, Morse and Morse Forestry and Wildlife Consultants. (See Habitat and Forest Management Plan, page 6-10, and Sue Morse Report in Appendix 10.)
- Establish a volunteer stewardship group to help monitor and maintain the property.
- Establish a 600-foot sensitive wildlife area around vernal pools. This area does not extend beyond the master plan area and is intended to maintain suitable upland habitat, but does not prohibit maintenance of roads, trails or forest management activities.

Policy 1d: Take actions to maintain and improve the health and diversity of the forest.

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[1] To be established. See Goal 4 on management structure.

[2] Only small boats that may be carried in to the pond will be permitted.

Implementation:

- Implement the forest management plan. (See Habitat and Forest Management Plan, page 6-10, and Forest Management Plan by Benjamin Forestry Services, Inc.)

Policy 1e: Take actions to minimize disturbances of ecologically sensitive areas.

Implementation:

- Establish and follow guidelines of the "Use Suitability Designation" map (See page 6-15).
  - Designate areas appropriate for trails and other activities (Suitable)
  - Limit uses adjacent to wetlands and on steep slopes (Limited)
  - Protect ecologically sensitive areas (Protected)
    - Exclude future trails and most other activities
  - Protect vernal pools and wetlands (VP Areas)
    - Allow maintenance activities, trails and interpretation of natural resources
    - Allow carefully controlled forestry operations

Goal 2: Increase Access for Westford Residents Engaging in Passive Recreation Activities.

The participants at the public meetings endorsed several improvements (to be described in the facilities plan) designed to enhance public access and enjoyment of the site and minimize the environmental impacts of human activity. Those improvements included the following:

- Removal of camp activities from the south side of Burge's Pond
- Improved parking and trailhead
- Handicapped access
- Clarification of trail and sign system
- Town management of group use.

Policy 2a: Ensure adequate year-round public access to the property for passive recreation.

Implementation:

- All summer camp activities shall be located on the north side of Burge's Pond leaving the south side available to the public year-around.
- If capacity is required, sleeping cabins may be moved from the south side of the pond to the designated areas on the north side of the pond. Bath facility and lodge on the south side of the pond may be retained and remodeled for group uses or may be demolished.

Policy 2b: Manage and limit use of facilities and buildings by organized groups.

Implementation:

- Regulate organized group use of building facilities and large group use of property through a permit system that includes user fees.

Group Use: The Conservation Commission, working with the Parks and Recreation Department, will manage group use of the site's facilities under a permit system (see Management Plan). This provision of the program allows families, non-profit groups, businesses, and civic organizations to utilize the camp facilities when the camp is not in session.

Policy 2c: Improve and clarify parking, vehicle access, and pedestrian circulation.

Implementation:

- Improve the existing gravel parking area.
- Improve grading and drainage and mark handicap spaces.
- Provide bike racks.
- Limit motorized access on roads to authorized vehicles only. Provide signs indicating that roads are closed to unauthorized vehicles.
- Minimize the number of camp vehicle trips to limit negative impact on the property.
- Roadways shall remain unpaved where possible and practical.
- Establish a central trailhead, clarify trail system, and mark trails.
- Relocate the welcome kiosk to the new central trailhead at the entrance and include a trail map, regulations governing the property and information about the site.
- Delineate and clearly mark the existing loop trail on the south side of the property and encourage its use by the public when camp is in session.
- Develop a trail management and maintenance system.

Parking, orientation, and trails are key elements of assuring year round public access. The facilities will be described in more detail in the Facilities Plan. Visitors coming to enjoy the site have a right to expect:

- that they are welcome;
- that the parking area and trailhead are attractive and easy to use;
- that there will be a trail map and that the trails are safe and well marked;
- that they have nothing to fear; and
- that the area is being well managed.

There are other programs that could facilitate public access and passive recreational uses. Some possibilities for the future are:

- Periodic volunteer-led nature walks
- Volunteer work weekends to maintain trails, signs, and other visitor facilities

Goal 3: Continue summer camp programs, with a goal of including children of low-income families from the Town of Westford as well as urban areas, and other camp programs.

Having both an overnight camp and day camp was clearly supported by a majority of the participants at both public meetings. Working with a camp operator who would recruit low-income campers from East Boston and Chelsea or other urban areas as well as from Westford and surrounding communities was also highly supported. Continuing the Westford schools 5th grade camp was very highly supported.

Policy 3a: Continue the tradition of the Westford schools fifth grade camp.

Implementation:

- Support the Westford Public School system in their continuing efforts to carry on an educational outdoor camp.

5th Grade Environmental Science Camp Program: The 5th grade camp that for 30 years has enabled students to make the camps their classroom for one week each spring, would continue as in the past.

Policy 3b: Continue the tradition of an overnight summer camp managed by an outside operator where possible and practical. Continue the tradition of a summer day camp conducted by an outside operator or by the Town of Westford.

Implementation:

- The camp operator shall make every effort to provide camp opportunities for low-income, urban children with a goal of at least 20 to 25% of the camper population being in this category.
- All camp operations shall be conducted so as to minimize the negative impact on the land and camps should include an environmental education component.
- Overnight and day camp facilities shall be limited to the north side of Burge's Pond and be conducted for up to eight weeks during the summer (plus a staff training session). If required for security purposes, the road through the camps may be closed to the general public during the camp season.
- The maximum number of campers at any given time shall not exceed 200, with the exception of the Westford Public School's camp.
- Camp and group user fees, donations and/or grants shall pay for all camp operating costs and the costs of maintaining the buildings used for camp activities.
- If capacity is required, sleeping cabins may be moved from the south side of the pond to the designated areas on the north side of the pond.

Summer Camps Program: The summer camps would include seven to eight weeks of camp divided into one-week and/or two-week sessions. The overnight camp for up to approximately 84 boys and girls could be run in a consolidated Camp Nashoba site with a boys' cluster and a girls' cluster of cabins or utilizing some of the area at Camp Cielo. There could also be coeducational day camp sessions at Camp Cielo. A one-week counselor training session could also be held at the beginning of the summer. The number of overnight and day campers is set by the capacities of the existing septic

systems at Camp Nashoba and Camp Cielo. There was a consensus that no more than 200 campers would be allowed on the site at any one time with the exception of the Westford Schools' 5th grade camp. Any increase in the number of campers would require modifications of existing septic systems and trigger the Conservation Restriction approval process.

Facilities Plan

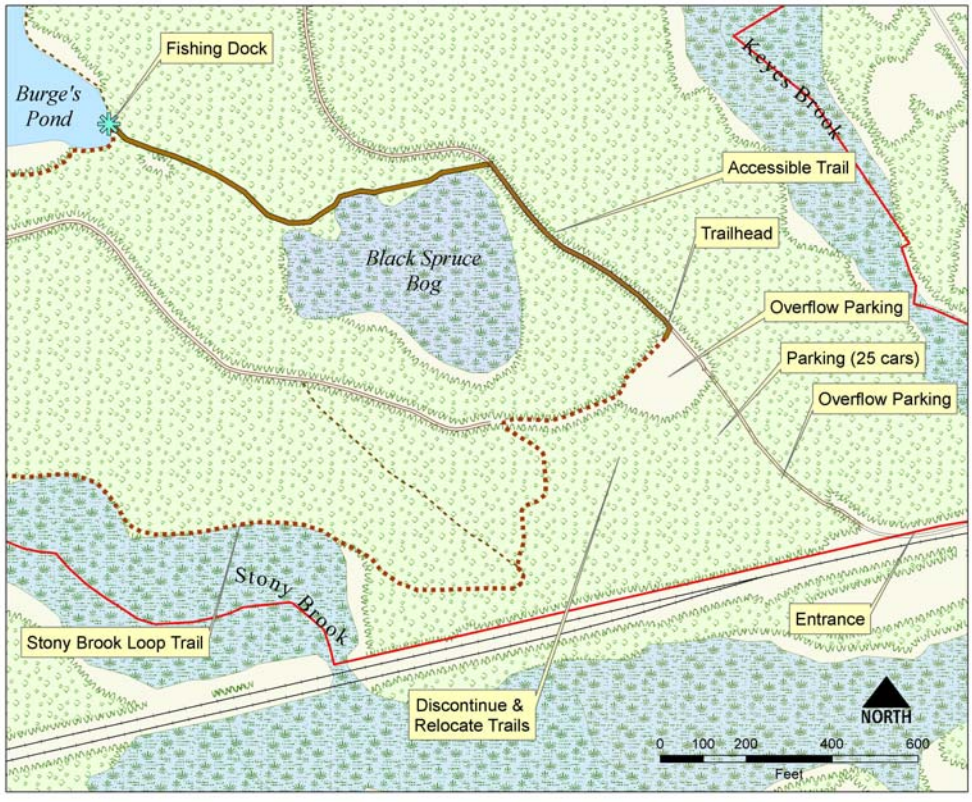
The facilities plan includes provisions for pubic access and summer camp/group use facilities.

Public Access Facilities

Improve Parking and Circulation

To address poor drainage and to make the site more inviting and minimize environmental impacts; grading, natural drainage, gravel, and demarking with log wheel stops can improve the existing parking area, near the Depot Street entrance to the site. To control the number of visitors, the number of spaces can be maintained at approximately 20-25 cars, with designated handicapped spaces. Overflow parking, for special events, can be provided in the grassy area and along the access driveway. Access to the remainder of the site will be limited to authorized vehicles only, with a signs/gate/chain to indicate areas closed to unauthorized vehicles, and to maintain the conservation values of the site, preserve its quiet enjoyment, and prevent vandalism and trash. A centralized trailhead with a relocated information kiosk will help orient visitors.

Estimated Cost: $25,000 to $36,000



Improve Handicapped Access

Developing a set of facilities for the disabled is another important means for increasing public access. These facilities would begin with handicapped parking at the entrance and a short crushed-stone trail with a gentle grade and a bench or two. The trail would begin at the centralized trailhead follow the existing trail along the black spruce bog to the "ice house beach" where there would also be a fishing dock.

Estimated Costs:
accessible trail—$22,000 to $28,000
fishing dock—$5,000 to $7,000

Note that there may be grants available to help with these costs.

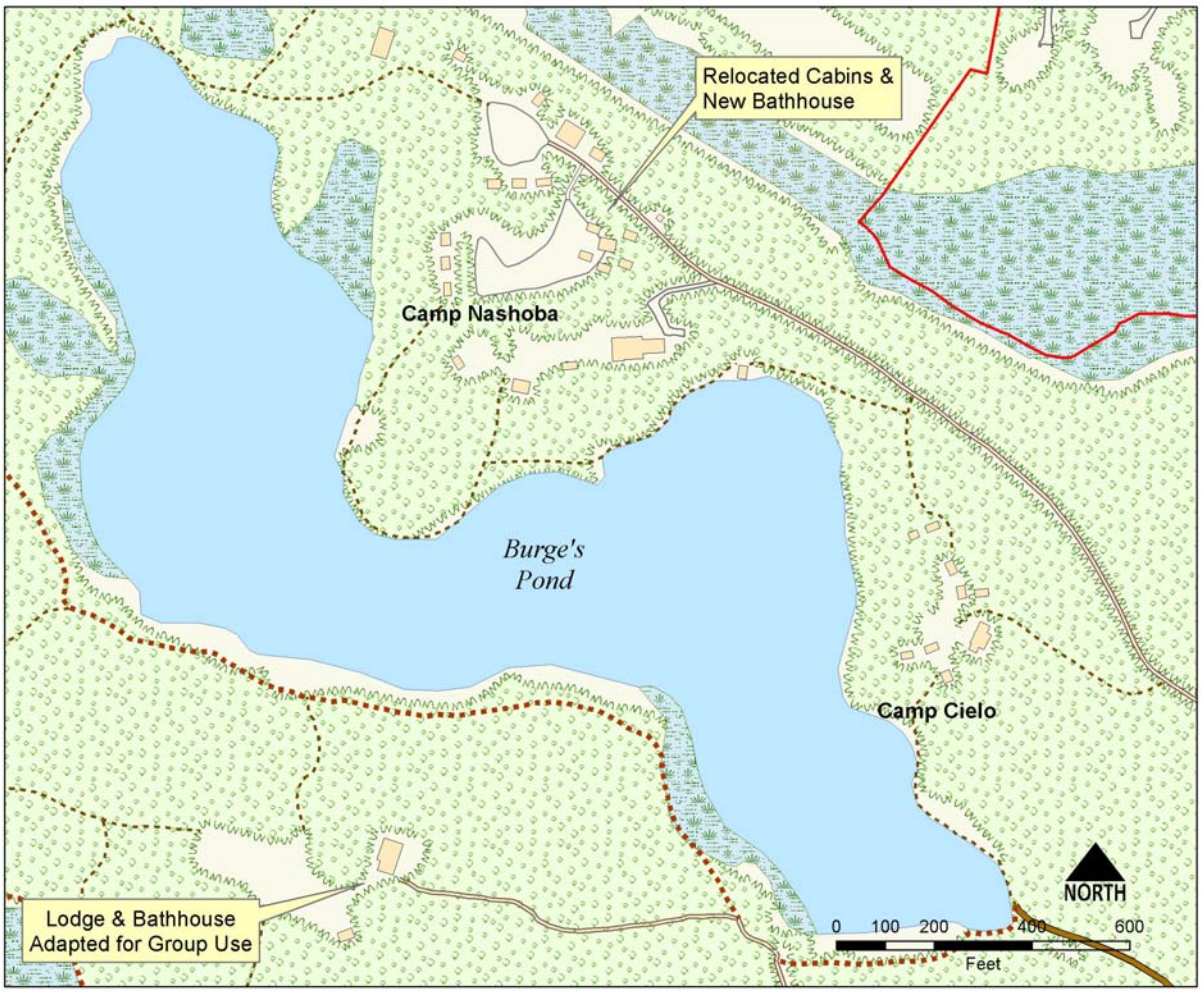
Clarification of Trail and Sign System

The plan on the preceding page illustrates several minor changes to the trail and sign system that can improve visitor access and orientation. A centralized trailhead, where all trails start, will serve as a point of orientation and beginning. The relocated welcome kiosk can provide information about the site, regulations, and a trail map. Because of a lack of a trailhead, numerous trails now begin in the general parking/entrance area. Several of these trails should be closed to reduce visitor confusion and others re-routed to tie into the centralized trailhead. A 2-mile long main loop skirting Stony Brook and the south side of Burge's Pond (the areas with the most spectacular views) should be prominently marked to serve as the major walking route. Relocating or better defining some trails passing through the camp areas can also help separate camp/group use areas from the public trail system.

Estimated Cost: $3,000 to $4,000

Remove Camp Activities From South Side of Burge's Pond

Removing all of the camp activities from the south side of Burge's Pond will go far towards providing the public with access to the majority of the site without encountering areas frequented by overnight or day campers.



For purposes of estimation the removal of the camp activities is assumed to require moving or demolishing the five cabins and retaining or demolishing the girls' camp dining lodge, bathhouse, and tennis court and a minor amount of site restoration (re-grading and seeding). The consolidation of the overnight camps would move the cabins to the north side of Burge's Pond if capacity is required.

Estimated Cost: $12,000 to $35,000

Retaining the dining lodge and an updated bathhouse for use by the public would provide a group use area that would be available during the camp season. This could require some initial investment and ongoing maintenance.

Estimated Initial Cost: $35,000 $50,000

Camp/Group Use Facilities

Camp Cielo, the existing day camp, has 9 buildings including a dining hall/activities building, bathhouse, five cabins, a store, and the director's residence; with a total of 4,094 square feet.

The five cabins located at Camp Waki, the current girls' camp, could be moved to the north side of Burge's Pond. A new girls' bathhouse might be needed to serve these cabins. Existing septic systems are capable of handling the additional tie-in of the new bathhouse that could accommodate up to 42 campers, resulting in a total of 84 campers at Camp Nashoba. Camp Nashoba currently has 17 buildings including the boathouse, main lodge, infirmary, office, six cabins, bathhouse, cook's residence, staff duplex, activities lodge, and three storage/ maintenance buildings, with a total of 11,191 square feet. The addition of the girls' cabins and bathhouse would bring the total square footage to 13,646. Overnight boys and girls could share the main lodge and other facilities.

Considering that the buildings are seventy years old, they are in relatively good condition. However, it should be noted that none of the buildings meet Americans with Disabilities Act (ADA) accessibility requirements. Building systems, such as plumbing, electricity, windows and doors, etc. were found to range from poor to good condition when evaluated by a consulting firm. Making the bathhouses, main lodge, and one boys' cabin and one girls' cabin accessible would make the facilities accessible.

There are currently three swimming beaches at the camps—one each at Camp Cielo, Camp Nashoba, and Camp Waki on the south side of Burge's Pond. Moving the girls to the north side of Burge's Pond would mean only two beaches would be needed for the summer camps.

Costs and Sources of Funds for Camp and Group Use Facilities

It is important to note that one of the points of consensus at the Visioning Session in October was that costs to the Town of Westford should be minimized. The estimates of capital costs presented below are investments that are required to continue the camp operation (another point of consensus). Not all of these investments would have to be made at one time—many can be scheduled over several years. Much of the money for these investments can come from a source other than tax revenues. They might come from program fees, group use rental fees, grants, in-kind contributions, or from a not-for-profit organization set up to benefit the East Boston Camps property. It should also be noted that all estimates are very preliminary and additional design work will be needed before final budgets are determined. They assume that all work is contracted.

Capital Costs

Construct new accessible girls' bathhouse and connect it to existing septic system:

Estimated Cost: $60,000 to $75,000

Potential Sources of Funds: Fundraising, grants, Town of Westford, in-kind contributions, camp operator, use fees.

Note: This cost may not be necessary in initial phases of implementation. The existing bathhouses and septic system at the current day camp site, Camp Cielo, has the capacity to accommodate up to 32 overnight campers.

Move five girls Cabins from Camp Waki to Camp Nashoba:

Estimated Cost: $12,000 to $15,000

Potential Sources of Funds: Town of Westford—Note this cost is incurred to assure improved public access to the south side of Burge's Pond and is approximately equal to the cost of demolishing the cabins.

Meet Town's Accessibility Commitments for main lodge, day-camp lodge, boys' bathhouse, infirmary (including accessible toilet), and two cabins:

Estimated Cost: $30,000 to $35,000

Potential Sources of Funds: Fundraising, grants, Town of Westford, in-kind contributions, camp operator, use fees.

Operating Costs

All operating costs associated with the day camp and overnight camp, including most of the costs of maintaining the buildings, would be paid by camp fees, group use fees, and/or fundraising and grants.

Habitat and Forest Management Plan

Perhaps the most important action to encourage wildlife at the East Boston Camps site in the future will be to protect its connection to other natural areas in Westford and adjacent towns. A general goal for ecological management of the East Boston Camps site is to encourage biological diversity by making the site attractive to as wide an assortment of native wildlife (birds, mammals, reptiles, amphibians, insects, etc.) as feasible within the constraints of the site's size and reasonable management and cost limitations. Specific objectives for ecological management are to:

- Increase wildlife food sources.
- Increase the diversity of cover types.
- Provide a variety of nesting or denning sites.

Many of the methods for achieving these objectives involve relatively simple measures that entail little or no expense or on-going maintenance.

Habitat Improvement for Wildlife

All animals have five basic requirements—food, water, cover, nesting sites and space. In addition to providing these basic requirements a site will attract a larger diversity of wildlife species if it provides a diverse set of habitat components. These components can include both vegetative and structural diversity.

Habitat Components

Vegetative Components	Structural Components
Conifers	Water
Grasses & legumes	Dead snags
Butterfly, bee and moth plants	Cut banks, cliffs, or caves
Hummingbird plants	Dust beds, sand and grit
Summer plants	Brush and rock piles
Fall plants	Nest boxes
Winter plants	Feeding stations
Nut and acorn trees	Salt or other mineral licks

The East Boston Camps property already has a fairly rich diversity of vegetative components, including a variety of conifers; small areas of grasses, legumes, and wildflowers that will attract butterflies, bees, moths, and hummingbirds; and oaks to produce acorns. It also has a diversity of structural components including open water, wetlands; areas of exposed soil that provide sand, grit, and dusting areas; and small areas of cut banks all of which are important to wildlife diversity. It also has the potential for creating other vegetative and structural components.

Summary of Wildlife Management Report Recommendations by Sue Morse

1. Maintain connections/corridors to other open spaces.
2. Protect vernal pools and associated upland habitat areas.
3. Designate "natural area reserves" that would not be subject to forestry operations.
4. Manage forest to achieve improved wildlife habitat.
    a. Retain 3 to 5 "dead snags" per acre
    b. Create brush piles
    c. Create vertical and horizontal forest diversity
    d. Utilize a diversity of forestry practices
5. Increase wildlife food plants and retain white oak and black cherry trees
6. Create selected areas for clearing and maintaining as brushy areas to increase wildlife food plants.
7. Prevent a proliferation of trails and maintain some trail-free areas.
8. Protect black spruce bog area.
9. Conduct a formal rare plant and plant community inventory of the property.
10. Use forest management activities as an opportunity for public education.

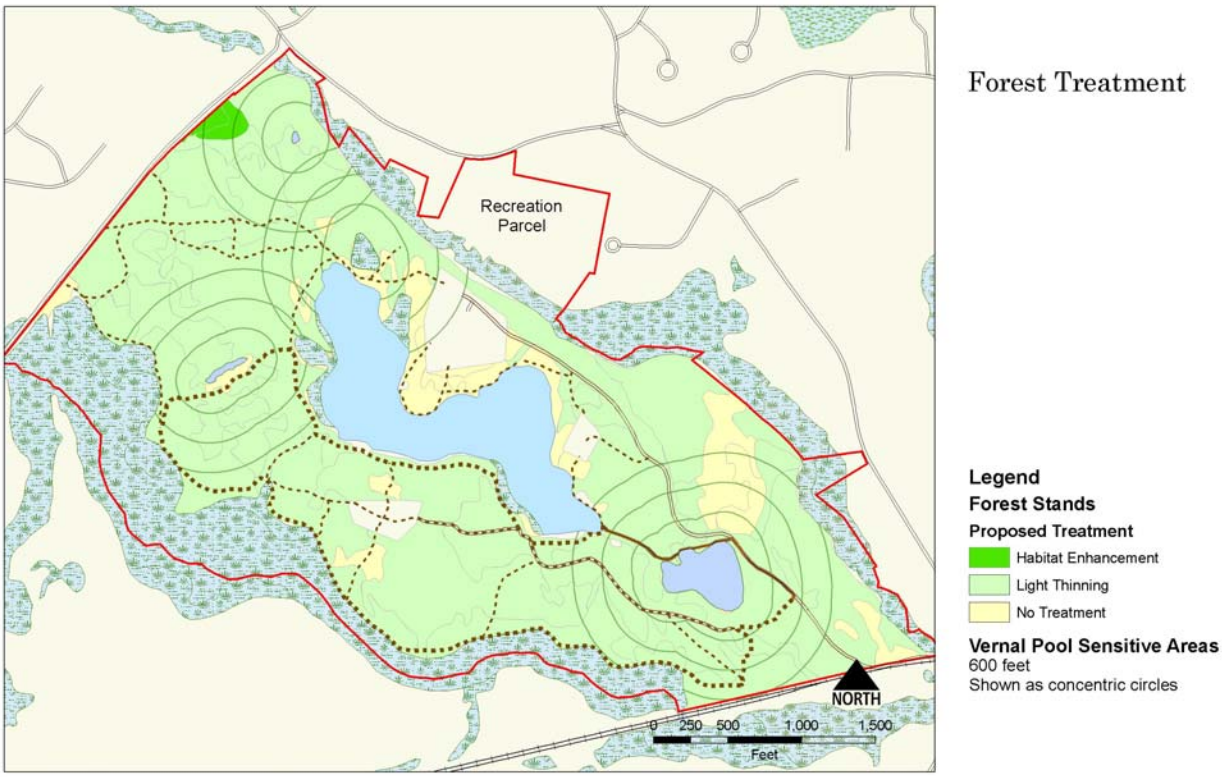
This plan recommends increasing the diversity of these habitat components by selected forestry treatments and adding several simple structural components including brush piles, nest boxes, rock piles, and dead snags.
The Forestry Management Plan recommends three basic management actions designed to improve wildlife habitat:

1) No treatment/old growth, (natural area reserves)
2) Thinning/ woodlot management,
3) Habitat enhancement/ periodic clearing, and

Appendix 8 includes a chart showing the management goal, management concerns, management recommendations, and management actions/priority for each stewardship unit (forest stand). The following map shows a summary of the management actions for the entire East Boston Camps property, excluding the area designated to become sports fields.

No Treatment/Old Growth (32 acres). No management actions are recommended for several of the forest stands that will serve as natural area reserves. Stands 1, 11, 14, 15,

16, 33, 34, 38, 39, 40, 41, 43, 44, 46, 49, 55, 57, and 58 should be allowed to mature for ten years and be reassessed. Their current undisturbed nature contributes to the existing habitat diversity of the property. Stands 12, 17, 29, 31, 32, 35, 48, 62, 67, and 68, are seasonally wet or vernal pools and require no treatment. Many of these stands have the potential to develop naturally and may provide an "old growth" example in the future.



Thinning. The Forest Management Plan recommends two types of thinning—individual selection harvest and improvement thinning. Both thinning types would be carried out in strict accordance with the Massachusetts Best Management Practices in order to protect and maintain the quality of the water resource and the site's natural resource and scenic values.

The individual selection harvest would be designed to stimulate natural regeneration of white pine and mixed oaks and improve the growing conditions of the remaining trees by removing selected white pine and red oak sawlogs, creating openings in the canopy and increasing spacing between trees. The harvest should be timed to coincide with good white pine cone and/or acorn crops in order to maximize the natural regeneration of the desired species.

The improvement thinning is a cut designed to improve the growing conditions of the better-formed and faster growing white pine and mixed hardwood saplings, poles, and sawlogs by reducing the overall competition within the stand by removing the competing, poor quality hardwoods.

Habitat Enhancement/Periodic Clearing: The Forest Management Plan also recommends two types of habitat enhancement—maintaining early successional stands

and periodic clearing or stand conversion in small areas. These enhancement actions will create a small area in and around a long-abandoned gravel pit that will encourage blackberry and other wildlife food plants and make the area more attractive to a variety of wildlife.

Vernal Pool Protection. Note that the treatment map shows a 600-foot sensitive wildlife area around vernal pools within the boundary of the master plan area. Forestry Habitat Management Guidelines for Vernal Pool Wildlife, a technical paper by the Wildlife Conservation Society recommends three zones, the vernal pool depression, a 100-foot vernal pool protection buffer, and a 100 to 400-foot zone beyond the protection buffer that is referred to as an "amphibian life zone". Forestry operations should follow the guidelines established for these three zones. Local studies done for the Westford Conservation Commission have recommended a 0-200-foot protection area and a 200 to 600-foot habitat protection area.

Zone	Desired Management Outcome
Vernal Pool Depression	Maintain the pool's basin, associated vegetation and the water quality in an undisturbed state.
Vernal Pool Protection Area (0 to 200 feet)	Protect vernal pool and surrounding habitat by maintaining or encouraging a mostly closed canopy stand in pole – or greater size class that will provide shade, deep litter, and woody debris around the pool. Maintain a shaded forest floor without ruts, exposed mineral soil, or sources of sedimentation/erosion.
Sensitive Wildlife Habitat Area (200 to 600 feet)	Provide suitable upland habitat for pool-breeding amphibian populations by maintaining or encouraging a partially closed-canopy stand that offers shade, deep litter, and woody debris around the pool. Minimize disturbance to the forest floor.

Forestry operations are allowed in the 200 to 600-foot wildlife habitat area but the guidelines establish limitations on those operations to achieve the desired management outcomes.

Other Habitat Management

Other methods to improve wildlife habitat include nest boxes, brush piles, logs, rock piles, dead snags, and planting native wildflowers and shrubs.

Nest Boxes A scarcity of suitable nest sites often prevents many birds from occupying what is otherwise excellent habitat. Artificial nest boxes can dramatically increase populations of a variety of birds. When these structures are designed and located to repel predators and resist weather elements, they can provide birds with a more secure nest than natural sites. Chickadees, titmice, nuthatches, bluebirds, tree swallows, woodpeckers, flickers, screech owls, and American kestrels can all be attracted to closed nest boxes in the woodland habitats. Different types of nest boxes could be located in different parts of the East Boston Camps property. Small nest boxes in cleared areas, like around the former girls camp, would attract tree swallows and blue birds. They could also attract house sparrows, a non-native species that take over many nest boxes and prevent nesting of our native cavity nesters. Wildlife managers usually recommend the

removal of house sparrow nest material from March to July to give the native species an opportunity to use the boxes. Larger nest boxes for screech owls could be located on some of the larger trees surrounding these clearings. Three-foot metal predator guards should be placed around the trunk of the trees used for these nest boxes to protect the hatchlings form raccoons. Nest box entrances should face east or southeast to catch the morning sun. Old nest material should be left in the nest box over the winter and removed in early spring.

Logs and Brush Piles Brush piles are recommended in the clearings and in several of the forested areas. Coarse woody debris on the forest floor provides critical foraging, escape, thermal relief, and denning habitat for dozens of species from salamanders to black bear. Brush piles provide important cover for cottontail rabbits, weasels, woodchucks, striped skunks, garter snakes and many other species, especially birds. They should be constructed with a foundation of rocks or relatively large logs or stumps on the bottom and small brush on top to keep the pile from decomposing too quickly. They should be about 12 feet in diameter and 4 to 5 feet high. Hollow logs or old sections of concrete culvert in the foundation of the pile can serve as animal den sites. Decay is vital for wildlife communities and is especially critical in a woodland. Many organisms depend on decay for their food and a web of other insects and small animals depend on these decay organisms. Leaf-litter and wood-chip mulch in the forest will boost the habitat for the organisms that live in decay. Leaving logs from storm damage and other tree maintenance to rot in carefully selected areas around the woodland can further enhance the woodland habitat. Many of the wood-boring insects have a winged stage in their life cycle and can seek out new supplies of rotting wood. In almost no time this increase in material on the forest floor will attract birds, which will kick through the litter and probe into the rotting logs to feed on these insects. In general logs should be left to rot in more remote sections of the forest.

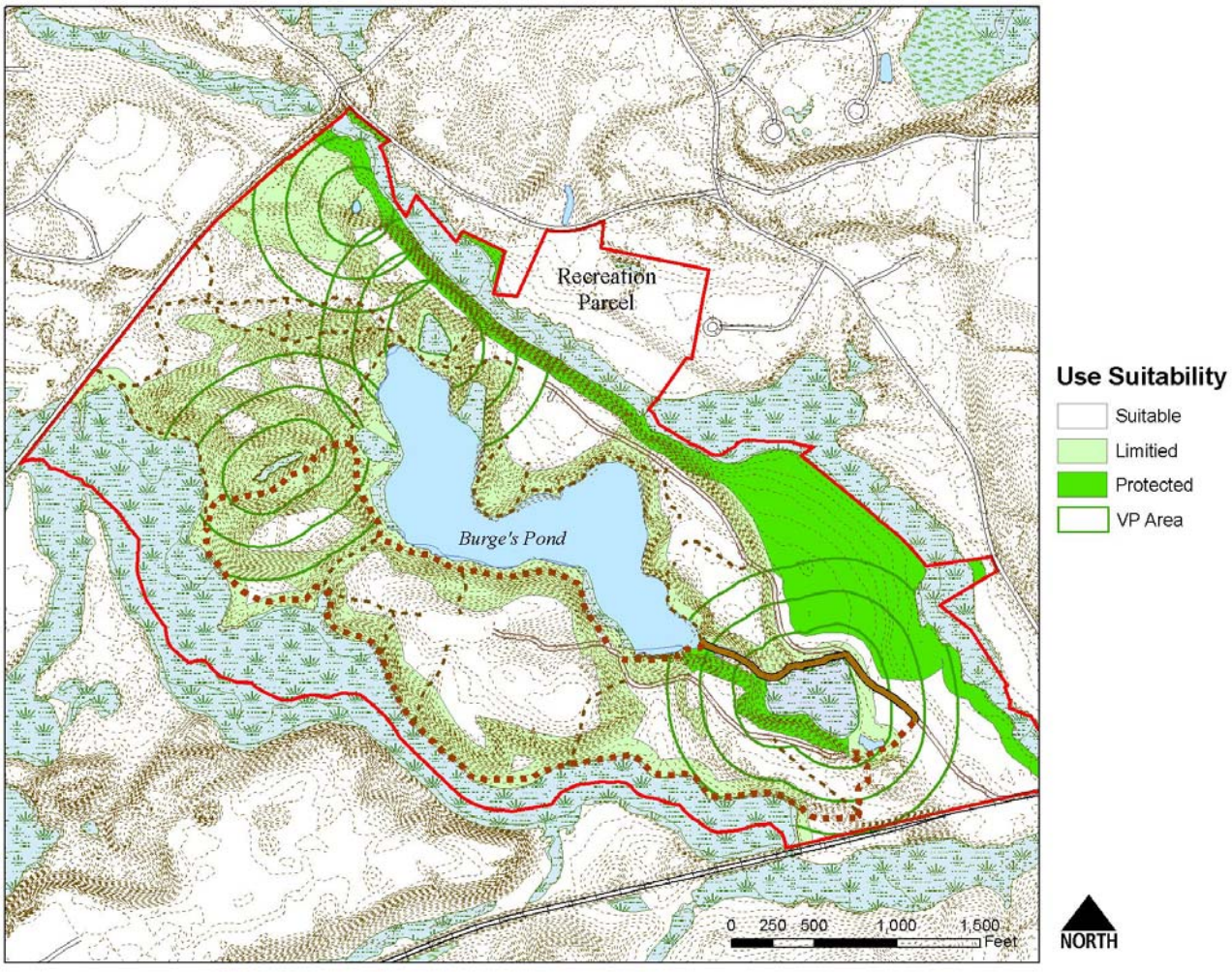
Rock Piles Rock piles serve many of the same purposes as brush piles. Boulders up to 3 feet can be used in the foundation with smaller rocks on top. The spaces between the boulders will become den sites for a variety of animals, especially chipmunks. Several 6-foot diameter rock piles could be located in the forest.

Dead Snags As old trees die they should be left to provide both food and nest sites for a diverse set of insects, birds and other small animals. Naturalists often refer to these dead snags as "apartment houses" for wildlife. In New England, an estimated 41 species of birds and mammals rely upon standing snags and tree cavities--seeking food, denning habitat, or roosting perches. The specific goal of maintaining 3-5 wildlife den trees per acre is essential for the well being of numerous species of insects, birds, and mammals.

Wildlife Plantings Cleared areas, like the area around the former girls camp and the area along the parking area, would be appropriate areas for planting some wildlife plantings. A list of recommended native plants is included in Appendix 5.

Use Suitability Designation Areas

Some of the site is well suited to a variety of public uses while other parts are more sensitive. The following map designates three levels of use. The white area is suitable for the uses that will be encouraged on the site. The light green area is suitable for most encouraged uses. It is intended to help protect wildlife areas, vernal pools, wetlands, and steep slopes. Construction of new trails and maintenance of existing trails or other facilities in these areas should be carefully controlled to protect the wetlands and prevent soil erosion. The darker green area is unsuitable for most public uses because of more fragile vegetation or wildlife. These management zones are based on the information about the site that has been presented in the site inventory and the wildlife management report by Sue Morse.



Opportunities for Creating Connections

The site inventory section noted that the East Boston Camps property is located at the confluence of Keyes Brook and Stony Brook, riparian (water related) corridors that connect the site to natural areas both upstream and downstream. Other nearby protected natural areas include Grassy Pond; Town well sites at the Farmer parcel, Depot Street, Nutting Road, and other Water Department lands upstream along Stony Brook. Keyes Brook connects the site to Keyes Pond. Protecting and improving these connections enhance the site's wildlife values and may also provide opportunities for future trail connections.

Land Additions

Protecting other adjacent or nearby land will also enhance the East Boston Camps site's wildlife value. The mostly forested Stepinski land, about 115 acres, lies to the south of Stony Brook and is the most important priority for additional protection.

Management Plan

There are two major management considerations for the East Boston Camps property – managing the natural resource/public access aspects and managing the camp/group use aspects of the site.

Goal 4: Establish an Appropriate Management Structure to Ensure That the Goals for the Site Are Met.

Policy 4a: Management structure must ensure future protection of the site's natural resources and the public water supply.

Implementation:

- Ownership of the property shall be transferred from the Board of Selectmen to the Conservation Commission.
- The Conservation Commission shall be the manager of activities on the property and will coordinate with the Parks and Recreation Commission and other relevant Town bodies and volunteers.

The importance of the site's natural resources including water supply protection is a major rationale for the lead ownership/management role being assigned to the Conservation Commission. Placing the property under the Conservation Commission's ownership also provides an additional layer of protection for the site under the provisions of Article 97 of the Articles of Amendment to the Constitution of the Commonwealth of Massachusetts. These provisions prevent the disposition of land held by the Conservation Commission without a unanimous vote of the Commission and a two-thirds vote of the state legislature.

The Conservation Commission will enter into a written agreement with the Parks and Recreation Department to manage the camp and group uses of the site. This kind of arrangement is similar to the current management of the Town beaches that are managed by the Parks and Recreation Department and owned by the Conservation Commission. The Parks and Recreation Department will oversee the operation and scheduling of the

overnight and day camp and group use activities in consultation with the Conservation Commission.

A qualified camp operator would be chosen to manage the overnight camp in response to a legally issued Request for Proposals. Both overnight and day group use of the camp facilities would require a permit applied for by a Westford resident. There could also be a security deposit as well as a rental fee.

Advisory Committee

An Advisory Board could meet quarterly or as required. Its sole focus would be this property. Potential membership could include: Westford Land Preservation Foundation (or holder of Conservation Restriction), Community Preservation Committee, Parks and Recreation Department, Water Department, Conservation Commission, and "at-large members". Its role would be to facilitate on-going communication about the management of the property and serve as a sounding board for policy changes.

Policy 4b: Management structure should take advantage of the expertise available from existing Town resources and provide for ongoing public involvement.

Implementation:

- An advisory committee that may include representatives of all stakeholders (Community Preservation Committee, Board of Selectmen, Water Department, Parks and Recreation Commission, Conservation Commission, the holder of the Conservation Restriction and several at large members with relevant interest and/ or expertise) shall meet on a periodic basis, as necessary, to discuss policy and operating issues affecting the property and shall make recommendations to the Conservation Commission.

Policy 4c: Provide for management and control of camp and group use activities.

Implementation:

- The Conservation Commission, as manager of the activities on the property, shall use the expertise of the Parks and Recreation Commission when appropriate.
- A plan for responses to emergencies should be established and posted.

Property Management Costs

Owning property always carries responsibilities for its ongoing care and maintenance. The East Boston Camps property has always had a year-round property management presence and the needs will only increase as public use increases. In addition there are recurring costs for administration, insurance, snow plowing, materials and supplies that are normally associated with ownership. Some of the money for these expenses can come from camp operations, but it is unrealistic to expect them to cover all costs.

Estimated Annual Cost: at least $50,000

Friends Group

A "friends of group" would be a separate non-profit organization with open membership that would help with fund-raising and provide a source of volunteers. Such an organization could raise funds and seek grants that may not be directly available to the Town. One function of such a group may be to have a corps of volunteer stewards.

Policy 4d: The management structure must provide for future fundraising to support the property.

Implementation:

- Encourage the establishment of a "friends" group for fundraising and volunteer efforts.

Potential Roles of Volunteer Stewards

Westford has residents who care about their open land and especially about the East Boston Camps site and would likely participate as volunteer land stewards. These volunteer stewards can provide valuable services that help safeguard and interpret the natural and cultural resources of the site and the safety of visitors. Neighbors and abutters of the East Boston Camps site are logical "eyes and ears" who can help interpret the values of the site, report problems, monitor public use, record presence of wildlife, and call the police or Conservation Commission to discuss local issues. Many of these stewardship roles will also help assure the quality of the visitor experience. Organization, education and training are key to an effective volunteer program. Unreliable or untrained volunteers can be a drain on an organization and can produce more damage than benefit. Such training and organization take time but are essential for a successful program. Recognition is also important for rewarding good volunteers. The stewardship group needs a chairman or key contact person, who serves as the primary liaison between the Conservation Commission, police, other Town services, and the other stewards. The group needs to establish a schedule of who does what and when, and there also needs to be a level of training provided for each volunteer. The following is a list and short description of possible roles.

- Each volunteer needs to be familiar with the site's boundaries, natural and cultural history, surrounding uses, and the regulations governing its use. They should also be aware of the basic contacts for reporting problems.
- Site Monitors—as mentioned above this site will require an on-going effort to manage use. Site monitors could be designated representatives of the Conservation Commission and carry identification. They could pass through the site on peak use days. They could provide information about the history of the site and its use regulations.
- Natural/Cultural History Walk Leaders—The East Boston Camps site offers many opportunities for interpretation. It has a rich natural history that can be an exciting subject. It is also an excellent site for guided natural history walks. Scheduling and advertising a series of community walks throughout the year could be a popular activity for both individuals and families with children. Such walks could also be offered to local school classes in conjunction with learning about local cultural and natural history.

- Maintenance Workers—a group spring-cleaning day could be an event that attracts a group of stewards and other volunteers. In addition to picking up litter and sprucing up the other facilities, these days could also be used to work on controlling non-native invasive species.

Potential Volunteer Projects

There are numerous projects that can be advanced by volunteers. Garden clubs, scout groups, school classes, and others can participate in implementing this plan and improving the East Boston Camps property. The following is a listing of potential volunteer projects. All projects need to be coordinated with the Conservation Commission.

Trail Work
(See section on Trail Design and Improvements and Appendix 6 – Trail Design Details)
Blocking/removal of existing trails to be closed
Clearing/marking of proposed hiking trails

Botanical Inventory
Continue development of Plant List (See Appendix 2 – Preliminary Plant List)

Identification and Certification of Vernal Pools
Potential vernal pools need to be examined in spring for indicator species
Vernal pools can then be certified (forms to fill out and file, see www.vernalpool.org)

Invasive Species
(See Appendix 2 – Preliminary Plant List)
Monitoring of Non-native Invasive Species
Periodic Removal of Non-native Invasive Species

Site Improvements
Relocation of Trailhead Kiosk
Native plantings around parking area and other cleared areas (See Appendix 5 – Recommended Native Wildflowers, Shrubs and Vines)

Habitat Enhancement
(See Habitat and Forest Management Plan and Appendix 8 – Ecological Management and Forest Management Summary)
Periodic clearing in specified areas
Pruning for views
Bird nest boxes
Log and brush piles
Rock piles
Wildlife plantings (See Appendix 5 – Recommended Native Wildflowers, Shrubs and Vines)

Litter removal, etc.

Volunteer Stewards

Site monitors

Natural/cultural history walk leaders

Other Management Issues

There are several other management issues including control of access, control of prohibited uses, control of pets, trash and litter, fire and safety, and vandalism.

Control of Access

There needs to be good control of the access to the site. The methods for gaining control of access include:

Gated Entrances
Boulders, Heavy Timber Fences, or Earth Mounds Placed to Prevent Access
Signs
Enforcement of Trespass Violations
Visitor Orientation

A combination of all of these methods is recommended. Having a gated parking area is one method of limiting unwanted and after hours use. A single leaf gate (see Appendix 7 – Single-leaf Gate Design) can be installed at the entrance to the access road. The gate to the parking area can be open from dawn to dusk and be part of the care-taking responsibilities. Police vigilance, especially on spring, summer, and fall weekends, will also be helpful. Volunteer stewards and neighbors can also be part of the deterrence for unwanted uses.

Control of Prohibited Uses

All-terrain vehicles, dirt bikes, and snowmobiles are generally prohibited uses on conservation land. Informing users of these regulations, the potential for a two hundred and fifty dollar fine, and warning them of the Town's intention to enforce the regulations is a first step. Continued trespass with these vehicles would have to be followed up with a citation from a police officer.

Control of Pets

Control of pets can be a difficult problem. Uncontrolled pets can be a danger to each other and to visitors. Westford requires that dogs be restrained and/or leashed at all times. Participants at the February public meeting were split in their opinions about allowing dogs to be unrestrained at the East Boston Camps property. Some towns have created areas that allow dogs to be either leashed or under voice control. For public safety, dogs should not be allowed to roam freely without being under some form of control.

Addressing Other Management Issues

A covered information board at the parking area/trailhead will help orient visitors and provide information about the site and its uses.

Trash and Litter: In general it is good to encourage "carry in – carry out" practices. If there is a group use picnic area there will be a desire to leave trash. A trash receptacle at the picnic area could be picked up and emptied on a regular basis.

Fire and Safety: Emergency response personnel should develop a plan for dealing with fire and injury at the East Boston Camps property. Fire is often a risk in dry oak forest and it is generally thought to a benefit the quality of the forest. Protecting the camp facilities and nearby homes should be the fire-fighting objective.

Vandalism: Vandals will occasionally target signs, benches, and other facilities. Design of these facilities should be based on the expectation that mischief will occur. Materials and finishes can help, but there are no "vandal-proof" designs. Vandalism seems to attract more vandalism. So rapid repair or replacement is the best strategy for minimizing an outbreak of this sort of bad behavior. Having a ready supply of replacement signs and other items and paint will speedup repairs.

As public use increases there are bound to be some management issues that will occur as a result of experience. For this reason it is advisable to review this management plan from time to time and make adjustments based on this experience.

Section 7: Financial Strategy

Implementation will occur in several steps or phases. The first step can begin upon the acceptance of the East Boston Camps Master Plan at the 2007 Annual Town Meeting. The other implementation steps are included in the Master Plan Goals and Recommendations section. Many of these recommendations can be implemented immediately with existing resources; others can only be implemented with additional resources. This section summarizes the requirements for financial resources. Those resources may come from a variety of sources including:

- Use and rental fees,
- Fundraising, grants,
- Town of Westford,
- In-kind contributions, and
- Camp operator.

Goal: Develop a fiscal and management structure that will generate sufficient revenue to maintain the site and all of its desired uses without placing undue financial burden on the Town.

SHORT AND LONG-TERM CAPITAL COSTS SUMMARY
Estimated costs associated with improvements to the site were included in Section 6 of this plan. These are summarized as follows:

ESTIMATED INITIAL SET-UP COSTS
General Public Access Improvements

	Estimate	
	Low	High
Handicap Access Improvements	$27,000	$35,000
Trail and Sign System	$3,000	$4,000
Removal of Camp Activities from South Side of Pond	$12,000	$35,000
Total Estimate	$42,000	$74,000

Camp-Related Improvements

	Estimate	
	Low	High
New Bathhouse (when needed)	$60,000	$75,000
Accessibility Improvements	$30,000	$35,000
Total Estimate	$90,000	$125,000

OPERATING EXPENSES
General Public Access Maintenance and Management (Town)

Based on the current annual cost for the Town to maintain the site, the estimated annual cost for maintenance and management would be about $50,000. The Town has also allocated $50,000 for capital expenses.

TOWN COSTS

Based on the proposed multiple uses for the site, the Town would need to secure funding to do basic public access improvements to the portions of the site that will not be used for camp activities. This could range from $42,000 to $74,000.

The ongoing costs associated with general maintenance and management is estimated to be about $50,000. Additional maintenance and management assistance could potentially be provided by volunteer stewardship activities.

To fund the capital improvements, the Town should consider a combination of outside grants and Community Preservation Act funds. In addition, a Friends Group could be responsible for a variety of ongoing fundraising efforts for the site.

The remaining improvements to the camp area are estimated at $90,000 to $125,000. The Town should expect to fund some or all of these improvements depending on whether the camp operations are contracted to an outside operator or retained by the Town Recreation Department.

TOWN OF WESTFORD'S

East Boston Camps

Master Plan

Appendices

East Boston Camps

Appendices

Appendix 1 – List of Reference Documents

These documents are included by reference.

Conservation Restriction to Westford Land Preservation Foundation, Inc., 2005

A History of East Boston Camps: from Glacial Retreat to Preservation, by Marian Harman, 2005

Open Space and Recreation Plan, Westford, MA 2002

The Westford Master Plan Policies and Directions, May 1995

The Westford Master Plan Implementation Strategy, May 1995

Town of Westford, Massachusetts Zoning Bylaw, 2005

Forest Stewardship for Watershed Health Grant Application, February 18, 2005

Drinking Water Supply Protection Grant Program Application Materials

Massachusetts Historical Commission Project Notification Forms

2005 Special Town Meeting Community Preservation Funds Appropriation

Certificate of Record Title

Town of Westford, Massachusetts, General Bylaws, 2005

Agreement by and Between the Town of Westford and the Westford Land Preservation Foundation, Inc.

Closing Documents/East Boston Camps, Brackett & Lucas

East Boston Camps: Proposed Rehabilitation and Additions to Camp Facility – 2000, prepared for the East Boston Social Centers

Proposal for the Future of the East Boston Camps – 2001 prepared by the East Boston Social Centers

Baseline Inventory of the East Boston Camps Site – 2005 prepared for WLCF

Avian Survey of East Boston Camp, Westford, MA by Benjamin Flemer, Morse and Morse Wildlife Consultants, March 2007.

Managing East Boston Camp's Forestlands for Wildlife Final Recommendations, by Sue Morse, Morse and Morse Wildlife Consultants, March 2007.

Forest Management Plan, by Philip Benjamin, Benjamin Forestry Services Inc., March 2007

Fact Sheets prepared during Master Plan
- General Fact Sheet
- Conservation Restriction Fact Sheet
- Camp Facilities & Services Fact Sheet
- Water Resources Fact Sheet
- Natural Resources Fact Sheet

Issue Sheets prepared during Master Plan

- Improved Public Access Issue Sheet
- Preserve/Enhance Natural Resources Issue Sheet
- Management Structure Issue Sheet
- Option #1 Traditional Camp Issue Sheet
- Option #2 Westford Day-Camp Issue Sheet
- Option #3 Overnight Camp & Westford Day-Camp Issue Sheet

Public Forum Summaries

- Summary of Resident Input – Visioning Workshop, October 26, 2006
- Summary of Resident Input – East Boston Camps Part 2, February 1, 2007
- East Boston Camps Master Plan Part 3, April 12, 2007

Appendix 2 – Preliminary Plant List

The following is a preliminary list of plants found at the East Boston Camps site. Inventory was taken from a list provided by Marian Harman and dated 2005. Additional information was added as a result of inventory work during this planning effort. The list is by no means comprehensive and additional efforts should be made to add to the list. Potentially invasive non-native species are indicated in **bold** type. Abundance is indicated in five categories with five as abundant. Wildlife value is an indication of the number of bird species that utilize the plant for food or shelter if the information is known (Source: *Trees, Shrubs, and Vines for Attracting Birds*, Richard M. DeGraaf, 2002, University Press of New England).

Common Name	Scientific Name	Abundance	Wildlife Values			
Trees			# of Birds	Food	Cover/ Nesting	Both
white pine	*Pinus strobus*	5	41			X
white oak	*Quercus alba*	2	31			X
red oak	*Quercus rubra*	2	31			X
black oak	*Quercus velutina*	1	31			X
pitch pine	*Pinus rigida*	1	31			X
red pine	*Pinus resinosa*	1	47		X	
eastern hemlock	*Tsuga Canadensis*	2	26			X
American chestnut	*Castanea dentate*	1				
paper birch	*Betula papyrifera*	1	9			
gray birch	*Betula populifolia*	1	9			
yellow birch	*Betula alleghaniensis*	1				
tupelo or black gum	*Nyssa sylvatica*	1				
red maple	*Acer rubrum*	2	5		X	
sugar maple	*Acer saccharum*	1	18		X	
common sassafras	*Sassafras albidum*	1	23	X		
aspen or quaking aspen	*Populus tremuloides*	1	11			X
big-toothed aspen	*Populus grandidentata*	1	7			X
American elm	*Ulmus Americana*	1				
black spruce	*Picea mariana*	1				
cherry species	*Prunus spp.*	1	81	X		
white ash	*Fraxinus Americana*	1	8	X		
willow species	*Salix spp.*	1	10			
Norway maple	***Acer platanoides***	1				
buckthorn	***Rhamnus spp.***	1				
black locust	*Robinia pseudoacacia*	1				
hop hornbeam or ironwood	*Ostrya virginiana*	1	9		X	
Shrubs and Vines						
highbush blueberry	*Vaccinium corymbosum*	2	15			X
lowbush blueberry	*Vaccinum angustifolium*	2	8			X
mountain laurel	*Kalmia latifolia*	1				
sheep laurel	*Kalmia angustifolia*	1				
shadbush or serviceberry	*Amelanchier arborea*	1	40			X
beaked hazelnut	*Corylus cornuta*	1	22	X		
juniper	*Juniperus communis*	1	15		X	

Common Name	Scientific Name	Abundance	Wildlife Value			
Shrubs and Vines (continued)			# of Birds	Food	Cover/ Nesting	Both
viburnum species	*Viburnum spp.*	1	10	X		
azaleas	*Rhododendron spp.*	1				
huckleberry	*Gaylussacia spp.*	1	12	X		
poison ivy	*Rhus radicans*	1				
Virginia creeper	*Parthenocissus quinquefolia*	1	37			X
spirea species	*Spirea spp.*	1	8			
sweet pepperbush	*Clethra alnifolia*	1	8			
buttonbush	*Cephalanthus occidentalis*	1	11			
hawthorn	*Crataegus spp.*	1	29			X
raspberry & blackberry	*Rubus spp.*	1	97			X
swamp-azalea or swamp-honeysuckle	*Rhododendron viscosum*	2				
witch hazel	*Hamamelis virginiana*	1				
dewberry	*Rubus spp.*	1	97	X		
Oriental bittersweet	***Celastrus orbiculatus***	1				
multiflora rose	***Rosa multiflora***	1				
Japanese knotweed	***Polygonum cuspidatum***	1				
autumn olive	***Eleagnus angustifolia***	1	50			X
Herbs						
common arrowhead	*Sagittaria latifolia*	2				
pickerelweed	*Pontederia cordata*	2				
groundnut	*Apios americana Medicus*	1				
ribbon-leaved pondweed	*Potamogeton epihydrus*	2				
purple loosestrife	***Lythrum salicaria***	2				
swamp milkweed	*Aselepias incarnata*	1				
wild rice	*Zizania aquatica*	1				
bulblet water hemlock	*Cicuta bulbifera*	1				
maleberry	*Lyonia ligustrina*	1				
pink lady's slipper	*Cypripedium acaule Aiton*	1				
partridgeberry	*Mitchella repens*	2				
downy rattlesnake plantain	*Goodyera pubescens*	2				
tansy ragwort	***Senecio jacobaea***	1				
swamp mallow	*Hibiscus moscheutos*	1				
white water-crowfoot	*Ranunculus aquatilis*	1				
watercress	*Rorippa nasturtium-aquaticum*	1				
starflower	*Trientalis borealis*	1				
wintergreen	*Gaultheria hispidula*	1				
pipsissewa	*Chimaphila umbellate*	1				
striped wintergreen	*Chimaphila maculata*	1				
mosses						
clubmosses						
grasses						

Common Name	Scientific Name	Abundance	Wildlife Value			
Herbs (continued)			# of Birds	Food	Cover/ Nesting	Both
skunk cabbage	*Symplocarpus foetidus*	1				
arrow arum	*Peltandra virginica*	1				
Indian cucumber root	*Medeola virginiana*	1				
stinging nettles	*Urtica dioica*	1				
whorled loosestrife	*Lysimachia quadrifolia*	1				
Queen Anne's lace	*Daucus carota*	1				

Appendix 3 – Preliminary List of Birds

The following is a preliminary list of birds found at the East Boston Camps site. Inventory was taken from a list provided by Marian Harman and dated 2005. Additional information was added as a result of inventory work during this planning effort. The list is by no means comprehensive and additional efforts should be made to add to the list. *Season: 3B – 11C indicates usual arrival in Massachusetts during the 2nd week of March and departure during the third week of November. PR indicates Permanent Resident. Asterisk indicates scattered reports throughout the year.*

Common Name	Habitat	Cavity Nester	Season
double-crested cormorant	Open Water		*
great blue heron	Wetlands/quiet water		*
great egret	Wetlands/quiet water		4A-10D
green heron	Edges of ponds & wooded streams		4C-10C
Canada goose	Ponds, marshes, & fields		PR
wood duck	Rivers, ponds, and wooded swamps	X	*
mallard	Pond or marsh		PR
American black duck	Pond or marsh		PR
northern pintail	Shallow ponds and marshes		3A-12B
green-winged teal	Shallow ponds and marshes		3A-12B
ring-necked duck	Sheltered ponds or streams		*
hooded merganser	Small wooded ponds		9D-4C
common merganser	Deep, clear lakes & rivers		10D-4D
red-shouldered hawk	Usually near water		PR
red-tailed hawk	Widespread		PR
peregrine falcon	Open areas		*
wild turkey	Open woods & fields		PR
killdear	Open areas, farmland		*
Virginia rail	Marsh		4B-10C
spotted sandpiper	Edges of steams or ponds		4D-9D
ring-billed gull	Widespread		PR
herring gull	Widespread		PR
mourning dove	Brushy open woods & suburbs		PR
great horned owl	Woods		PR
barred owl	Mixed woods		PR
eastern screech-owl	Open woods & forest edges	X	PR
common nighthawk	Open woods & fields		5C-9C
ruby-throated hummingbird	Flowering plants		5A-9C
belted kingfisher	Ponds & streams		PR
red-bellied woodpecker	Woods	X	PR
downy woodpecker	Woods	X	PR
hairy woodpecker	Woods	X	PR
northern flicker	Open areas	X	PR
pileated woodpecker	Mature forests	X	PR
eastern phoebe	Open areas near water		3B-10C

Common Name	Habitat	Cavity Nester	Season
great crested flycatcher	Hardwood forests		4D-9C
eastern kingbird	Open areas with trees & bushes		4D-9C
warbling vireo	Large trees near water		5A-9B
red-eyed vireo	Hardwood forests		5B-10B
bluejay	Woods		PR
American crow	Widespread		PR
common raven	Widespread		PR
tree swallow	Hunts over water & open fields	X	3C-10D
chimney swift	Widespread		
barn swallow	Hunts over water & open fields		4B-10C
tufted titmouse	Hardwood forests	X	PR
black-capped chickadee	Widespread	X	PR
red-breasted nuthatch	Open mixed woods with mature trees	X	PR
white-breasted nuthatch	Open mixed woods with mature trees	X	PR
brown creeper	Forests		PR
Carolina wren	Dense bushy areas		PR
house wren	Gardens, hedgerows, & brushy woods		4C-10D
winter wren	Shady woods with dense brush		4A-12C
golden-crowned kinglet	Mature conifers		PR
eastern bluebird	Fields & open woods	X	PR
American robin	Widespread		PR
wood thrush	Shady woods with leafy understory		4D-9D
veery	Shady woods with leafy understory		5A-9C
hermit thrush	Open, brushy woods		*
gray catbird	Widespread		*
northern mockingbird	Dense bushy areas		PR
brown thrasher	Dense thickets		*
European starling	Widespread		PR
cedar waxwing	Widespread		PR
pine warbler	Pine forest		4B-10D*
yellow warbler	Low trees & forest edges		4D-10A
yellow-rumped warbler	Open woods & brushy areas		PR
American redstart	Mixed forests		5A-10B
ovenbird	Shaded woods		5A-10A
common yellowthroat	Marshy or brushy areas near water		*
Canada warbler	Low in dense, shady areas near water		5B-9C
scarlet tanager	Woods		5B-10B
northern cardinal	Brushy open areas		PR
rose-breasted grosbeak	Hardwood forests		5A-10D
eastern towhee	Dense brush		*
American tree sparrow	Brushy areas		10C-4D
field sparrow	Brushy areas		*

Common Name	Habitat	Cavity Nester	Season
chipping sparrow	Open woods		*
white-throated sparrow	Dense brush		PR
white-crowned sparrow	Brushy, weedy areas		5A-5C 9B-12D
fox sparrow	Brushy areas in woods		3A-4D 10B-11D
song sparrow	Open, weedy or brushy areas		PR
dark-eyed junco	Open woods & brushy clearings		PR
bobolink	Grassy or weedy fields & meadows		5A-10A
brown-headed cowbird	Woods, edges & fields		3B-11D
red-winged blackbird	Wet, brushy or marshy areas		*
common grackle	Open woods & fields		*
Baltimore oriole	Hardwood forests		*
evening grosbeak	Treetops		*
house finch	Open woods & suburbs		PR
common redpoll	Thickets & weedy fields		11D-4C
American goldfinch	Widespread		PR
house sparrow	Suburbs	X	PR

Several sources including Marion Harman and Benjamin Flemer of Morse and Morse Forestry and Wildlife Consultants.

Appendix 4 – Preliminary List of Mammals, Reptiles & Amphibians

The following is a preliminary lists of mammals, reptiles, and amphibians found at the East Boston Camps site. Inventory was taken from a list provided by Marian Harman and dated 2005. Additional information was added as a result of inventory work during this planning effort. The list is by no means comprehensive and additional efforts should be made to add to the list.

Mammals
Beaver
Chipmunk
Cottontail rabbit
Coyote
Grey squirrel
White-tailed deer
Mink
Muskrat
Otter
Red fox
Red squirrel

Reptile and Amphibians
Garter snake
Green frog
Musk turtle
Northern water snake
Painted turtle
Snapping turtle
Yellow spotted salamander
Spotted turtle
Wood frog

Appendix 5 – Recommended Native Wildflowers, Shrubs, and Vines

Listed by Wildlife Value

Species	Latin Name	Soil	Fruit Season	Forest Planting	Wildlife Value*
Shrubs and Vines					
Allegheny Blackberry	*Rubus allegheniensis*	dry, acid	su, fa		97
Wild Red Raspberry	*Rubus idaeus v strigosus*	dry, acid	su, fa		97
Black Raspberry	*Rubus occidentalis*	dry, acid	su, fa		97
Dwarf Raspberry	*Rubus pubescens*	wet, acid/alk.	su, fa	x	97
Swamp Dewberry	*Rubus hispidus*	wet, acid	su		97
Scrub Oak	*Quercus ilicifolia*	dry, acid	fa		96
Dwarf Chinquapin Oak	*Quercus prinoides*	dry, acid	fa		96
Fire or Pin Cherry	*Prunus pensylvanica*	dry, acid	su, fa		81
Chokecherry	*Prunus virginiana*	dry, acid/alk.	su	x	81
Common Elderberry	*Sambucus canadensis*	wet, acid	su, fa		79
Summer Grape	*Vitis aestivalis*	dry/wet, acid	fa	x	75
Riverbank Grape	*Vitis riparia*	wet, acid/alk.	su, fa		75
Fox Grape	*Vitis labrusca*	dry, acid	su, fa		75
Flowering Dogwood	*Cornus florida*	dry, acid	su	x	64
White Dogwood	*C. racemosa/foemina*	dry, acid/alk.	su		64
Pagoda Dogwood	*Cornus alternifolia*	dry, alkaline	su	x	64
Roundleaf Dogwood	*Cornus rugosa*	dry, alkaline	su		64
Downy Shadbush	*Amelanchier arborea*	dry, acid/alk.	su	x	58
Smooth Shadbush	*A. arborea v laevis*	dry, acid	su	x	58
Running Shadbush	*Amelanchier stolonifera*	dry, acid	su		58
Thicket Shadbush	*Amelanchier canadensis*	wet, acid	su	x	58
Highbush Blueberry	*Vaccinium corymbosum*	wet, acid/alk.	su	x	58
Low Sweet Blueberry	*V. angustifolium*	dry, acid	su		53
Lowbush Blueberry	*Vaccinium pallidum*	dry, acid	su	x	53
Cranberry	*Vaccinium macrocarpon*	wet, acid	fa, wi		53
Winged Sumac	*Rhus copallinum*	dry, acid	fa		50
Smooth Sumac	*Rhus glabra*	dry, acid	su, fa		50
Staghorn Sumac	*Rhus hirta*	dry, acid	fa, wi		50
Virginia Creeper	*Parthenocissus quinquefolia*	dry, alkaline	su, fa, wi	x	37
Inkberry	*Ilex glabra*	dry, acid	fa, wi, sp	x	36
American Holly	*Ilex opaca*	dry, acid	fa, wi	x	36
Smooth Winterberry	*Ilex laevigata*	wet, acid	fa, wi	I	36
Common Winterberry	*Ilex verticillata*	wet, acid/alk.	su, fa, wi	x	36
Bayberry	*Myrica pensylvanica*	dry, acid	fa, wi		36
Sweet Gale	*Myrica gale*	wet, acid	fa, wi		36

Species	Latin Name	Soil	Fruit Season	Forest Planting	Wildlife Value
Sawbrier, Wild Sarsaparilla	*Smilax glauca v leurophylla*	dry/wet, acid	fa, wi	x	33
Catbrier, Bullbrier	*Smilax rotundifolia*	dry/wet, acid	fa, wi	x	33
Prickly Gooseberry	*Ribes cynosbati*	dry, acid	su, fa	I	32
Wild Black Currant	*Ribes americanum*	wet, acid/alk.	su	x	32
Hawthorns	*Crataegus spp.*	dry, acid/alk.	su, fa	x	29
Hobblebush	*Viburnum lantanoides*	wet, acid	su, fa	x	25
Sweet Viburnum	*Viburnum lentago*	wet, acid/alk.	su	x	25
Wild Raisin	*Viburnum nudum*	dry, acid	fa, wi	x	25
Smooth Arrowwood	*Viburnum dentatum*	wet, acid/alk.	su, fa	x	25
Pasture Rose	*Rosa carolina*	dry, acid	su, fa, wi		24
Virginia Rose	*Rosa virginiana*	dry/wet, acid	su, fa		24
Swamp Rose	*Rosa palustris*	wet, acid/alk.	su, fa		24
American Hazelnut	*Corylus americana*	dry, acid	su, fa	x	23
Beaked Hazelnut	*Corylus cornuta*	dry, acid/alk.	su, fa	x	23
Canada Yew	*Taxus canadensis*	dry/wet, acid	su, fa	I	17
Speckled Alder	*Alnus incana*	wet, acid	su, fa		16
Common Alder	*Alnus serrulata*	wet, acid	su, fa		16
Black Huckleberry	*Gaylussacia baccata*	dry, acid	su, fa	x	14
Dangleberry	*Gaylussacia frondosa*	dry/wet, acid	su, fa	x	14
Mt. Fly-honeysuckle	*Lonicera villosa*	wet, acid/alk.	su		14
Limber Honeysuckle	*Lonicera dioica*	dry, acid/alk.	su	x	14
Spicebush	*Lindera benzoin*	wet, acid/alk.	su, fa	I	12
Black Chokecherry	*Aronia melanocarpa*	dry/wet, acid	su, fa	x	11
Red Choke-cherry	*Aronia arbutifolia*	dry/wet, acid	su, fa	x	11
Bearberry	*Arctostaphylos uva-ursi*	dry, acid	fa, wi		8
Wildflowers and Grasse					
Common Smartweed	*Polygonum hydropiper*	wet, acid	su, fa		66
Spreading Dogbane	*Apocynum androsaemifolium*	dry/wet, acid	su, fa	x	43
Common Milkweed	*Asclepias syrica*	dry, acid	su, fa		42
Sweet Goldenrod	*Solidago odora*	dry, acid	fa, wi	x	20
Gray Goldenrod	*Solidago nemoralis*	dry, acid	fa, wi	x	20
Swamp Milkweed	*Asclepias incarnata*	wet, acid	su, fa		20
Butterfly Weed	*Asclepias tuberosa*	dry, acid	su, fa		20
Blue Heartleaf Aster	*Aster cordifolius*	dry, acid	fa, wi	x	19

Species	Latin Name	Soil	Fruit Season	Forest Planting	Wildlife Value
New England Aster	*Aster novae-angliae*	dry/wet, acid	fa, wi	x	19
Wild Lupine	*Lupinus perennis*	dry, acid	su, fa	x	13
Tickseed Sunflower	*Bidens coronata*	wet, acid	fa		10
Common Cinquefoil	*Potentilla simplex*	dry, acid	su, fa, wi		10
Wild Geranium	*Geranium maculatum*	dry/wet, acid	su, fa	x	9
Joe-pye Weed	*Eupatorium maculatum*	wet, acid	fa		9
Sedges	*Carex spp.*	wet, acid	fa	x	8
Lance-leaf Violet	*Viola lanceolata*	dry/wet, acid	su		7
Orange Jewelweed	*Impatiens capensis*	wet, acid	su, fa		7
Fireweed	*Epilobium angustifolium*	dry, acid	fa		5
Evening Primrose	*Oenothera biennis*	dry, acid	su		5
Blue-eyed Grass	*Sisyrinchium atlanticum*	dry, acid	su	x	5
Wild Bergamot	*Monarda fistulosa*	dry, acid	su, fa		2
Indian Paintbrush	*Castilleja coccinea*	wet, acid	sp, su, fa		
Little bluestem	*Scizachyrium scoparium*	dry, acid			
New England Blazing Star	*Liatris scariosa*	dry, acid	su, fa	x	
Wood Lily	*Lilium philadelphicum*	wet, acid	su, fa		
New York Ironweed	*Vernonia noveboracensis*	wet, acid	su, fa		
Columbine	*Aquilegia canadensis*	dry, acid	sp, su, fa	x	
Trout Lily	*Erythronium americanum*	wet, acid	sp	x	
Slender Blue Flag	*Iris prismatica*	dry/wet, acid	sp, su	x	
Wild Indigo	*Baptisia tinctoria*	dry, acid	su		

* Number of animal species known to use plant, as reported in American Wildlife & Plants A Guide to Food Habits, Alexander C. Martin, et al, 1951 and Landscaping for Wildlife, Carrol L. Henderson, 1987.

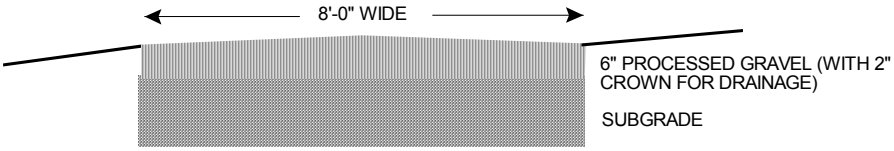
Forest Planting Guide

x. Edge or Light to Moderate Shade

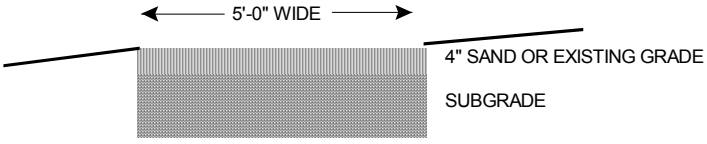
I. Interior or Full Shade

Appendix 6: Trail Design Details

Trails



ALL PURPOSE TRAIL



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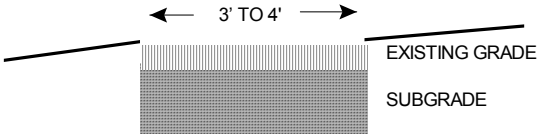
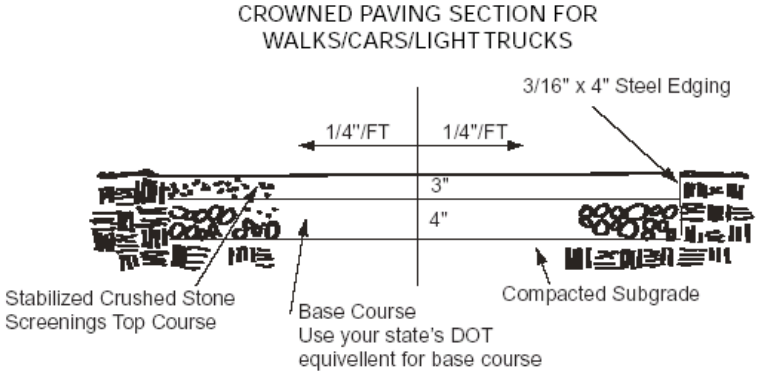


HIKING TRAIL

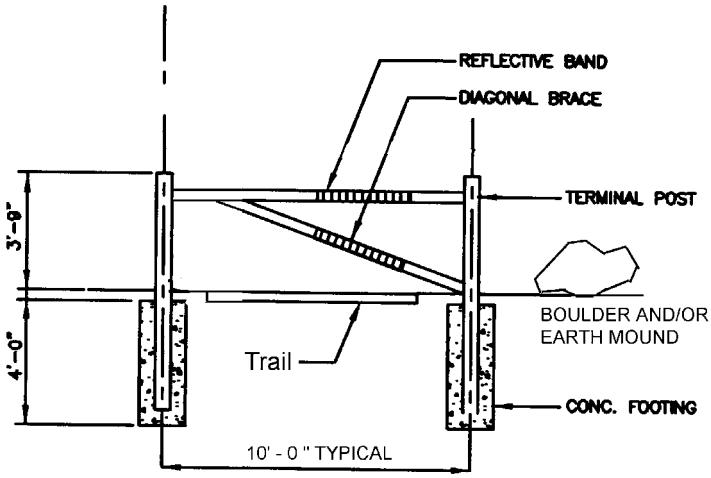
Trail Notes:

1. Clear overhanging vegetation up 8 feet.
2. These trail surfaces are generally poorly suited for wheelchair access. A layer of compacted crushed stone (¼ inch stone with stone dust) can be used to provide a universally accessible trail.

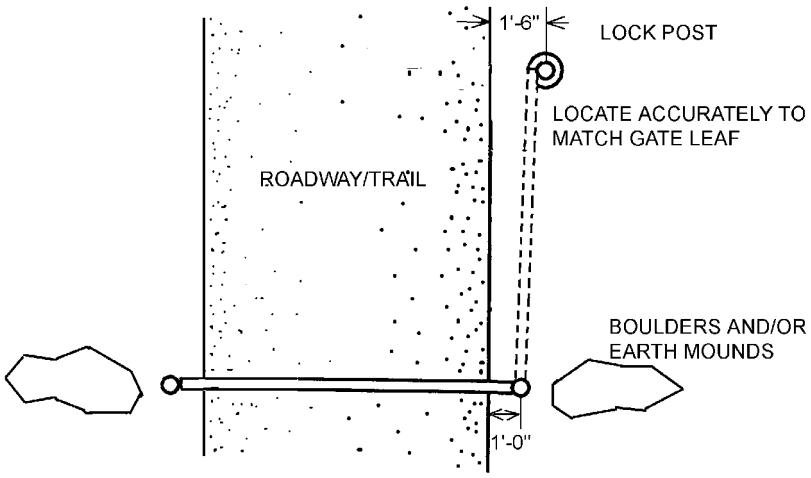
Accessible Trail



Appendix 7: Single-leaf Gate Design



SINGLE LEAF GATE ELEVATION



SINGLE LEAF GATE PLAN

Notes:

1. All welded pipe construction.
2. Line of gate top and bottom shall be installed straight and true. All posts shall be installed parallel and plumb. All leaves shall be installed parallel and true.
3. All gate hardware shall be double dip hot galvanized.

Appendix 8: Ecological Management and Forest Management Summary

For details on each stand refer to the Forest Management Plan.

Stand 1	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Invasive non-native species, bittersweet, multiflora rose, buckthorn, Japanese knotweed
Management Recommendations	Periodic removal of invasive non-native species
Management Actions/ Priority	Natural Area Reserve/Low Priority. Control of invasive species.
Stand 2	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area and Stony Brook wetland buffer
Management Recommendations	Stimulate natural regeneration of white pine and improve growing conditions
Management Actions/ Priority	Light individual selection harvest/High
Stand 3	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/High
Stand 4	**As Needed**
Management Goal	Wildlife Habitat Enhancement/open grassland
Management Concerns	Invasive non-native species, bittersweet, autumn olive
Management Recommendations	Encourage native species with higher wildlife values, remove non-native invasive species
Management Actions/ Priority	Invasive removal and periodic mowing/High
Stand 5	**As Needed or by Fall 2015**
Management Goal	Wildlife Habitat Enhancement
Management Concerns	Partly within vernal pool sensitive habitat area
Management Recommendations	Encourage native species with higher wildlife values, may be considered as open grassland to increase area of Stand 4 or as improved forest habitat
Management Actions/ Priority	Stand conversion or Improvement thinning/High

Stand 6	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area and Keyes Brook natural reserve corridor
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/High
Stand 7	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/High
Stand 8	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area and Stony Brook wetland buffer
Management Recommendations	Stimulate natural regeneration of white pines and oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/High
Stand 9	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/High
Stand 10	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area and Keyes Brook natural reserve corridor
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/High

Stand 11	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 12	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within vernal pool sensitive habitat area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 13	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Within vernal pool sensitive habitat area
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/High
Stand 14	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Partly within vernal pool sensitive habitat area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 15	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within vernal pool sensitive habitat area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 16	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within vernal pool sensitive habitat area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low

Stand 17	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Vernal pool sensitive habitat area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 27	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area
Management Recommendations	Stimulate natural regeneration of white pines and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest/High
Stand 28	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/High
Stand 29	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Vernal pool sensitive habitat area and Burge's Pond wetland buffer
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 30	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Within vernal pool sensitive habitat area and partly within Burge's Pond wetland buffer
Management Recommendations	Stimulate natural regeneration of white pine and oaks and improve growing conditions
Management Actions/ Priority	Light improvement thinning/Medium
Stand 31	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within Burge's Pond wetland buffer
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low

Stand 32	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within Burge's Pond wetland buffer
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 33	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Partly within Burge's Pond wetland buffer – proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 34	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Partly within Burge's Pond wetland buffer – proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 35	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within Burge's Pond wetland buffer – proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 36	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within Stony Brook wetland buffer
Management Recommendations	Stimulate natural regeneration of white pines and oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/High
Stand 37	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within Stony Brook wetland buffer
Management Recommendations	Stimulate natural regeneration of white pines and oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/Medium

Stand 38	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Proximity to group use area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 39	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Partly within Burge's Pond wetland buffer – proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 40	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 41	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Partly within Burge's Pond wetland buffer – proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 42	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within Burge's Pond wetland buffer
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 43	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low

Stand 44	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 45	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 46	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 47	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within Stony Brook wetland buffer
Management Recommendations	Stimulate natural regeneration of white pines and oaks and improve growing conditions
Management Actions/ Priority	Light individual selection harvest/Medium
Stand 48	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within Burge's Pond wetland buffer
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 49	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Partly within Burge's Pond wetland buffer, proximity to camp area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low

Stand 50	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area and Burge's Pond wetland buffer
Management Recommendations	Stimulate natural regeneration of white pines and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/Medium
Stand 51	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Within Keyes Brook natural reserve corridor
Management Recommendations	Stimulate natural regeneration of white pines and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/Medium
Stand 52	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area and Stony Brook wetland buffer
Management Recommendations	Stimulate natural regeneration of white pines and oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/Medium
Stand 53	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area and Stony Brook wetland buffer
Management Recommendations	Stimulate natural regeneration of white pines and oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/Medium
Stand 54	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within Burge's Pond wetland buffer
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low

Stand 55	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within Burge's Pond wetland buffer
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 56	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area and Keyes Brook natural reserve corridor
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/Medium
Stand 57	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within Keyes Brook natural reserve area and partly within vernal pool sensitive habitat area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 58	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Within Keyes Brook natural reserve area and partly within vernal pool sensitive habitat area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 59	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Partly within vernal pool sensitive habitat area and Keyes Brook natural reserve corridor
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest/Medium

Stand 60	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Within Keyes Brook natural reserve corridor
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest/Medium
Stand 61	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Within vernal pool sensitive habitat area
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest and light improvement thinning/Medium
Stand 62	**As Needed**
Management Goal	Natural Area Reserve – reassess after 10 years
Management Concerns	Vernal pool sensitive habitat area
Management Recommendations	Allow to develop naturally
Management Actions/ Priority	None/Low
Stand 63	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Within Keyes Brook natural reserve corridor
Management Recommendations	Stimulate natural regeneration of white pines and improve growing conditions
Management Actions/ Priority	Very light individual selection harvest/Medium
Stand 64	**By Fall 2017**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Within Keyes Brook natural reserve corridor
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Improvement thinning/Medium
Stand 65	**By Fall 2015**
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Within Keyes Brook natural reserve corridor
Management Recommendations	Stimulate natural regeneration of oaks and improve growing conditions
Management Actions/ Priority	Individual selection harvest and improvement thinning/Medium

Stand 66	By Fall 2015
Management Goal	Forest and Wildlife Habitat Improvement
Management Concerns	Within Keyes Brook natural reserve corridor
Management Recommendations	Stimulate natural regeneration of white pines and improve growing conditions
Management Actions/ Priority	Individual selection harvest and improvement thinning/Medium

Appendix 8: Summary of Resident Input

A more extensive version of these reports was prepared and is included by reference.

SUMMARY OF RESIDENT INPUT:

Visioning Workshop

Stony Brook School, Oct. 26, 2006

Over one hundred (100) people attended the visioning workshop regarding the future of the East Boston Camps held at the Stony Brook School on Thursday, October 26, 2006 from 7:00 to 10:00 p.m.

Purpose: The purpose of the workshop was to identify what community members could agree should be included in terms of uses and users in the future. This will be used to develop a common vision for the future of the East Boston Camps site around which an action plan can be developed. The main objective was to identify areas of consensus so that the number of options can be reduced. These options will then be developed further by gathering additional information to help with decision-making.

Process: Before the formal start of the workshop, participants were encouraged to visit information tables and gather hand-outs including fact sheets and questionnaires. There were also comment pads available for public input.

The workshop began with a power point presentation summarizing "existing conditions" of both natural features as well as of the current buildings on the site. Additional information included historical use of the site and a brief description of future options.

Participants were then encouraged to visit the information tables with hand out materials and representatives from the future camp options (East Boston Social Center, Town Recreation Department, YMCA, Westford fifth grade camp).

Participants were then divided into nine discussion groups of approximately ten to twelve people per group. Discussions were led by facilitators and all nine groups were asked the same questions. A summary of these discussions follows

Finally, each group selected a representative to "report back" a summary of their discussion to the larger group.

RESIDENT INPUT:

KEY ELEMENTS TO INCLUDE IN A

SHAREDVISION FOR THE FUTURE OF EAST BOSTON CAMPS

The following elements of a future vision are based on the input residents gave at the visioning workshop. They represent those aspects of the discussion for which there seems to be relative consensus.

- ***More access for Westford residents, particularly to the pond and trails****
- There should be a camp of some sort on the property
- Preserve pristine natural environment and rustic character
- Protect natural resources (e.g. trees, wildlife, water quality)
- Preserve feeling of serenity, peacefulness and quiet
- Support the enjoyment of property by residents engaging in such activities such as hiking/walking, dog walking, mountain biking, ice skating, boating and fishing.
- If the property is to be shared with outside users, their use should not impede access to the site, including the pond, by Westford residents.
- Keep the 5th grade camp
- No weekend rentals to outside groups
- Minimize environmental impacts
- Preserve camp tradition in some way
- Add educational uses to the site
- Cost to the town should be an important criterion in deciding amongst options

    - This was the number one issue and a recurring theme throughout all of the group discussions.

FUTURE USE OF THE PARCEL

1. ***What would you think are the most important <u>factors to consider</u> in selecting an option for the future of the property (preserve open space, generate income, provide community gathering spot, honor commitment to Hyams Foundation, etc.)?*** **Prioritize**

Factors to Consider	Comment(s)	# of Groups	# of Votes[1]
Maintain quality of open space	• Rustic character & scenic views	6	96
Preserve Camp tradition as it is now run by EBSC	• Honor EBC agreement, but no sub-leases • Moral obligation	8	74[2]
Environmental Impact (least amount)	• Protect land, aquifer and brooks • Preserve pond and water quality • Maintain water quality • Maintain and enforce the CR	7	54
Access to all groups	• Year around • Don not allow any use which restricts public access • Particularly the pond • During camp sessions • Some trails accessible	7	48
Cost	• Cost of upkeep of buildings & septic systems • Financial & liability • Generate income or at least break even	5	25
Primarily for Westford use	• & affiliated organizations (e.g. Nashoba Tech)	4	24
Use for environmental educational	• Nature center • Keep environmental studies camp	4	23
Care-taking, management, stewardship	• Maintain trails	4	16

[1] All Participants were asked to respond to this question. Once all group members had contributed their ideas, each participant was given 5 dots and asked to get up from their seats and "vote" on which they find most important by placing the dots next to the words on the large pads. They were instructed to use all their dots but they could not place more than 3 dots on any one item.

[2] There were an additional 6 votes for this factor from non-Westford residents (making for a total of 80 votes)

Balance year round access for residents with camp use		3	15
Who will make these decisions		1	12
Continue Camp as is	• Moral obligation to continue • Be self-sufficient	4	11
Keep East Boston Connection	• But on a limited basis	2	9
Environmentally sound practices	• Care and custody	2	9
Maintain wildlife	• Sustain ecology • Avoid becoming day destination	2	8
Spirit to serve children		1	7
Only make rules when needed	• when there is a problem • think about current users and how may be stopped from doing what they have always done	1	6
Horseback riding		1	5
Use site for community building	• Community involvement in maintenance of site	2	5
Canoe drop off area	• Let cars in to drop off, then return to central parking area	1	4
Community gathering	• outdoor amphitheater	2	4
Camps – security for kids	•	1	3
Least amount of infrastructure	•	1	3
Minimize traffic impact	• Anything that would require road improvements	1	2
Bench tradition	•	1	1
Number of people involved	• Today and in the future	1	3
Encourage x-country skiing	• Alpine sports	1	1
Trail signs, nature signs	• Trail names, rules	1	1
Art program	•	1	
Public restrooms	• one building open for public: lunch, restroom	1	1
Camp should not be there as it is today		1	
Length of lease with camps	• 8 weeks	1	8
Walking dogs	•	1	6

Additional Notes:

While there was substantial sentiment for continued camp use by EBSC there was concern about balance. Weekend use by others was particularly troublesome.

2. ***Please vote: <u>Camp or No Camp of any kind</u> and then share some of your reasons for this choice.***

Camp or no Camp	Reasons	# of Votes
Camp (of some sort)	• Sharing the resource • Valuable for kids to be outdoors (2) • Close to home • Educational opportunities, life lessons • Memories of one's own camp experience • Moral obligation to city kids • Keep options open for future • Expose all 5th graders to nature • Option of adult camp • Include same stakeholders (more than just local)	77*
No Camp (of any kind)	• Risk of undefined camp • Risk of large commercial operation • Use of property by non-campers • No financial benefit to Town • Unrestricted access • Finances • Insurance liability • Environmental impact • Either as is or tear down • No camp except 5th grade camp	7
Undecided		1

- There were 6 additional votes for this option by non-Westford residents (for a total of 83)

3. **Future Options Chart**

Participants were given a chart with options and asked if they wished to add additional options not listed . Next they were asked to offer their opinions on the pros and cons of each of the options and finally they were asked to vote on a preferred option.

Options

Options 1, 1A, 2, 3 and 4 were presented to participants. In almost every group, participants proposed an additional option(s) which were mainly modifications to Option 2 and Option 3 as listed below.

Option 1: No Camp
Option 1A: No overnight or summer day camp
Option 2: Continue historic use
Option 3: Town run day camp
Option 4: Third party day camp

The two main options that were added by participants were some version of the following:

- ***Option 2A :Historic Use with some modifications***. Several groups had ideas regarding how to continue use by EBSC, but with some changes; these included:
- more use by Westford residents & no weekend use by other users
- Limit EBSC use to 6-7 weeks with limited access and town managing discreet rentals
- Town has oversight for income from rentals, full access except summer.
- Demolish the buildings on one side (girls' camp?) allowing public tenting and other uses at that side. The other side would be reserved for camp, with the time split between boys' and girls' camps (if overnight). Town access is shared with the overnight camp (first choice is EBC)
- Use of day camp, run by the town, use of boys camp for overnight camp (1/2 the time for girls, the other ½ for boys); use the boys camp for educational opportunities for students. All must be self-supporting. This group was not definitive about who would run the overnight camp.

***** Option 3A: Town run day camp with some modifications*.** Several groups had ideas regarding how to adapt the Town run day camp option; these included:

- Combine Town run day camp with 5th grade camp and theme camps
- Demolish the buildings on one side (girls' camp?) allowing public tenting and other uses at that side. The other side would be reserved for camp, with the time split between boys' and girls' camps (if overnight). Town access is shared with a day camp (first choice is town Rec. Dept.)
- Smaller camp area, greater use by public
- Walden Pond Model
- Create Westford Partnership for Ecology
- Environmental studies camp

FUTURE OPTIONS

Option #	Option	Pros (most mentioned)	Cons (most mentioned)	# of groups	# of Votes
1	**No Camp**	Access by Town Easiest & least expensive way to preserve the land No future maintenance Retains "as is" natural Reduced liability	Deprives kids of opportunities Loss of historic use/character	3	6
1A	**No overnight or summer day camp**	Retains a Westford tradition & respects history of camps Less environmental impact, but retains some options for use Better access for Westford residents	Self-centered for Westford residents Underutilizes facilities already purchased Continued restrictions on camp area	4	6
2	**Continue historic use**	Maintains opportunities & traditions EBSC assumes building maintenance	Restricts access to residents Maintenance costs Lack of town control Liability issues	4	22[3]
2A	**Continue historic use (with some changes)***	Can be adjusted to maximize fairness & minimize costs Keeps tradition while giving access to local kids		6	30[4]
3	**Town run day camp**	More town control More public access	Limits users Town expense	3	4
3A	**Town run day camp (with some changes)****	Allows more access Provides direct benefit to town residents		4	16
4	**3rd party day camp**	Generates income, minimizes cost to Town	Town loses control Too large/impacts Difficult to monitor	9	0

The following is a more complete listing of the pros and cons as provided by the participants.

Option	Pros	Cons
Option 1: No Camp	Most access by Town (5) Easiest & least expensive way to preserve the land (3) One year financial hit No future maintenance (2) Retains "as is" natural environment (2) Less environmental impact (2) Reduced liability (2) Reduced chance of vandalism Environmental improvement Maximum use of habitat	Deprives kids of opportunities (2) Against the spirit of MOU Cost of demolition Loss of current unique use within the community Less oversight of property Loss of historical use/character (2) Loss of educational value Waste of land Fewer people there, may increase vandalism, littering, etc.

[3] There were 2 additional votes for this option by non-Westford residents (resulting total of 24).
[4] Includes 11 votes in support of continuing an overnight camp, but without being explicit about who would run it; several would like it to be smaller. There was an additional vote for this option made by a non-Westford resident (resulting in a total of 31 votes).

	No more arguments re: camp	Loss of 5th grade camp
Option 1A: No overnight or summer day camp	Retains a Westford tradition and respects history of camps (3) Less environmental impact, but some options (2) Better access for town residents (3) Sill have facilities for town use Direct benefit to Westford Residents 5th grade camp important Good for students	Self-centered for Westford residents Underutilizes facilities already purchased Other uses of buildings may open the door to unwanted activities or groups Some demolition Sporadic use could increase town maintenance costs Continued restrictions in camp area None Parents will pay
Option 2: Continue historic use	Maintains opportunities & traditions (2) Closest to preserving "as is" condition (2) Moral obligation to continue historic camp; social justice (3) EBC assumes building maintenance costs Continues great work of EBSC kids Less liability for the town Kids & families use & benefit from nature Unify & unite communities	None Camps not in good condition: electrical hazards, propane tanks, poor septic & environmental impact (2) Camps more likely to want exclusive use Lack of Town control/stewardship (2) Fewer campers each year/unable to maintain Restrictive access to residents (4) Don't feel that Westford taxpayers should subsidize non-profit whose stated purpose is to provide preferential treatment for East Boston & Chelsea low income families. Lose value of $13 M purchase by not addressing future town needs Weekend rentals + use by outside groups of 6-8 weeks camp period is unfair to town residents Crafting a reasonable contract & monitoring that contract Maintenance (3) Liability (2) High cost Separate E. Boston & Chelsea Potential overuse of property
Option 2A: Continue historic use w/some changes	Can be adjusted to maximize fairness & minimize costs Sharing the resource benefits everyone Keeps camping tradition alive while allowing access to local children Can be combined w/all other options except #1 Finds a medium where the Town & the Social Center can still provide the services they require for their respective communities	None

Option 3: Town run day camp	More Town control of use Better facility than Nab School More short programs Local campers and staff More public access (3) Low maintenance Great site for residents None Much needed day care & summer activities	Limits users Restricted use (not as much) Increase in Town growth may lead to increase in # of campers Permanent addition to Town salaries & expense item for Rec Department (3) Town managed None What about adults? Too heavily used
Option 4: Third party day camp	Best opportunity to continue camp while minimizing cost to Town Generates income (2) Management expertise Includes city kids Weekend public access None	Could lose access for Town & EBSC (1) Loss of benefits & traditions of overnight experience Too large/too commercial (2) Town loses control (6) Risk of unknown costs Restricted access (maybe more) Crafting & monitoring contract (2) Increased infrastructure costs due to quality expectations Party would want long-term contract w/town Higher risk of damage to pristine, rustic site Increase in traffic
Option 5: Town run day camp/ 5th grade/ theme camp	Allow access for longer time of year Direct benefit to Westford Residents Town run day activities self sustaining, open to all, wouldn't restrict access to the property by the general public Continued use of camp facilities & maintenance of buildings and grounds for camp and environmental education Teaches Westford kids to understand & respect EBC	
Option 6: Split Use (town and overnight camp)	Allows public access to the pond during the summer EBC could still use Town beach (is this possible?) Maximizes use of educational opportunities for all kids Ensures some sort of watchfulness	Resolving conflicting use of area (logistics) Increased traffic Safety of campfire areas Residents use limited during summer

Option 6A: Split Use (town and day camp)	Allows public access to the pond during the summer EBC could still use Town beach (is this possible?)	Resolving conflicting use of area (logistics) Increased traffic Safety of campfire areas

Option 6: Demolish the buildings on one side (girls' camp?) allowing public tenting and other uses at that side. The other side would be reserved for camp, with the time split between boys' and girls' camps (if overnight). Town access is shared with the overnight camp (first choice is EBC)

Option 6A: town access is shared with a day camp (first choice is town Rec. Dept.)

Most Important Pros

- EBSC has done a wonderful job caring for both the property & the kids (2)
- Use by everyone, including EBSC kids (2)
- EBSC can continue to run the camp
- Flexibility in managing costs
- Sharing opportunities with others
- Can accommodate all other options but one
- Access for more kids from different communities (2)
- Keeps traditions going (2)
- Access (4)
- Financial (3)
- Education (2)
- All options other than #1 restrict public access to some degree; it is a matter of what amount is acceptable. This was the number one issue pro/con on deciding the issue.

Most Important Cons

- Undefined proposal
- Weekend rentals = disrespect of property from out-of-Towner's ; restricts public use

Additional Comments:

- "I don't think costs./incomes are big enough to be a driving factor."
- There was significant support for continued camp use by EBSC, there was concern about balance. Weekend use by others was particularly troublesome**.**
- Cost and income data is highly suspect; should not be used as factor
- No camp is taxpayer must pay

- Access to land
- Want future use to be financially self sustaining/no tax drain
- Access for different groups/ages but must be self financed
- Do not care who runs the day camp, but EBSC should run the overnight camps and the 5th grade camp should continue.
- No one wanted the weekend rentals to continue for out-of-Town groups because of disrespect of property and restrictions on public use.
- In general most had problems with the financial comparisons. It becomes evident that all camps are non-profit.

Other Ideas Include:

- Add educational programs with the school in addition to the camp
- Theme-based camps, e.g. nature/music/science/ecology
- Work programs for maintenance, e.g. forestry/trail upkeep
- Audubon Camp
- Create Westford Partnership for Ecology
- Walden Pond model
- Smaller camp
- Boat rentals and other income
- No weekend rentals
- Residents only, family camping
- Weekend use of the day camp
- Environmental studies camp
- Run the camp like Roudenbush with a board of Directors

COMMENT PADS

Three "comment pads" were available for participants to write in their responses. These were located at the information tables throughout the evening. The following is a complete list of responses.

What are your favorite things about the EBC property?

- The trails and their awesome views
- Access to all trails and pond
- Ditto above
- Ditto – no housing. No commercial development, natural landscape for walking, hiking, dogs, etc.
- Trails, natural habitat, walking
- Trails and the fact we are contributing to inner city youth education
- The beauty and solitude of "a walk in the woods"
- Ditto to all of the above
- Place to walk the dog off-leash – very special
- The service it provides to under-privileged children
- Able to walk dogs off leash
- Good for physical mental health
- Access to pristine natural environment for exercise and enjoyment
- Protection of natural resources including water
- Access to natural environment to walk, trails
- Allow youngsters with fewer resources (East Boston) a chance to explore a new environment
- Walking in woods with dogs off leash
- Peaceful trails – wildlife
- Great fishing
- Peaceful and solitude
- Birding
- I love it just the way it is – keep the historic camp

What are your least favorite things about the EBC property?

- Limited access to Westford residents
- Cessation of allowing vehicles to bring canoes, etc. for launching
- Dogs off leash!
- Fishing, canoeing and auto access
- Ditto to the line directly above
- Cancel camps
- Would like composting toilet (good idea)_
- Black flies in June
- Not being able to use all of the camp all of the time (good one)
- How to navigate?
- Please keep operating as a summer camp for children
- The chain across the road
- Need maps to find way
- Let residents have access to pond in summer
- Too little access for town residents
- Roads blocked off for kayaks
- Dogs off leash! And dog poop in trail
- Dogs off leash. Vehicles entering. Pollution. Trash
- Need maps

What are some ways the East Boston Camps property contributes to the well-being of the Town of Westford?

- Exclusive usage by anyone
- Ditto
- Beauty, wildlife habitat, solitude and trails
- Open areas
- Open space is extremely important in such a big chunk for animals (and plants). Great to have a place to walk, and the camps
- Need solitude and peace someplace in town. Preserves our sanity!
- All children (attending public 5th grade) gain appreciation of conserved natural space.

Summary of Resident Input
East Boston Camps EBS Master Plan Part Two:
Public Forum
Stony Brook School, Feb. 1, 2007

Approximately forty (40) people attended the public forum, the second one related to developing a master plan for the East Boston Camps property. The Forum was held at 7:00 at the Stony Brook School on Thursday, February 1, 2007.

Purpose of the forum: To provide input into the process of option selection for the future of the East Boston Camps site around which an action plan can be developed.

Process: The forum began with a PowerPoint presentation by the Consultants who presented their findings. They began by reporting back "what they heard" from residents in the previous forum (visioning session held in October) and in the notes left in the various suggestions boxes placed in a number of locations around town. The Consultants compiled this input, determined the main areas of consensus and developed a set of goals and visioning statement to be the foundation upon which recommendations will be made. These were reviewed with participants. This was followed by an outline of the master planning process and an explanation of the main conclusions of the existing conditions survey. Finally, a description of the Steering Committee's preliminary recommendations regarding policies necessary to manage the property in the future was presented to the group for their review and comment.

The Consultant presentation was followed by a brief question and answer session in the large group format, followed by small group discussions. Participants were divided into four groups of approximately ten persons in each group. Discussions were led by facilitators and all four groups were asked the same questions; these were focused on developing policies for improving, preserving, managing and maintaining the property in the future. A summary of these discussions follows.

Finally, each group (with the exception of one which insisted on using the time to continue their discussion) presented a summary of their discussion to the larger group.

OVERVIEW OF SMALL GROUP DISCUSSIONS

For each discussion point, participants were presented with the following background:

- **Goals**
  - These are derived from the first public forum
  - There are four main goals; for each there is an issue sheet:
    - To protect natural resources
    - To increase access for Westford residents
    - To continue the camp tradition
    - To develop an appropriate management structure
- **Issues**
  - They are derived from the existing conditions survey
  - These provide the background for policy discussions
- **Objectives**
  - These are more specific aspects of the goals around which policies will be developed.
- **Policy Considerations**
  - These are explained more fully in Issue Sheets
  - These provide the context for discussions

- **Policies Being Considered**
  - These are the Steering Committee's preliminary recommendations
  - ***This is where the public input was requested***

SUMMARY OF PARTICIPANT INPUT

GOAL 1: PROTECT NATURAL RESOURCES

Objective 1A: Protect the water quality at Burge's Pond

Majority Response: Yes

Policy Recommendation: The majority of participants would like to continue the boat policy of "carry in/carry out" as a way of limiting the potential for invasive weed contamination. Some residents advocated for more limits than currently exist and one wished for easier access than currently enjoyed.

Objective 1B: Manage the forest to increase wildlife diversity and improve vistas.

Majority Response: Yes

Policy Recommendation: The large majority (with the exception of only 2 participants) were in favor of implementing a forest management plan at the EBC property. Many

expressed concerns regarding over managing and clearing too much of the property, but were supportive of a good plan done by a qualified person.

GOAL 2: INCREASE ACCESS FOR WESTFORD RESIDENTS

Objective 2A: Improve parking and circulation.

Majority Response: Yes

Policy Recommendation: The large majority of participants were in favor of making parking and circulation improvements, but emphasized the need to be mindful that these did not negatively impact the property and some made suggestions regarding the type of improvements that might help improve access while protecting the environment. Most felt that the number of parking spaces should remain the same.

Objective 2B: Manage Access to Camp By Group Users

Majority Response: Yes

Policy Recommendation: An overwhelming majority of participants were in favor of allowing group rental/use of the site (with the sole exception of one individual). There were some concerns expressed regarding management and enforcement of the policy and several mentions of the fact that group rentals should not result in disruption of public access to the property. There was not full consensus regarding whether or not the renters should be required to be Westford residents and/or sponsored by a resident of the Town.

GOAL 3: CONTINUE THE CAMP TRADITION

Participants were asked to express their preference for one of the three camp options developed from the previous public visioning workshop.

> Option 1: Continue operating the overnight camp and day-camp by an outside operator that could provide opportunities for East Boston and Chelsea campers and for Westford campers, similar to the way the camp has operated for the past seventy years, but limited to the north side of the pond.
>
> Option 2: Have the Westford Recreation Department operate a day camp utilizing the camp facilities on the north side of the pond. This town-run day camp could recruit campers from Westford and surrounding communities and make an effort to have 25% low-income campers from East Boston and Chelsea.
>
> Option 3: This option, suggested by residents at the previous public forum, is a combination of the first two options. An outside operator could provide opportunities for low-income campers and for Westford campers in an overnight camp similar to the way the camp has operated in the past. The day camp could be run by the Westford Recreation Dept. and could make an effort to recruit day-campers from Westford, surrounding communities and East Boston and Chelsea.

Majority Response: There was a very clear consensus in support of the continuation of an overnight camp. Option 3: Overnight Camp & Westford Day Camp with a very close second preference (in effect it was a tie) being Option 1: the Traditional Camp and Day Camp (as operated until now). Option 2, a Westford Day-Camp was very clearly third choice for a large majority of participants.

Policy Recommendation: Those participants who said they preferred Option 3, seemingly based it on the belief that it would provide access to more Westford residents. Those who preferred Option 1 felt that it was keeping the tradition alive, the best chance to bring inner city kids to the camp and the belief that there may be more financial incentive for camp operators.

GOAL 4: DEVELOP APPROPRIATE MANAGEMENT STRUCTURE

Question 4A: What kind of expertise is needed to **manage** the property?

Majority Response: Only one group answered this directly and said that the Advisory Council should have knowledge of conservation, environment, wildlife, water resources, volunteer management, fundraising, an awareness of potential impact on property, public relations and communication.

Question 4B:

Part 1: Given what you know about town resources, which existing town entity do you think is best suited to having **ownership** of the property?

Majority Response: Conservation Commission

Part 2: Given what you know about town resources, which existing town entity do you think is best suited to **managing** the property?

Majority Response: Conservation Commission manages land, Recreation Department manages camp.

Policy Recommendation: The majority of the participants seemed to agree that the care, custody and control model of the Roudenbush and the Town Beaches (which are owned by the Conservation Commission and managed by the Recreation Department) was a good model to adapt to the management of the EBC property. Some felt that there should be a separate Advisory Committee, others did not, and yet others thought there ought to be a Board of Directors with more authority than the proposed Advisory Council.

Vision Statement

In addition, participants were asked to review a vision statement developed to guide future decision-making regarding the East Boston Camps property. Two participants felt

the statement should include something about the Town's commitment to having an overnight for inner city kids.

Participants were also asked to respond to two written questions:

Do you think the EBC site is a location where dogs should run loose (off their lease)?

Majority Response: The number of participants who thought the by-law should be changed to allow dogs to run loose was slightly higher than those who thought it should not be changed.

Do you think the name of the property should be changed?

Majority Response: The majority of those responding to this question felt that the name of East Boston Camps property should remain the same (just about half as many thought it should be changed).

A DETAILED DESCRIPTION OF SMALL GROUP DISCUSSIONS follows.

GOAL # 1: Protect Natural Resources

There are two policies to consider with regard to this goal

Issues:

- Spectacular natural area
- Located along corridors
- Pristine and pure Burge's Pond
- Place of beauty, peace and quiet
- Conservation Restriction prohibits activities that would compromise these qualities (e.g. all motorized activity is prohibited.

Relevant issue sheet describes these in more detail.

OBJECTIVE 1A: Protect the water quality of Burge's Pond

Policy Consideration(s): One of the major threats to the pond's water quality is the accidental introduction of invasive weeds. Once introduced they spread rapidly choking the pond and this becomes very expensive to control.

Policy Being Considered: Continue the policy of "carry in/carry out" boats so as to limit potential for contamination.

❖ QUESTION #1A:

Given the threat to contamination, do you want boat access to the Pond to:

Response	*Votes*	*Comments*
Remain the same	**29**	• Need boats to fish • Shoreline difficult to access • Educate public (kiosk, web) of proper procedure to clean boats prior to bringing to pond to ensure they do not introduce invasive weeds • Signs should inform public of invasive weeds issue • Like having no cars going up the road • Need a monitoring program to watch for the introduction of invasive weeds (easier to treat if caught early)
Become easier than now	**1**	
More limits than now	**9**	• Town ownership & management of all boats • No boats at all except from inside camp operations

Other Comments:
- No motorized boats
- Choice of management entity will make the difference in making this choice

OBJECTIVE 1B. Manage the Forest to Increase wildlife diversity & improve vistas.

Policy Consideration:

- The goal of Forest Management is to maintain and improve the health, diversity and productivity of forest ecosystems (including wildlife) for the enjoyment of current and future generations.
- As part of the master plan process, the town hired a professional forester to conduct a forest inventory. The forester has indicated that much of the site's forest is suitable for selective thinning to improve vistas and increase wildlife diversity by creating small clearings.
- *Refer to hand –out on Forest Management Planning for more information.*
- Just as additional background information, the forest at the EBC property has been managed in the past (every 20 years or so)
- Forest management is also conducted in other places in town (e.g. the Water Department property near Forge Village Road and the cemetery)

Policy Being Considered:

To implement a Forest Management Plan including such techniques as selective thinning and creating small clearings for the purpose of improving vistas and increasing wildlife diversity.

❖ QUESTION #1B:

Are you in favor of implementing a forest management plan at the EBC property?

YES or NO	*Number of Votes*	*Why?*
YES	***39***	• Cost the town no money & done with an approved plan by all stakeholders • Be careful of invasive bittersweet • Be sure to stay away from wetlands & vernal pools • Ensure that qualified person does forestry management • Do not do this to make money • Ensure forestry plan does not damage property • Don't turn EBC into a park, e.g. a lot of clearing • Ensure the character remains the same, keep "as is" • Diversity in forest is good with proper management • Protect native species • Ensure that plan is done effectively • Do not over manage
NO	***1***	• The plan done in the past looks "too manicured"
Neutral	***1***	Not enough knowledge regarding the plan

GOAL #2. Increase Access for Westford Residents

There are two policies to consider with regard to meeting this goal.

Issues:

- Currently access to Westford residents is somewhat limited during camp season
- This was the number one issue for participants in the first public forum

Relevant issue sheet describes these in more detail.

OBJECTIVE 2A. Improve Parking and Circulation

Policy Consideration(s):

- Currently parking has poor drainage and is poorly marked
- Site is not very welcoming

Policy Being Considered

Parking Improvements (estimated cost = = $25,000 - $36,000)

- Make improvements to the parking area
- Keep current location and capacity (25 spaces plus overflow)
- Provide handicap parking space

Circulation will remain the same

- No unauthorized motorized vehicles will be allowed beyond the parking lot
- Loading and off-loading will be allowed for group use

Make Site more Welcoming & Finding your way around the site easier
(estimated cost = $1,500 - $2,000)

- Create a centralized trail head and re-locate some trails near parking
- Relocate kiosk to help orient visitors
- Provide Signage for orientation

❖ QUESTION #2A:

Do you agree with these improvements? (yes or no/Show of Hands)

Parking and Circulation Improvements

YES	NO
29	4

One group divided the voting into several questions:

Improve parking	**YES 9**	**NO 1**	
# of Parking spaces	Expand 1	Decrease 1	Remain the same 8
Improve the trails	Improve 9	Leave as is 1	

Would you like to add any additional improvements?

ADDITIONAL IMPROVEMENTS

- Should look to increase use in the future and plan parking accordingly
- Should make it more obvious where you should park
- Include a bike rack
- Publicize other parking at Stony Brook School
- Consider separate trail systems for cross country skiing, snow shoers, bikers, dogs off-leash
- Trails should be marked and keyed to a trail map at kiosk with lengths delineated; develop trail management system
- Port-a-Potty near parking area
- Increase obstructions to block vehicles (e.g. boulders, gates, chains)
- Install gated barriers instead of chains tied to trees
- Parking signs/boundaries would be helpful
- Whenever possible, including group use, all cars should park in parking area and not drive up the roads
- Would other access (e.g. Stony Brook School) create more usage?

Do you have any concerns?

CONCERNS

- One group discussed the environmental benefits and the convenience of improving parking versus the fact that doing so might encourage use by too many people versus the fact that any resident who wishes to use the property should be encouraged and allowed to do so
- Keep all parking closer to Depot Street
- Fundraising to help pay for these improvements
- ADA accessibility for wheelchairs
- Improvements should be limited so as not to add more vehicle activity

OBJECTIVE 2B. Manage Access to Camp by Group Users

Policy Consideration(s):

- Residents at the previous forum suggested that they didn't like having the property rented to outside groups because it was not controlled by the Town

Policy Being Considered

Allow group use on a rental basis either to Westford residents or to groups sponsored by a Westford resident.

- Institute a permitting process including fee
- No alcohol or smoking will be allowed (same as in all other town-owned properties)
- All users must be sponsored by a Westford resident

❖ QUESTION 2B:

Group Use Allowed

YES	NO
41	1

One group dealt with the residency requirement separately:

Westford residents only	2
Sponsored by Westford resident	3
No residency restriction	5

Would you add anything to this policy?

- Boy scouts should not have to get a permit just to hike the land
- Group rentals should in no way constitute an exclusive use of the property, public should still be able to walk loop around the pond even along north camp
- Allow for overnight use
- How will the policy be controlled? There should be security measures or policing
- Groups should be restricted for public safety
- Management is most important
- Should have a different fee structure, i.e. lower rate for non-profit groups vs. private
- Should require a security deposit
- ACA has a set of standards for renting property – look into these
- Want a restriction on the number of vehicles going up the road, ideally none
- Should have a limit on the number of people that can attend a group function
- Need to check into safety rules from organizations, i.e. Scouts and see if compatible
- Want a limit on the number of rentals, e.g. rent it for 30% of available weekend

GOAL #3: Continue the Camp Tradition

Issues:

Relevant issue sheets describe each camp option in detail. The Camp Options Summary table compares them below.

Camp Options Summary

Camp Option	Public Access to Majority of Site	Facilities	Costs	Income	On-going Management Costs
Camp Option 1 Traditional Camp	Increased (Entire south side of Burge's Pond and Stony Brook would be accessible to year-round public use)	Concentrated in limited area (north side of Burge's Pond)	Fees would generally cover costs (Any town-supported capital costs would have to be approved by Town Meeting)	$12,000 lease + group use income	Paid by fees & fundraising
Camp Option 2 Westford Day-camp	Increased (Entire south side of Burge's Pond and Stony Brook would be accessible to year-round public use)	Concentrated in limited area (north side of Burge's Pond)	Fees would generally cover costs (Any town-supported capital costs would have to be approved by Town Meeting)	Fees would generally cover costs Group use income	Paid by fees & fundraising
Camp Option 3 Overnight Camp & Westford Day-camp	*Increased* (Entire south side of Burge's Pond and Stony Brook would be accessible to year-round public use)	Concentrated in limited area (north side of Burge's Pond)	Fees would generally cover costs (Any town-supported capital costs would have to be approved by Town Meeting)	$12,000 lease + group use income	Paid by fees & fundraising

▪ QUESTION #3A:

Which camp option do you prefer (for 1rst choice, 2nd choice, 3rd …)? (Show of Hands)

Option	1rst Choice	2nd Choice	3rd Choice[5]
Option 1: Traditional Camp – Overnight + Day-camp	16	18	1
Option 2: Westford Day Camp	7	4	26
Option 3:Overnight Camp & Westford Day-camp	18	15	1
TOTAL	41	37	28

Option 1:

Pros

- Feeling that the overnight experience could not be duplicated in a day camp
- Give something back because previous owners of property had been generous with Westford community
- Unique special place. Goodwill, keep tradition
- Less financial risk to town
- Experienced camp operators
- Best chance to bring in inner city kids
- More incentive for camp operators to bid because it is more financially attractive to them.
- It did not seem to be financially feasible for one operator to run an overnight camp on this property without the day camp and that this option would most likely include both Westford children and low income children.

Cons

- Town loses some control of managing property, especially environmental aspects

Option 2:

Pros

- Easier monitoring, town has more control, fewer outsiders managing the property
- Flexibility to allow occasional overnights for campers
- Opportunity for the Recreation Department to enhance their programming

Cons

- Loss of overnight experience would have a haunting effect
- Doesn't' take advantage of the overnight capabilities we have
- Not very likely that inner city kids will participate (traditionally users)

Option 3:

Pros

- Opportunity for the Recreation Department to enhance their programming
- Access to more Westford residents

[5] Only three of the groups voted on third choice

Cons

- Limited outside activity
- Revenue not going to camp operator
- Question if it is financially viable for an outside entity to run just an overnight camp
- Feel it would be awkward for two different management groups to operate in the same area – question if it would work

Additional Comments

- If the Recreation Department runs the camp, it should not be an opportunity for them to make money. Also, if they run any additional overhead, this should be paid for by the fees and not be a cost to the taxpayer.
- The day camp needs to be affordable.
- If a contract is given to run a camp, whether it be an outside group or the Recreation Department, an evaluation period should be set up to determine if the camp option chosen is working or if there needs to be a reevaluation of the choice.
- Had they been allowed to do so, two participants would have chosen Traditional Camp as both their first and second option and two other participants would have chosen Westford run day camp only as both their first and second options.
- One participant wanted no overnight camp at all and felt that any camp on the property should be run by the Westford Recreation Department only.
- Some participants wanted to see another option for a day and overnight camp run by two different entities not necessarily the Recreation Department.
- Definitely continue fifth grade camp!

GOAL #4: Develop Appropriate Management Structure

Issues:

- There is a need for an appropriate management structure for the property in order to ensure that the previously stated goals are implemented and that the property is appropriately cared for over time.
- The Conservation Restriction specifies terms; the management structure is proposed to oversee these and ensure that they are being complied with.

Relevant Issues Sheet describes these in more detail.

Policy Considerations:

- There are five town entities that can own land in town; these are:
  - Board of Selectmen
  - Conservation Commission
  - Recreation Department
  - Cemetery Commission
  - Water Department

- These entities can choose to delegate maintenance and scheduling of the property they own to another entity, for example, just the way the Conservation Commission has delegated management of the beaches to the Recreation Department.

Policy Being Considered:

As we mentioned earlier, the Committee has been considering a management structure based in part on a model familiar to the Town (e.g. Roudenbush Community Center). The proposed structure is as follows:

- Conservation Commission – official owner and managing body with strong participation from Recreation Department.
- Advisory Board: meet quarterly, sole focus would be this property, potential membership could include: Westford Land Preservation Foundation (or holder of Conservation Restriction), Community Preservation Committee, Department of Parks and Recreation, Water Department, Conservation Commission, and At-large members.
- Friends of ….: Would be responsible for fund-raising.

❖ *QUESTION 4A:*

What kind of expertise is needed to manage the property?

Advisory Council should have knowledge of conservation, environment, wildlife, water resources, volunteer management, fundraising, an awareness of potential impact on property, public relations/communications.

❖ *QUESTION 4B:*

Given what you know about town resources, … Which existing town entity do you think is best suited to having ownership of the property?

Ownership Entity	*Number of "Votes"*
Conservation Commission	35
Board of Selectmen	4
Abstain (not enough info)	1
Recreation Department	0

Which existing town entity do you think is best suited to managing the property?

Management Entity	*Number of "Votes"*
Conservation manages land, Recreation manages camp	22
Board of Directors[6]	9
Conservation Commission	6
Recreation Department	3
Abstain (not enough info)	1
Board of Selectmen	1

[6] This proposed body would be similar in make-up to the proposed Advisory Council but with more authority.

Additional Comments

- Need to raise outside money through Friends group.
- Think the Advisory Board should be both for the Conservation Commission and the Recreation Department and that they should have under their purview both parcels (large one and the Nutting Road parcel).
- Some participants felt that there should be a separate advisory committee as outlined in the Committee's policy consideration; others did not.
- One participant felt that policy for this property should be created by additions/changes to the Town by-laws.
- Some participants felt that the existing administrative structure at the Rec Dept. was already in existence and well suited to both ownership and management of the property (another participant noted that this would result in an increase in budget and personnel at the Rec Dept.).
- One participant identified the Town Beach model (ownership to Conservation Commisssion/management to Recreation Department) as a model for success.
- The need for bathrooms or port-a-potty open to the public year around was brought up.
- One participant wanted the Town Manager to be the Official Manager with the Advisory Council to direct him.
- Concern that Recreation would want to put in more infrastructure and expand operations.

VISION STATEMENT

Participants were given a copy of the vision statement (on the back of their agenda, the last page of this document) developed from comments at the first public meeting, and asked to make any suggestions for improvement. The following comments were contributed by participants:

- What about our commitment to East Boston Camper residents?
- What does "effective management" mean?

Under *Goals*, comments were:

- Continue camp tradition by having some sort of *overnight camp for inner city kids* (wording changed from 'camp on the property')

Additional Comments:

- Cutting Trees: OK if minimized, no vehicles near wetlands, well away from vernal pools.
- Summer camps: I hope it will continue to be available for inner city kids. Being run by the EBSS is good because of their experience in attracting city kids.
- Invasive Pond Weeds: We should actively monitor every year.

QUESTION SHEETS

Participants were also asked to respond to two questions written on question sheets and located on the sign –in table at the entrance to the auditorium.

QUESTIONS SHEET 1: DOGS

ISSUE*:* Westford currently has a leash law. Any change to this would require a vote at Town Meeting to amend the non-zoning by-law.

QUESTION: ***Do you think the EBC site is a location where dogs should run loose (off their leash)?***

Please Check One	***Number of Checks***	***Comments***
Change By-Law (to Allow Dogs to Run without Leash)	***17***	• Prefer "under control" guidelines as in Acton • It's a great place for dogs to run • Dogs must be under control, however • It's working find now – most dogs off leash • Perhaps have certain hours/months for leash/no leash. On-leash for 2 hours /day for access by those who might fear/dislike dogs • Just put on leash if dog is excitable! • Great idea!
Make No change to By-law (Requires that Dogs be on a Leash at all times)	14	• Worry about irresponsible owners • Provide an "enclosed park" for dogs • Maybe allow dogs off leash in a part of the camp • Too sad, but necessary • Public Safety! • Of late I had met 2 dogs in particular, who are very aggressive, one of them is leashed, one isn't, 2 different owners, not sure of solution
OTHER	1	It does not matter

QUESTIONS SHEET 2: NAME OF PROPERTY

ISSUE: The name of the property is based on its historic use by the East Boston Camps Social Center. Some residents have felt that since the property now belongs to the Town of Westford, its name should reflect the change in ownership.

QUESTION: ***Do you think the name of the property should be changed?*** (yes or no)

Please Check One	***Number of Checks***	***Comments***
YES (Change name)	*12*	• If you want the town to support and embrace the Master Plan it should carry a Westford name. How about Burge's Pond Camps?
NO (don't change name)	20	

East Boston Camps EBS Master Plan Part Three: Public Forum

Stony Brook School
Thursday April 12, 2007
7:00 – 9:30 pm.

Purpose of the forum: To present the Draft Master Plan to Westford residents and to ask for their input on the plan's recommendations.

It was a snowy evening and in addition to the Steering Committee, five members of the public attended the forum. The Consultants presented the Plan Recommendations in a Power Point slide show and distributed a summary document. The discussion, which took place in conjunction with the presentation, lasted one and a half hours and was lively; many questions were made and comments given. The following is a review of the attendees input.

Attendees Comments

In addition to the Summary of Questions prepared by Norman Khumalo, the following comments were written on Comment Pads at the forum.

GOAL 1: PRESERVE NATURE

- 1a- CR enforcement is by WLPR, not caretaker, WPD, etc.
- 1a- lot of redundancy on road use and vehicles
- 1a – carry in-carry out boats – will private property boats be stored in boathouse?
- 1c- explain purpose of 600' buffer around vernal pools
- Map 1, Map 2 – "deconflict" various uses – thinning vs. protected

GOAL 2: INCREASE ACCESS TO WESTFORD RESIDENTS
No comments

GOAL 3: PROVIDE SUMMER CAMP OPPORTUNITIES

- I don't see a need to specify having an overnight camp operator to be an outside operator. This seems in conflict with the open bid procedures. The goals should be to get the "best" camp operators, whoever they should be.

GOAL 4: APPROPRIATE MANAGEMENT STRUCTURE

- Conservation Commission control may be a conflict of interest.
  - Advocating for a camp operator, or septic system in a central recharge area
  - Fundraising while they have low-mandated duties to enforce laws related to conservation

ADDITIONAL COMMENTS

- Where do leashed or unleashed dogs fit in?

Appendix 9: Managing East Boston Camp's Forestlands for Wildlife - Final Recommendations (Sue Morse Report)

1. A large part of what drives and directs your planning process is the need to protect and enhance East Boston Camp's biodiversity. I recommend that you emphasize "landscape scale" as the Town of Westford sets goals for the land's appropriate conservation. While the property itself is indeed rich and remarkable (as well as vital for the plants and animals that reside there) the larger landscape of surrounding core and connective habitats must be stewarded to ensure East Boston Camp's habitats and inhabitants remain healthy over time. It is essential that the Town of Westford seek to conserve the property's connectivity with Grassy Pond, Millstone Hill, and adjoining wildlands in Groton and other towns. You may have already done this but I recommend a regional map review session when you, Bill, George, and other Town and conservation leaders can define specific planning goals that appropriately place East Boston Camp's acreage within a larger conservation context.

2. Your goals for sustainable forest ecosystem management suggest the need for actively managing for wildlife habitat and timber products in some locations, while not harvesting trees or disturbing in any way certain other "natural areas." The challenge before you is to decide how best to achieve this balance. For example, I strongly recommend that maximum buffer zones be delineated around each of the four vernal pools found on the property. A buffer zone of 50-100 feet is *not* sufficient; research has demonstrated this amount of space does not adequately protect the necessary upland habitat that amphibians use during most of their life cycle. I recommend that your committee review this with Phil Benjamin so he can incorporate the most recent scientific recommendations and plan for more appropriate protection of these fragile wetland habitats. I attach two excellent resources that address this subject. I further recommend that you consider a consultation with Dr. Michael Klemens of the Wildlife Conservation Society in New York City (see Bibliography). He is an internationally known herpetologist with considerable experience working in the mid-Atlantic region.

3. As we discussed, I believe that you should designate "natural area reserves" where you conduct research and just plain observe and study natural ecosystem development functions and beauty over time. Negative, interacting, cumulative anthropogenic influences aside, forests do *not need* to be managed to be healthy. By setting aside natural area reserves, you can observe (and enjoy!) the dynamic interplay of natural processes including succession and the shifting mosaic of changing forest structures, spatial heterogeneity and wildlife responses; this is an often overlooked option for ecosystem managers. Your goal to practice sustainable forest management on suitable portions of your land is also a worthy goal. I believe such management, i.e., the harvesting of wood products and

micro-managing of wildlife habitat attributes, can and should be part of a deliberate effort to create a more productive mix of age classes, plant species mixes, and structures for the benefit of wildlife.

4. Besides managing East Boston Camp's daily visitors and campers, the primary goal for EBC's forest management is to ensure adequate quality habitat is stewarded over time and across the landscape so viable populations of all native plant and animal species can flourish. At the **stand level**, specific forest management practices conducted in specific stands, coupled with the protection of unmanaged natural areas, will achieve a more successful stewardship of the whole forested property for its variety of habitat amenities. At the **landscape scale**, your management plan should imagine the big picture and seek to guide the stewardship of the property's core and connective habitat values and ecosystem services.

5. Appreciation is growing for the tremendous benefits gained by properly managing timber stands, not only to improve wood products but to enhance and guarantee a suitable diversity in physical structure and foraging opportunities for wildlife. In New England, an estimated 41 species of birds and mammals rely upon standing snags and tree cavities--seeking food, denning habitat, or roosting perches. Similarly, coarse woody debris on the forest floor provides critical foraging, escape, thermal relief, and denning habitat for dozens of species from salamanders to black bear. The following sustainable forest management considerations should always guide any harvest operation on the ground:

    a. *Forest structure* determines the abundance and diversity of plant and animal habitats. Canopy height, canopy closure, tree and shrub density, stand composition, woody debris, snags, ground cover, stem density, and species and age class diversity all contribute invaluably to species richness and sustainability. Standing dead trees, for example, are a natural and vital part of most forest ecosystems, whether they are considered "old growth" or not. The specific goal of maintaining 3-5 wildlife den trees per acre is essential for the well-being of numerous species of insects, birds, and mammals. The protection and perpetuation of available dead snags, cavity trees, recruitment trees (cull trees that eventually become cavity trees and snags), and down and dead woody debris immeasurably enhance the value of East Boston Camp's forest for wildlife.
    b. Within your managed forest stands, scattered group selection cuts could dramatically improve the area's *vertical and horizontal diversity*: *Vertical diversity* describes the variety and complexity of vegetation layers from the ground up. Vertical diversity is the abundance of foliage layering and stem density derived from short herbaceous plants, larger herbaceous plants, woody shrubs, understory trees, and their canopy,. Throughout temperate forests in North America, many species of birds and mammals prefer habitats offering greater vertical diversity. Bird species demonstrate individual preference for specific canopy heights, foliage,

fruit or insect prey availability, flying maneuverability, and suitable roosting and nesting habitats.

c. *Horizontal diversity* measures the mix of different habitat types across a given landscape. A mosaic or patchwork of multiple habitats is more valuable and meets more needs of more species of wildlife than one or two types of habitat alone.

6. A variety of silvicultural practices implemented over the natural diversity of terrain, soils, and plant community types can improve species and age class diversity. Logging roads and small landings can be managed to increase the availability of nutritious forage and other herbaceous growth, benefitting deer, wild turkey, grouse, and dozens of other bird, mammal, and insect species.

7. I urge the Town of Westford to agree upon specific harvest standards that can be referred to and used as a guide during logging operations on the property. For example, I recommend that you specifically outline East Boston Camp's expectations with regard to wetland protection zones, snag and wildlife tree retention, coarse woody debris requirements per acre, protection from invasive plants through equipment cleaning, and encouragement of individual and multiple mast-tree release efforts wherever feasible. I also encourage you *not* to harvest valuable wildlife mast-producing tree species like white oak and black cherry. If you recall our field trips, I repeatedly discussed the virtues of designing and gradually implementing a "mast tree release" program for East Boston Camp. Tons of fruit from serviceberry, hazelnut, oak, beech, hickory, and cherry species provide an annual bounty of foods that are vital to dozens of species of birds and mammals as they prepare for the hardships of winter. "Releasing" the crown space of these desirable trees will increase their productivity and longevity. Until this past August, during our bumper year for beechnut production in northern New England, I hadn't comprehended how much food individual trees actually produce for wildlife. I conducted a simple investigation in which I actually measured the bounty. From just eight 2-5 foot long branches broken from the outermost crown, I counted 4,344 nuts! Similarly, other researchers have found that a healthy forest of mature oaks in the Northeast may produce 3,000-5,000 acorns pounds per acre.

8. Another worthy effort is to find opportunities to create a diversity of early successional habitat harvests. The challenge will be to map the perimeter of successional growth response areas that can be cut with greater or lesser frequency and at different times over the coming decades to create and maintain a more productive mosaic of habitat, food, and cover opportunities through space and time. This kind of management could easily be achieved within the younger forest and forest-edge habitats near the school. This area is most suitable for an intensive habitat enhancement regime of micromanagement cuts involving a mosaic of smaller stands being treated over time. Understandably, it will be a separate undertaking to delineate and agree upon a detailed plan. I would be

delighted to assist your committee and Phil with this endeavor.

9. There is increasing temptation in municipal town open-space planning to assume that recreational trails are compatible with natural resource conservation—especially along protected riparian areas and along wetland edge habitats. Such pathways are known to harm wildlife in several ways; our trails introduce significant stress factors within the refugia that numerous species of birds and mammals require. Nesting birds, denning bobcats, foxes, and mustelids, for example, are displaced if not killed as a result of people and domestic dogs regularly using these formerly inaccessible security habitats. Thick, impenetrable vegetation and coarse woody debris on the ground adjacent to riparian or wetland edge habitats often provide village and suburban wildlife their only means of moving across the otherwise human-dominated landscape.

10. The Black Spruce Bog and Keyes Brook impress me as rare examples of such pristine habitats; these habitats deserve natural area status. They should *not* be compromised through the introduction of pathways and people. These remote wetland and riparian habitats function as "corridors" that facilitate animal movement, and species and genetic exchange. They also offer critical opportunities for "demographic rescue"—the ability for new individuals to reach and replenish a core habitat should some stochastic event cause an entire local population to perish. Introduction of pets into these habitats may constitute a disease threat to resident wildlife. The wolves of Isle Royale and more recently Yellowstone National Park were decimated by the domestic dog Parvo virus; and Florida panthers have been known to die due to exposure to domestic cat feline leukemia. Pollution runoff associated with human and pet feces poses another serious threat to water quality and human health as well.

11. I recommend the committee search for another location other than Black Spruce Bog for the proposed handicap access trail. In eastern Massachusetts this rare habitat, despite its proximity to the road, has miraculously remained pristine. During my two field trips to the bog, we observed by far the most bird and mammal use of Black Spruce Bog habitat than anywhere else on the entire East Boston Camp property. Away from the road or any trail, the back portion of the bog was full of tracks and sign of numerous species; it impressed us all with its value as a refuge for animals.

12. In view of our discovery of the Black Spruce Bog, I recommend that Bill consider conducting a formal rare plant and plant community inventory of the property. Rare and uncommon plant species known to exist on the East Boston Camp property include shadbush species, tansy ragwort, swamp rose mallow, whitewater buttercup, watercress, buttonbush, mountain laurel, tupelo, Virginia Meadow Beauty, sheeplaurel, rattlesnake plantain, wild rice, swamp milkweed, and possibly American hazelnut. Perhaps there are other plants we do not know about; a comprehensive field investigation in more than one season is always a good idea.

13. People and their pets are seeking to use open spaces in more ways and with greater impacts than ever before; once "traditions" become established, they are virtually unstoppable. I recommend that the Master Plan specifically designate (and thereby officially limit) the proliferation of paths, dog walking, and mountain biking to existing appropriate areas only, making a clear and rational statement about the Town's determination to protect wildlife habitat and biodiversity from such disturbances.

14. The Town of Westford could plan to offer the community the opportunity to learn from the various forest management activities you conduct at East Boston Camp. Where possible, teachers, students, as well as other forestry and forest ecology professionals may be invited to study the effects of various silvicultural practices, and perhaps learn more about how such responses are specifically influenced by season, soil type, and weather.

15. For the committee's convenience, I include a glossary of terms that will help as you consider wildlife habitat outcomes from specific silvicultural treatments. When the committee agrees to consider specific logging and habitat enhancement projects, it would be ideal to draw upon the collaborative expertise of both a forester and a wildlife expert. At that time, these professionals can specify the steps necessary to succeed in fulfilling both silvicultural objectives and wildlife habitat enhancement. It will be much easier for your committee and community members to comprehend a plan within the actual physical setting where it will be applied.

Appendix 10: Forestry Management Plan

Some portions of the Forestry Management Plan were not available in digital form. The entire report is part of this master plan and is available from the Conservation Commission and Town Manager.

Property Overview, Regional Significance, and Management

The East Boston Camps lie in the northwest corner of the town of Westford in north central Middlesex County. The property lies 1.55 miles north northwest of the Westford Town Hall, 2.6 miles northwest of the intersection of Boston Road and Route 495, and 2.9 miles southwest of the intersection of Route 3 and 40. Although it is rural residential in the general area of the East Boston Camps, the region as a whole has been experiencing the challenging transition from rural residential to suburban residential.

Westford has enjoyed respectable land protection efforts in the past. This property was purchased by the town of Westford in 2005 for permanent protection. Between the Westford Conservation Commission and the Westford Water Department, the town owns a minimum of 1,500 acres of additional permanently protected open space. In addition, the Westford Conservation Trust, a local land preservation organization, owns approximately 120 acres throughout Westford. The Westford Conservation Trust also holds conservation restrictions and trail easements on additional lands in Westford, both solely and in conjunction with the town of Westford.

The 286 plus acres of the East Boston Camps offer a partial representation of what much of the Westford landscape was once and continues to be in a few areas. The well drained, flat to variably sloped upland supports a typical mix of white pine and mixed oak saplings, poles, and sawlogs that is the result of past harvesting and thinning. The lower areas tend to remain seasonally wet and consist primarily of red maples. The past agricultural use of portions of this property is evident. Occasional stonewalls, some of which mark portions of the boundaries, are present in parts of the property indicating the land was cleared at some point in its past. There are also several abandoned fields present along Nutting Road. Extensive shrub marshes are present along Stony Brook while beaver damage is slowly killing many of the trees along Keyes Brook.

Forest health appears to be generally good and the few harvested and thinned areas are responding very well to their past management attention. Habitat diversity is good, primarily favoring interior-dwelling birds and animals. Burge's Pond, the wooded and shrub wetlands, and the open marshes along Keyes Brook and Stony Brook provide exceptional habitat for both resident and migratory birds and animals, as do the abandoned fields, which provide superb open grassland and early-successional habitats.

This Forest Management / Forest Stewardship Plan seeks to describe the current conditions of the East Boston Camps and recommend various actions to further enhance the vigor, productivity, aesthetics, biological diversity, and passive recreational

opportunities of this property. The plan identifies the various forest stands based on species composition and age. Each stand is described in detail as far as the dominant vegetation is concerned. Past history, soils and topography, general wildlife notes, and brief management recommendations are also included for each stand description as well as the results of the inventory work undertaken during the preparation of the management plan.

A separate section in this plan describes the various management practices that will be considered to improve and enhance the property for aesthetics and passive recreational enjoyment, for tree and forest vigor and productivity, and for wildlife habitat maintenance and protection. Although there a number of management alternatives available to consider for this property, the approach that favors the long term protection and maintenance of the forest is the most appropriate for the East Boston Camps. Developing and implementing an all-ages management program for portions of the property will increase the diversity of tree sizes and species as the selection removal of individual and small groups of trees is considered. Although there is currently modest diversity through the upland forests on the East Boston Camps, it will be imperative over time to deliberately strive to increase the diversity of species and the balance of age and size classes through the property as a means to better prepare the forest to withstand potential natural disasters such as fire, hurricane, or pestilence damage.

The all-ages management approach will eventually lead to the development of three distinct and important age classes. By establishing and enhancing the development of seedlings and saplings in the understory, the forest will have a class of desired tree species that will continue to develop into the next forest component while ready to immediately fill the void in the case of catastrophic disturbance. The intermediate component of poles, those trees whose diameter at breast height (dbh - 4.5 feet above the ground) ranges from 4" to 9", provides strength for the forest and is very important by accumulating nutrients and preventing excessive runoff into the streams and pond. The poles will also be the trees that develop into the third component, the larger, older sawlogs. The sawlog component provides many values to the forest. Not only do the mature sawlogs produce the seed and nuts for establishing the next generation of trees and for food for wildlife, the sawlogs strengthen to the forest's ability to withstand strong winds. The high canopy provided by the bigger trees provides shade for the forest floor, slowing the organic decomposition of the litter and reducing the amount of leachable nutrients into the ponds and streams. The high canopy also softens the impact of falling rain, further reducing the chance for detrimental runoff. The sawlogs also enhance the aesthetics of the property while providing an opportunity for modest revenue enhancement through the management of the property.

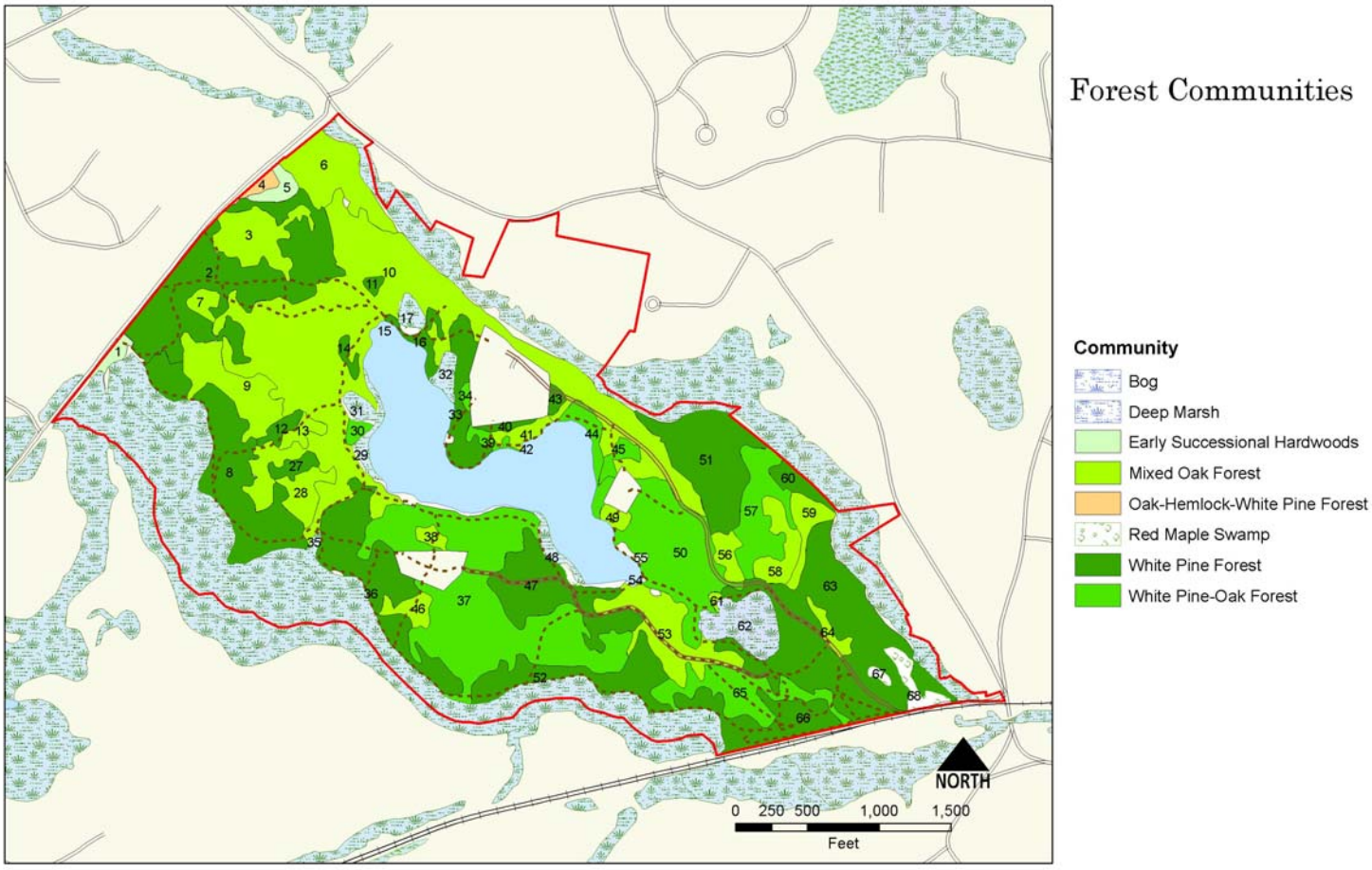
The all-ages management approach tends to mimic the natural development of the forest. Although many of our current forests are relatively even-age as the result of farm abandonment at the end of the last century, natural disturbances have resulted in the establishment of younger trees over time. The all-ages approach provides for the deliberate selection of trees to be removed based on the needs of the particular area of the property. The resulting forest will at all times consist of all three components, which will

be both aesthetically appealing to visitors to the property and will enhance the area for more species of wildlife.

In addition to addressing the interior upland forest, the plan's management recommendations will address the potential clearing of the small abandoned gravel removal area adjacent to the abandoned trolley line along the northwest boundary of the property. The early-successional forest this area represents is quickly disappearing from the New England landscape as fields that were once actively farmed have now either grown into young forests or have been developed. Many species of wildlife such as bluebirds, sparrows, mockingbirds, brown thrashers, kestrels, voles, moles, mice, rabbits, and foxes are dependent on this type of habitat.

The East Boston Camps provides an unrivaled setting for environmental education for both the local schools and visitors in general. The Westford teachers may want to take advantage of Project Learning Tree, a national program administered by the American Forest Foundation that is designed to educate the teachers of students ranging from prekindergarten to twelfth grade. Teachers attend workshops led by trained facilitators to learn about all aspects of environmental education and are provided with curriculum materials to assist with the teaching of their own classes. The accessibility of the East Boston Camps with its well established trail system should certainly facilitate its use by the local schools.

Forest management is a very broad umbrella under which many objectives can be served. This Forest Stewardship Plan, having incorporated the town's input, will provide a framework to guide the management work that may be carried out to further enhance the many facets of this property, now and for the future.



STEW	1	PA	none - allow to develop	0.62	NA	NA	NA
STEW	11	WP	none - allow to develop	0.15	NA	NA	NA
STEW	12	WP	none - allow to develop	0.62	NA	NA	NA
STEW	14	WP	none - allow to develop	0.39	NA	NA	NA
STEW	15	RM	none - allow to develop	0.23	NA	NA	NA
STEW	16	WP	none - allow to develop	1.56	NA	NA	NA
STEW	17	RM	none - allow to develop	0.70	NA	NA	NA
STEW	29	RM	none - allow to develop	0.31	NA	NA	NA

STEW	31	RM	none - allow to develop	0.86	NA	NA	NA
STEW	32	RM	none - allow to develop	0.70	NA	NA	NA
STEW	33	WP	none - allow to develop	3.74	NA	NA	NA
STEW	34	WO	none - allow to develop	0.23	NA	NA	NA
STEW	35	RM	none - allow to develop	0.10	NA	NA	NA
STEW	38	OM	none - allow to develop	0.62	NA	NA	NA
STEW	39	WO	none - allow to develop	0.55	NA	NA	NA
STEW	40	WP	none - allow to develop	0.31	NA	NA	NA
STEW	41	OM	none - allow to develop	1.04	NA	NA	NA
STEW	42	MD	none - allow to develop	0.10	NA	NA	NA
STEW	43	WP	none - allow to develop	0.39	NA	NA	NA
STEW	44	WO	none - allow to develop	2.73	NA	NA	NA
STEW	45	WO	none - allow to develop	0.70	NA	NA	NA
STEW	46	OM	none - allow to develop	1.09	NA	NA	NA
STEW	48	RM	none - allow to develop	0.55	NA	NA	NA
STEW	49	OM	none - allow to develop	0.47	NA	NA	NA
STEW	54	MD	none - allow to develop	0.15	NA	NA	NA

STEW	55	GB	none - allow to develop	0.10	NA	NA	NA
STEW	57	WO	none - allow to develop	4.52	NA	NA	NA
STEW	58	OM	none - allow to develop	2.03	NA	NA	NA
STEW	62	MD	none - allow to develop	3.10	NA	NA	NA
STEW	67	RM	none - allow to develop	0.23	NA	NA	NA
STEW	68	RM	none - allow to develop	1.25	NA	NA	NA

The recommendation to allow the above stands to develop without any treatment for the next ten years is designed primarily to enhance the property for wildlife. The forest management priorities in Stands 1, 11, 14, 16, 55, 57, and 58 are simply too low in comparison to other stands through the property to warrant management attention at this point in their development. All of or portions of Stands 15, 17, 29, 31, 32, 35, 42, 48, 54, 62, 67, and 68 tend to be seasonally wet and as a result, rate a low priority in terms of conventional forest management. Species such as marbled salamanders, northern redbelly and ribbon snakes, eastern screech and barred owls, many species of woodpeckers, vireos, and wrens, raccoons, Virginia opossums, and mink are known to prefer seasonally wet, shrub swamp or red maple stands such as these. Although Stands 33, 34, 38 - 41, 33 - 46, and 49 are ready for management attention, these stands are too close to the camp facilities. Leaving all of these stands and the various habitats they represent relatively undisturbed for a ten year period is an excellent means of attracting various bird and animal species which use these areas for feeding, breeding, and nesting.

STEW	2	WP	individual selection harvest	10 - 14	30	4,500 bf/ac	by fall 2015
STEW	3	OM	individual selection harvest	2 - 3	27	2,350 bf/ac	by fall 2015
			improvement thin	2 - 3	27	8.1 cds/ac	by fall 2015
STEW	6	OM	individual selection harvest	3 - 5	40	5,000 bf/ac	by fall 2015
			improvement thin	3 - 5	10	2.8 cds/ac	by fall 2015
STEW	7	OM	individual selection harvest	0.5	30	3,750 bf/ac	by fall 2015
			improvement thin	0.5	30	8.3 cds/ac	by fall 2015
STEW	8	WP	individual selection harvest	5 - 10	19	2,850 bf/ac	by fall 2015
			improvement thin	5 - 10	19	5.2 cds/ac	by fall 2015

STEW	9	OM	individual selection harvest	3 - 4	30	3,750 bf/ac	by fall 2015
			improvement thin	3 - 4	30	8.3 cds/ac	by fall 2015
STEW	10	OM	individual selection harvest	10 - 20	27	2,350 bf/ac	by fall 2017
			improvement thin	10 - 20	27	8.1 cds/ac	by fall 2017
STEW	13	OM	individual selection harvest	0.5	30	3,750 bf/ac	by fall 2015
			improvement thin	0.5	30	8.3 cds/ac	by fall 2015
STEW	27	WP	individual selection harvest	0.5	21	3,675 bf/ac	by fall 2015
STEW	28	OM	individual selection harvest	1	30	3,750 bf/ac	by fall 2015
			improvement thin	1	30	8.3 cds/ac	by fall 2015
STEW	30	WO	improvement thin	0.5	20	5.5 cds/ac	by fall 2017
STEW	36	WP	individual selection harvest	5 - 9	19	2,850 bf/ac	by fall 2015
			improvement thin	5 - 9	19	5.2 cds/ac	by fall 2015
STEW	37	WO	individual selection harvest	10 - 20	22	1,925 bf/ac	by fall 2017
			improvement thin	10 - 20	22	6.1 cds/ac	by fall 2017
STEW	47	WP	individual selection harvest	4 - 6	33	4,950 bf/ac	by fall 2017
STEW	50	WO	individual selection harvest	5 - 8	28	4,200 bf/ac	by fall 2017
			improvement thin	5 - 8	28	7.7 cds/ac	by fall 2017
STEW	51	WP	individual selection harvest	5 - 8	20	3,000 bf/ac	by fall 2017
			improvement thin	5 - 8	10	3.0 cds/ac	by fall 2017
STEW	52	WP	individual selection harvest	5 - 7	19	2,850 bf/ac	by fall 2015
			improvement thin	5 - 7	19	5.2 cds/ac	by fall 2015
STEW	53	OM	individual selection harvest	3 - 4	24	2,100 bf/ac	by fall 2017
			improvement thin	3 - 4	24	7.3 cds/ac	by fall 2017
STEW	56	OM	individual selection harvest	@ 1	27	2,350 bf/ac	by fall 2017
			improvement thin	@ 1	27	8.1 cds/ac	by fall 2017
STEW	59	OM	individual selection harvest	@ 1	40	4,600 bf/ac	by fall 2017
STEW	60	WP	individual selection harvest	@ 1	35	6,125 bf/ac	by fall 2017
STEW	61	OM	individual selection harvest	0.10	27	2,350 bf/ac	by fall 2017
			improvement thin	0.10	27	8.1 cds/ac	by fall 2017
STEW	63	WP	individual selection harvest	10 - 15	35	6,125 bf/ac	by fall 2017

STEW	64	OM	improvement thin	0.5	34	10.3 cds/ac	by fall 2017
STEW	65	WO	individual selection harvest	2 - 4	28	4,200 bf/ac	by fall 2015
			improvement thin	2 - 4	28	7.7 cds/ac	by fall 2015
STEW	66	WP	individual selection harvest	3 - 5	19	2,850 bf/ac	by fall 2015
			improvement thin	3 - 5	19	5.2 cds/ac	by fall 2015

The individual selection harvest recommended for the appropriate above stands is designed to both stimulate the natural regeneration of the white pine and mixed oaks and improve the growing conditions of the remaining trees. This will be achieved by removing selected white pine and mixed oak sawlogs, thereby creating openings in the canopy and improving the spacings between the trees in the residual stands. This management recommendation will help to enhance and maintain a vigorous and productive, aesthetically appealing all-ages stand. The harvest should be timed to coincide with good white pine cone and/or acorn crops in order to maximize the opportunity for the natural regeneration of the desired species.

The improvement thinning recommended for the appropriate above stands is an intermediate cut designed to improve the growing conditions of the better formed and faster growing white pine and mixed hardwood saplings, poles, and sawlogs by reducing the overall competition within the stand. This will be achieved by removing the competing, poor quality hardwoods. Excellent fuelwood utilization.

These improvement practices will be carried out in strict accordance with the Massachusetts Best Management Practices (BMPs) in order to protect and maintain the quality of the water resource on this property. In addition, efforts will be made to minimize the aesthetic impact of the recommended improvement work. The harvesting itself should be carried out only when market interest in either chips or tree length pulp is strong. This will facilitate the selection and removal of poor quality and suppressed poles and sawlogs in addition to the commercially valuable white pine and mixed oak sawlogs, further enhancing the aesthetics of the stands. If chipping the slash is not an economically viable option to incorporate into the projects, then the logging and thinning debris will be left to lie as close to the ground as possible. The creation of several brush piles per acre with some of the slash will enhance the area for wildlife. Many birds and small animals utilize brush piles for roosting, nesting, and feeding. Leaving several cavity trees and dead trees, referred to as snags, per acre will also enhance the area for wildlife. Many species of birds and animals such as wood ducks, barred owls, chickadees, titmice, nuthatches, squirrels, and raccoons utilize these trees for roosting, nesting, and feeding.

It should be noted that there are several certified vernal pools present on this property as well as several potential vernal pools. Habitat management guidelines have been developed over the past few years to ensure that these ecologically sensitive and very important habitats remain protected and viable. There should be very limited work within 100 feet of the edge of a vernal pool and work between 100 feet and 400 feet should follow strongly recommended guidelines.

STEW	4	WH	habitat enhancement	0.3	NA	NA	as needed
STEW	5	PA	stand conversion	0.85	NA	NA	as needed
			improvement thin	0.8	24	6.6 cds/ac	by fall 2015
STEW	S1	WH	habitat enhancement	NA	NA	NA	as needed
STEW	S2	WH	habitat enhancement	NA	NA	NA	as needed

The habitat enhancement recommended for the above stands is designed to make the property more attractive for a greater variety of wildlife. Stand 4 is a long-abandoned gravel removal area with varying degrees of advanced shrub growth and young trees present including nonnative invasive plant species. These species, including autumn olive and bittersweet, should be eliminated to favor those native species with higher wildlife values such as smooth sumac and blackberry. In addition, periodic mowing of the open areas within these stands will also help to maintain the diversity of habitats present in the East Boston camps. Stands such as this offer a variety of plants and insects that are not found in the nearby woodlands. Many birds and animals such as eastern hognose snakes and northern black racers, various hawks, willow flycatchers, bluebirds, cardinals, mockingbirds, brown thrashers, various sparrows, redpolls, goldfinches, moles, least shrews, voles, mice, cottontail rabbits, and red foxes prefer and use the vegetative species and layers in these abandoned fields for feeding, breeding, and nesting.

If it is determined that Stand 4 will be maintained as an abandoned field or grassland habitat, then Stand 5 could be clearcut to expand the area of Stand 4.

The habitat enhancement recommended for Stands S1 and S2 is designed to make the areas more attractive for wood ducks. Wood ducks are tolerant of human activity and will use artificial nesting boxes if properly installed. The nest boxes need to be placed at least four feet above the high water mark and no closer than 150 feet. The boxes must be predator proof to be effective.

BOUNDARIES: As the above recommendations are carried out, the appropriate property boundaries will be blazed and painted as needed.

ACCESS: During the course of the ten year management period, the current trail system will be extended, improved, and maintained to facilitate the implementation of the forest management / forest stewardship program, enhance the potential for passive recreational enjoyment of the property, and provide increased accessibility for fire protection equipment.

STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX
STEW	1	PA	0.62	8.7"	140	4,800 bf & 28.9 cds	60 (WP)

Big tooth aspen is the primary species being in the pole class. Occasional red maple, mixed oak, quaking aspen, paper birch, white ash, black locust, black cherry, and white pine saplings, poles, and sawlogs are also present in this overstocked stand. The understory is light to moderate and includes arrowwood, buckthorn, honeysuckle, multiflora rose, bittersweet, Virginia creeper, Japanese knotweed, ferns, goldenrod, whorled loosestrife, grasses, poison ivy, and Canada mayflower. The area is generally flat, dry upland with deep, excessively drained soils (Hinckley).

Due to the higher management priorities of other stands on the property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	2	WP	14.90	11.0"	216	29,500 bf & 10.0 cds	60 (WP)

White pine is the primary species being in the sawtimber class, fair to excellent form. Individual and small pockets of mixed oak saplings, poles, and sawlogs are also present in this slightly overstocked stand as well as occasional red maple and black birch saplings, poles, and sawlogs. Very infrequent hemlock saplings, poles, and sawlogs are also present. The understory is light to moderate and includes highbush blueberry, maple leaf viburnum, serviceberry, hawthorn, raspberry, beaked hazelnut, ferns, sarsaparilla, lady slippers, ground cedar, grasses, poison ivy, wintergreen, Canada mayflower, starflower, and partridgeberry. The area is flat to variably sloped, dry rolling upland with occasional surface stones and deep, excessively drained soils (Hinckley).

This stand is ready for a light individual selection harvest to both stimulate the natural regeneration of the white pine and to improve the growing conditions of the remaining trees. A light improvement thinning will also enhance the growing conditions of the desired trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed white pine poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine in this stand is based both on its aesthetic appeal and its long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows.

STEW	3	OM	3.43	9.4"	150	7,515 bf & 23.9 cds	60 (WP)

Mixed oaks are the primary species being in the small sawtimber class. Occasional red maple, hickory, paper birch, and grey birch saplings, poles, and sawlogs are also present in this overstocked stand. Individual and small pockets of white pine poles and sawlogs are also present. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, maple leaf viburnum, beaked hazelnut, serviceberry, buckthorn, juniper, occasional hop hornbeam, pin cherry, and white ash saplings, chestnut stump sprouts, ferns, lady slippers, Indian cucumber root, whorled loosestrife, princess pine, grasses,

OBJECTIVE CODE: CH61 = stands classified under CH61/61A STEW = stands not classified under CH61/61A
STD = stand AC = acre MSD = mean stand diameter BA = basal area VOL = volume MBF = thousand board feet cds = cords

Owner(s) Town of Westford Town(s) Westford

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

striped wintergreen, wintergreen, Canada mayflower, starflower, partridgeberry, and areas of fair to good white pine regeneration being in the sapling class. The area is flat to variably sloped, dry rolling upland with deep, excessively drained soils (Hinckley).

Portions of this stand are ready for a very light individual selection harvest to both stimulate the natural regeneration of the white pine and mixed oaks to improve the growing conditions of the remaining trees. A light improvement thinning will also enhance the growing conditions of the desired trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed mixed oak poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine and mixed oaks in this stand is based both on their aesthetic appeal and their long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows, while the oaks are invaluable to the wildlife in the area due to the acorns they produce.

STEW	4	WH	0.39	saplings	-	-	60 (WP)

White pine and mixed hardwoods, in varying densities, are the primary species being in the sapling class. Grey birch, pin cherry, quaking aspen, big tooth aspen, and mixed oak seedlings and saplings are present in this sparsely to fully stocked, long-abandoned gravel removal area as well as infrequent pitch pine saplings. The understory is light to moderate and includes grasses, goldenrod, Queen Anne's lace, creeping dewberry, sweet fern, spireas, blackberry, autumn olive, and smooth sumac. Bittersweet is also beginning to establish itself in this stand. The area is generally flat, dry upland with what is left of deep, excessively drained soils (Hinckley).

This stand provides excellent early successional habitat for the wildlife in the area. The desired future condition of this stand is essentially the same as it is currently. It will be prudent to consider the periodic removal of the developing trees to maintain this very valuable habitat, although the proximity to a school complex may preclude any management activity in this particular stand. Efforts should also be made to minimize the presence of the non-native, invasive shrub species such as the bittersweet and autumn olive. Although the fruits are eaten by several species of birds, these are not an important source of food for wildlife. At the same time, they are a threat to the existing native vegetation by choking out the competition.

STEW	5	PA	0.85	3.4"	113	23.4 cds	60 (WP)

Big tooth aspen is the primary species being in the sapling class. Occasional quaking aspen, paper birch, grey birch, pin cherry, mixed oak, and red maple saplings, poles, and infrequent sawlogs are also present in this long-abandoned gravel removal area as well as a developing component of white pine saplings and poles. The understory is quite light and includes maple leaf viburnum, beaked hazelnut, raspberry, Virginia creeper, whorled loosestrife, princess pine, grasses, striped wintergreen, Canada mayflower, and partridgeberry. The area is flat, dry upland with moderately sloped banks at the extent of the gravel removal operation and what is left of deep, excessively drained soils (Hinckley).

This stand can be considered for two different management objectives. Due to its proximity to a slowly maturing, long

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

abandoned gravel removal area, this stand could be cleared in an effort to enlarge the desired, early successional habitat that Stand 4 represents. The desired future condition of this stand would be either an open grassland or early successional habitat that provides superb habitat diversity for the wildlife in the area.

However, if the proximity of these two stands is too close to a nearby school, then the stand can considered for a light improvement thinning to favor the better formed white pine saplings and poles. The desired future condition of this stand will be an aesthetically appealing mix of well spaced, better formed white pine poles with a developing component of white pine saplings. The value of the white pine in this stand is based both on its aesthetic appeal and its long term commercial importance.

STEW	6	OM	5.15	11.4"	200	23,330 bf & 9.4 cds	57 (WP)

Mixed oaks are the primary species being in the sawtimber class. Individual and small pockets of white pine poles and sawlogs are also present in this overstocked stand as well as infrequent hickory and red maple saplings, poles, and sawlogs. A small grove of hemlock sawlogs is present in the southeast corner of the stand as is a very small seasonal pond. The understory is light to moderate and includes huckleberry, lowbush blueberry, maple leaf viburnum, wild raisin, serviceberry, witch hazel, beaked hazelnut, hawthorn, sheep laurel, chestnut stump sprouts, Virginia creeper, ferns, Indian cucumber root, princess pine, pipsissewa, rattlesnake plantain, wintergreen, Canada mayflower, starflower, partridgeberry, and areas of fair to good white pine regeneration being in the sapling class. Highbush blueberry and winterberry are also present, especially in the lowest portions of the stand. The area is flat to moderately sloped, dry upland with occasional surface stones and deep, excessively drained soils (Windsor), although it can be seasonally wet in the lowest portions of the stand around the seasonal pond and along Keyes Brook.

This stand is ready for a very light individual selection harvest to both stimulate the natural regeneration of the white pine and mixed oaks to improve the growing conditions of the remaining trees. A light improvement thinning will also enhance the growing conditions of the desired trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed mixed oak poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine and mixed oaks in this stand is based both on their aesthetic appeal and their long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows, while the oaks are invaluable to the wildlife in the area due to the acorns they produce.

STEW	7	OM	0.70	10.3"	160	10,300 bf & 23.9 cds	60 (WP)

Mixed oaks are the primary species being in the small sawtimber class. White pine saplings, poles, and sawlogs are also present in this overstocked stand as well as very infrequent red maple and pitch pine saplings, poles, and sawlogs. The

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, maple leaf viburnum, beaked hazelnut, serviceberry, buckthorn, juniper, occasional hop hornbeam, pin cherry, and white ash saplings, chestnut stump sprouts, ferns, lady slippers, Indian cucumber root, whorled loosestrife, princess pine, grasses, striped wintergreen, wintergreen, Canada mayflower, starflower, and partridgeberry. The area is flat to moderately sloped, dry rolling upland with deep, excessively drained soils (Hinckley).

This stand is ready for a very light individual selection harvest to both stimulate the natural regeneration of the white pine and mixed oaks to improve the growing conditions of the remaining trees. A light improvement thinning will also enhance the growing conditions of the desired trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed mixed oak poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine and mixed oaks in this stand is based both on their aesthetic appeal and their long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows, while the oaks are invaluable to the wildlife in the area due to the acorns they produce.

STEW	8	WP	12.01	9.7"	170	17,540 bf & 17.9 cds	57 - 60 (WP)

White pine, in varying densities, is the primary species being in the small sawtimber class, fair to excellent form. Individual and small pockets of mixed oak saplings, poles, and sawlogs are also present in this fully stocked, harvested stand as well as occasional paper birch, grey birch, red maple, and pitch pine saplings, poles, and sawlogs. Very infrequent yellow birch, black birch, tupelo, hemlock, and black spruce saplings, poles, and sawlogs are also present. Areas of fair to dense white pine saplings are also present due to the past harvesting as well as occasional sparser pockets of old storm damage. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, serviceberry, maple leaf viburnum, buckthorn, beaked hazelnut, sheep laurel, juniper, chestnut stump sprouts, ferns, lady slippers, princess pine, ground cedar, pipsissewa, rattlesnake plantain, grasses, striped wintergreen, and Canada mayflower, and starflower. Sweet pepperbush and swamp azalea are also present primarily along the Stony Brook marshes. The area is flat to steeply sloped, dry rolling upland with deep, excessively drained soils (Windsor / Hinckley).

Beaver damage is present along much of the marsh edge.

Portions of this stand were harvested approximately 20 years ago, although some of the areas between the trail and the Stony Brook marshes were not included in the harvest.

Portions of this stand are ready for a very light individual selection harvest to both further stimulate the natural regeneration of the white pine and to continue improving the growing conditions of the remaining trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed white pine poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine in this stand is based both on its aesthetic appeal and its long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows.

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Owner(s) Town of Westford Town(s) Westford

STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX
STEW	9	OM	4.37	10.3"	160	10,300 bf & 23.9 cds	60 (WP)

Please see Narrative - Stand 7.

STEW	10	OM	37.18	9.4"	150	7,515 bf & 23.9 cds	60 (WP)

Mixed oaks are the primary species being in the small sawtimber class. Occasional red maple, hickory, paper birch, and grey birch saplings, poles, and sawlogs are also present in this partially thinned and salvaged, overstocked stand. Individual and small pockets of white pine poles and sawlogs are also present as well as very infrequent hemlock saplings, poles, and sawlogs. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, maple leaf viburnum, beaked hazelnut, serviceberry, buckthorn, juniper, occasional hop hornbeam, pin cherry, and white ash saplings, chestnut stump sprouts, ferns, lady slippers, Indian cucumber root, whorled loosestrife, princess pine, grasses, striped wintergreen, wintergreen, Canada mayflower, starflower, partridgeberry, and areas of fair to good white pine regeneration being in the sapling class. Sweet pepperbush, swamp azalea, and grapes are also present along the lowest portions of the stand. The area is flat to steeply sloped, dry rolling upland with deep, excessively drained soils (Hinckley), although the lowest portions along Keyes Brook can be seasonally wet.

Beaver damage is present along much of Keyes Brook.

Small pockets within this stand have been thinned and salvaged for firewood over the years.

This stand is ready for a very light individual selection harvest to both stimulate the natural regeneration of the white pine and mixed oaks to improve the growing conditions of the remaining trees. A light improvement thinning will also enhance the growing conditions of the desired trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed mixed oak poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine and mixed oaks in this stand is based both on their aesthetic appeal and their long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows, while the oaks are invaluable to the wildlife in the area due to the acorns they produce.

Scenic vistas along the high bank could be created in this stand to accentuate the views of Keyes Brook and its marshes.

A portion of this stand, approximately 350 - 400 feet northwest of the north end of Burge's Pond, could conceivable lend itself to a conversion to developing sprout growth habitat. The area is flat to gently sloped and relatively far from the camps and trails. The desired future condition of this potential clearcut area is an area of hardwood sprout growth and early successional herbaceous vegetation that will provide excellent habitat diversity for the wildlife in the area.

STEW	11	WP	0.15	16.6"	120	21,000 bf	60 (WP)

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STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

White pine is the primary species being in the sawtimber class, fair to excellent form. Occasional mixed oak poles and sawlogs are also present in this understocked stand as well as occasional red maple and black birch saplings. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, maple leaf viburnum, beaked hazelnut, chestnut stump sprouts, buckthorn, sarsaparilla, whorled loosestrife, ground cedar, striped wintergreen, Canada mayflower, starflower, partridgeberry, and areas of fair to good white pine regeneration being in the sapling class. The area is flat to moderately sloped, dry upland with deep, excessively drained soils (Hinckley).

This stand has been used for camp activities.

Due to the low stocking level of this stand and the higher management priorities of other stands on the property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	12	WP	0.62	10.2”	190	23,750 bf & 11.6 cds	60 (WP)

White pine is the primary species being in the small sawtimber class, good to excellent form. Occasional mixed oak, red maple, and tupelo saplings, poles, and sawlogs are also present in this fully stocked stand. The understory is light and includes huckleberry, highbush and lowbush blueberry, wild raisin, serviceberry, chestnut stump sprouts, ferns, princess pine, Canada mayflower, starflower, and partridgeberry. Winterberry and swamp azalea are also present. The area is gently to moderately sloped, dry upland with deep, excessively drained soils (Hinckley), although there is a seasonal pond present in the lowest portion of the stand.

Due to the challenging topography and the presence of a potential vernal pool, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	13	OM	0.78	10.3”	160	10,300 bf & 23.9 cds	60 (WP)

Please see Narrative - Stand 7.

STEW	14	WP	0.39	14.9”	170	28,750 bf & 4.6 cds	60 (WP)

White pine is the primary species being in the sawtimber class, fair to excellent form. Occasional mixed oak, red maple, and

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

black birch saplings, poles, and sawlogs are also present in this adequately stocked stand. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, serviceberry, beaked hazelnut, wild raisin, chestnut stump sprouts, princess pine, ground cedar, wintergreen, Canada mayflower, starflower, and areas of fair to good white pine regeneration being in the sapling class. The area is flat to gently sloped, dry upland with deep, excessively drained soils (Hinckley).

Due to the adequate stocking level of this stand and the higher management priorities of other stands on the property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	15	MD	0.23	-	-	-	50 (RM)

This deep marsh is virtually nonstocked. The understory is moderate to dense and includes sweet pepperbush, swamp azalea, highbush blueberry, buttonbush, swamp loosestrife, and sedges. The area is flat and wet with deep, very poorly drained organic soils (Freetown).

Due to the very low management priorities of this stand, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, wet nature of this stand contributes to the excellent habitat diversity of the property.

STEW	16	WP	1.56	14.9”	170	28,750 bf & 4.6 cds	60 (WP)

White pine is the primary species being in the sawtimber class, fair to excellent form. Individual and small pockets of mixed oak, red maple, and black birch saplings, poles, and sawlogs are also present in this adequately stocked stand. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, serviceberry, beaked hazelnut, wild raisin, chestnut stump sprouts, ferns, princess pine, ground cedar, wintergreen, Canada mayflower, starflower, and areas of fair to good white pine regeneration being in the sapling class. Sweet pepperbush and swamp azalea are also present, especially along the pond’s edge. The area is gently to moderately sloped, dry upland with deep, excessively drained soils (Hinckley), although the lowest portions can be seasonally wet.

Due to the adequate stocking level of this stand and the higher management priorities of other stands on the property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

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Owner(s) Town of Westford Town(s) Westford

STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX
STEW	17	RM	0.70	4.2"	22	4.9 cds/ac	50 (RM)

Red maple is the primary species being in the pole class. Very infrequent white pine saplings and poles are also present in this sparsely stocked, deep marsh. Occasional sparser openings are also present as well as small pockets of red maple poles, which are present primarily along the margins of the stand. The understory is moderate to dense and includes sweet pepperbush, swamp azalea, highbush blueberry, buttonbush, and sedges. The area is flat and wet with deep, very poorly drained organic soils (Freetown).

Due to the very low management priorities of this stand, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, wet nature of this stand contributes to the excellent habitat diversity of the property.

STEW	18	WH	1.64	11.4"	185	15,000 bf & 28.1 cds	60 (WP)

White pine and mixed hardwoods, in varying densities, are the primary species being in the sawtimber class. Black cherry and red maple saplings, poles, and sawlogs are present in this fully stocked stand as well as occasional grey birch, paper birch, and white ash poles and sawlogs. A single apple tree is also present. The understory is light to moderate and includes honeysuckle, winterberry, highbush blueberry, arrowwood, spicebush, winged euonymus, multiflora rose, barberry, Virginia creeper, bittersweet, ferns, grasses, poison ivy, creeping dewberry, and Canada mayflower. The area is flat to very gently sloped, generally dry upland with deep, excessively drained soils (Hinckley), although the lowest portions can be seasonally wet.

This portion of the East Boston Camps is being targeted for recreational use by the Town of Westford and will not be included in the *Management Practices* section of this plan.

STEW	19	AF	2.50	-	-	-	60 (WP)

This abandoned field is stocked primarily with grasses, goldenrod, common mullein, milkweed, crown vetch, and poison ivy. Purple loosestrife and rushes are also present, primarily in the slightly lower southwest corner. The abandoned field is ringed with multiflora rose, bittersweet, grapes, grey dogwood, smooth sumac, autumn olive, blackberry, jewelweed, and occasional mixed oak, black cherry, elm, and red cedar poles. The area is generally flat, dry upland with deep, excessively drained soils (Hinckley), although the lowest portions can be seasonally wet.

This portion of the East Boston Camps is being targeted for recreational use by the Town of Westford and will not be included in the *Management Practices* section of this plan.

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STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX
STEW	20	RM	2.18	5.3"	60	750 bf & 12.4 cds	60 (WP)

Red maple is the primary species being in the pole class. A strong component of both grey birch and white pine saplings and poles, especially along the fields' edges, is also present in this just barely adequately stocked stand as well as infrequent quaking aspen, paper birch, black birch, and elm poles and sawlogs. The understory is light to almost impenetrable in areas and includes highbush blueberry, sweet pepperbush, alder, winterberry, arrowwood, buckthorn, multiflora rose, bittersweet, grapes, ferns, jacks-in-the-pulpit, poison ivy, and Canada mayflower. The area is generally flat, dry upland with deep, excessively drained soils (Hinckley), although the lowest portions can be seasonally wet.

Beaver damage is present along much of Keyes Brook.

This portion of the East Boston Camps is being targeted for recreational use by the Town of Westford and will not be included in the *Management Practices* section of this plan.

STEW	21	AF	1.56	-	-	-	60 (WP)

This long-abandoned former gravel removal area is very sparsely stocked, although there are several small thickets and portions of the stand are ringed with varying densities of white pine, grey birch, big tooth aspen, quaking aspen, mixed oak, and willow saplings and poles. The stand consists primarily of grasses, goldenrod, ragweed, pokeweed, spireas, autumn olive, smooth sumac, purple loosestrife, jewelweed, multiflora rose, bittersweet, Virginia creeper, and grapes. The area is generally flat, dry upland with gently sloping banks and what is left of deep, excessively drained soils (Hinckley).

This portion of the East Boston Camps is being targeted for recreational use by the Town of Westford and will not be included in the *Management Practices* section of this plan.

STEW	22	AF	1.88	-	-	-	60 (WP)

This abandoned field is stocked primarily with grasses, goldenrod, purple loosestrife, Joe-Pye-weed, ferns, burdock, rushes, red maple saplings, multiflora rose, bittersweet, Virginia creeper, and sphagnum moss. The area is generally flat, dry upland with deep, excessively drained soils (Hinckley), although the lower portions can be seasonally wet.

This portion of the East Boston Camps is being targeted for recreational use by the Town of Westford and will not be included in the *Management Practices* section of this plan.

STEW	23	WO	1.40	10.8"	160	14,000 bf & 18.6 cds	60 (WP)

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STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

White pine and mixed oaks, in varying densities, are the primary species being in the sawtimber class. Occasional red maple, big tooth aspen, quaking aspen, grey birch, and paper birch saplings, poles and sawlogs are also present in this adequately stocked stand as well as very infrequent apples. The understory is light to moderate and includes huckleberry, lowbush blueberry, beaked hazelnut, serviceberry, chestnut stump sprouts, princess pine, grasses, poison ivy, Canada mayflower, and areas of fair to good white pine regeneration being in the sapling class. The area is flat to gently sloped, dry upland with deep, excessively drained soils (Hinckley).

This portion of the East Boston Camps is being targeted for recreational use by the Town of Westford and will not be included in the *Management Practices* section of this plan.

STEW	24	AF	2.65	-	-	-	60 (WP)

This abandoned field is stocked primarily with grasses, asters, goldenrod, common mullein, milkweed, crown vetch, poison ivy, and occasional grey birch saplings. The area is generally flat, dry upland with deep, excessively drained soils (Hinckley).

This portion of the East Boston Camps is being targeted for recreational use by the Town of Westford and will not be included in the *Management Practices* section of this plan.

STEW	25	WP	0.78	14.9"	170	28,750 bf & 4.6 cds	60 (WP)

White pine is the primary species being in the sawtimber class, fair to excellent form. Individual and small pockets of mixed oak, red maple, and grey birch saplings, poles, and sawlogs are also present in this adequately stocked stand. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, serviceberry, beaked hazelnut, chestnut stump sprouts, ferns, princess pine, ground cedar, wintergreen, Canada mayflower, starflower, and areas of fair to good white pine regeneration being in the sapling class. The area is flat to gently sloped, dry upland with deep, excessively drained soils (Hinckley.

This portion of the East Boston Camps is being targeted for recreational use by the Town of Westford and will not be included in the *Management Practices* section of this plan.

STEW	26	RM	0.39	7.7"	230	4,000 bf & 55.6 cds	60 (WP)

Red maple is the primary species being in the pole class. Occasional white pine and grey birch saplings, poles, and sawlogs are also present in this overstocked stand. The understory is light and includes ferns, princess pine, Canada mayflower, and starflower. The area is flat, dry upland with deep, excessively drained soils (Hinckley).

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STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

Extensive beaver damage is present in this stand.

This portion of the East Boston Camps is being targeted for recreational use by the Town of Westford and will not be included in the *Management Practices* section of this plan.

STEW	27	WP	0.62	10.9"	185	22,750 bf & 11.4 cds	60 (WP)

White pine is the primary species being in the sawtimber class, good to excellent form. Occasional mixed oak poles and sawlogs are also present in this lightly thinned, fully stocked stand as well as very infrequent paper birch, grey birch, black birch, hickory, and hemlock saplings and poles. The understory is light and includes huckleberry, lowbush blueberry, ground cedar, pipsissewa, wintergreen, Canada mayflower, partridgeberry, and areas of fair white pine regeneration being in the sapling class. The area is gently to moderately sloped, dry upland with deep, excessively drained soils (Hinckley).

This stand is ready for a light individual selection harvest to both further stimulate the natural regeneration of the white pine and to continue improving the growing conditions of the remaining trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed white pine poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine in this stand is based both on its aesthetic appeal and its long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows.

STEW	28	OM	1.95	10.3"	160	10,300 bf & 23.9 cds	60 (WP)

Please see Narrative - Stand 7.

STEW	29	RM	0.31	4.6"	15	2.9 cds	50 (RM)

Red maple is the primary species being in the pole class. Very infrequent red maple poles and sawlogs are also present in this very sparsely stocked stand, especially along the margins. A few standing dead white pines, referred to as snags, are also present. The understory is moderate to dense and includes sweet pepperbush, highbush blueberry, winterberry, swamp azalea, swamp loosestrife, and sphagnum moss. The area is flat and tends to remain seasonally wet with deep, very poorly drained organic soils (Freetown).

Due to the very low management priorities of this stand, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, wet nature of this stand contributes to the excellent habitat diversity of the property.

STEW	30	WO	0.55	7.2"	140	9,250 bf	60 (WP)

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STAND DESCRIPTIONS

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& 9.0 cds

White pine and mixed oaks are the primary species being in the pole class. Occasional red maple and hickory saplings, poles, and sawlogs are also present in this fully stocked stand. The understory is light to moderate and includes sweet pepperbush, huckleberry, highbush and lowbush blueberry, beaked hazelnut, serviceberry, swamp azalea, sheep laurel, chestnut stump sprouts, ferns, princess pine, wintergreen, Canada mayflower, starflower, partridgeberry, and areas of fair to good white pine regeneration being in the sapling class. The area is flat to steeply sloped, dry rolling upland with deep, excessively drained soils (Hinckley).

This stand is ready for a light improvement thinning to favor the better formed and faster growing white pine and mixed oak saplings and poles. The desired future condition of this stand is a mix of well spaced, better formed mixed oak poles and sawlogs with a developing component of better formed, faster growing white pine saplings, poles, and sawlogs that will provide both aesthetic and species diversity to the property.

STEW	31	RM	0.86	4.6”	15	2.9 cds	50 (RM)

Please see Narrative - Stand 29.

STEW	32	RM	0.70	saplings	-	-	50 (RM)

Red maple is the primary species being in the sapling class. Occasional red maple poles and infrequent sawlogs are also present in this sparsely stocked, deep marsh as well as occasional dead white pines, referred to as snags. The understory is moderate to dense and includes sweet pepperbush, swamp azalea, winterberry, and swamp loosestrife. The area is flat and wet with deep, very poorly drained organic soils (Freetown).

Due to the very low management priorities of this stand, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, wet nature of this stand contributes to the excellent habitat diversity of the property.

STEW	33	WP	3.74	11.5”	183	27,010 bf & 7.2 cds	60 (WP)

White pine is the primary species being in the sawtimber class, fair to excellent form. Occasional mixed oak poles and sawlogs are also present in this lightly salvaged, adequately stocked stand. Very infrequent black cherry, hickory, tupelo, and hemlock saplings and poles are also present as well as developing components of both white pine and mixed oak saplings. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, maple leaf viburnum, beaked hazelnut, buckthorn, juniper, chestnut stump sprouts, ferns, lady slippers, grasses, pipsissewa, and Canada mayflower. The

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STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

area is flat to steeply sloped, dry rolling upland with deep, excessively drained soils (Hinckley).

Beaver damage is present along the pond shore.

Due to the adequate stocking level of this stand and proximity to the camp, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	34	WO	0.23	12.3”	155	13,900 bf & 19.0 cds	60 (WP)

White pine and mixed oaks are the primary species being in the sawtimber class. Very infrequent hickory, big tooth aspen, and hemlock saplings and poles are also present in this lightly salvaged and thinned, adequately stocked stand. The understory is light to moderate and includes huckleberry, lowbush blueberry, juniper, chestnut stump sprouts, lady slippers, and wintergreen. The area is flat to variably sloped, dry upland with deep, excessively drained soils (Hinckley).

Due to the adequate stocking level of this stand and proximity to the camp, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	35	RM	0.10	saplings	-	-	50 (RM)

Red maple is the primary species being in the sapling class. Very infrequent red maple poles are also present in this very sparsely stocked stand, especially along the margins. The understory is light to moderate and includes highbush blueberry, swamp azalea, winterberry, buttonbush, alder, ferns, skunk cabbage, arum, sedges, grasses, and sphagnum moss. The area is flat and wet with deep, very poorly drained organic soils (Freetown).
Due to the very low management priorities of this stand, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, wet nature of this stand contributes to the excellent habitat diversity of the property.

STEW	36	WP	10.61	9.7”	170	17,540 bf & 17.9 cds	57 - 60 (WP)

Please see Narrative - Stand 8.

STEW	37	WO	22.15	9.2”	175	14,950 bf	57 - 60 (WP)

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Owner(s) Town of Westford Town(s) Westford

STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

& 21.1 cds

White pine and mixed oaks are the primary species being in the small sawtimber class. Occasional red maple and paper birch saplings, poles, and sawlogs are also present in this partially harvested, thinned, and salvaged, fully stocked stand as well as very infrequent big tooth aspen poles. The understory is light and includes huckleberry, highbush and lowbush blueberry, chestnut stump sprouts, lady slippers, princess pine, grasses, pipsissewa, striped wintergreen, starflower, and areas of fair to good white pine regeneration being in the sapling class. The area is flat to moderately sloped, dry rolling upland with deep, excessively drained soils (Windsor / Hinckley).

Beaver damage is present along some of the pond's edge.

Portions of this stand are ready for a very light individual selection harvest to both stimulate the natural regeneration of the white pine and to improve the growing conditions of the remaining trees. A light improvement thinning will also enhance the growing conditions of the desired trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed white pine and mixed oak poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine and mixed oaks in this stand is based both on their aesthetic appeal and their long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows, while the oaks are invaluable to the wildlife in the area due to the acorns they produce.

STEW	38	OM	0.62	8.1"	136	5,485 bf & 27.5 cds	57 - 60 (WP)

Mixed oaks are the primary species being in the pole class. Occasional white pine, red maple, and paper birch saplings, poles, and sawlogs are also present in this overstocked stand. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, serviceberry, sheep laurel, chestnut stump sprouts, ferns, sarsaparilla, princess pine, ground cedar, grasses, striped wintergreen, wintergreen, Canada mayflower, starflower, and areas of fair to excellent white pine regeneration being in the sapling class. The area is flat to gently sloped, dry upland with deep, excessively drained soils (Windsor / Hinckley).

Due to the proximity to the camp and the higher management priorities of other stands on this property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	39	WO	0.55	12.3"	155	13,900 bf & 19.0 cds	60 (WP)

Please see Narrative - Stand 34.

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Owner(s) Town of Westford Town(s) Westford

STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX
STEW	40	WP	0.31	11.5"	183	27,010 bf & 7.2 cds	60 (WP)

White pine is the primary species being in the sawtimber class, fair to excellent form. Occasional mixed oak saplings, poles, and sawlogs are also present in this lightly salvaged, adequately stocked stand. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, maple leaf viburnum, beaked hazelnut, buckthorn, juniper, black cherry saplings, chestnut stump sprouts, ferns, lady slippers, grasses, pipsissewa, Canada mayflower, and areas of fair to good white pine regeneration being in the sapling class. The area is flat to gently sloped, dry upland with deep, excessively drained soils (Hinckley).

Due to the adequate stocking level of this stand and proximity to the camp, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	41	OM	1.04	9.5"	110	7,500 bf & 8.5 cds	60 (WP)

Mixed oaks are the primary species being in the small sawtimber class. Occasional white pine, red maple, and paper birch saplings, poles, and sawlogs are also present in this fully stocked stand. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, chestnut stump sprouts, ferns, lady slippers, grasses, wintergreen, and Canada mayflower. Sweet pepperbush and swamp azalea are also present along the pond's shore. The area is flat to variably sloped, dry upland with deep, excessively drained soils (Hinckley).

Due to the proximity to the camp and the higher management priorities of other stands on this property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	42	MD	0.10	-	-	-	50 (RM)

Please see Narrative - Stand 15.

STEW	43	WP	0.39	9.5"	200	17,750 bf & 18.1 cds	60 (WP)

White pine is the primary species being in the small sawtimber class, fair to excellent form. Occasional pitch pine, mixed oak,

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Owner(s) Town of Westford Town(s) Westford

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

and red maple saplings, poles, and sawlogs are also present in this lightly salvaged, slightly overstocked stand as well as very infrequent planted Colorado blue spruce and red pine saplings and poles. The understory is light and includes lowbush blueberry, ferns, lady slippers, grasses, starflower, and Canada mayflower. The area is flat to gently sloped, dry upland with deep, excessively drained soils (Hinckley).

Due to the proximity to the camp and the higher management priorities of other stands on this property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	44	WO	2.73	13.0"	160	20,250 bf & 8.1 cds	60 (WP)

White pine and mixed oaks, in varying densities, are the primary species being in the sawtimber class. Occasional red maple saplings, poles, and sawlogs are also present in this lightly salvaged, adequately stocked stand as well as infrequent paper birch saplings and poles. The understory is light to moderate and includes huckleberry, lowbush blueberry, serviceberry, maple leaf viburnum, beaked hazelnut, juniper, ferns, lady slippers, grasses, ground cedar, pipsissewa, poison ivy, starflower, and Canada mayflower. The area is gently to variably sloped, dry upland with deep, excessively drained soils (Hinckley).

Due to the proximity to the camp and the higher management priorities of other stands on this property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	45	WO	0.70	10.4"	202	22,150 bf & 17.0 cds	60 (WP)

Please see Narrative - Stand 50.

STEW	46	OM	1.09	11.2"	115	5,750 bf & 19.7 cds	57 (WP)

Mixed oaks are the primary species being in the sawtimber class. Occasional white pine poles and sawlogs are also present in this lightly thinned and salvaged, fully stocked stand as well as very infrequent hemlock saplings and poles. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, beaked hazelnut, black birch and black cherry saplings, ferns, princess pine, poison ivy, Canada mayflower, and areas of fair to good white pine regeneration being in the sapling class. The area is generally flat, dry upland with deep, excessively drained soils (Windsor).

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Owner(s) Town of Westford Town(s) Westford

STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

Due to the proximity to the camp and the higher management priorities of other stands on this property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	47	WP	7.49	9.5"	212	26,210 bf & 11.9 cds	60 (WP)

White pine is the primary species being in the small sawtimber class, good to excellent form. Occasional mixed oak, red maple, and paper birch saplings, poles, and sawlogs are also present in this partially harvested, overstocked stand as well as infrequent pitch pine poles and sawlogs. A very small pocket of hemlock poles and sawlogs is present in the southeast corner of this stand along the bank above the pond. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, serviceberry, beaked hazelnut, maple leaf viburnum, chestnut stump sprouts, ferns, lady slippers, pipsissewa, grasses, Canada mayflower, starflower, partridgeberry, and areas with fair to good white pine, paper birch, and grey birch regeneration being in the sapling class. Sweet pepperbush and swamp azalea are also present, primarily along the ponds' edge. The area is gently to moderately sloped, dry rolling upland with deep, excessively drained soils (Hinckley).

There is a very small pocket of past harvesting which occurred between 15 and 20 years ago and a separate pocket of white pine mortality that was triggered by a lightening strike.

Portions of this stand are ready for a light individual selection harvest to both stimulate the natural regeneration of the white pine and to improve the growing conditions of the remaining trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed white pine poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine in this stand is based both on its aesthetic appeal and its long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows.

STEW	48	RM	0.55	saplings	-	-	50 (RM)

Red maple is the primary species being in the sapling class. Very infrequent red maple poles are also present in this very sparsely stocked, deep marsh. The understory is moderate to dense and includes sweet pepperbush, swamp azalea, winterberry, buttonbush, and swamp loosestrife. The area is flat and wet with deep, very poorly drained organic soils (Freetown).

Due to the very low management priorities of this stand, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, wet nature of this stand contributes to the excellent habitat diversity of the property.

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Owner(s) Town of Westford Town(s) Westford

STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX
STEW	49	OM	0.47	8.1"	136	5,485 bf & 27.5 cds	60 (WP)

Mixed oaks are the primary species being in the pole class. Occasional white pine, red maple, and paper birch saplings, poles, and sawlogs are also present in this overstocked stand. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, serviceberry, sheep laurel, chestnut stump sprouts, ferns, sarsaparilla, princess pine, ground cedar, grasses, striped wintergreen, wintergreen, Canada mayflower, starflower, and areas of fair to excellent white pine regeneration being in the sapling class. The area is flat to steeply sloped, dry upland with deep, excessively drained soils (Hinckley).

Due to the proximity to the camp and the higher management priorities of other stands on this property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	50	WO	10.14	10.4"	202	22,150 bf & 17.0 cds	60 (WP)

White pine and mixed oaks, in varying densities, are the primary species being in the small sawtimber class. Occasional red maple saplings, poles, and sawlogs are also present in this partially thinned and salvaged, slightly overstocked stand. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, chestnut stump sprouts, ferns, princess pine, grasses, rattlesnake plantain, starflower, and areas of fair to good white pine regeneration being in the sapling class. The area is flat to variably sloped, dry rolling upland with deep, excessively drained soils (Hinckley).

Portions of this stand are ready for a very light individual selection harvest to both stimulate the natural regeneration of the white pine and to improve the growing conditions of the remaining trees. A light improvement thinning will also enhance the growing conditions of the desired trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed white pine and mixed oak poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine and mixed oaks in this stand is based both on their aesthetic appeal and their long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows, while the oaks are invaluable to the wildlife in the area due to the acorns they produce.

STEW	51	WP	8.11	12.9"	174	24,475 bf & 10.9 cds	57 (WP)

White pine is the primary species being in the sawtimber class, good to excellent form. Mixed oak poles and sawlogs are also present in this harvested and thinned, adequately stocked stand as well as occasional red maple, paper birch, and grey birch poles and sawlogs. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, beaked hazelnut, maple leaf viburnum, raspberry, chestnut stump sprouts, ferns, lady slippers, Indian cucumber root, princess pine,

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Owner(s) Town of Westford Town(s) Westford

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

pipsissewa, grasses, Canada mayflower, starflower, partridgeberry, and areas of fair to good white pine, mixed oak, red maple, and black birch regeneration being in the sapling class. Sweet pepperbush and swamp azalea are also present close to Keyes Brook. The area is flat to gently sloped, dry upland with deep, excessively drained soils (Windsor).

Much of this stand was harvested approximately 10 to 15 years ago.

Portions of this stand are ready for a very light individual selection harvest to both further stimulate the natural regeneration of the white pine and to continue improving the growing conditions of the remaining trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed white pine poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine in this stand is based both on its aesthetic appeal and its long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows.

STEW	52	WP	7.33	9.7"	170	17,540 bf & 17.9 cds	57 - 60 (WP)

Please see Narrative - Stand 8.

STEW	53	OM	5.15	8.1"	136	5,485 bf & 27.5 cds	60 (WP)

Mixed oaks are the primary species being in the pole class. Occasional white pine, red maple, and paper birch saplings, poles, and sawlogs are also present in this overstocked stand as well as very infrequent hemlock poles and sawlogs. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, serviceberry, sheep laurel, buckthorn, chestnut stump sprouts, ferns, sarsaparilla, princess pine, ground cedar, grasses, striped wintergreen, wintergreen, Canada mayflower, starflower, and areas of fair to excellent white pine regeneration being in the sapling class. Sweet pepperbush is present in the lowest portion of the stand. The area is flat to steeply sloped, dry upland with deep, excessively drained soils (Hinckley), although there is a small seasonal pond present in the lowest portion of the stand.

This stand is ready for a very light individual selection harvest to both stimulate the natural regeneration of the white pine and mixed oaks to improve the growing conditions of the remaining trees. A light improvement thinning will also enhance the growing conditions of the desired trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed mixed oak poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine and mixed oaks in this stand is based both on their aesthetic appeal and their long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows, while the oaks are invaluable to the wildlife in the area due to the acorns they produce.

STEW	54	MD	0.15	-	-	-	50 (RM)

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Owner(s) Town of Westford Town(s) Westford

STAND DESCRIPTIONS

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Please see Narrative - Stand 15.							
STEW	55	GB	0.10	saplings	-	-	60 (WP)

Grey birch is the primary species being in the sapling class. Occasional white pine, big tooth aspen, paper birch, and willow saplings and occasional poles are also present in this sparsely to adequately stocked, long-abandoned sand pit. The understory is light to moderate and includes grasses, goldenrod, poison ivy, milkweed, sweet fern, blackberry, and multiflora rose. Sweet pepperbush, highbush blueberry, and briars are also present, especially along the pond's edge. The area is flat to steeply sloped, dry upland with what is left of deep, excessively drained soils (Hinckley).

Due to the proximity to one of the camp's beaches and the higher management priorities of other stands on this property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, early to mid-successional nature of this stand contributes to the excellent habitat diversity of the property.

STEW	56	OM	1.09	9.4"	150	7,515 bf & 23.9 cds	60 (WP)
Please see Narrative - Stand 3.							
STEW	57	WO	4.52	8.6"	155	12,420 bf & 18.5 cds	57 (WP)

White pine and mixed oaks are the primary species being in the pole class. Occasional red maple saplings and poles are also present in this lightly thinned, adequately stocked stand as well as infrequent grey birch saplings. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, serviceberry, sheep laurel, juniper, chestnut stump sprouts, ferns, lady slippers, princess pine, ground cedar, grasses, wintergreen, starflower, partridgeberry, and areas of fair to good white pine regeneration being in the sapling class. Swamp azalea is also present, especially close to Keyes Brook. The area is flat to very slightly sloped, dry upland with deep, excessively drained soils (Windsor).

Due to the higher management priorities of other stands on this property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	58	OM	2.03	7.1"	40	2,750 bf & 5.3 cds	57 (WP)

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Owner(s) Town of Westford Town(s) Westford

STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

Mixed oaks are the primary species being in the pole class. Occasional white pine and red maple saplings, poles, and infrequent sawlogs are also present in this heavily thinned, understocked stand as well as one chestnut pole. The understory is light and includes huckleberry, highbush and lowbush blueberry, serviceberry, sheep laurel, juniper, chestnut stump sprouts, ferns, lady slippers, princess pine, ground cedar, grasses, wintergreen, starflower, partridgeberry, and areas of fair to good white pine regeneration being in the sapling class. The area is generally flat, dry upland with deep, excessively drained soils (Windsor).

Due to the low management priorities of this stand, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed nature of this stand contributes to the excellent habitat diversity of the property.

STEW	59	OM	1.72	10.2”	200	17,500 bf & 15.4 cds	57 (WP)

Mixed oaks are the primary species being in the small sawtimber class. Occasional white pine poles and sawlogs are also present in this overstocked stand as well as areas with a flourishing component of white pine saplings. The understory is light and includes huckleberry, highbush and lowbush blueberry, serviceberry, sheep laurel, maple leaf viburnum, wild raisin, chestnut stump sprouts, ferns, princess pine, pipsissewa, grasses, striped wintergreen, Canada mayflower, and partridgeberry. The area is flat to very slightly sloped, dry upland with deep, excessively drained soils (Windsor).

This stand is ready for a very light individual selection harvest to both stimulate the natural regeneration of the white pine and mixed oaks to improve the growing conditions of the remaining trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed mixed oak poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine and mixed oaks in this stand is based both on their aesthetic appeal and their long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows, while the oaks are invaluable to the wildlife in the area due to the acorns they produce.

STEW	60	WP	1.33	11.8”	232	33,515 bf & 12.9 cds	57 (WP)

White pine is the primary species being in the sawtimber class, fair to excellent form. Occasional mixed oak, red maple, and grey birch saplings, poles, and sawlogs are also present in this overstocked stand as well as very infrequent Norway maple, sugar maple, tupelo, big tooth aspen, elm, and hemlock saplings, poles, and sawlogs. The understory is light to moderate and includes huckleberry, highbush and lowbush blueberry, serviceberry, beaked hazelnut, arrowwood, wild raisin, alternate leaf dogwood, spicebush, winterberry, barberry, Virginia creeper, grapes, ferns, sarsaparilla, lady slippers, Indian cucumber root, whorled loosestrife, princess pine, ground cedar, grasses, poison ivy, striped wintergreen, starflower, Canada mayflower, partridgeberry, and a few areas with fair to good white pine regeneration being in the sapling class. Swamp azalea, nettles, and arum are also present close to Keyes Brook. The area is generally flat, dry upland with deep, excessively drained soils (Windsor), although the lowest portions can be seasonally wet.

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Owner(s) Town of Westford Town(s) Westford

STAND DESCRIPTIONS

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

This stand is ready for a light individual selection harvest to both stimulate the natural regeneration of the white pine and to improve the growing conditions of the remaining trees. The desired future condition of this stand is an aesthetically appealing mix of well spaced, better formed white pine poles and sawlogs with a developing component of white pine saplings and poles. The value of the white pine in this stand is based both on its aesthetic appeal and its long term commercial importance. In addition, the tall pines provide excellent nesting opportunities for owls, hawks, and crows.

STEW	61	OM	0.15	9.4"	150	7,515 bf & 23.9 cds	60 (WP)

Please see Narrative - Stand 3.

STEW	62	MD	3.10	saplings	-	-	50 (RM)

This quaking bog is very sparsely stocked with occasional red maple saplings, especially along the margins of the stand, and infrequent black spruce saplings and poles. The understory is moderate to dense and includes sweet pepperbush, highbush blueberry, swamp azalea, winterberry, alder, leatherleaf, sheep laurel, ferns, skunk cabbage, sedges, grasses, and sphagnum moss. The area is flat, somewhat hummocky, and wet with deep, very poorly drained organic soils (Freetown).

Due to the very low management priorities of this stand, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, wet nature of this stand contributes to the excellent habitat diversity of the property.

STEW	63	WP	17.94	11.8"	232	33,515 bf & 12.9 cds	57 (WP)

Please see Narrative - Stand 60.

STEW	64	OM	0.86	9.5"	170	12,250 bf & 30.6 cds	57 (WP)

Mixed oaks are the primary species being in the small sawtimber class. A strong component of white pine saplings, poles, and sawlogs is also present in this very lightly thinned, overstocked stand as well as occasional red maple saplings and poles. The understory is light and includes huckleberry, highbush and lowbush blueberry, beaked hazelnut, hawthorn, black cherry saplings, chestnut stump sprouts, ferns, princess pine, grasses, wintergreen, starflower, Canada mayflower, and partridgeberry. The area is generally flat, dry upland with deep, excessively drained soils (Windsor).

This stand is ready for a light improvement thinning to favor the better formed and faster growing white pine and mixed oak saplings and poles. The desired future condition of this stand is a mix of well spaced, better formed mixed oak poles and

OBJECTIVE CODE: CH61 = stands classified under CH61/61A STEW = stands not classified under CH61/61A
STD = stand AC = acre MSD = mean stand diameter BA = basal area VOL = volume MBF = thousand board feet cds = cords

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OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

sawlogs with a developing component of better formed, faster growing white pine saplings and poles that will provide both aesthetic and species diversity to the property. In addition, the oaks are invaluable to the wildlife in the area due to the acorns they produce.

STEW	65	WO	4.37	10.4"	202	22,150 bf & 17.0 cds	60 (WP)

Please see Narrative - Stand 50.

STEW	66	WP	5.77	9.7"	170	17,540 bf & 17.9 cds	57 - 60 (WP)

Please see Narrative - Stand 8.

STEW	67	RM	0.23	12.0"	185	11,225 bf & 24.4 cds	57 - 65 (WP)

Red maple is the primary species being in the sawtimber class. Occasional mixed oak, elm, big tooth aspen, and white pine saplings, poles, and sawlogs are also present in this overstocked stand. The understory is light to moderate and includes highbush and lowbush blueberry, arrowwood, swamp azalea, beaked hazelnut, infrequent black cherry, hickory, and red cedar saplings, barberry, bittersweet, Virginia creeper, grapes, ferns, goldenrod, sarsaparilla, princess pine, poison ivy, grasses, starflower, Canada mayflower, and areas of fair to good white pine regeneration being in the sapling class. The area is flat to slightly variably sloped, generally dry upland with several, very small borrow pits and deep, excessively drained soils (Windsor), although the lowest portions tend to be seasonally wet with deep, poorly drained soils (Wareham).

Due to sensitive operating conditions and the higher management priorities of other stands on the property, improvement work is not recommended at this point in time. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, seasonally wet nature of this stand contributes to the excellent habitat diversity of the property.

STEW	68	RM	1.25	12.0"	185	11,225 bf & 24.4 cds	57 - 65 (WP)

Please see narrative - Stand 67.

STEW	S1	MD	@ 19.89	-	-	-	50 (RM)

This open marsh along Stony Brook is virtually nonstocked, although there are individual and small pockets of red maple saplings and poles present, especially in the northwest portion of the stand. The stand consists primarily of highbush

OBJ	STAND NO	TYPE	ACRES	MSD or SIZE-CLASS	BA/AC	VOLUME/ACRE	SITE INDEX

blueberry, silky dogwood, arrowwood, winterberry, swamp azalea, cattails, purple loosestrife, skunk cabbage, arum, sedges, rushes, and sphagnum moss. Extensive areas of open water are also present. The area is generally flat, somewhat hummocky, and wet with deep, very poorly drained organic soils (Freetown).

Active management of this stand should be limited to considering the installation of wood duck boxes, which will further enhance the stand's value as superb habitat for wildlife. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, wet nature of this stand contributes to the excellent habitat diversity of the property.

STEW	S2	MD	@ 13.00	-	-	-	50 (RM)

This open marsh along Keyes Brook has been altered by beaver activity over the years. Individual and small pockets of standing dead trees, referred to as snags, are evidence that flooding caused by the construction of dams by beavers in the area is relatively recent. The area now consists primarily of very infrequent red maple saplings, alder, highbush blueberry, swamp azalea, buttonbush, swamp rose, leatherleaf, spireas, purple loosestrife, ferns, nettles, pickerelweed, and sedges. Extensive areas of open water are also present. The area is generally flat and wet with deep, very poorly drained organic soils (Freetown).

Active management of this stand should be limited to considering the installation of wood duck boxes, which will further enhance the stand's value as superb habitat for wildlife. The desired future condition of this stand is essentially an older and larger version of what it is now. This stand will be allowed to develop naturally over the next ten year period at which point its management needs will be reassessed. The undisturbed, wet nature of this stand contributes to the excellent habitat diversity of the property.