

Land Use Plan

1/21/2016

 Regional Water Authority



Land Use Plan
Of the
South Central Connecticut Regional Water Authority

Approved by Representative Policy Board

January 21, 2016

This update of the Land Use Plan, adopted by the Authority on October 15, 2015, was approved by the Representative Policy Board on January 21, 2016 following a public hearing. The plan may be amended only with the approval of the Representative Policy Board.

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PREFACE TO THIRD EDITION

This edition of the Land Use Plan is the third major updating of the original Plan that was completed in 1983. It reflects changes of ownership and uses of Authority landholdings and our present plans for the future use of these lands. The Authority's landholdings, together with the remaining public and privately-held open space tracts in the south central region of Connecticut, represent a vital and diminishing resource that must be managed judiciously.

Our mission is derived from our enabling legislation: To provide customers with high-quality water and services at a reasonable cost while promoting the preservation of watershed land and aquifers. This Plan addresses the preservation of land, particularly those parcels no longer used or useful for water supply. The Authority's goal is to see these lands preserved. Our commitment to the preservation of these lands for the benefit of the region anticipates the Authority working with local municipalities, the State of Connecticut, land trusts, and other organizations in an effort to conserve these lands while minimizing the impact of the cost of their preservation on the Authority's ratepayers.

Making wise land use decisions for the Authority's more than 27,000 acres of land is a dynamic process, and it is expected that this plan will be marked by amendments and subsequent revisions as the future unfolds.

REGIONAL WATER AUTHORITY

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INTRODUCTION AND OVERVIEW

History

When the South Central Connecticut Regional Water Authority (Authority) acquired the New Haven Water Company in 1980, it became the owner of more than 25,000 acres of land distributed throughout the 16 towns that form the Regional Water District. Those landholdings extended from Milford to Killingworth, 33 miles east, and 20 miles north to Prospect. With the many acquisitions since 1980, including the acquisition of the Birmingham Utilities, Inc. system in 2008, the Authority's landholdings now stretch from the Housatonic River to beyond the Hammonasset River. More than 500,000 people live and work in this 500 square mile area, three-quarters of them in densely-populated urban areas. In 1983, the Representative Policy Board (RPB) approved a Land Use Plan adopted by the Regional Water Authority for making land use decisions on these extensive landholdings. The Land Use Plan was updated in 1988 and 1993 by supplements. In 1996, the RPB approved a full revision. This document is a full update of the 1996 Land Use Plan.

Purpose/Mission

Within this region, the Authority continues to own and manage 27,723 acres of land. This property constitutes a significant area of essentially undeveloped open space that covers a spectrum of landforms and landscapes from urban to wilderness, and bog to ridgetop. The land's distinctions include the biggest reservoirs, longest uninterrupted ridgelines, and largest blocks of open space under single ownership in the south central region of Connecticut. Because the land is rich in natural resources and opportunity, it demands thoughtful and judicious stewardship.

The enabling legislation that created the Authority charges the Authority with "providing and assuring the provision of an adequate supply of pure water at reasonable cost...and to the degree consistent with the foregoing, of advancing the conservation and compatible recreational use of land held by the Authority." This Land Use Plan has been prepared to delineate the most appropriate uses of the Authority's landholdings consistent with the overriding priority of protecting water supplies and the goal of preserving our landholdings. The Plan also recognizes the limitations and opportunities created by the natural features of the land and the regional and local need for recreation and public improvements.

Acreage figures presented in this Land Use Plan have been derived from the Authority's geographic information system (GIS). GIS is a computerized mapping system designed to store, analyze, manage, and present spatial or geographical data. Acreages of land holdings can be calculated from data layers containing property boundaries. These acreages may differ slightly from what is noted on the property deeds and previous versions of the Land Use Plan. Acreage noted on deeds and other references were calculated using methods that are less precise than those used by GIS analysis. GIS is the standard that most organizations use for these types of calculations. However, GIS data is not without its own caveats as most of the polygons have been drawn using old maps and not with A-2 surveys.

Standards and Classifications

The protection of water supplies continues to be the foremost standard for all land use decisions. The development of planning goals compatible with this standard and land use policies consistent with these goals continues the process that began with the 1983 Land Use

Plan. Five categories of land use, each governed by specified policies, will continue to define appropriate uses of Authority landholdings as delineated below:

- 1) Water Supply Facilities and Source Protection – Approximately 12 percent of the Authority’s landholdings, or 3,266 acres, is occupied by water supply facilities, such as dams and reservoirs, filtration plants, pumping stations, water storage tanks, and wells, or is reserved for future construction of such facilities. The Authority will continue to acquire additional land, as needed, for the development or protection of water supply facilities to improve water service. Watershed and aquifer land acquisitions and conservation easements will continue to be pursued consistent with the goal of the Authority’s 2007 initiative titled *The Land We Need for the Water We Use* to acquire an additional 3,000 acres of privately-owned watershed land. The Authority partners with municipalities, the Department of Public Health (DPH), and the Department of Energy and Environmental Protection (DEEP), and other entities to control, or otherwise limit, the risk of contamination of the public water supply.
- 2) Preservation – The protection of scenic ridges, lakeshores, watercourses, outstanding geologic features, natural ecosystems, and significant historic sites and structures will guide land use policy for some 3,449 acres, about 12 percent of the Authority’s landholdings. Any potential conflicting land uses proposed for these areas will be carefully evaluated to balance public need and public benefit against potential adverse effects on the preservation sites. Among the scenic features to be preserved are traprock ridges that dominate the southern Connecticut landscape and lake vistas visible from heavily traveled roadways and thoroughfares, as well as more secluded scenery such as rugged gorges and sparkling waterfalls reached only by foot trails. Key natural areas include lakes and wetlands that provide some of the richest wildlife habitats in the region and significant geologic formations that provide important clues to geologic history. Among the outstanding historical sites are structures at Lake Whitney associated with Eli Whitney II, who created the first public water supply for New Haven, as well as the remains of several colonial buildings, water-powered mills, and early Native American archaeological sites near the Maltby Lakes.
- 3) Recreation and Education – More than 70 miles of foot trails and nine recreation areas have been opened for public hiking, jogging, cross-country skiing, bicycling, horseback riding, and nature study by the Authority since its acquisition of the New Haven Water Company. Portions of the shoreline of Lakes Saltonstall and Chamberlain, the Maltby Lakes, and several streams have been opened by the Authority for permitted fishing. Eventually, with approval of the DPH, additional streams and reservoir shorelines may be opened for fishing. Approximately 289 acres, or one percent of the land, are dedicated to support recreational activities, such as visitor parking areas. Educational and scientific use of the land by colleges, universities, and other schools will continue to be encouraged. The Authority’s Whitney Water Center provides an important focal point for environmental education in the region. There are other opportunities for the public to use Authority land for recreation outside of our recreation permit program. Examples include the Blue-blazed Trails that cross our property, as well as fishing locations along streams and Clark’s Pond.
- 4) Natural Resources – About 71 percent of the land, or 19,732 acres, will be used primarily for production of renewable natural resources in a manner compatible with

water supply, preservation, and recreation objectives. Most of this land is forested and will continue to be managed for timber production consistent with the Authority's Forest Management Plan. Land with prime farmland soils, may be converted to agricultural use where this poses no threat to water supplies.

- 5) Non-Water System Uses – 1,088 acres, or approximately four percent of the Authority's landholdings, are designated as non-water system land and could be sold with approval from the RPB. This includes land that was identified as non-water system land in the 2007 initiative *The Land We Need for the Water We Use* that could be sold. Where appropriate, special features of any land proposed for development may be protected with deed restrictions or other legal means.

The delineation of these categories of land use is shown on the land use maps included in this report and reflects the Authority's consideration for the classification of water company lands specified in Section 25-37c of the Connecticut General Statutes. Class I lands are those within water supply watersheds that lie closest to water supply reservoirs and tributary streams, or meet specific criteria concerning topography, soils, and depth to bedrock. They also are lands within an identified direct recharge area or outcrop of an aquifer now in use, or available for future use. These lands are subject to stringent restrictions on disposition and use. Class II lands include all other water company lands within water supply watersheds and some lands that are off water supply watersheds, but in close proximity to reservoirs and tributaries. Since Class II lands are generally less critical for protection than Class I lands, they are subject to slightly fewer restrictions. Class III lands are lands that are not Class II and not within water supply watersheds or aquifers. Any change in use or allowed disposition of Class I and II land requires a permit from the DPH. Class III land is not subject to this restriction. Definitions of these classes and a synopsis of land use constraints on Class I and II lands are included in Appendix A and Appendix B.

Recreation

This Plan recognizes the need for public recreation in our region. In 2008, the Authority adopted a specific process for considering requests for additional recreational opportunities on its land. This process includes the use of a memorandum of agreement between the Authority and the requesting organization to define the nature and location of the proposed recreational activity. The agreement also details the financial and logistical support needed from the sponsoring organization. The complete procedure can be found in Appendix C.

Renewable Economic Resource Projects

In 2011, the Authority adopted a "Procedure for Future Renewable Economic Resource Projects". This procedure provides the process for the RPB to consider renewable energy projects. It includes a meeting of three RPB members, Authority management, any business partners, and local town officials to discuss the project. The complete procedure can be found in Appendix D.

Conservation of Land

The Authority is in a unique position to conserve significant land resources in the region. Since the late 19th century, thousands of acres were acquired for public water supply purposes by the New Haven Water Company by purchase and exchange. Today, 27,723 acres, most of it forested land, constitute the highly-visible land owned by the Authority.

In this Plan, 26,636 acres, or 96 percent of landholdings, have been identified as either

currently used for water supply purposes or expected to be used for water supply in the future. The cost of maintaining that land is a justifiable part of operating the Authority's water supply system and is financed through revenues derived from our customers.

Disposition of Land

This Plan identifies approximately 1,087 acres of land, or about four percent of total land holdings, that are either approved for sale by the Representative Policy Board, identified for disposition in *The Land We Need for the Water We Use* program, or associated with former rental houses or barns. The Authority's intent is to sell these properties to reduce costs to Authority ratepayers and to fund, in part, future watershed land purchases that are discussed in *The Land We Need for the Water We Use*. The Authority anticipates working with local municipalities, the State of Connecticut, land trusts, and other organizations committed to land conservation concerning the disposition of these parcels. In the past, the Authority has offered alternative financing terms to towns and land trusts, where the use of properties has been restricted for conservation purposes and protected as open space. The Authority believes that it must consider the impact of the relative cost of holding and maintaining these landholdings on the ratepayer since the land does not provide, and is not expected to provide, a long-term future water supply need.

Future of the Plan

This Land Use Plan is a dynamic document. As changing circumstances may require, it will be reviewed and amended. Every ten years it will undergo an extensive review and update if needed. The Plan may not be amended, however, without the approval of the RPB. The foundation of the Plan will continue to be the wise and effective use of land consistent with maintaining the purity and adequacy of the public water supply.

HOW TO USE THIS PLAN

This Land Use Plan includes maps, tables, and text intended to provide detail about Authority lands. By using these materials selectively, the reader can gain a general understanding of the Plan or study areas of special interest in depth. The introductory chapters of the Land Use Plan provide an overview of the Authority's landholdings and define the standards and policies that guide land use and land disposition decisions. Land use plans have been organized by major land divisions or "systems". The first four (North Branford, Saltonstall, West River, and Mill River) are surface water and groundwater systems that are expected to remain in use for many years. These are followed by the Maltby Lakes, Prospect, and Birmingham systems, which except for active groundwater supplies in the Birmingham System, are not planned for use within the 50-year planning period. Landholdings associated with groundwater systems are described in the North Cheshire Wellfield, Mill River, and Birmingham sections. A number of small, miscellaneous parcels of land, not closely connected with any of these systems, are described in a separate section titled, "Miscellaneous Parcels". A section titled "Changes in Land Ownership" describes the parcels acquired or sold by the Authority since 1996. The Wintergreen, Racebrook, and Beaver Brook tracts, described in the 1983 Land Use Plan, were abandoned for water supply use, and major portions of these landholdings were sold. Large areas of these former Authority lands were preserved as open space, as specified in the deeds.

Detailed land use maps for each system and the miscellaneous parcels show specific current activities and uses. The maps are color-coded to provide a guide to the five major categories of land use: water supply facilities and source protection, preservation, recreation and education, natural resource conservation, and non-water system land. The map legends identify major types of use in each category. For consistency, the maps legends are almost all the same. Therefore, some symbols in the legend may not be found on that map, but are found elsewhere. Additionally, there are some points of overlap between maps. Parcels appearing in two maps are only counted once in the acreage calculations.

The narrative description of each system's land use plan provides further information on specific land uses and land disposition categories. The text summarizes the basis for the plans, describing the water supply, natural features, and history of each system. This background is followed by a description of planned land uses and the status of each of the major categories: Water System Land and Non-Water System Land.

Table 1 summarizes land uses and associated acreages for all systems.

**Table 1
Land Uses By System**

LAND USES BY SYSTEM						
System	Water Supply Facilities and Source Protection	Preservation	Recreation and Education	Natural Resources	Non-Water System	Total
North Branford	1,578.6	2,572.3	83.8	10,683.5	823.3	15,741.5
Saltonstall	539.6	218.1	40.2	1,190.8	174.6	2,163.3
Mill River	324.0	146.3	79.9	255.3	1.4	806.9
West River	527.4	330.9	41.4	4,516.1	6.0	5,421.8
Maltby	102.7	17.9	38.5	866.4	34.9	1,060.4
Prospect	19.7	36.1	4.8	714.8	34.2	809.6
Birmingham	103.0	26.6	-	1,442.9	12.4	1,584.9
North Cheshire Wellfield	54.0	1.1	-	62.3	-	117.4
Misc. Parcels	16.3	-	-	-	0.9	17.2
Totals	3,265.3	3,349.3	288.6	19,732.1	1,087.7	
				Total		27,723.0

THE LAND AND ITS RESOURCES

Of the more than 27,000 acres owned by the Authority, nine percent is covered by reservoirs, 70 percent is forested, and the balance is used for water facility structures, power lines, or farmland. In addition to structures used for water supply purposes, the land includes 16 houses and other buildings, some of which are rented. The land is crossed by 254 miles of maintained roads and forestry trails and 32 miles of Blue-blazed Trails on or near Authority lands, which are maintained and administered for public use by the Connecticut Forest and Park Association. Since the last approved Land Use Plan in 1996, 3,959 acres were acquired by the Authority in fee simple ownership, including 1,595 acres that were part of the acquisition of Birmingham Utilities. An additional 1,304 acres were protected by acquiring conservation easements. During that same time, the Authority disposed of 713 acres. Of the land sold, over 600 acres were protected as open space in town parks, land trust properties, or privately-owned properties with deed restrictions.

The Authority classifies its landholdings according to the criteria of Section 25-37c of the Connecticut General Statutes. Approximately 42 percent is Class I, 50 percent is Class II, and eight percent is Class III land. Statutory definitions of the water supply-watershed land classes can be found in Appendix B.

The Authority's determination of Class I, Class II, or Class III land is subject to a final determination by the DPH. The Authority must obtain a permit from the DPH before it may dispose of any interest in real estate (sale or lease) or change the use of any land that is designated Class I or Class II. By law, the DPH may not grant a permit for the sale, lease, assignment, or disposition of any interest in Class I land except to a state agency, municipality, or another water utility. The only exception is by the amendment to the Authority's enabling legislation (Special Act 13-20) that allows the disposition of the former rental houses and barn along with suitable building lots, some of which are on Class I and II land.

In addition to the supply and protection of drinking water, the major use of the Authority's land is for the production of forest products, such as sawtimber and cordwood. Principles of forest management were first introduced in 1904 by the Yale School of Forestry under a land use agreement with the New Haven Water Company. This partnership of a renowned university and a region-wide land-owning water company was the first of its kind. This relationship proved to be beneficial to both Yale and the Water Company. A Forest Management Plan was written in 1989 and is implemented under the guidance of the Authority's forester. Since 1904, the volume and quality of forest sawtimber has steadily increased and improved, the diversity of the forest and wildlife habitats has expanded, and the importance of the forest as a major contributor to the scenic and environmental quality of this region is unquestioned.

Forest uses are integrated wherever possible. The same forests that mitigate flooding, also create wildlife habitat and provide timber for construction. With proper management, otherwise conflicting land uses can coexist with the protection of the public water supply. The Authority is committed to sustainable management and protection of its land.

Under New Haven Water Company ownership, public recreational use of the land was limited to hiking on the Blue-blazed Trails that crossed its property. Since the acquisition of the New Haven Water Company in 1980, the Authority has opened its lands for passive recreational and educational uses under a carefully administered public permit

system. Where recreation uses were proposed on Class I and Class II land, the implementation of such uses required the prior approval of the DPH. The Authority has found that passive recreation is compatible with the goal of water supply protection.

POLICIES FOR LAND USE, THE CONSERVATION OF LAND, AND DISPOSITION STANDARDS

Section 18 of the Authority's enabling legislation requires it to develop "standards for determining the suitability of its real property for categories of land use including which, if any, of its real property may be surplus with regard to the purity and adequacy of both present and future water supply, which, if any, may be desirable for specified modes of recreation or open space use and which may be suitable for other uses, giving due consideration to the State Plan of Conservation and Development, to classification and performance standards recommended in the final report of the Council on Water Company lands -- and to such other plans and standards as may be appropriate".

The basic standard that guides the Land Use Plan is the protection of public drinking water supplies. All land holdings are classified on the basis of their importance for protecting water supplies according to the criteria of Section 25-37c of the Connecticut General Statutes. These classifications are used to determine the suitability of land for various categories of land use.

Goals for Land Use

Planning for land that has a wide range of potential uses must be preceded by defining the goals of the Authority. The land use goals identified by the Authority are consistent with its enabling legislation: "providing and assuring the provision of an adequate supply of pure water at reasonable cost...and to the degree consistent with the foregoing, of advancing the conservation and compatible recreational use of land held by the Authority". This Land Use Plan was formulated to:

1. Ensure an adequate supply of pure drinking water at a reasonable cost.
2. Involve towns and cities of the Regional Water District, DEEP, land trusts, and other land conservation organizations in preserving Authority-owned open space land that is not used or useful for public water supply, without reliance on water rates to recover the Authority's costs of holding and maintaining this land.
3. Protect outstanding natural and historical features.
4. Reserve land for the production of timber, cultivation of agricultural crops, conservation of wildlife, and management of non-renewable resources.
5. Expand recreational opportunities on Authority lands near urban and suburban centers within the constraints of water supply and environmental protection.
6. Foster use of the land for education and research, especially for activities that will enhance awareness and understanding of water resources and improve their management and stewardship.
7. Promote the development at appropriate locations of special institutions and facilities that will serve regional and local needs and be self-supporting when appropriate and feasible.
8. Provide sufficient flexibility to accommodate unanticipated future needs by exercising caution in committing land to irreversible uses.

Policies for Land Use

I. General Policies

A. Priority of Water Supply Use. The provisions of a consistent, reliable supply of

safe drinking water will eclipse all other uses of the property. If any conflict among uses arises, the provision for water supply and water supply protection will have priority.

B. Control and Implementation. New land use categories may be developed to ensure effective control of the use of the land. New land uses will receive careful evaluation regarding water quality impacts and cost-effectiveness. Changes in land use will be implemented only in conformance with the requirements of all applicable laws, zoning regulations, and governmental permit or approval procedures. Such uses will be evaluated for their impacts on the land, its neighborhood, and the surrounding communities. Land use decisions will remain reversible whenever possible.

C. Self-Supporting Uses. In general, the Authority will strive to develop uses of land that are expected, in the long run, to become self-supporting from a revenue standpoint and will further the goals of this Plan. The Authority recognizes, however, that certain uses may initially require financial support from the Authority while public support is being developed. Other uses, such as education, research, and recreation that may not be self-supporting, will be considered if they further other Authority goals. The Authority will seek and encourage the cooperation of volunteer organizations.

D. Review of the Plan and Amendments. The Plan will be reviewed as changing circumstances may require and amended or updated as necessary with the approval of the RPB, which will hold public hearings if it deems the amendments substantial. As opportunities arise to accommodate other uses of land that are environmentally compatible, help satisfy a regional need, are economically feasible, and are not contemplated in this plan, the Authority may request the RPB to approve amendments to this Land Use Plan.

II. Specific Policies

A. Water Supply Facilities and Source Protection

Land will be used as necessary for the construction and maintenance of water treatment plants, water storage tanks, pumping stations, wells, dams, diversions, reservoirs, tunnels, stormwater quality controls, and other facilities to ensure a safe and dependable water supply.

All land uses will include measures to protect water quality, including the following:

1. Steep slopes will be protected from activities that could cause erosion and sedimentation. Activities proposed on or near wetlands will be conducted in accordance with the conditions of a permit issued by the local inland wetland agency.
2. Development will be designed to provide for maximum infiltration of stormwater, to avoid direct, immediate discharge of stormwater into water courses and water bodies without detention, sedimentation, and other provisions for intercepting runoff contaminants.
3. Best Management Practices, as defined by federal and state laws, regulations, and guidelines will be followed to avoid significant adverse impacts on water quality from any land use.

B. Preservation

Outstanding natural and historic features, especially those identified as having regional significance, will be protected to the extent compatible with water supply objectives. Land use policies affecting these features include the following:

1. Scenic ridges and views will be protected through careful forest management

and avoidance of non-essential construction. Proposed structures that might detract from the aesthetic value of the scenic ridges and viewsheds will be carefully evaluated for visual impact and weighed against public need and expected benefits.

2. Identified historic sites will be protected except where they conflict with an essential water supply structure. Uses that might destroy features of historic significance will be carefully controlled.

C. Recreation and Education

Proposed land uses will recognize the needs of the region and of local communities for recreation and open space. Particular effort has been made to develop recreational uses in areas readily accessible from urban population centers. Use of the land by area schools, colleges, and universities for education and research will be encouraged. The use of Class I and Class II land for recreation purposes is regulated by the DPH. Recreational or educational uses must be compatible with the reliable supply of safe drinking water.

Land will be made available for recreational and educational uses in accordance with the following policies:

1. Recreational use of Authority landholdings will be coordinated with community programs, where practical.
2. Authority lands approved for recreational uses are to be open to all persons bearing a valid permit regardless of where they reside.
3. Activities will be restricted to those that cause minimal disturbance to the land, water resources, and the environment. Preference will be given to those that are readily controllable and compatible with other uses. These uses include, but are not limited to:
 - a. hiking, cross-country skiing, and jogging on designated roads and trails and under specified conditions
 - b. activities such as photography, birdwatching, and sketching
 - c. fishing at specified and controlled locations
 - d. bicycling at designated locations and under specified conditions
 - e. horseback riding at designated locations and under specified conditions
 - f. hunting or trapping at designated locations and under specified conditions.
4. Activities that will not be allowed on Class I and Class II land, but may be allowed on certain Class III land, include:
 - a. boating, except as part of a controlled fishing program
 - b. picnicking, except for consumption of food and non-alcoholic beverages while fishing or using trails.
5. Activities that will not be allowed on any land include, but are not necessarily limited to:
 - a. swimming
 - b. setting of fires
 - c. smoking
 - d. use of alcoholic beverages, drugs, or other controlled substances
 - e. use of motorized vehicles, including trail bikes and snowmobiles
 - f. walking or carrying of any pet animals
 - g. ice skating on ponds and reservoirs

- h. climbing or walking on structures, including dams, unless where permitted
- i. disposal or discharge of wastes.
- 6. Educational use of the land will be promoted through the following measures:
 - a. The operation of the Whitney Water Center, an environmental education center developed in cooperation with Eli Whitney Museum. The Authority may collect user fees for special programs offered to the public at the Whitney Water Center.
 - b. expanding opportunities for educational and research use of the land.
 - c. cooperating with students undertaking water-related projects and studies.
- 7. The Authority has adopted a specific process for considering requests for additional recreation opportunities on its land. See Appendix C.

D. Natural Resources

Within the constraints of water supply protection and good environmental practice, economic use will be made of timber resources, agricultural land, and mineral resources. The following policies will guide resource use:

- 1. Forest management will continue on Authority lands and will be guided by a Forest Management Plan prepared by the Authority's forester founded on principles of water protection, timber resource conservation, and wildlife habitat protection.
- 2. The Authority will consider the use of prime farmland for non-farm uses when such alternative use is environmentally compatible with these policies, would help satisfy a regional or municipal need, and is economically feasible.
- 3. Mineral resource removal is not compatible with most of the Authority's goals. There may be a location where the removal of sand, gravel, or rock is necessary for the benefit of the water supply or is otherwise desirable. Preference will be given for projects where excavations will increase the storage capacity of a reservoir, provide detention for stormwater runoff, facilitate improvement of water supply facilities, or advance other goals of this Plan consistent with Authority policies.

E. Non-Water System

Non-water system lands are defined as lands not needed for the operation, protection, and maintenance of the water system now or in the future. Our intent is to sell these properties as feasible to reduce costs to Authority ratepayers and to fund, in part, future watershed land purchases that further the 2007 3,000-acre goal in *The Land We Need for the Water We Use*. The Authority anticipates working with local municipalities, the State of Connecticut, land trusts, and other organizations committed to land conservation concerning disposition of these parcels. In the past, the Authority has offered alternative financing terms to towns and land trusts where the use of properties has been restricted for conservation purposes and protected for open space.

Conservation Policies

In addition to land use, this Plan addresses the issue of conserving Authority-owned open space land not used or useful for public water supply. The Authority's goal is to conserve as much of this land as possible without reliance on water rates to recover the costs of holding and maintaining such open space lands. A commitment to the conservation of

land for the benefit of the region, without unduly burdening water ratepayers, anticipates the Authority working with local communities, the State of Connecticut, land trusts, and other organizations. In the past, the Authority has offered alternative financing terms to towns and land trusts where the use of properties sold has been restricted for conservation purposes and protected for open space. These terms are still available for use when those groups intend to keep the land as open space.

Authority land has been divided into two categories for determining future action. The categories are Water System Land and Non-Water System Land. Water System Land comprises 96 percent of all Authority land and Non-Water System Land comprises just four percent.

Water System Land

This is a category of land that the Authority intends to retain because it is used or useful for its water supply system. It is land on reservoir watersheds or wellfield aquifers of water supplies presently utilized or planned for the future, including some Class III land near reservoirs. This category also includes land serving as existing or potential sites for water facilities and infrastructure.

While Water System Land may benefit the region and local community as open space, the cost of holding and maintaining such land will continue to be borne by Authority ratepayers, less any offsetting income derived from forestry operations, agriculture, and other uses compatible with water supply.

The following landholdings are designated as Water System Land:

**Table 2
Water System Land By System**

Systems	Acres	
North Branford	14,918.5	
Saltonstall	1,988.7	
Mill River	805.5	
West River	5,415.8	
Maltby Lakes	1,025.4	
Prospect	775.4	
Birmingham	1,572.5	
North Cheshire Wellfield	117.4	
Miscellaneous Parcels	16.3	
Total, Water Supply Land Acreage	26,635.5	(96% of Total)

Water System Land identified in this Plan includes potential water supplies that would require permits for use from the DEEP under the Connecticut Water Diversion Act. Potential sources within this category, which could be denied for water supply use at a future time, include: potential wellfield sites at the Muddy River in North Haven, Waite Street in Hamden, and the Farm River in the Northford section of North Branford; surface water diversions at the Cedar Swamp, Page Lot Brook, and lower Iron Stream in Madison; and the east branch of the Hammonasset River in Killingworth. In addition, existing water supply sources currently authorized for use by virtue of filing diversion registrations with the DEEP could be subject to permitting requirements in the future if current laws are changed to

eliminate this grandfathering provision.

Non-Water System Land

Non-Water System Land is land not needed in the present or future for the operation, protection, and/or maintenance of the Authority’s water system. Land in this category is intended to be sold where a sale is feasible. Examples include Class III lands with obsolete water supply facilities, such as pumping stations that will not be replaced, or lands previously identified for future facilities that are no longer considered viable for these purposes. It also includes Class I and II properties associated with the former rental houses and barn, which are allowed to be sold subject to conditions.

Some of the Authority's land included in the Non-Water System Land category may be needed by local communities or regional agencies for a public use. Whenever a use of Authority land is proposed that requires the disposition of an interest in real estate, the Authority will carefully consider such proposed use and disposition. If it is deemed to be consistent with the goals and policies of this Plan, and in the best interests of the Authority, approval for such use and disposition will be sought from the RPB.

As other water supply facilities, such as pumping stations and water tanks, become obsolete and are no longer useful for other types of water supply facilities, such parcels may fall into the Non-Water System Land category.

**Table 3
Non-Water System Land By System**

Systems	Acres	
North Branford	823.3	
Saltonstall	174.6	
Mill River	1.4	
West River	6.0	
Maltby Lakes	34.9	
Prospect	34.2	
Birmingham	12.4	
North Cheshire Wellfield	-	
Miscellaneous Parcels	0.9	
Total, Non-Water Supply Land Acreage	1,087.7	(4% of Total)

Land Acquisition Policies

The Authority will pursue the acquisition of unimproved and improved land when it is offered or available at reasonable prices, terms, and conditions. The Authority will also consider acquiring conservation easements over unimproved land, rather than fee simple ownership if it is more prudent. To be considered for acquisition, the land must be useful for the protection of ground or surface waters, the siting of future water supply structures, the improvement of access, boundaries, and buffers of existing landholdings, or for other purposes deemed in the best interests of the Authority. The Authority may work with the DEEP, land trusts, municipalities, and other parties to acquire or protect land that will benefit the public water supply. Unimproved watershed parcels are reviewed and analyzed in a matrix to rank their desirability for acquisition.

Land Disposal

The Authority will follow the principles noted in the program *The Land We Need for the Water We Use* when considering Class III parcels for disposition. In that program, the Authority identified approximately 900 acres of Non-Water System Land not needed for the protection and maintenance of the water system. The disposition process is not entered into lightly. A lengthy statutory process is required in order for the Authority to sell a parcel. This process includes holding a public hearing. The process also includes rights of first refusal by the towns and state.

THE BASIS FOR PLANNING

Applying policy decisions to more than 26,000 acres of water system land requires an understanding of the capabilities and limitations of the land. Applying policy decisions regarding the other 1,000 acres of Non-Water System Land are bound by fewer limitations. Water supply needs, natural and historic features, and socioeconomic factors have played, and will continue to play, key roles in determining appropriate land use.

Water Supply Needs

The requirements of the land for supplying drinking water and protecting its quality continue to dominate land use planning. This means that wherever possible, especially on sloping land near watercourses, vegetative cover should be preserved, since it protects water quality by promoting infiltration, removing sediments and pollutants, and controlling erosion. Because of the importance of wetlands and floodplains in slowing runoff, reducing flood peaks, and trapping sediments, land uses are planned to avoid encroachment on these critical areas. Groundwater resources are highly vulnerable to contamination from certain types of chemicals and must be protected from uses that might release such chemicals.

The operation and management of water supply systems also impose constraints on certain uses. For example, active reservoirs can experience extremes in water level fluctuations, limiting their use for activities such as fishing to periods when water levels are sufficient.

Natural and Historic Features

To avoid unintended and irreversible adverse impacts on the environment, land use planning has considered the natural features of each particular area in the context of the larger systems of which it is a part. The topography, geology, soils, hydrology, and biological communities of the land and its known historic and archeological sites have been inventoried to identify significant resources. Ecologically important or environmentally sensitive areas identified for preservation include wetlands, flood plains, fragile ridge communities, and rare or unusual plants, animals, or geologic formations. Other features that should be protected or enhanced for their high value include uninterrupted ridgelines and other scenic views, as well as significant historic and archeological sites. Because of their potential ecological and conservation value, large unbroken tracts of land should remain intact whenever practicable.

Renewable and non-renewable economic resources must be managed in an environmentally-sound manner, to protect the environment and to ensure long-term productivity of the land. Timber, prime farmland, and sites for renewable energy are among the economic resources on Authority land. A policy for reviewing renewable energy projects

was adopted in 2011 and can be found in Appendix D.

Socioeconomic Factors

The needs and interests of people and communities within the water district have been, and will continue to be, key considerations in land use planning. Identification of local and regional needs for recreational opportunities, economic development, and special land uses have helped to determine the most effective uses of Authority land. Existing community infrastructure, such as zoning, utilities, and transportation networks, plays a role in determining appropriate uses. Changes in land use have been planned within the context of existing uses, both on, and adjacent to, Authority property. These recommended uses are subject to existing governmental controls, such as zoning restrictions, permit procedures, and agency approvals.

Planning for Unforeseen Land Use Needs

When a use of Authority land is proposed that was not contemplated by this Plan, the Authority will carefully consider each such proposal for consistency with the goals and policies of this Plan, and, if deemed to be in the best interests of the Authority, approval for such a use will be sought from the RPB as a Land Use Plan amendment.

SYSTEM LAND USE PLANS



North Cheshire System



Prospect System



West River System

Mill River System Map 2

Birmingham System Map 2

North Branford System Map 2

Saltonstall System Map 2

North Branford System Map 1

Birmingham System Map 1

Mill River System Map 1

Maltby System

Saltonstall System Map 1

Land Use Plan Map Index

0 2.5 5 Miles

Regional Water Authority

NORTH BRANFORD SYSTEM

SUMMARY

The North Branford System, including more than 15,741 acres of Authority-owned land, includes Lake Gaillard, the Authority's largest reservoir. Landholdings in this system extend from North Branford to Haddam, encompassing some of the largest forested tracts in southern Connecticut.

These landholdings will continue to be managed for the primary purpose of protecting the public water supply. The massive ridge of Totoket Mountain, and other outstanding scenic resources of the area will be conserved along with significant natural areas and historic sites. More than 30 miles of hiking trails in this system have been opened for recreational use. The Authority will continue to administer these trails for public use under its schedule of user fees.

Renewable natural resources, such as forest and farmland, will be managed to maintain the productive capacity of the land and will be guided by the Forest Management and Agricultural Resource Plans of the Authority. Most of the terrain making up the North Branford System is critical to water supply protection or is too rugged to develop in an economical manner. Areas off the water supply watershed, and not needed for other present or future water system uses, may be sold for development, retained as buffer land to water supply watershed properties, sold for other regional/municipal uses, or may be exchanged for land needed for water supply facilities or source water protection.

INTRODUCTION

The North Branford System is the Authority's largest source of water supply. It includes the Authority's largest reservoir, Lake Gaillard, and diversions that bring water into the reservoir from streams and reservoirs to the north and east. Landholdings associated with this system have been divided into two divisions on separate maps: the Gaillard-Menunketuc division is on map #1 and the Genesee-Hammonasset division on map #2. The Gaillard-Menunketuc division includes Lake Gaillard, Lake Menunketuc, several small stream diversions, and the associated landholdings which lie in North Branford and Guilford. The Genesee-Hammonasset division forms the eastern portion of the North Branford System and is located in Guilford, Madison, Killingworth, Durham, and Haddam. The North Branford System lands are generally remote and accessible only by rough roads and trails. They have a wilderness character and, together with adjacent privately-owned open space, make up the largest tract of forest land in the region.

WATER SUPPLY

The North Branford System accounts for more than half of the Authority's entire water supply. Lake Gaillard is the center of this system. Lake Gaillard's natural watershed of 7.6 square miles is small in relation to the size of the reservoir, so provisions were made in the initial design of the system to bring water from other watersheds into the reservoir.

Diversions were constructed to divert water from several watersheds into Lake Gaillard. From the northwest, water from four small streams and the Farm River near Northford are diverted to the reservoir. Water also enters from the east from Lake Menunketuc and other small diversions in Guilford. Finally, water from Little Meadow

Brook and Iron Stream in Madison and Lake Hammonasset in Madison and Killingworth is diverted to Lake Gaillard.

In the Authority's Water Supply Plan, a 6.0 square mile watershed east of Lake Hammonasset, and referred to as the East Branch of the Hammonasset River, has been identified as a future diversion for 50 years and beyond. The diversion would be located immediately below Kroupa Pond and would extend westward to Lake Hammonasset. Two other potential diversions to Lake Gaillard are Cedar Swamp, a 1.0 square mile watershed within the Genesee Tract, and the 0.7+/- square mile Page Lot Brook/Iron Stream watershed. Only with DEEP approval may any water be diverted from these streams to existing reservoirs.

WATERSHED CHARACTERISTICS

The Authority owns approximately 55% of the total watershed area of the North Branford System. Approximately 625 acres in the North Branford system lie within the Farm River watershed that is diverted to Lake Saltonstall. Land off the watersheds of existing supplies include approximately 530 acres of the potential Cedar Swamp diversion watershed in Madison, four acres on the potential East Branch of the Hammonasset River diversion in Killingworth, and 996 acres on the potential Page Lot Brook/Iron Stream watershed downstream of the existing Iron Stream diversion. These have been identified as potential diversions and are listed in the Water Supply Plan filed with the DPH in 2009 and approved in 2014 as being additional supplies for the 50-year planning period and beyond. The North Branford System landholdings also include approximately 880 acres of Class III land that are not associated with any potential diversion.

In the early 1980s, the Authority acquired 38.7 acres in the North Branford System while land prices were relatively low. For the next 15 years, little land acquisition occurred. From 1997 to 2008, the Authority engaged in an active land acquisition program and acquired 49 parcels totaling 1,419 acres for watershed protection within the North Branford System. Land acquisition efforts slowed in 2008 and target only the most desirable properties based on a ranking system. Since 2008, 203 more acres were purchased. The tracts acquired since 1997 are in six different municipalities including North Branford (138 acres), Guilford (130 acres), Madison (399 acres), Killingworth (603 acres), Durham (249 acres), and Haddam (104 acres). Some of these parcels were bought with the help of state grants or land conservation organizations who hold conservation easements over them. In addition to fee simple interest, the Authority holds conservation easements over 218 acres in the North Branford System. About half of that was acquired from the Hammonasset Fishing Association. The rest was acquired in the late 1990s and early 2000s.

In 1998, the Authority made a financial contribution to assist The Nature Conservancy in protecting 237 acres of watershed land. This transaction was part of a larger conservation easement between the Hammonasset Fishing Association and The Nature Conservancy that protected 2,124 acres of water supply watershed land in Madison and Killingworth.

The Authority will continue to direct its attention towards the protection of its water supply by acquiring key tracts of land and easements for water supply source protection and by conducting watershed inspections, police patrols of Authority lands, and reviews of proposed land development applications before municipal land use boards.

Since 1996, the Authority has sold 185 acres in the North Branford System that were all Class III land. The majority of this acreage was sold to the Madison Land Conservation Trust and the Guilford Land Conservation Trust to be kept as open space. In 2002, five acres, including a house and barn, were sold to a private individual in Guilford. A 2.3-acre commercial property in Guilford was sold in 2009. That property was acquired in 2008 as part of the acquisition of the Birmingham Utilities Inc.

Gaillard-Menunketuc Division

Most of the watershed for the Gaillard-Menunketuc Division of the North Branford System lies on the slopes of Totoket Mountain. Soils on the ridge are generally shallow, and the area is interspersed with pocket swamps and ledge outcrops. Since the shallow soils have limited water storage capacity, streamflow responds rapidly to precipitation and peak flows occur within a relatively short time after a storm. Limited storage in the soil also means that streamflow practically ceases during the summer and early fall.

More than 90 percent of the Gaillard-Menunketuc watershed areas are forested, and population density is quite low. The most intensive development is on the watershed of the Northford Diversion of the Farm River. High-density residential development along the tributaries of the Northford diversion, frequent crossings of brooks by public roads, and agricultural uses within this watershed have had an adverse impact on water quality relative to other diversions in the North Branford system. In the 1990s, sanitary sewers were extended to serve a limited area of this watershed to address failing septic systems.

Genesee-Hammonasset Division

The watersheds of the Genesee-Hammonasset Division are characterized by shallow soils, ledge outcrops and numerous wetlands. Stream response to storms is more moderate than on Totoket Mountain because stream channel gradients are lower, and the numerous wetlands act as natural detention basins. Inflow from streams dwindles or ceases during dry periods except in the Hammonasset River, where shallow deposits of sand and gravel help to sustain a very modest flow during normal summer months. The numerous and extensive wetlands impart a characteristic natural staining of the water caused by leaves and partially decomposed humus discharging from these areas, especially after summer storms.

Most of the Genesee-Hammonasset watersheds are rugged and undeveloped with about 95 percent forested. However, numerous subdivisions with new roads have been developed on these watersheds. Non-point source pollution or runoff from roads, lawns, and farmland collectively, has the largest impact on water quality. Vestiges from a remediated former junkyard and illegal dumping on the Iron Stream watershed north of the Authority's property in Madison also pose risks that warrant monitoring by Authority source water protection staff.

LAND USE HISTORY

Development of the North Branford System was the most aggressive water supply expansion ever undertaken in this region of the state. In 1923, the New Haven Water Company began acquiring land for the construction of three reservoirs and numerous diversions. At the time of acquisition, much of the area presently inundated by Lake Gaillard was farmland. The less productive lands on Totoket Mountain were predominantly

woodlots, used as a source of fuelwood for domestic stoves and brickyards and for making charcoal for the regional brass industries. Prior to the 1920s, most of the land in the Genesee-Hammonasset area was woodland, periodically cut to support the local production of charcoal.

Construction of the reservoirs and diversions in the Gaillard-Menunketuc division took place between 1926 and 1930. Lake Hammonasset and diversions were constructed in the mid-1950s. Shoreline areas were planted with hemlock, white pine, and Norway spruce to prevent hardwood leaves from falling into the reservoir. In the 1920s, more than 800 acres of former pasture land was planted with red pine. Much of this pine was salvaged in the 1970s after it became infested by the red pine scale. Most of the salvaged sites have naturally regenerated with hardwood species, which will eventually mature into stands of marketable timber.

Timber management continues to be the primary activity in the North Branford System. In the Genesee-Hammonasset division, modest amounts of sand, gravel, and rock have been removed and used to construct and maintain Authority service roads and other needs.

Prior to 1983, the Hammonasset Fishing Association held exclusive hunting and fishing rights on Lake Hammonasset and 372 acres of surrounding Authority property in Madison and Killingworth. All of the Hammonasset Fishing Association hunting and fishing rights on this acreage were acquired by the Authority except for exclusive fishing rights on the Hammonasset River and Church Brook north of the reservoir. The Association conveyed to the Authority a conservation easement on more than three miles of the Hammonasset River tributary to Lake Hammonasset as part of an exchange agreement.

PLANNED LAND USES

WATER SUPPLY FACILITIES AND SOURCE PROTECTION

The North Branford System includes 126 acres that are designated for water supply facilities.

The diversion of water from three streams to Lake Gaillard has been proposed. First, a gravity diversion of the East Branch of the Hammonasset River in Killingworth to Lake Hammonasset would involve four acres of Authority land below Kroupa Pond and 1,000 linear feet of Authority property on the east side of Lake Hammonasset for a raw water conduit. A second potential diversion above Cedar Swamp in Madison may require impounding water in a 35-acre pond in order to have it flow by gravity into an existing diversion to Lake Gaillard. A third potential diversion would be at the confluence of Page Lot Brook and Iron Stream, a project requiring the development of a small impoundment, a pumping station, and a pipeline to carry pumped water to an existing diversion to Lake Gaillard. The construction of these diversions is not likely during the present 50-year planning period and will require the approval of DEEP and DPH.

In North Branford Map #1, a parcel of land east of Route 22 purchased in the 1970s, will be reserved for a possible future wellfield at parcel NB 11. At the present time, this property is coded as forestry and recreation.

A site northeast of Race Hill Road in Madison was used as a drying basin and disposal site for water treatment plant alum sludge as authorized by DEEP and the Town of Madison starting in 1975. That activity ceased by the time the town's permit expired in May 1997. The site is relatively flat Class III land, away from watercourses and 800 feet from the nearest residential development. The DEEP approved a closure plan for the site in July 1998 that included groundwater monitoring requirements. After several years of sampling demonstrating that there were no water quality issues of concern, the DEEP approved an Authority request to discontinue groundwater monitoring. A quarterly visual inspection is still required.

PRESERVATION

Scenic Resources

Like other traprock ridges in south central Connecticut, Totoket Mountain, from the west shore of Lake Gaillard to Bluff Head in Guilford, is a scenic resource that should be protected. Many locations along Route 22 and Route 17 in Northford offer impressive views of the ridge. From Great Hill Road and West Street in Guilford, the forested mountainside forms a picturesque backdrop for an expanse of well-maintained fields, especially during the fall. Proposals to construct towers or other structures on Authority-owned portions of the ridge will be critically evaluated for visual impact and weighed against public need and expected benefits. Upper slopes and ridgetops will be protected from forest clear-cutting, except where it is necessary to salvage timber severely damaged by wind, ice, pests, or fire.

Several other scenic areas in the Gaillard-Menunketuc division will also be protected. These include: East and West Sugar Loaf Hills in Guilford, a secluded scenic gorge on Gulph Brook known as "icicle gorge" for its thick columns of ice in the winter, and a scenic waterfall in Guilford that cascades down the slope of Totoket Mountain during the fall, winter, and spring.

Historic Sites

The North Branford System includes several historic sites. These areas will be protected by carefully controlling uses that might destroy features of historic significance.

The old Genesee settlement land in western Madison was named after a group of people who moved westward from Killingworth and Saybrook in the 1790s to seek new homes and farms in the Genesee Valley of New York State. In route they suffered a serious misfortune and decided to settle instead along Goat Lot Road and Cooper Lot Road, calling the area "Little Genesee". The land was abandoned between 1850 and 1875, but remnants of their farms and homes can still be found. Not far from this site to the east of Iron Stream, is a peat bog mine where peat was mined for smelting iron in the crude field furnaces of the colonial era.

There are several sites of historical interest in the Gaillard-Menunketuc division. A series of mills operated to produce lumber, cider, and possibly milled grain east of Lake Gaillard on Roses Brook. An ice house that was used to store cut ice from the mill ponds on Roses Brook sits on the eastern shore of Lake Gaillard. Finally, a former sandstone quarry used by local families can be found at the northeast tip of the island in Lake Gaillard.

Natural Areas

Sandstone cliffs and caves east of Lake Menunketuc are of a size and extent unusual for this region. They will be protected as a significant geologic feature.

Two stands of Atlantic white cedar in Madison are significant natural features that will also be protected. One on the northwest side of Nathan's Pond is particularly outstanding because of its density. A less dense but larger stand in Cedar Swamp north of Route 80 will be protected to the extent compatible with the potential development of the Cedar Swamp diversion.

A small watershed area of hardwood forest on the west side of Route 79 has been used since 1972 by classes at the Yale School of Forestry and Environmental Studies to study watershed ecology. This miniature watershed will be preserved for future study and cutting of timber or other activities that would disturb the natural ecosystem will be undertaken only in connection with scientific projects.

RECREATION AND EDUCATION

Recreation activities permitted in the North Branford System are hiking, bicycling, horse-back riding, and stream fishing.

Trail Use

There are four trail systems in the North Branford System. These trail networks will continue to be maintained and available for hiking, cross-country skiing, and other passive recreation activities. Recreation activities are limited by the conditions of permits issued pursuant to the regulations of the DPH.

- The Big Gulph Recreation Area has been open since 1984. It is comprised of a system of hiking trails on the north slope of Totoket Mountain, accessible from a town-owned recreation parking area in Northford.
- The Genesee Tract has also been open since 1984. The trail system is accessible from a recreation parking area on Authority land on the west side of Route 79 in Madison. Public horseback riding is permitted on designated Authority trails, roads, and old town roads at the Genesee Tract. In 1998, designated service roads and abandoned town roads on the Genesee Tract in Madison and Guilford were opened for bicycling under specified conditions with the approval of the DPH.
- In 1990, a network of trails was opened around Lake Hammonasset with a parking area in Killingworth.
- Another network of trails was opened in 1990 at the Sugar Loaf Hills in Guilford with a parking area on West Street.

The Mattabeset Trail, one of the Blue-blazed Trails maintained by the Connecticut Forest and Park Association (CFPA), crosses Authority property at Bluff Head in Guilford. Authority property in Durham could serve as a site for another section of the Mattabeset Trail that currently follows public roads. A short trail, maintained by the Town of Madison, was allowed on property owned by the Authority at Coan Pond in 1997. This was to facilitate a loop trail that circled the pond from town open space property. In 2008, the Authority cooperated with the CFPA to establish a portion of the New England National Scenic Trail on the western edge of its Genesee tract. This trail connects the Mattabeset

Trail to other trails to the south.

Fishing

Some stream fishing is allowed by persons who have purchased a Regional Water Authority recreation permit. Page Lot Brook and Iron Stream in Madison off Race Hill Road are suitable for fishing during the first few weeks of the fishing season. Portions of the Farm River and a tributary, Beach Brook, both in Northford, are open for stream fishing. Finally, a portion of the Hammonasset River downstream of Lake Hammonasset below Route 80 and a reach of the stream referred to as Church Brook by Route 148 are open in Killingworth. Stream fishing may continue to be permitted at these locations in both divisions of the system.

NATURAL RESOURCES

Timber

Timber will continue to be harvested in the North Branford System. Forest land will benefit from thinnings, improvement cuttings, regeneration harvests, and clearcuts over the next decade. Hemlock, once prevalent in some stands of timber on Totoket Mountain, was weakened by gypsy moth defoliation in the early 1980s and, more recently, decimated by the hemlock woolly adelgid. Timber harvesting will be planned to protect areas immediately adjacent to the secluded scenic gorge on Gulph Brook, the scenic waterfall in Guilford on the slope of Totoket Mountain, and in areas immediately adjacent to the sandstone cliffs and caves east of Lake Menunketuc. Some trees may be cut to improve the view of these natural areas. Timber harvesting will be limited within stands of Atlantic White Cedar in Madison to promote the growth and regeneration of this species. Ash stands will be investigated for salvage harvest feasibility as a response to emerald ash borer infestation.

When feasible, nearby firewood permit holders will be permitted to harvest the tops of hardwood sawtimber trees for fuelwood. Elsewhere, the tops of harvested trees and other logging slash will be kept low immediately adjacent to public roads to improve the appearance of a timber sale area soon after the completion of logging. Farther away from the road, logging slash and tops within timber sales will be left uncut or lopped to a height designated by the Forester. This will act as a natural barrier to herbaceous animals in an effort to aid in the regeneration of higher value species. Clearcutting is planned for a section of the Genesee area with plans to plant hybrid chestnut species in an attempt to bring back this tree as a part of our forests.

Wildlife

The large expanse of protected open space in the North Branford System supports an abundant wildlife population. Waterfowl are common in the lakes, streams, and ponds. The Authority's forests are heavily populated with deer and other forest mammals. Coyotes, wild turkeys, and bobcats have been sighted, and bald eagles often range between Lake Saltonstall and Lake Gaillard during winter. In 2008, bald eagles were first observed nesting at Lake Gaillard and have been successfully raising broods there since.

In 2013, a cicada species, *Magicalcanda septendecula*, was discovered for the first time in Connecticut along the western side of Lake Gaillard. This discovery represents the northernmost record of this species. Decline of white ash and butternut are considered to be one of the biggest threats to this species.

Timber harvesting will be planned to protect wildlife habitat, especially for birds and waterfowl during nesting periods. The scarlet tanager, American redstart, ovenbird, hooded warbler, and other species requiring extensive areas of interior habitat may be protected by organizing timber harvests so that large tracts will remain relatively undisturbed for longer periods of time. Large tracts suitable for interior species can be found on Totoket Mountain and the Genesee tract. Due to maturing forests on Authority property, timber harvesting will also be used to expand the areas of currently diminishing early successional habitat which is utilized by a host of species.

The population of deer has substantially increased in the last few decades, especially in the Gaillard-Menunketuc division. In 2009, 770 acres to the south and east of Lake Gaillard were opened for a controlled archery hunt. The next year, the area was expanded to about 3,300 acres around the entire lake. Anecdotal evidence indicates that the deer population has declined. This is due to the deer hunt and persistent snow accumulation, such as in January 2011. Any impact on regeneration of the forest won't be seen for a few more years. At that time, Authority staff will take measurements at plots that were established inside and outside of the hunt area in 2009.

Agriculture

Approximately 68 acres are presently used for agriculture, such as for growing hay. The remaining fields not in production will be kept open for possible future use.

NON-WATER SYSTEM LAND

Two former rental houses within the North Branford system lands may be considered for disposition. One is at 1115 Great Hill Road in Guilford and the other is at 752 Summer Hill Road in Madison. The Authority will attempt to sell these, with approved building lots after DPH review, per the amendment to its enabling legislation in 2013. Both houses are situated on Class II land.

The Authority leases out less than 0.6 acres for a cell phone tower on Durham Road in Madison. The tower was pre-existing on land acquired from the Ruge family in 2011.

STATUS OF LAND

WATER SYSTEM LAND

The North Branford System lands include 14,919 acres that have been designated Water System Land. This acreage is land the Authority anticipates continuing to hold and manage. Water system lands include land for water supply facilities, all of the land on watersheds tributary to Lake Gaillard that provide runoff either directly to this reservoir or via diversions, land on watersheds which may be diverted in the future to Lake Gaillard, and some Class III land that is a buffer between public roads and reservoirs.

NON-WATER SYSTEM LAND

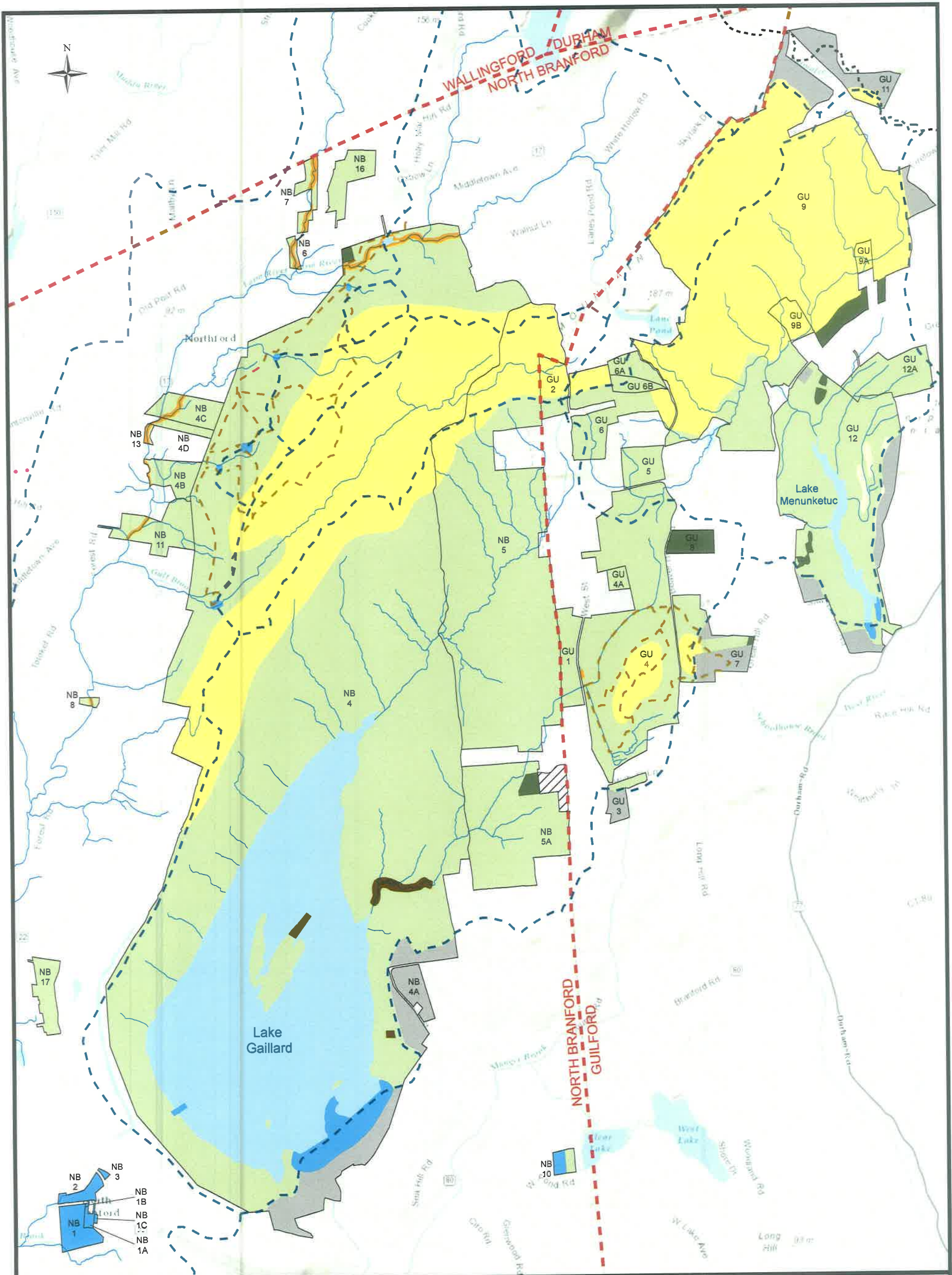
Approximately 823 acres of the North Branford System are designated as Class III and are not used or useful for water supply, now or in the future. Most of this acreage is forested land that provides scenic open space for the communities in which this land is located.

A commitment to the conservation of land for the benefit of the region anticipates the Authority working with the towns where the Class III acreage is located and land conservation organizations that have interests in the area. This Plan commits the Authority to work toward the goal of conserving this land. If this policy is to be revised, doing so will require a Land Use Plan Amendment subject to the approval of the RPB.

The 4.6 acres associated with the two former rental houses may be slated for disposition. Additionally, 60 acres in North Branford at the intersection of Pomps Lane and Beech Street were approved for disposition in 2011. Of the remaining Class III land in the Non-Water System Land category, the Authority will continue to evaluate all options and consider what is in the best interest of the organization.

**Table 4
North Branford System Land Use Summary**

NORTH BRANFORD SYSTEM LAND USE SUMMARY				
LAND USE	Land Unit Number	Description	Acres	Status
WATER SUPPLY AND FACILITIES USES				
Reservoir Land	GU 12, KI 4, MA 6, MA 7, MA 9, NB 4	Lake Gaillard, Lake Menunketuc, Lake Hammonasset, Dudley Pond, Nathan's Pond, Farm River Northford diversion, other small ponds	1,452.4	Existing
Facilities	Numerous locations		126.2	Existing
PRESERVATION USES				
Scenic areas	Numerous locations	Totoket Mt., Sugar Loaf Hills, Big Gulph gorge; Bluff Head waterfall Old mill dams, Sandstone cliffs and caves, Ice House, Sandstone quarry, Colonial-era iron works bog, Genesee settlement area	2,273.2	Existing
Historic areas	MA 2, NB 4		118.8	Existing
Natural areas	GU 12, MA 2, MA 6	Sandstone cliffs and caves, Nathan's Pond cedar swamp, Cedar Swamp, Watershed research areas	180.3	Existing
RECREATION AND EDUCATION USES				
Visitor parking	GU 4, KI 4, MA 2	Parking lots for Sugar Loaf, Genesee, and Hammonasset areas	2.0	Existing
Stream Fishing	Numerous locations	stretches of the Farm River, Page Lot Brook, Iron Stream, Church Brook	81.8	Existing
Blue-blazed Trails	Numerous locations	Mattabeset Trail and New England National Scenic Trail Trail	4.2 mi	Existing
Hiking, biking, horseback riding and cross-country ski trails	Numerous locations	Big Gulph, Sugar Loaf, Genesee, and Lake Hammonasset recreation areas	36.1 mi	Existing
NATURAL RESOURCE USES				
Forest Management	Numerous locations		10,614.3	Existing
Agriculture	GU 7, GU 8, GU 9, GU 12, HD 1, NB 4	Fields	67.7	Existing
Utility ROW	HD 1	Gas pipeline	1.4	Existing
NON-WATER SYSTEM USES				
Non-water System Land	Numerous locations	Class III acreage	818.1	Proposed disposition
Great Hill Rd., former rental house	GU 12	1115 Great Hill Rd.	3.6	Proposed disposition
Summer Hill Rd., former rental house	MA 9	752 Summer Hill Rd.	1.0	Proposed disposition
Cell phone tower	MA 2D	1749 Durham Rd.	0.6	Existing
Total			15,741.4	



Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way

Recreation and Education Use

- Recreation
- Recreation Trail

Preservation

- Natural
- Scenic
- Historic

Non Water System Land

- Non-water System Land

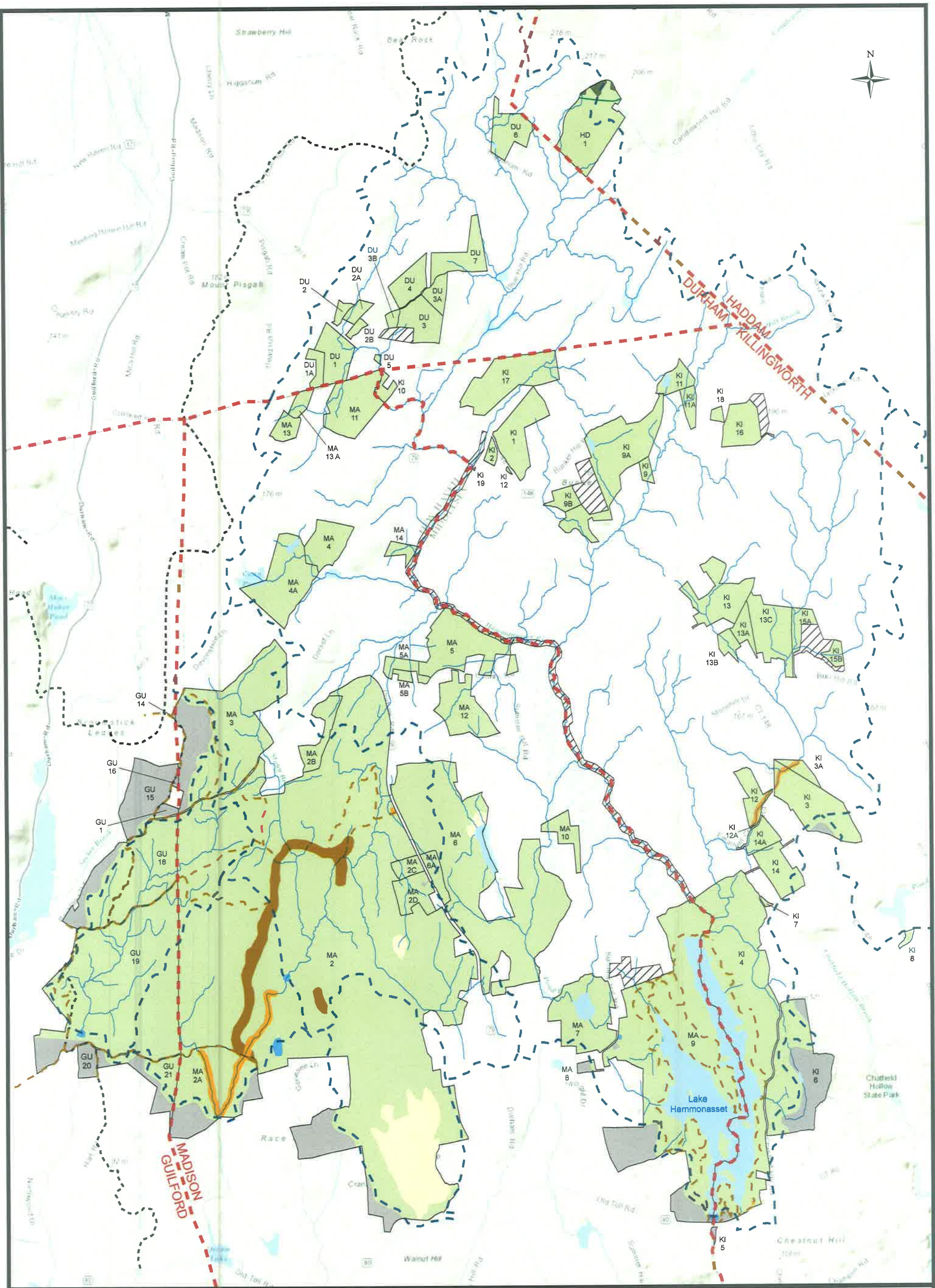
NB 1 Land Unit Number

- Town Boundary
- Blue Blaze Trail
- Conservation Easement

**Land Use Plan
North Branford System
Map 1**

0 1,500 3,000 Feet

1:32,000



Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way

Recreation and Education Use

- Recreation
- Recreation Trail

Preservation

- Scenic
- Natural
- Historic

Non Water System Land

- Non-water System Land

MA 1 Land Unit Number

- Town Boundary
- Blue Blaze Trail
- Conservation Easement

**Land Use Plan
North Branford System
Map 2**



1:38,000

SALTONSTALL SYSTEM

SUMMARY

The Saltonstall System, of which the Authority owns approximately 2,163 acres, mostly in East Haven and Branford, is centrally located and readily accessible by public transportation from urban areas. Lake Saltonstall is a long, narrow reservoir winding between wooded ridges.

Protection of the public water supply will continue to be the highest priority in managing these landholdings. This objective is compatible with preserving the scenic qualities of Saltonstall Ridge and the unusually rich diversity of wildlife supported by the reservoir and its surrounding land. The accessibility of the Authority's Saltonstall lands makes it a very valuable recreational resource. More than nine miles of hiking trails are open and about 75% of the surface area of the reservoir is open for public fishing under a carefully managed program approved by the DPH. There is a wheelchair-accessible fishing dock and nearly 3.5 miles of shoreline, primarily on the Branford shore, is open for sport fishing. Bicycling is also allowed on the entire trail system.

Timber resources will be managed to maintain the productivity of the land. Areas of prime farmland that were recently used may be kept for agricultural use.

INTRODUCTION

Centrally located within the Regional Water District, the Saltonstall System straddles the East Haven/Branford town line. Of the 2,163 acres of land associated with this system, 862 lie in East Haven, primarily on Saltonstall Ridge. About 92 acres are in North Branford, 38 acres are in North Haven, and the remaining 1,171 acres are in Branford. Confined between two ridges, Lake Saltonstall stretches almost two miles north of the railroad causeway and averages less than one-half mile wide. South of the railroad causeway is a smaller body of water known as Furnace Pond.

Except for the southern end of Lake Saltonstall and Saltonstall Ridge, most of the reservoir and surrounding forest are remote from public view. In many ways, the land has a wilderness character despite its proximity to populated areas. Only three miles from downtown New Haven, Saltonstall can be easily reached by public transportation along Route 1. As a large tract of open space well-connected to urban centers, this property is one of the most popular of Authority landholdings opened for recreational use.

WATER SUPPLY

Although its maximum depth is approximately 108 feet, Lake Saltonstall reservoir becomes shallower toward the southern end and the eastern shoreline and has a mean depth of approximately 41 feet.

Lake Saltonstall's natural watershed, only 2.6 square miles, is small for the size of the reservoir. Furnace Pond's watershed is 1.4 square miles. Under certain conditions, water from Furnace Pond can flow north into Lake Saltonstall. To increase the amount of water available to the reservoir, a diversion was constructed around 1911 on the Farm River in East Haven, which added 11.1 square miles of watershed to the reservoir.

A small diversion was created in 1905 when the Hosley Brook cutoff brought 1.2 square miles of watershed into the reservoir above the railroad causeway. An artificial channel was cut through the upper portion of a peat swamp and a low traprock ridge to discharge near the midpoint of the eastern shore of the reservoir. The total watershed area for Lake Saltonstall is 16.0 square miles.

WATERSHED CHARACTERISTICS

Water quality in Lake Saltonstall is directly related to watershed activities. Widespread agriculture in the Farm River watershed has been a major source of nutrient input to the reservoir via the Farm River diversion since the early 1900s. Increased development has accelerated the process of nutrient enrichment so that the reservoir is approaching a eutrophic condition.

Except for clearings beneath power lines, the Saltonstall landholdings are primarily forested. There are smaller rights-of-way for sanitary sewers on properties in North Branford and North Haven. The right-of-way in North Branford is periodically mowed by the Town. The right-of-way in North Haven is not cleared.

Since 1996, the Authority has acquired over 186 acres in the Saltonstall area for watershed protection. This includes several parcels in East Haven and North Branford. The Authority also acquired conservation easements over 101 acres in Branford and North Branford in the Farm River watershed. Additional acres were acquired for watershed protection in North Branford to protect the Farm River. Due to their proximity to Lake Gaillard, they are listed and shown within the Lake Gaillard/North Branford System section of this Plan.

LAND USE HISTORY

Maps and other information from the early 1900s indicate that Lake Saltonstall was once a popular recreation area, accessible by the railroad, a trolley line, and two steamboats that plied the reservoir from its south end to a picnic grove and pavilion at the north end. Although the reservoir was first used for water supply in 1882, the New Haven Water Company did not begin aggressive land acquisition until 1895. By 1920, it had purchased 1,785 acres in the towns of East Haven and Branford.

Beginning in 1912, the New Haven Water Company embarked on a forest management program. Old pastures and fields were planted with white pine, red pine, and spruce. Management objectives were to protect the source of supply for public drinking water while at the same time producing crops of timber that would return some income to the Water Company to offset a portion of the cost of holding the land. Timber management has continued to be the primary activity on the property.

PLANNED LAND USES

WATER SUPPLY FACILITIES AND SOURCE PROTECTION

The Saltonstall System includes 43 acres that are designated for water supply facilities. This includes current operational facilities as well as some that are proposed for the future. The Saltonstall System contains only surface water supplies: Lake Saltonstall and Furnace Pond. Two diversions bring water to Lake Saltonstall. One is permanently open

while the other can be opened or closed depending on needs and conditions.

The steep slopes of Saltonstall Ridge above the reservoir may be prone to landslides. These areas will be protected from logging and any other disturbance that might disrupt the stability of the soil.

PRESERVATION

Scenic Resources

The most important scenic resource at Saltonstall is the ridge with its natural smooth line that strikes the southeastern horizon. The Saltonstall Ridge is most prominently visible from Route 80 and Route 110 (North High Street) in East Haven. Any proposal to construct towers or buildings, especially in the area between the two high-tension line crossings of the ridge, will be critically evaluated to assess visual impact against public need and expected benefits. Other areas where scenic views will be protected are the western side of the ridge near I-95 and in the vicinity of the more heavily developed areas below the Farm River diversion. The upper slopes and crest of the ridge will be protected against clearcutting of forest growth unless it is necessary to regenerate the forest following severe damage by natural forces.

The area most frequently viewed from public roads is the shoreline of Lake Saltonstall and Furnace Pond as seen from I-95 and Route 1. Management of these resources will continue to protect forested shorelines from heavy clearing unless unusually severe damage has been caused by natural forces.

Historic Sites

Furnace Pond is named after the first iron works constructed in the New Haven Colony circa 1652. The original dam that created the pond was constructed to provide power to operate the iron works. No visible evidence of the iron works remains today. An archeological review has determined that this site offers virtually no potential for obtaining significant data or for creating a public exhibit even if very sophisticated techniques were employed to penetrate the modern fill. The location of this industry of the early colonial era might be noted with a plaque or historical marker.

The mansion of Governor Saltonstall was a large frame colonial dwelling built circa 1707. It and its outbuildings were situated on the northwestern side of Hosley Avenue at a site which today is just south of the railroad tracks. The house burned to the ground in November 1909, and its foundation has been obscured by subsequent use of the land. Although no special preservation action is recommended for this site, a plaque or other notice might be erected to alert passers-by that this once was the homesite of one of colonial Connecticut's most respected public servants.

Near the southern end of Saltonstall Ridge is a surge tower that was constructed in the early 1900s. The existing tower replaced the original which was constructed when Lake Saltonstall was developed as a source of supply in 1882. The tank received water pumped from the old Saltonstall pumping station to eliminate or equalize surges in water pressure before being discharged into a transmission main that connected with an open storage basin in Fair Haven, also constructed in 1882.

Natural Areas

Because of the large size of Lake Saltonstall and the diversity of the surrounding habitat, the area has been identified by experts as one of the richest wildlife areas in Connecticut.

The diverse vegetative cover in the surrounding watershed supports a large variety of wildlife. Numerous species of birds have been recorded. Important wildlife species that have been identified include bald eagles. Habitat important for wildlife species will be protected and maintained.

The property also includes some unusual plants. These plants and their habitats will be protected by detailed site evaluation before any development is proposed by the Authority.

RECREATION AND EDUCATION

Since 1983 the Authority has opened more than nine miles of trails for hiking, cross-country skiing, mountain biking, bird watching, photography, and general scenic enjoyment at Lake Saltonstall. The Authority has also opened approximately 3.5 miles of shoreline, mostly on the Branford side, for fishing. A wheel-chair accessible fishing dock is available to provide fishing opportunities for people with disabilities.

Three parking areas to control visitor access are in use off Hosley Avenue. One is approximately 1,600 feet west of the intersection with Brushy Plains Road. A second is about two miles north of the intersection with Route 1. A third was developed nearer the fish dock area. The latter two are used primarily by people who enjoy fishing. Sanitary facilities are provided by the Authority.

Trail Use

The Authority will continue to maintain the trails currently opened for hiking, jogging, mountain biking, and scenic enjoyment and may expand the trail system in limited areas to create shorter loops.

Fishing

Lake Saltonstall was opened for public fishing from boats and from designated shoreline areas in a carefully controlled trial program in 1983. Launching of private boats was discontinued in 1991 due to concerns regarding the potential for zebra mussels and other invasive species, with boating access limited to the Authority's rental boats. Fishing will continue to be allowed by the Authority as authorized by DPH approval. A dock facility is located near the mouth of Hosley Brook, midway between the upper and lower ends of Lake Saltonstall. The number of persons fishing at any one time is limited by the number of permits issued by the Authority in accordance with DPH rules. User fees and boat rentals are collected to cover a portion of the carrying charges of capital investments as well as the costs of administering, controlling, and complying with the permit requirements of the DPH.

The Authority will continue to closely monitor the benefits and costs associated with its program for public fishing. To control its costs, the Authority limits the number of weekdays it staffs and maintains the boat livery. The Authority will continue to allow shorefishing during most of the fishing season consistent with its recreation policies and

subject to the continued approval of the DPH.

Stream fishing is also allowed in accordance with DEEP regulations on certain land units bisected by the Farm River and the Muddy River. These tracts are in East Haven, North Haven, and North Branford.

NATURAL RESOURCES

Timber

Planting, thinning, and harvesting of sawtimber and cordwood have continued without interruption since 1912, and ecologically sound forest management of these lands will continue. As existing plantations of white pine and spruce are harvested, indigenous hardwood species will be encouraged on the sites most suited for hardwood growth. On poorer sites, white pine and larch may be encouraged to grow in mixture with indigenous oak and hickory.

Wildlife

A substantial area beneath the high-tension power line is maintained as low brushy growth. The mixture of habitats created by this partial clearing improves the environment for wildlife and will be protected and maintained. The reservoir also provides important wildlife habitat. Shallows will be protected to provide food and cover for dabbling ducks as well as for fish spawning and amphibian habitat to the extent such management will be consistent with use of the reservoir as a source of public water supply. In 2014, the Authority constructed a fishway on the Farm River diversion dam to aid the spawning migration of river herring and other species. The fishway is operated in accordance with a Cooperative Agreement between the Authority and DEEP.

Agriculture

Open fields may continue to be used for raising hay and other forage crops. Many of these fields are currently rented to local farmers for hay.

NON-WATER SYSTEM LAND

The Authority has identified 175 acres that are off the watershed (Class III) which could be sold as they hold no purpose for the public water supply. These acres were identified in the 2007 program *The Land We Need for the Water We Use*. Most of the acreage is located on the western side of the Saltonstall Ridge in East Haven. Two other smaller tracts are in Branford off Brushy Plains Road. Those parcels drain into Lidyhites Pond.

The Authority has license agreements with various entities to place communications equipment on land unit NO 1. The North Haven Police and Fire Department have radio equipment on that parcel. Additionally, the Authority has a license agreement with T-Mobile for the placement of cell phone antennas there.

STATUS OF LAND

WATER SYSTEM LAND

Most of the Authority's Saltonstall landholdings have been designated as Water System Land and will remain in this category. The Muddy River tract (NO 10) contains 29 acres in the Clintonville section of North Haven and was purchased for the development of a future well supply in 1972 by the New Haven Water Company. The Muddy River winds through the eastern portion of the property. A sanitary trunkline sewer and easement passes through the eastern portion of the property.

A deed in the chain of title contains the following restrictions and conditions: (1) the property is to be retained in its natural state or used for water supply purposes and no drilling for oil or other minerals or removal of gravel is to be undertaken; (2) structures are to be limited to one story in height, all utilities are to be underground, and the site is to be landscaped.

This property will not be committed to uses that would be incompatible with the development of a future groundwater supply. An open field, presently rented for hay, will continue in this use. Fishing in accordance with DEEP regulations is permitted in the Muddy River.

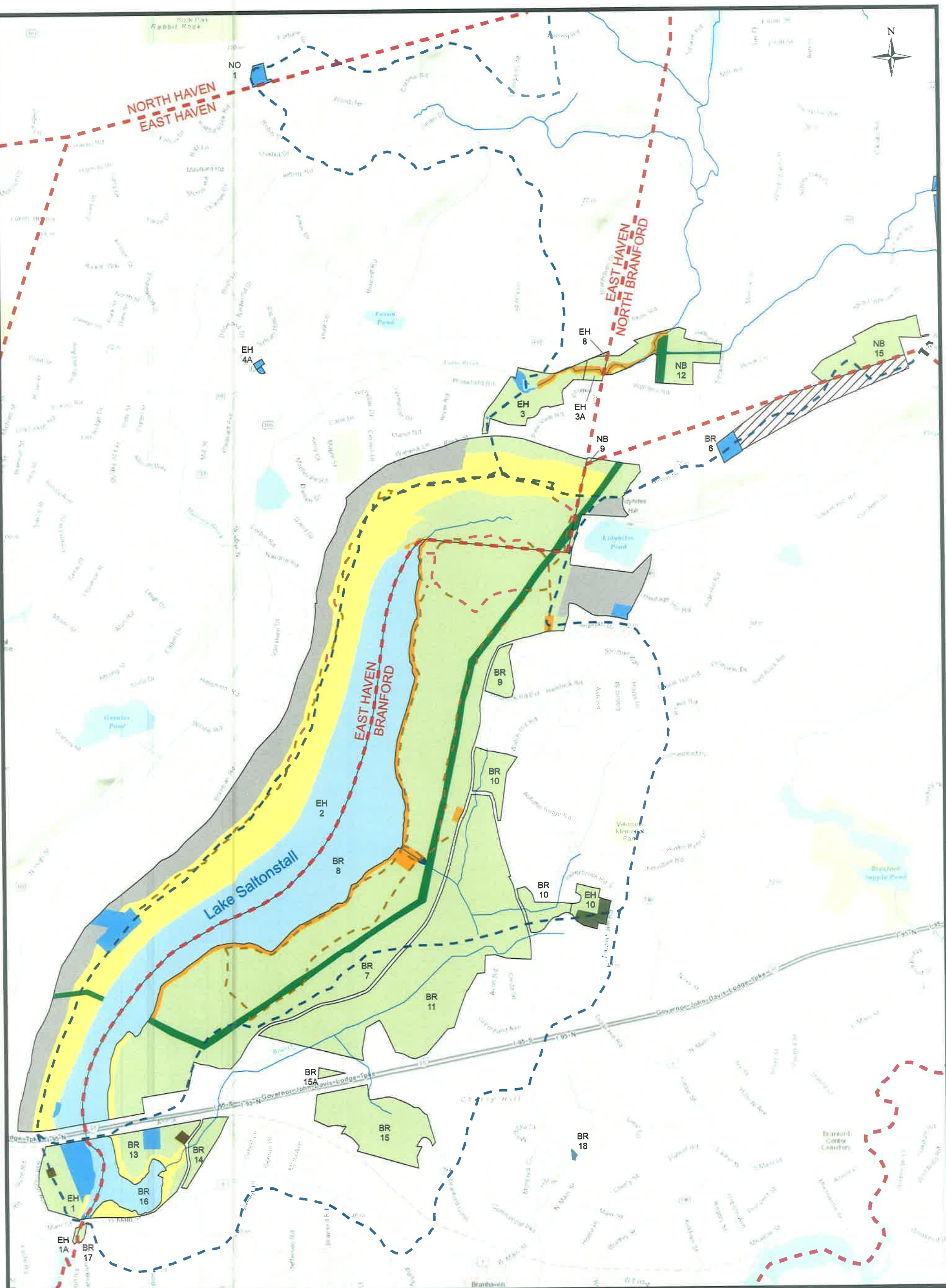
NON-WATER SYSTEM LAND

The Class III land slated for disposition in *The Land We Need for the Water We Use* program would fall into the Non-Water System Land category. Most of the Class III land in East Haven is steeply sloped with shallow soils unfit for development. The Class III properties in Branford are more suitable to development. However, the Town of Branford and Branford Land Trust have expressed interest in preserving the tracts within their town.

One small rectangular parcel (NO 3) is accessible from North Hill Road by a right-of-way. This parcel, containing approximately 0.3 acres, was purchased for a possible water storage tank in the 1920s. At the time the New Haven Water Company acquired this property, it also acquired a right-of-way extending from North Hill Road (north of the parcel), together with a right to lay and maintain one or more water mains. This landlocked lot is too small to build on under existing zoning regulations and may be conveyed to abutting landowners.

**Table 5
Saltonstall System Land Use Summary**

SALTONSTALL LAND USE SUMMARY			
Land Use	Land Unit Number	Description	Acres Status
WATER SUPPLY AND FACILITIES USES			
Reservoir Land	EH 1, EH 2, EH 3, BR 8, BR 16	Lake Saltonstall, Furnace Pond, Farm River	406.3 Existing
Facilities	Numerous locations		42.6 Existing
Water Quality structure	BR 7	Storm water basin at Hosley Brook	0.4 Existing
PRESERVATION USES			
Scenic areas	BR 7, BR 13, EH 1, EH 2	Saltonstall Ridge; Furnace Pond shore line	307.3 Existing
Historic areas	BR 13, EH 1	Gov. Saltonstall mansion site, old water tower	1.5 Existing
RECREATION AND EDUCATION USES			
Visitor parking and boat rental area	BR 7	Parking lots (3), fish shack, and boat ramp	6.3 Existing
Shore Fishing	BR 7, EH 2	Lake Saltonstall	23.5 Existing
Stream Fishing	EH 3, EH 3A, NB 12, NO 10	Farm River	10.4 Existing
Hiking, biking and cross-country ski trails	BR 7, EH 2	Trails over woods roads throughout property	9.2 mi. Existing
NATURAL RESOURCE USES			
Forest Management	Numerous locations		1,067.4 Existing
Utility ROW	BR 7, EH 2, NB 12	Electric power lines and sewer line	53.8 Existing
Agriculture	BR 19, EH 9, EH 10, EH 11, EH 13, NB 14, NB 14A, NO 10	Fields	69.2 Existing
NON-WATER SYSTEM USES			
Non-water System Land	BR 7, EH 2	Class III acreage west of ridge and by Brushy Plains Rd.	174.6
		Total	2,163.3



Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way
- Recreation and Education Use**
- Recreation
- Recreation Trail

Preservation

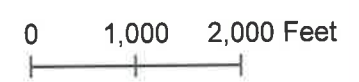
- Natural
- Scenic
- Historic

Non Water System Land

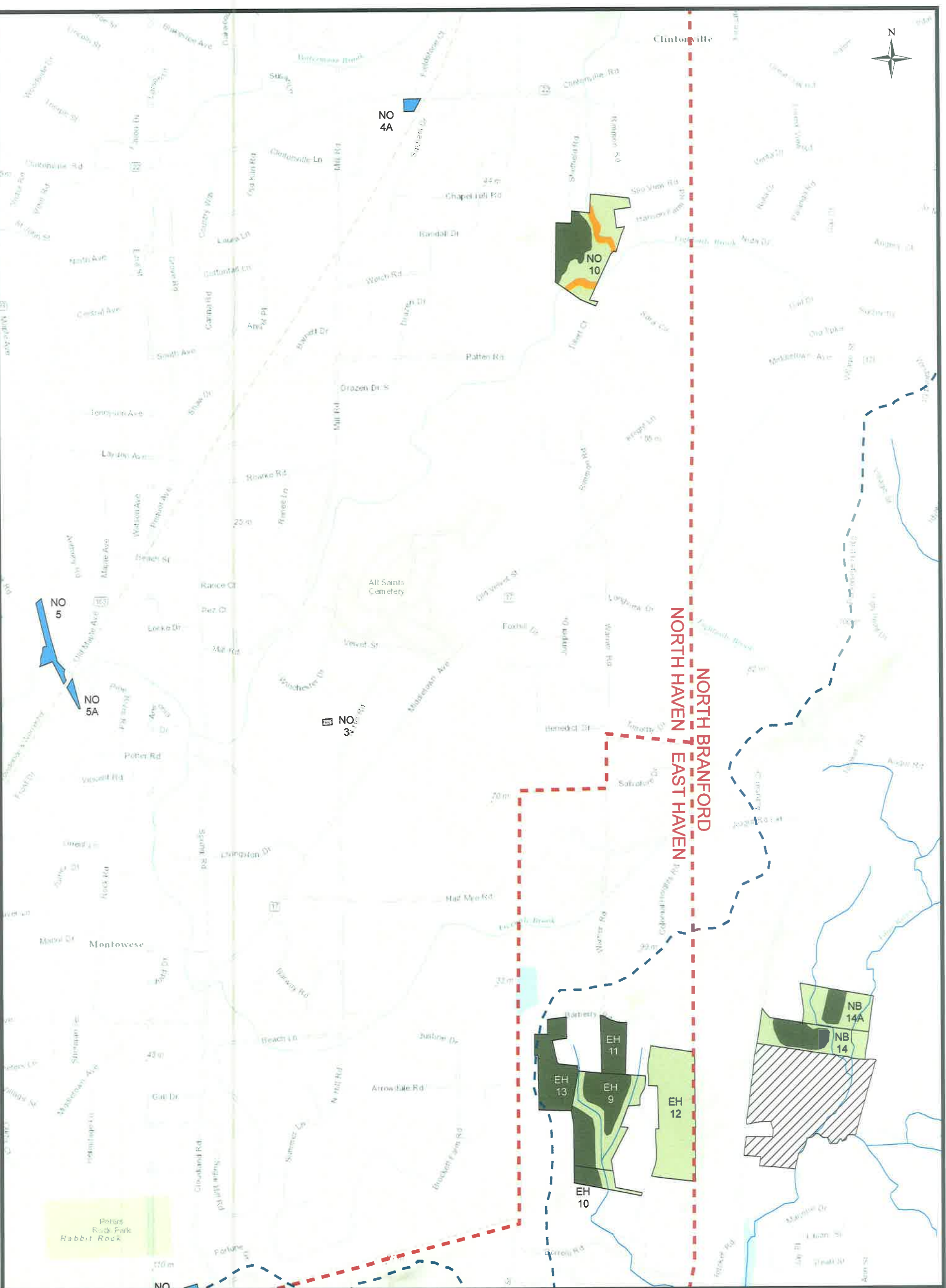
- Non-water System Land

- Land Unit Number
- Town Boundary
- Blue Blaze Trail
- Conservation Easement

**Land Use Plan
Saltonstall System
Map 1**



1:22,000



Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way
- Recreation
- Recreation Trail

Preservation

- Natural
- Scenic
- Historic

Non Water System Land

- Non-water System Land

NO 10 Land Unit Number

- Town Boundary
- Blue Blaze Trail
- Conservation Easement

**Land Use Plan
Saltonstall System
Map 2**

0 1,000 2,000 Feet

1:18,000

MILL RIVER SYSTEM

SUMMARY

The Authority's Mill River landholdings include 807 acres that lie mostly along the Mill River from Cheshire southward to the Hamden-New Haven town line. These lands, mostly acquired in the early 20th century, are utilized for both surface and groundwater supplies. Lake Whitney, a narrow, winding reservoir that floods 2.5 miles of the river, is also an important scenic resource along major urban thoroughfares.

The primary management consideration for the Mill River System will continue to be the protection of both surface water supplies and the extensive groundwater aquifer underneath the river. The system includes several historically significant sites and structures that will be preserved, along with its important scenic and natural resources. Stream fishing will continue to be permitted at several locations along the river, including the shoreline of Clark's Pond. All of the Authority-owned land along the Mill River is Class I or II, and any change of use will require the approval of the DPH under laws currently in effect.

Forests along the Mill River corridor will be managed to maintain a scenic appearance and to effectively buffer conflicting land uses such as commercial businesses and residential neighborhoods. Timber will continue to be harvested as it matures or succumbs to natural causes.

INTRODUCTION

The Mill River property is among the most visible of all the Authority landholdings. Meandering to the east and west of Whitney Avenue, the river and associated property form a corridor of open space through the highly urbanized center of Hamden. Lake Whitney, which floods 2.5 miles of river, acts more like a lazy river than a lake. Of the 807 acres of landholdings in the system, 762 are in Hamden, 16 are in North Haven, and 29 are in Cheshire. All of the Authority's Mill River landholdings have been designated as Water System Land although the two parcels with former rental houses are now classified as Non-Water System Land and slated for disposition.

WATER SUPPLY

The Mill River System is unique among the Authority's water supply systems in its combined use of surface water and groundwater. Prior to its closing in August 1991, water from Lake Whitney was treated at a slow sand filtration plant on Armory Street. Constructed in the early 1900s, this water treatment plant was the oldest in the Authority's system. Lake Whitney was returned as a source of supply with the completion of a new water treatment plant in April 2005. There are four well fields in the Mill River aquifer located in southern Cheshire and northern Hamden. The aquifer is an extensive glacial deposit of sand and gravel that lies in the Mill River valley.

WATERSHED CHARACTERISTICS

With 36.4 square miles of drainage area, the Mill River watershed is the largest watershed in the Authority's water supply system. The Authority owns only about 7 percent of the Mill River watershed. Some of the Authority's landholdings within the Mill River

watershed are not shown in this section, but instead appear in the West River and Prospect Systems maps. Large areas are heavily developed, with extensive areas in the lower end of the watershed being covered with buildings, parking lots, and other impervious surfaces. Runoff from paved areas is often collected in catch basins and discharged through storm drains to the nearest watercourse, carrying with it sediment and other surface pollutants. These impervious surfaces also decrease the opportunity for groundwater recharge. The effect of urban runoff on the reservoir has been to increase the rate of sedimentation the acceleration of nutrient enrichment and reservoir eutrophication. These factors, along with the short water residence time of the reservoir, can lead to highly variable water quality. The state-of-the-art water treatment processes at the treatment facility, however, produce excellent finished water quality. Controlling and managing water quality issues in this highly developed watershed continues to be a major focus of the Authority's source water protection program. In the early 1990s, the Authority began a program of retrofitting piped stormwater outfalls to Lake Whitney by constructing stormwater treatment systems at key locations. These systems improve the water quality of stormwater runoff and can act to intercept potential hazardous material spills, such as from vehicle accidents. Existing land uses on the watershed, such as businesses and construction sites, are inspected regularly by Authority source water protection staff. Proposed developments that are submitted to municipal land use commissions are reviewed by the Authority's Environmental Planning staff, with written recommendations and comments provided to mitigate potential water quality impacts.

Water withdrawals by the Authority from Lake Whitney are guided by the Whitney Environmental Management Plan prepared in accordance with a July 2000 Authority resolution. The resolution contains public commitments that address stakeholder concerns about potential environmental impacts to Lake Whitney and the Mill River downstream of the dam.

The Mill River watershed is distinguished from the other watershed systems not only because of its size and degree of urbanization, but also because of its extensive stratified-drift aquifer. Thirteen miles long and up to a mile wide, the aquifer has a large storage capacity that is important for sustaining flow in the Mill River during dry periods. The extent to which water may be pumped from the aquifer for public water supply is limited by a DEEP diversion registration.

Water quality problems associated with groundwater supplies are quite different from those found in surface water. Because certain volatile organic chemicals do not degrade or dissipate readily underground, many land use activities in the aquifer recharge area pose a threat to groundwater quality. The limits of the Mill River aquifer under the influence of pumping from the Authority's wells, known as the Aquifer Protection Area (APA), have been modeled and mapped in accordance with DEEP Level A mapping standards. The APA covers approximately 4,175 acres extending from southern Cheshire to northern Hamden, with a minor portion in North Haven. In 2004, the State of Connecticut adopted comprehensive model aquifer protection regulations for stratified-drift public water supply aquifers. These regulations are mandated to be implemented at the municipal level and were adopted by Hamden and Cheshire in 2008 and by North Haven in 2012. The regulations prohibit the establishment of 28 high-risk land uses within the APA and require existing high-risk uses to register with the municipal Aquifer Protection Agency. These regulated activities must comply with specified best management practices and are included in the

Authority's source water protection program.

Since 1996, the Authority has purchased five parcels within the Lake Whitney watershed for source water protection. One hundred acres are found on three tracts (HA 33A, HA 33B, and HA 36) that are shown on the West River Tract map. In 2002, the Authority acquired 0.8 acres at the intersection of Davis Street and Hartford Turnpike in Hamden to facilitate the construction of a stormwater treatment system to improve water quality from an existing stormwater discharge to Lake Whitney. The fifth parcel, consisting of 14 acres of watershed land, was purchased from the Drabkin family and is located off of Spruce Bank Road in Hamden (HA 35).

Additionally, the Authority holds many conservation easements and restrictive covenants over properties within the Lake Whitney watershed. Thirty-eight acres were protected prior to 1996. From 1996 to 2014, the Authority acquired conservation easements over another 559 acres in Hamden and Cheshire.

The Authority's acquisition of watershed lands and conservation easements and implementation of stormwater management strategies are consistent with the recommendations of a 2002 study of the shallow northern basin of Lake Whitney. This Upper Lake Whitney Management Study was a community-driven process to examine alternatives for addressing concerns about the effects of future water withdrawals on the environment and aesthetics of the northern basin. Alternatives examined included no action, dredging, and watershed management. The study concluded that watershed management, including land conservation, best meets the Authority and stakeholder goals of protecting Lake Whitney as a valuable water supply resource, while preserving its environmental integrity to the greatest extent possible.

LAND USE HISTORY

Most of the Authority's property in the Mill River System was purchased around 1900. Until the 1920s, much of the lower Mill River basin was farmland. Farther north, the terrain was less suitable for farming, and the land was predominantly in woodlots and pastures. Several factories were located along the Mill River at Augur Shop Pond, Webb Shop Pond, Beers' Pond, Woodruff's Pond, Clark's Pond, and Axle Shop Pond. Farmland was gradually converted to residential use. In the early 1950s, orchards were replaced by the large shopping complex on Dixwell Avenue in Hamden. Apartments appeared soon after, along with extensive developments of single family homes. Although the rate at which watershed and aquifer areas being developed with impervious surfaces has declined, smaller parcels of land heretofore undeveloped or other tracts which had been in industrial use have been claimed for intensive commercial land use such as shopping plazas and business parks.

PLANNED LAND USES

WATER SUPPLY FACILITIES AND SOURCE PROTECTION

Source protection efforts may include construction of additional stormwater systems as discussed above to control the influx of sediment and other pollutants into the reservoir whenever discharges occur on Authority-owned parcels. Seven such systems have been constructed by the Authority in the Lake Whitney watershed, five since 1993. An additional stormwater basin constructed by the developer of a shopping center in Hamden in 1995 lies

partially on Authority property abutting Connolly Parkway. A site near the intersection of Waite and Mather Streets will be reserved for the possible development of additional groundwater supplies.

In 2012, the Authority entered into an agreement with SolarCity to build a solar array on seven acres of land (HA 19). The installation of the array occurred during 2013 and 2014. The 1-megawatt solar system at the Authority's North Sleeping Giant water treatment facility in Hamden was activated in January 2015 and is producing most of the energy needed to power the facility.

PRESERVATION

Scenic Resources

The view of Lake Whitney and its surrounding riparian areas are an important scenic resource in the center of urbanized Hamden. The property bordering public streets will continue to be maintained to enhance the public view.

Near the intersection of Mather and Waite Streets, a small bog provides an unusual scenic resource for this area. Its natural vegetation will be protected to preserve its scenic quality.

One of the district's scenic ridges lies on the east side of land unit HA 19. Proposals to construct towers and other structures on the ridge will be critically evaluated for visual impact and weighed against public need and expected benefits. There will be no clearcutting of trees unless it is necessary to salvage timber which has been killed by natural forces. Other scenic areas to be protected include the wetlands of the former Woodruff's Pond and downstream of Clark's Pond, west of Spruce Bank Road.

Historic Sites

The Mill River lands have an abundance of historic sites that will be protected to the extent compatible with water supply requirements. The most notable are the historic buildings at Lake Whitney which date back to the early 1800s. Eli Whitney II was responsible for the construction of the Lake Whitney Dam and the creation of the first water supply for the City of New Haven. The Eli Whitney Barn, built in 1816, was conveyed to the Eli Whitney Museum, Inc. by the New Haven Water Company in April 1980. The building known as the Workers' Dormitory on the south side of Armory Street near Whitney Avenue was conveyed by the Authority to the Connecticut Trust for Historic Preservation in 1989. The land under the Barn and Workers' Dormitory is leased to the Museum and the Trust.

The remains of the foundation of a historic schoolhouse are located on the east side of Whitney Avenue just north of the Whitneyville Congregational Church. Many years ago, this foundation was converted to a stormwater detention basin by the State of Connecticut and subsequently modified by the Authority to enhance sediment removal.

The Elam Ives House, an 18th-century dwelling, is located on the south side of Ives Street near the Mill River. This house is currently leased to the Town of Hamden under a 14-year license agreement that expires in 2021. The house was placed on the National List of Historic Places in 2010. Nearby, at the corner of Broadway and Ives Street, are the remains of a 19th-century factory. A former canal and tailrace on the Mill River that provided power for the factory runs past this site from the former Woodruff's Pond, where an old sluice gate

remains.

Other historic sites in the Mill River System are an abandoned copper mine on the ridge overlooking land unit HA 19 and the remains of a mill pond dam from the turn of the century near the Hamden-Cheshire town line.

Natural Areas

There are several important natural features in the vicinity of Clark's Pond in Hamden. North and south of the pond are glacial kettle holes, interesting geologic features that will be protected from any excavation or filling other than by natural processes.

A colony of the seventeen-year cicada (*Magicicada septendecim*) is located in an area east of the Mill River, north of River Road in the Mt. Carmel section Hamden. The seventeen-year mass hatch of this insect is a unique biological phenomenon. In 1996, the Authority decided to protect the area from timber harvests to make it a defacto preserve for the cicadas.

RECREATION AND EDUCATION

Trail Use

A 13.8 acre Authority parcel at Harrison Avenue in Cheshire is located on the east side of the Canal Line Railroad right-of-way. The right-of-way was acquired by the DEEP from the Boston and Maine Railroad in 1989. Portions of the former railroad right-of-way have been converted into the Farmington Canal Trail linear park in Hamden and Cheshire.

The Lake Whitney Water Treatment Plant, completed in April 2005, includes a designed natural landscape with almost one mile of walking trails open for public recreational use.

Fishing

Fishing is the major recreational activity allowed on the Mill River properties. Stream fishing is presently permitted on the Mill River north of Skiff Street, and this privilege will continue as long as the integrity of the water and landscape are protected by people who use these lands. Stream fishing is also allowed on the short stretch of Willow Brook that runs through the parcel in Cheshire (CH 2) between Harrison Road and the Farmington Canal Trail.

Shore fishing will also continue to be available at Clark's Pond. A wheelchair-accessible fishing platform near the Clark's Pond dam on New Road, constructed by the Authority in 1989, will continue to be maintained by the Authority.

Education

The Authority has entered into a long-term lease and agreement with the Eli Whitney Museum for use of a building formerly owned by the New Haven Water Company near the Lake Whitney Dam. The building, known as the Whitney Water Center, was renovated for use as a water science education center for school children.

NATURAL RESOURCES

Timber

Forests of the Mill River landholdings may be managed primarily as important scenic buffers separating commercial areas and residential neighborhoods. As forests mature and timber begins to show the effects of insect and disease predation, windstorms, ice, and other natural catastrophes, the timber will be salvaged.

Wildlife

Open fields, brushy areas, wetlands, and water bodies all provide food and cover for animals and increase the diversity of wildlife that the land can support. Whenever possible, favorable wildlife habitat will be maintained and protected. The Authority's environmental management plan for utilizing Lake Whitney as a water supply contains measures to balance water supply needs with those of aquatic habitats both upstream and downstream of the Lake Whitney dam. This includes operation of an eel pass at the base of the dam operated in cooperation with DEEP to enhance the upstream migration of juvenile American eels.

NON-WATER SYSTEM LAND

Three houses are found on the Authority's property in the Mill River System. One in Cheshire (CH 1) has been converted into office space for treatment personnel. The Elam Ives house in Hamden (HA 13) has been discussed in the Preservation section above. Finally, the Authority owns a house at 233 Skiff Street in Hamden (HA 9A).

STATUS OF LAND

WATER SYSTEM LAND

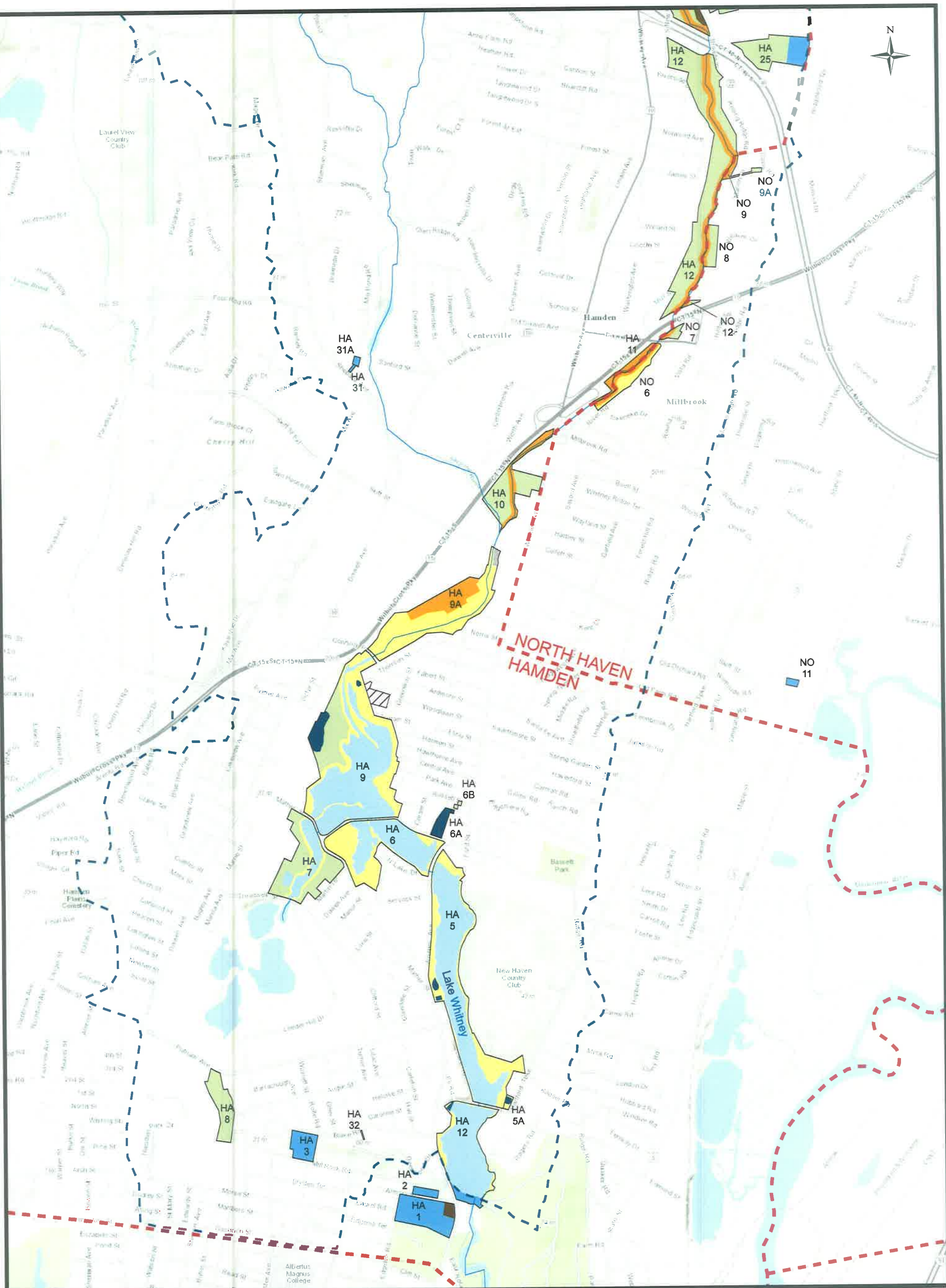
The Authority resumed its use of Lake Whitney as a source of supply in April 2005. The reservoir was deactivated in August 1991 after almost 130 years of continuous operation. The Authority's landholdings on the Mill River watershed will continue to be maintained for source water protection. Four active wellfields are also part of the Mill River System.

NON-WATER SYSTEM LAND

There are no lands within the Mill River System that fit into this category. However, 1.5 acres, consisting of two lots at the Ives Street house and Skiff Street house, are slated for disposition according to the 2013 amendment to the Authority's enabling legislation. The Ives Street house cannot be sold until the lease with the Town of Hamden expires or is terminated.

**Table 6
Mill River System Land Use Summary**

MILL RIVER LAND USE SUMMARY				
LAND USE	Land Unit Number	Description	Acres	Status
WATER SUPPLY AND FACILITIES USES				
Reservoir Land	HA 4, HA 5, HA 6, HA 7, HA 9, HA 18, HA 19	Lake Whitney, Clark's Pond	183.1	Existing
Facilities	Numerous locations		132.6	Existing
Water Quality structure	HA 4, HA 5, HA 5A, HA 6A, HA 9	Storm water basins	8.3	Existing
PRESERVATION USES				
Scenic areas	Numerous locations	Lake Whitney and Mill River shoreline; Scenic ridge	138.5	Existing
Historic areas	CH 2, HA 1, HA 19	Historic dam, Whitney Barn, Worker's Dormitory, Historic copper mine	5.4	Existing
Natural areas	HA 16, HA 18	Glacial kettle holes	2.4	Existing
RECREATION AND EDUCATION USES				
Stream and shore fishing	Numerous locations	Along sections of the Mill River and Clark's Pond	69.1	Existing
Ball fields	HA 9A	Leased to Hamden Hall Country Day School	10.8	Existing
Trails	HA 1		0.9 mi	Existing
NATURAL RESOURCE USES				
Forest Management	Numerous locations	Numerous Locations	253.0	Existing
Utility ROW	CH 4, HA 20	Gas and electric power lines	2.3	Existing
NON-WATER SYSTEM USES				
Ives St. former rental house	HA 13	95 Ives St.	0.7	Proposed disposition
Skiff St. former rental house	HA 9A	233 Skiff St.	0.7	Proposed disposition
Total			806.9	



Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way

Recreation and Education Use

- Recreation
- Recreation Trail

Preservation

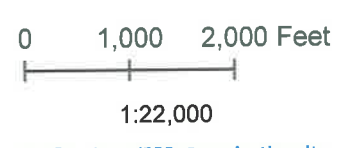
- Natural
- Scenic
- Historic

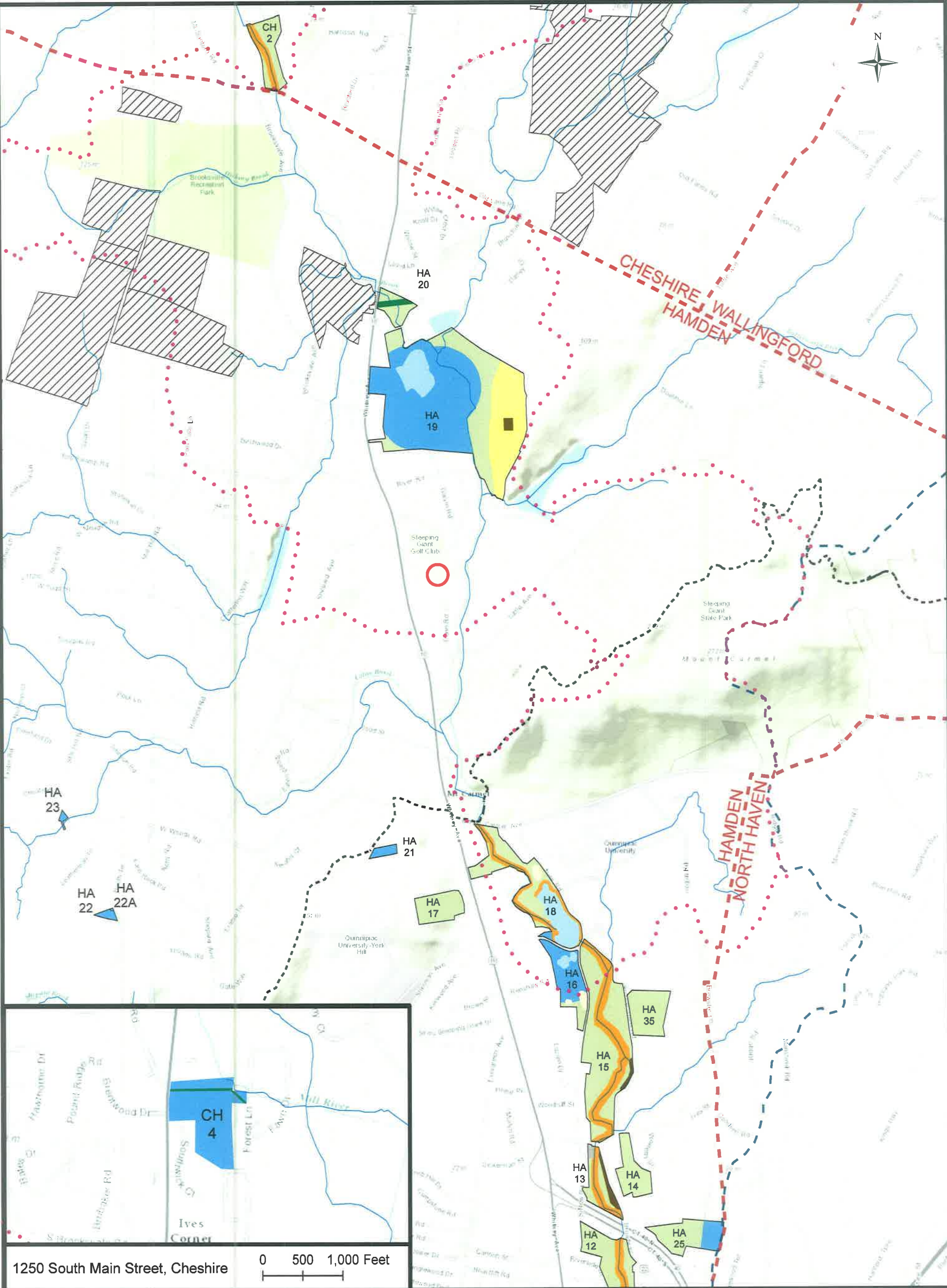
Non Water System Land

- Non-water System Land

- HA 1 Land Unit Number
- Town Boundary
- Blue Blaze Trail
- Conservation Easement

**Land Use Plan
Mill River System
Map 1**





1250 South Main Street, Cheshire

0 500 1,000 Feet

<p>Water Supply Facilities</p> <ul style="list-style-type: none"> Reservoir Water Supply Facility Water Quality Basin Watercourse Watershed Aquifer 	<p>Natural Resource and Conservation Use</p> <ul style="list-style-type: none"> Forest Agricultural Right of Way <p>Recreation and Education Use</p> <ul style="list-style-type: none"> Recreation Recreation Trail 	<p>Preservation</p> <ul style="list-style-type: none"> Natural Scenic Historic <p>Non Water System Land</p> <ul style="list-style-type: none"> Non-water System Land 	<p>HA 19 Land Unit Number</p> <ul style="list-style-type: none"> Town Boundary Blue Blaze Trail Conservation Easement Wellhead Protection Area 	<p>Land Use Plan Mill River System Map 2</p> <p>0 1,000 2,000 Feet</p> <p>1:22,000</p> <p> Regional Water Authority</p>
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WEST RIVER SYSTEM

SUMMARY

The West River System includes 5,422 acres along the West and Sargent Rivers which flow through the valley below West Rock Ridge.

The West River landholdings will continue to be managed to protect the public water supply and to preserve the scenic values of West Rock Ridge and the gorges and watercourses tributary to the river. Over 12 miles of loop trails are open for public recreational use. Fishing from the shoreline of Lake Chamberlain, an upstream storage reservoir, and a specified reach of the Sargent River carrying the downstream release of water from this reservoir are part of the Authority's recreation program.

Timber resources will be managed to maintain the productivity of land, with intensified management on the most productive sites. Agricultural use will be encouraged on appropriate sites that are far enough from watercourses to ensure protection of water quality.

INTRODUCTION

The West River and its tributary, the Sargent River, flow through the valley west of West Rock Ridge. Between 1889 and 1915, five reservoirs were created on these rivers to form the West River water supply system. Landholdings in the West River System include 1,705 acres in Woodbridge, 3,205 acres in Bethany, 496 acres in Hamden, and 16 acres in Prospect, for a total of 5,422 acres. Part of this land, 300 acres, lies on the adjacent Mill River watershed, but is managed as part of the West River watershed landholdings. There are over 35 miles of town and state roads bordering the West River properties, making it among the most visible of the Authority landholdings.

WATER SUPPLY

The five reservoirs in the West River System are Lake Bethany, Lake Watrous, and Lake Dawson on the West River, and Lake Chamberlain, and Lake Glen on the Sargent River.

WATERSHED CHARACTERISTICS

The 13.84 square miles of watershed tributary to the West River reservoirs encompass physiographic extremes, including high traprock ridges and extensive wetlands. More than 75 percent of the watershed is forested, and except for a small business and commercial development on the watershed of Lake Chamberlain, the remainder is in low-intensity land uses such as small farms, single-family homes, and estates.

Because the soils of the watershed have minimal water storage capacity, runoff is generally rapid after storms, and streamflow is low in the dry season of summer and early fall. During periods of high runoff, water quality in the reservoirs is influenced by increased sediment loads and discoloration produced by organic matter flushed from wetlands. With this exception, water quality in the West River reservoirs is generally good. However, according to a study by Nonpoint Education for Municipal Officials (NEMO) in 2013, the potential for future development in the watershed to accelerate nutrient enrichment and eutrophication is of concern.

The Authority owns over 60 percent of the West River watershed. Since 1996, the

- A waterfall west of Lake Watrous;
- A scenic gorge along the Sargent River north of Lake Glen;
- A scenic gorge on the West River between Lake Bethany and Lake Watrous; and
- A scenic watercourse that flows over the remains of old mills and mill dams above the northwest arm of Lake Bethany.

Historic Sites

One site of historic interest in the West River landholdings is an old cement kiln on the southwest corner of Route 69 and Dillon Road. Marble was quarried from the area during the 1870s and kilned, but the operation produced a very poor grade of cement because of impurities in the stone. The old kiln remains as a reminder of the ill-fated business venture. Veins of marble can be seen in the old quarry behind the kiln. The kiln and quarry site will be protected to the extent it is feasible and prudent. By 1998, one of the hearths had collapsed. A consultant was hired to help document the site and stabilize the remnants of the kiln. Ten years later, additional stabilization was conducted by Authority crews.

Two dwellings owned by the Authority are interesting for their early 19th century architecture. One of these buildings is below Lake Glen on the west side of Route 69, and the other is on the east side of Downs Road between Lake Bethany and Lake Watrous. Other buildings include a former rental house on Sperry Road in Woodbridge and a rented barn on Amity Road in Bethany. The Authority will evaluate the status of each building. If conditions warrant, the Authority will attempt to sell these structures with approved building lots, per the amendment to its enabling legislation in 2013.

Natural Areas

Because of its location and physical features, West Rock Ridge supports a unique assortment of uncommon plant and animal species. Several northern and southern plants reach the limits of their range here, making them rare for the location. Identified rare and endangered species of plants and animals and their critical habitats will be protected and maintained.

A research area known as the "Lutz plots" will also be protected. Established in the 1930s by Dr. Harold Lutz, Professor of Forest Soils at Yale University School of Forestry, the plots are used for ongoing ecological research to monitor changes in an old growth hemlock hardwood stand.

RECREATION AND EDUCATION

Trail Use

More than 13 miles of roads and trails on the West River properties are open for public recreational use. Parking areas for Authority recreation permit holders are open near Lake Bethany on the south side of Hatfield Hill Road and near Lake Chamberlain on Sperry Road in Woodbridge near the Woodbridge/Bethany town line. Horseback riding is permitted on designated trails under a public program administered by the Bethany Horsemen Association, but subject to conditions required by the Authority and the DPH.

Plans advanced by local land trusts and conservation commissions for some connecting trails linking West Rock Ridge with the western side of Woodbridge and Bethany

as part of a Connecticut Greenways trail network may be considered by the Authority. One such linkage, the Woodbridge Greenway, has already been approved. Implementation of plans for such trails will be contingent upon satisfactory assurances given by the sponsoring organization(s) for use, maintenance, and financing by those organizations. The Authority may also consider proposals advanced by the Bethany Horsemen Association to connect existing trails at Lake Chamberlain with trails on the Naugatuck State Forest. The Authority may require the prior conceptual approval by DPH before considering specific plans for new hiking or equestrian trails.

Fishing

In addition to trails for hiking, jogging, and cross-country skiing around the Chamberlain and Bethany reservoirs, the Authority also has a public fishing program at Chamberlain Reservoir and the Sargent River downstream of the reservoir to Sperry Road in accordance with the rules and regulations of the Authority's recreation program.

In addition to trails opened in the 1980s, designated areas of the Lake Bethany shoreline may be opened for fishing if approval is given by DPH. Additional off-street parking may be needed, most likely on the north side of Hatfield Hill Road.

NATURAL RESOURCES

Timber

Timber and other forest raw materials will continue to be harvested on the West River property. Some investments for improving the quality of timber growth may be made on the sites best suited for growing higher quality hardwood. Hardwoods which have regenerated in former red pine stands may be thinned on a regular cycle to increase the rate of growth and the health and vigor of the best trees. At locations where it will be feasible to do so, there may be trial plantings of chestnut hybrids.

Wildlife

The Authority will seek to increase the diversity of wildlife by protecting favorable habitat beneath power lines, other areas where hardwood stands are regenerating, and wetlands. These favorable wildlife habitats may be maintained and protected when it is consistent with protecting the sources of public drinking water supply, and overhead electric transmission lines.

Agriculture

Open fields may continue to be used for hay and other forage crops.

NON-WATER SYSTEM LAND

The Authority owns four residential dwellings and a large barn. The four residences are vacant, but the barn is rented to a tenant and is currently used as an art studio. The house downstream of the Lake Dawson dam (1955 Litchfield Turnpike, Woodbridge) will be maintained and improved for Authority use. The Authority will attempt to sell the other three houses and barn each with an approved building lot. This will be in accordance with the amendment to its enabling legislation in 2013. The addresses of the other houses are 2040 Litchfield Turnpike in Woodbridge, 115 Sperry Road in Woodbridge, and 184 Downs

Authority has acquired over 393 acres in the West River area, mostly for watershed protection. These properties are in Bethany, Hamden, and Woodbridge, with the majority being in Bethany. Additionally, the Authority has acquired easements over 22 acres in the West River area.

LAND USE HISTORY

The West River reservoirs were constructed around the turn of the 20th century, beginning with Lake Dawson in 1889, and concluding with Lake Watrous, completed in 1915. Lake Chamberlain, originally constructed in 1890, was enlarged in 1958 to over five times its original size. Land acquisition began with the development of the reservoirs and continued as opportunities arose. A large portion of the land surrounding and under the present reservoirs was farmland, primarily as pasture. Old pastures and fields were reforested with pines to protect the water supplies and eventually provide income from timber. Timber management continues to be the primary activity on the property.

PLANNED LAND USES

WATER SUPPLY FACILITIES AND SOURCE PROTECTION

The West River watershed and reservoirs require aggressive source protection. All of the West River reservoirs are relatively small and shallow, making them vulnerable to accelerated eutrophication if watershed development is poorly planned and inadequately controlled. Developed land typically contributes about ten times more phosphorus per unit area than forested land. Increases in phosphorus concentrations promote the growth of algae and play a key role in reservoir eutrophication. This process causes deterioration in water quality, such as taste and odor problems and turbidity, and causes operational problems at the treatment plant. A comprehensive watershed build-out and water quality monitoring study completed in 2013 estimated that a full build-out of undeveloped private lands in the watershed would increase the frequency of algal blooms over 1000-fold from current conditions. There would be an approximately 50 percent increase in nuisance-causing blue-green algae. These blooms would significantly impact treatment processes and associated capital and operating costs. To minimize future non-point pollution sources, undeveloped land along principal tributaries, much of which is adjacent to land owned by the Authority, will be targeted for acquisition through purchase, donation, land exchange, joint purchase with land trusts, conservancies, or acquisition of an easement sufficient to control land use.

PRESERVATION

Scenic Resources

West Rock Ridge is the most prominent scenic resource of the West River System and one of the outstanding scenic ridges of south central Connecticut. Many locations along Route 69 and Downs Road offer extensive vistas and scenic views. To protect the integrity of this valuable resource, proposals to construct towers and other structures on the ridge will be critically evaluated for visual impact and weighed against public need and expected benefits. Upper slopes and ridgetops will be protected from forest clearcutting except where it is necessary to salvage timber destroyed by fire, wind, disease, or ice storms.

Other scenic areas that will be protected include:

Road in Bethany. The barn is located at 440 Amity Road in Bethany.

STATUS OF LAND

WATER SYSTEM LAND

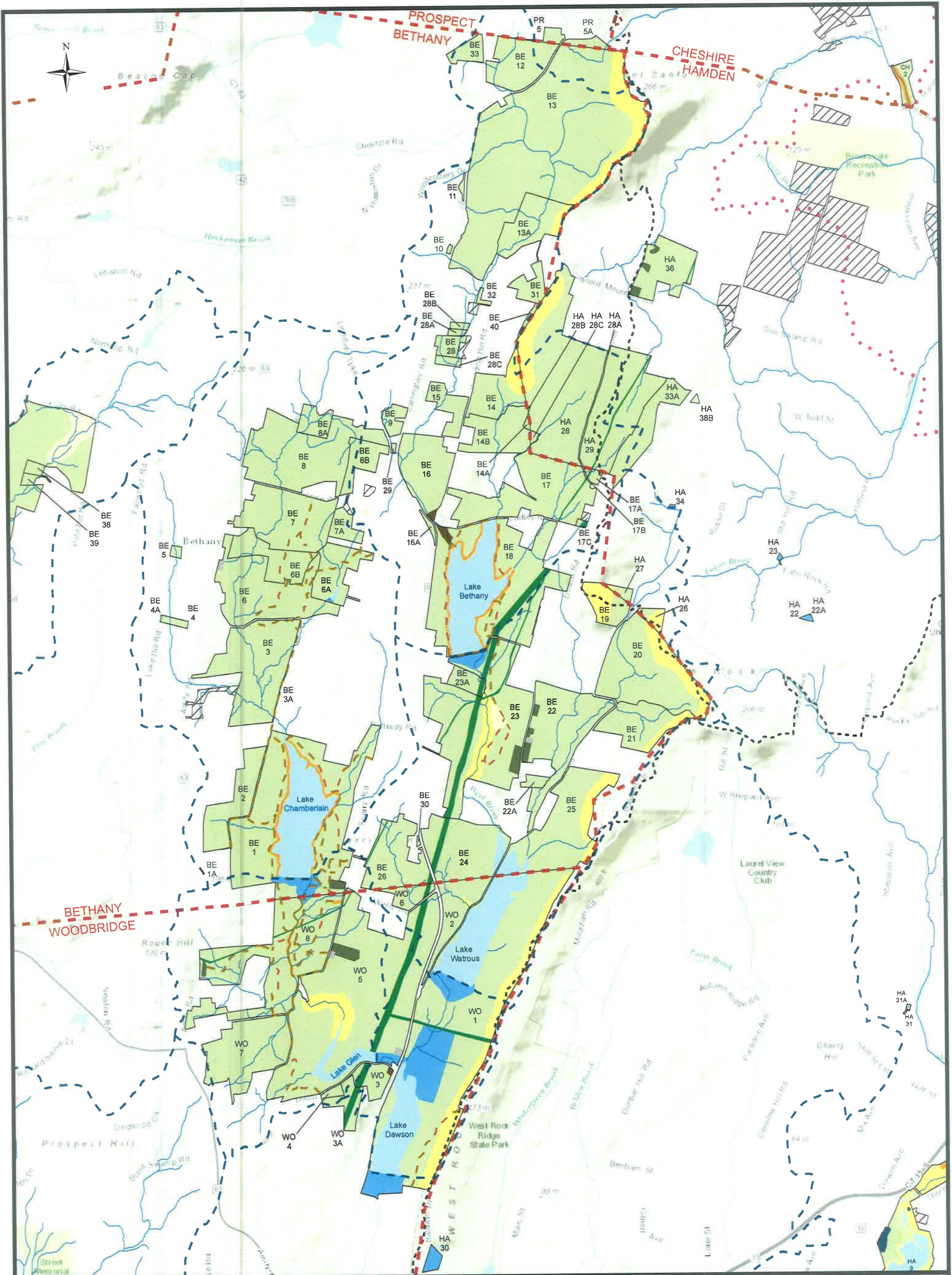
All of the Authority's West River System landholdings, with the possible exception of approximately six acres associated with the former rental houses and barn, will continue to be held by the Authority for public water supply purposes.

NON-WATER SYSTEM LAND

Approximately six acres around the three houses and barn are slated for disposition. This is in accordance with the amendment to the Authority's enabling legislation in 2013. Should the houses and barn not be sold, the Authority will continue to own these properties.

**Table 7
West River System Land Use Summary**

WEST RIVER LAND USE SUMMARY				
Land Use	Land Unit Number	Description	Acres	Status
WATER SUPPLY AND FACILITIES USES				
Reservoir Land	Numerous locations	Lakes Dawson, Watrous, Glen, Chamberlain, Bethany	402.2	Existing
Facilities	Numerous locations		125.2	Existing
PRESERVATION USES				
Scenic areas	Numerous locations	Ridges, gorges, and waterfall	319.3	Existing
Historic areas	BE 16, BE 18, WO 3	Old mill dams and cement kiln	5.6	Existing
Natural area	BE 23	Scientific research area, south of Lake Bethany	5.9	Existing
RECREATION AND EDUCATION USES				
Visitor Parking	BE 23, WO 8	Hatfield Hill Rd. and Sperry Rd.	0.8	Existing and future
Hiking and Cross-Country Ski Trails	BE 1, BE 18, BE 23, WO 8	Lake Chamberlain and Lake Bethany	12.5 mi.	Existing
Blue-blazed Trails	WO, BE, HA	West Rock Ridge and ridges north	6.5 mi.	Existing
Bridle Paths	Numerous locations	Vicinity of Lake Chamberlain	5.5 mi.	Existing
Stream Fishing	WO 8	along Sargent River	4.9	Existing
Shore Fishing	BE 1, BE 18	Lake Chamberlain and Lake Bethany	35.7	Existing and future
NATURAL RESOURCE USES				
Forest Management	Numerous locations		4,388.6	Existing
Utility ROW	Numerous locations	Gas and electric power lines	100.3	Existing
Agriculture	BE 22, BE 23, HA 36, WO 5, WO 8	Fields	27.2	Existing
NON-WATER SYSTEM USES				
Amity Rd. rental barn	BE 6	440 Amity Rd. (Rt. 63)	1.5	Existing
Downs Rd. former rental house	BE 22	184 Downs Rd.	1.5	Existing
Sperry Rd. former rental house	WO 5	115 Sperry Rd.	1.5	Existing
Litchfield Turnpike former rental house	WO 5	2040 Litchfield Turnpike	1.5	Existing
Total			5,421.8	



Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way
- Recreation and Education Use**
- Recreation
- Recreation Trail

Preservation

- Natural
- Scenic
- Historic

Non Water System Land

- Non-water System Land

- BE 1 Land Unit Number
- Town Boundary
- Blue Blaze Trail
- Conservation Easement

**Land Use Plan
West River System**

0 1,500 3,000 Feet



1:35,000

MALTBY SYSTEM

SUMMARY

The tracts of land surrounding the Maltby Lakes and the Wepawaug Reservoir, referred to as the Maltby Division, include 1,060 acres, most of it forested and easily accessible from the western side of New Haven, West Haven, and Orange. The three Maltby Lakes and the Wepawaug Reservoir are inactive for water supply use.

The Authority will continue to be vigilant in the protection of the watersheds tributary to the reservoirs of this system. The Maltby Lakes have been opened for public recreational use. Persons holding valid Authority recreation permits may fish from the shoreline of the Maltby Lakes and hike the trails coursing through the woodlands surrounding these reservoirs. The Wepawaug River will continue to be available for public stream fishing under the Authority's permit program. Forest land will continue to be managed for timber harvesting, and significant natural and scenic features of the landscape will continue to be protected. Approximately 35 acres have been designated as Non-Water System Land. Most of these acres are Class III land. Two former rental houses are on Class I and II land. The Authority will attempt to sell these, with approved building lots, per a 2013 amendment to its enabling legislation.

The Authority intends to retain the Maltby Lakes as a source of public water supply for possible use in the future and will continue to own and maintain the lands needed for this supply.

INTRODUCTION

The three Maltby Lakes lie approximately four miles west of downtown New Haven on Route 34. The 1,060 acres of land associated with this system are contained in several tracts, most of which lie north of Route 34 in the towns of Orange, Woodbridge, West Haven, and New Haven. With several miles of frontage on state highways, these landholdings are readily accessible.

WATER SUPPLY

The Maltby System includes the three Maltby Lakes, Trout Brook, and the Wepawaug Reservoir. The Maltby Lakes are numbered 1, 2, and 3, from east to west. The total watershed of the Maltby System is almost ten square miles.

The passage of the Safe Drinking Water Act in 1974 and the increasingly stringent water quality standards developed to implement the Act made it impossible to meet the new standards without filtration. The Maltby supply was last used as a source of public drinking water in 1981, and there are no plans to restore the Maltby System to water supply service within the next 50 years.

WATERSHED CHARACTERISTICS

The Authority owns more than half of the Maltby Lakes and Trout Brook watersheds which are largely forested and undeveloped. In contrast, only seven percent of the 7.7 square mile Wepawaug watershed is in Authority ownership. Acquisitions since 1996 within the Wepawaug watershed include the Frechette parcel (21 acres), the Elderslie easement (75

acres), and 35 acres near Peat Swamp Reservoir. Land use in the Wepawaug watershed is predominantly rural residential, with single-family dwellings on one and two-acre lots. Several state highways cross the Wepawaug watershed. Extensive wetlands along the Wepawaug River and its tributaries generally benefit water quality by helping to reduce flood peaks during storms and serving as traps for sediment and other pollutants.

The primary source protection problems in the Maltby System relate to the major roads that pass through the watersheds and near the reservoirs. Road salt can increase the sodium concentration in the water supply; however, a greater danger lies in the risk of spills of hazardous materials near the reservoirs or tributary watercourses.

LAND USE HISTORY

The three Maltby Lakes were acquired by the New Haven Water Company when it merged with the Fair Haven Water Company in 1876. Subsequently, the water supply facilities were reconstructed and expanded, and by the early 1900s the Trout Brook and Wepawaug River tracts were developed.

Most of the land around the Maltby Lakes was too rough for farming and had been used primarily as a source of fuelwood. West of the reservoirs, however, there were fewer outcrops of ledge and wetlands, so the land was more suitable for farming. After the land was purchased by the New Haven Water Company, it was planted with conifers to provide a source of income on land that would otherwise have grown into brush and low value trees.

PLANNED LAND USES

WATER SUPPLY FACILITIES AND SOURCE PROTECTION

Although the Maltby Lakes will probably not be used for water supply in the next 50 years, the Authority continues to be vigilant in the protection of the watersheds tributary to the reservoirs of this system. The Authority's source water protection staff will continue to review proposals for development that could impact the lakes.

The Authority holds several parcels currently in use with its distribution system within the Maltby Lakes area. Most are exclusively used for Authority purposes. However at 1201 Whalley Avenue, New Haven, a portion of the property is leased for customer parking to the adjoining ice cream stand under terms and conditions originally negotiated and granted by the New Haven Water Company. Adjoining land is city-owned open space and some is in commercial use.

PRESERVATION

Scenic Resources

Sections of the Maltby Lakes' shoreline are noted as a scenic resource. These are mostly the shoreline of Maltby Lake #1 which is visible from Route 34.

Historic Sites

There are two sites of possible historic interest. There are reports that a Native American cemetery may exist west of Maltby Lake #3. An early Native American archeological site was discovered south of Derby Avenue in West Haven. The discovery of

human-produced debris and charred materials is archeological evidence that this was a site frequently used by Native Americans living in this area long before the discovery of this continent by Europeans. A major portion of this site is on a 16.8 acre parcel on the south side of Derby Avenue that has been dedicated as open space. This parcel includes and surrounds two ponds that are hydraulically connected to Maltby Lake #1.

Natural Areas

A wetland area in Woodbridge, adjoining the Yale Natural Preserve, will be reserved as a natural area. This site is east of Johnson Road.

RECREATION AND EDUCATION

A visitor parking area for the Maltby Lakes recreation area has been constructed off Route 34 between Maltby Lakes #1 and #3.

Trail Use

A network of service roads at the Maltby Lakes have been opened for hiking, jogging, mountain biking, and cross-country skiing.

Fishing

The Authority has opened designated areas of the Maltby Lakes shoreline for fishing. The Wepawaug River north of the Wilbur Cross Parkway is open for fishing as part of the Authority's recreation program. Access to the Wepawaug River is available from the commuter parking lot on Greenway Road.

NATURAL RESOURCES

Timber

Forest management will be a continuing activity on the landholdings of the Maltby System. As existing plantations of mature white pine and spruce are harvested, regeneration of native hardwoods will be encouraged. On the best sites, management of the forest may be intensified to promote the development of high quality individual hardwood timber trees.

Wildlife

Brush-covered areas (beneath the power lines), regenerating hardwood stands, and wetlands all increase the food, cover, and diversity of wildlife that the land can support. Unless there is an overriding need for protection of public health or safety, these favorable wildlife habitats will be maintained and protected.

Agriculture

A field east of Johnson Road will continue to be mowed annually for potential agriculture.

NON-WATER SYSTEM LAND

Approximately 35 acres have been designated as Non-Water System Land. The vast majority of these acres are Class III land lying just over the watershed boundaries of the Maltby Lakes or Wepawaug Reservoir.

Two former rental houses are on Class I and II land. The Authority will attempt to sell these with approved building lots, per the amendment to its enabling legislation in 2013. These houses are at 499 Derby Avenue, Orange (Wepawaug Reservoir) and on Johnson Road, Woodbridge.

A 70-acre tract on the south side of Derby Avenue in West Haven was sold for development in 1989. Of the 70 acres, nearly 30 acres are to remain as open space with natural woodlands, runoff detention basins, and buffer areas as Authority land use conditions and restrictions specified in the deed. The land use conditions and restrictions continue to run with the land. This property has not yet been developed.

The Authority rents two areas for communication sites. The Authority leases part of the parcel at Burwell Hill (WH 3) to a cable TV company for a head-end receiving antenna tower and transmitter. The company owns their building and equipment. The terms of the lease and agreement were negotiated and granted by the New Haven Water Company to a predecessor of the present lessee in 1976. Other organizations, such as local fire departments and the Coast Guard, share space for their antennas on an Authority tower. The other site rented for communications is found on Ogg Meadow Road in Orange (OR 2). This site is licensed to a cell phone company for a tower.

STATUS OF LAND

WATER SYSTEM LAND

The Authority intends to retain the Maltby Lakes as a source of public water supply for possible use in the future. The Authority will continue to hold and maintain its lands associated with this future supply. All of the Authority's Maltby Lakes, Trout Brook, and Wepawaug lands have been given this designation.

NON-WATER SYSTEM LAND

Only the three acres associated with the two houses are slated for disposition in the next 20 years. The other Class III acres slated for disposition would occur after that planning period. Other land in the Non-Water System category includes the area rented for a cell phone tower in Orange.

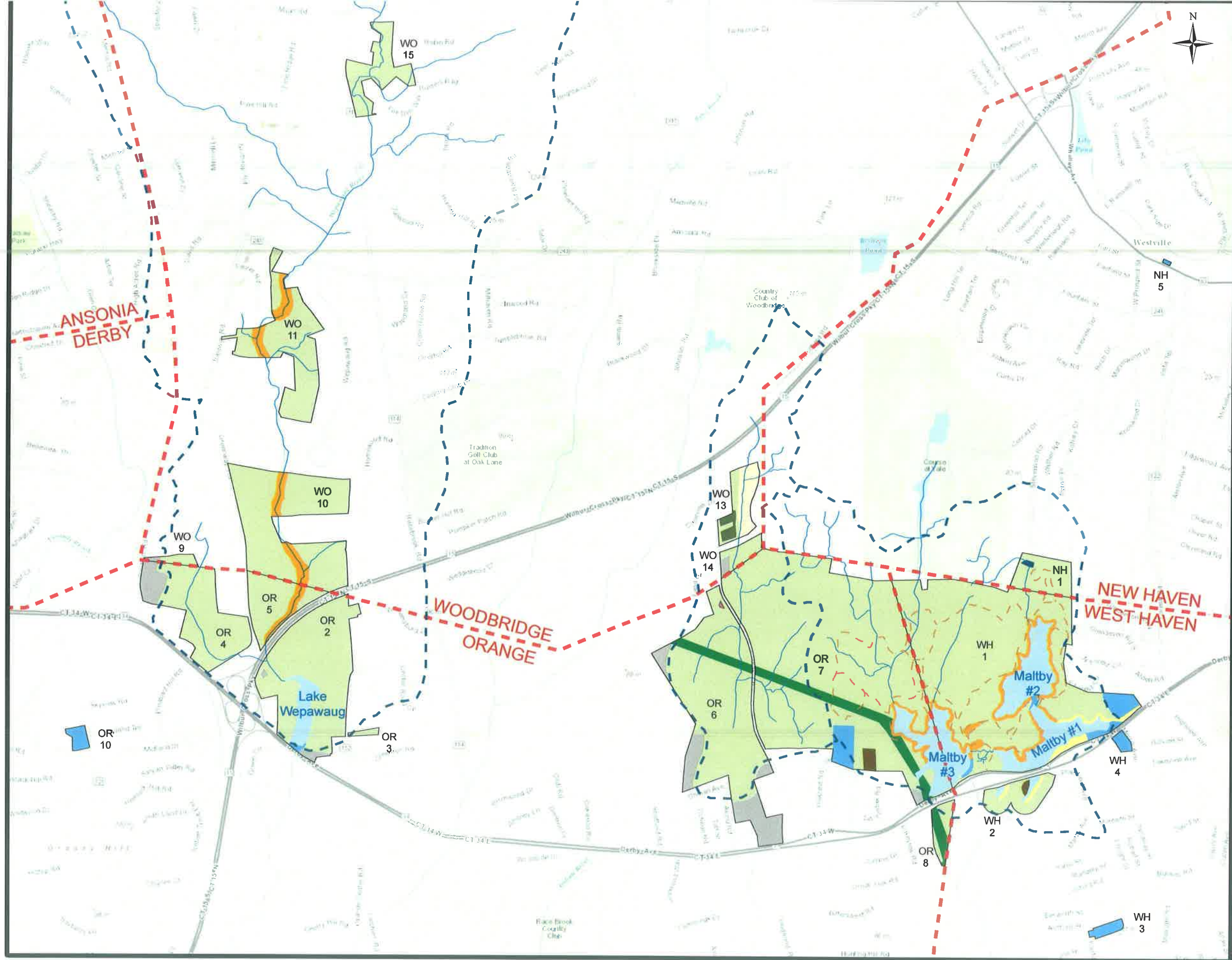
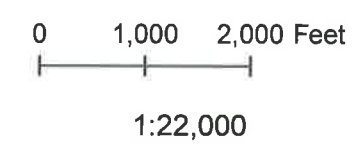
**Table 8
Maltby System Land Use Summary**

MALTBY LAND USE SUMMARY				
Land Use	Land Unit Number	Description	Acres	Status
WATER SUPPLY AND FACILITIES USES				
Reservoir land	WH 1, WH 2, OR 2, OR 7 NH 5, OR 2, OR 10, WH 1, WH 3, WH 4	Maltby Lakes #1, #2, & #3 and Wepawaug Res.	78.2	Not In Use
Facilities	NH 1	Sediment detention basin off of Stevenson Rd.	24.1	Existing & Proposed
Water Quality structure			0.5	Existing
PRESERVATION USES				
Historic area	OR 7, WH 2	Native American archeological site	3.0	Existing
Scenic areas	WH 1, WH 2	Shoreline around Maltby #1	6.0	Existing
Natural area	WO 6	West of New Haven-Woodbridge line	8.9	Existing
RECREATION AND EDUCATION USES				
Visitor Parking	WH 1	North of Derby Avenue (Route 34)	1.0	Existing
Trails	NH 1, OR 7, WH 1	Throughout Maltby Lakes property	5.5 mi	Existing
Stream Fishing	OR 5, WO 10, WO 11	Along Wepawaug River north of Route 15	0.7 mi.	Existing
Shore Fishing	OR 7, WH 1	Designated areas of Maltby #1, #2, and #3	37.5	Existing
NATURAL RESOURCE USES				
Forest Management	Numerous locations	Numerous locations	838.3	Existing
Utility ROW	OR 6, OR 7, OR 8	Electric ROW, West of Maltby #3	25.5	Existing
Agriculture	WO 13	Field east of Johnson Rd.	2.6	Existing
NON-WATER SYSTEM USES				
Non-water System Land	OR 3, OR 4, OR 6, OR 7, WO 9	Class III lands	31.9	Proposed disposition
Derby Ave. former rental house	OR 2	499 Derby Ave. (Orange)	1.5	Proposed disposition
Johnson Rd. former rental house	WO 14	East of Johnson Rd.	1.5	Proposed disposition
		Total	982.2	

Land Use Plan Maltby System



- Water Supply Facilities**
- Reservoir
 - Water Supply Facility
 - Water Quality Basin
 - Watercourse
 - Watershed
 - Aquifer
- Natural Resource and Conservation Use**
- Forest
 - Agricultural
 - Right of Way
- Recreation and Education Use**
- Recreation
 - Recreation Trail
- Preservation**
- Natural
 - Scenic
 - Historic
- Non Water System Land**
- Non-water System Land
- WH 1** Land Unit Number
- Town Boundary
 - Blue Blaze Trail
 - Conservation Easement



PROSPECT SYSTEM

SUMMARY

The Prospect tracts encompass 810 acres. They include two small reservoirs and extensive forests reaching from the valleys of its clear streams to the top of a rugged traprock ridge. Although it is not anticipated that the Prospect System will be needed as a source of water supply within the 50-year planning period, the Authority intends to retain this system as a potential source. The Prospect lands will be managed for the primary purpose of protecting the public water supply. Other uses include timber management and preservation of natural, historic, and scenic resources.

INTRODUCTION

The Prospect Reservoir land is situated in the southeastern corner of Prospect. These landholdings fall into two major watershed basins: the Quinnipiac River and the Mill River.

WATER SUPPLY

Prospect Reservoir provided Cheshire's drinking water supply until 1977. It was taken out of service because it could not supply water without filtration of a quality that consistently met the standards of the Safe Drinking Water Act. As stated previously, the Prospect System is currently inactive, but will be needed as a source of water supply within the 50-year planning period. Therefore, the Authority intends to retain this system as a potential source.

WATERSHED CHARACTERISTICS

The topography and landscape of the Prospect tracts are interesting and diverse. West Rock Ridge forms the eastern boundary, rising 200 feet above the reservoir. The land is predominantly hardwood forests, with smaller areas of conifer plantations and open fields.

Approximately 85 percent of the Prospect land is forested and used as a source of sawtimber and cordwood. Residential development adjoins the Prospect lands along Cook Road, Roaring Brook Road, Matthew Street, Tress Road, and Cornwall Avenue. A commercial riding stable is located at the end of Roaring Brook Road, not far from the Prospect property.

LAND USE HISTORY

Approximately five acres of land on Matthew Street were leased to the Town for recreational playing fields. A barn situated on an open field near the reservoir was rented in the past. In the more distant past, parts of the Prospect System were cut as woodlots, farmed for a variety of crops, and contained mills with light manufacturing.

PLANNED LAND USES

WATER SUPPLY FACILITIES AND SOURCE PROTECTION

There are four water supply facilities located in the Prospect System. No new facilities are planned for this system.

As stated earlier, the Prospect Reservoir provided a portion of Cheshire's drinking water supply until 1977. It was taken out of service because, without the construction of comprehensive water treatment facilities, it could not supply water of a quality that consistently met the standards of the Safe Drinking Water Act. The two reservoirs in the system, West Brook Reservoir and Prospect Reservoir, were separated by a man-made dike constructed in 1981. Viability as a future surface water supply source would necessitate rejoining the two reservoirs, including obtaining any permits required and addressing dam safety issues associated with an expanded watershed to Prospect Reservoir. The reservoir is located where its supply could be diverted to a reservoir owned by Connecticut Water Company.

PRESERVATION

Scenic Areas

The upper slope of West Rock Ridge is an important scenic area. By law, any proposals to construct utility towers, other than for water supply, is regulated by the Connecticut Siting Council. The Council critically evaluates proposed tower construction to assess visual impact against public need and expected benefits.

Historic Sites

Four sites associated with land uses in the 1800s are located on the property. The foundations of a 19th-century ceramic button factory on the Ten Mile River are among the last remnants of the manufacturing activity that occurred in the reservoir area for nearly two centuries. A 19th-century house foundation lies west of the Reservoir. The remains of a mill or barn foundation, an example of dry wall foundation work of the previous century or possibly earlier, is located on a small parcel of land on the north side of Route 68.

Natural Areas

Roaring Brook Falls in Cheshire is designated as a significant natural area in the Connecticut Register of Historic, Scenic and Natural Areas. Although the falls are not on Authority property, portions of the headwaters of Roaring Brook and the ridge land above the falls are owned by the Authority. Major portions of the headwaters are wetlands, the use of which is regulated by federal and state laws and local ordinances.

A large dry kettle hole of glacial origin is located east of Roaring Brook Road. This area may be preserved to protect its geologic and botanical features.

A sizeable spring feeds Ten Mile River upstream from the Prospect Reservoir. The land surrounding this spring should be protected regardless of the ultimate disposition of the Prospect Reservoir watershed land.

RECREATION AND EDUCATION

Community recreational use may be considered for the West Brook tract. At one time, the Town of Prospect leased five acres for a soccer field and an associated parking lot off of Matthews Street. The town discontinued this use in 2006. The Authority would consider a license agreement for this acreage if the Town desires to resume its use.

The Blue-blazed Quinnipiac Trail starts at the intersection of Chatfield Road and

Route 68. It follows Chatfield Road, Tress Road, and Cornwall Road until it goes off the pavement and enters the woods at the cul-du-sac of Cornwall Road. From there, this Blue-blazed Trail skirts the Authority's property along the Prospect/Cheshire town line.

NATURAL RESOURCES

Timber

The Prospect tracts will continue to be managed for timber production guided by the Authority's Forest Management Plan. Forest land will benefit from thinnings, improvement cuttings, regeneration harvests, and clearcuts. A checkerboard of patch cuts was undertaken in 2007 and will be continued in the future.

When feasible, firewood permit holders are permitted to harvest the tops of hardwood sawtimber trees for fuelwood. Elsewhere, the tops of harvested trees and other logging slash will be kept low immediately adjacent to public roads to improve the appearance of a timber sale area soon after the completion of logging. Farther away from the road, logging slash and tops within timber sales will be left uncut or lopped to the height designated by the Forester. This will act as a natural barrier to herbivory in an effort to aid the regeneration of higher value species.

Wildlife

Open fields, brushy areas, wetlands, and water bodies all provide food and cover for animals and increase the diversity of wildlife that the land can support. Whenever possible, favorable wildlife habitat will be maintained and protected.

Agriculture

Real estate records indicate that a wetland south of Route 68 was once a cranberry bog. Ten acres of fields surround the barn off Chatfield Road and Tress Road. These are maintained for possible agricultural uses. For several years, they were cut for wildlife management through WHIP (Wildlife Habitat Improvement Program) contracts.

NON-WATER SYSTEM LAND

Approximately 54 acres in the Prospect System are Class III land. Thirty-four acres are designated for disposition. These acres are located off the West Brook, Prospect, and Mill River watersheds and are not needed for other water system uses.

STATUS OF LAND

WATER SYSTEM LAND

Water system land acreage in the Prospect System totals 775 acres. It consists of acreage in the Prospect Reservoir watershed, the West Brook Reservoir watershed, and the Mill River watershed.

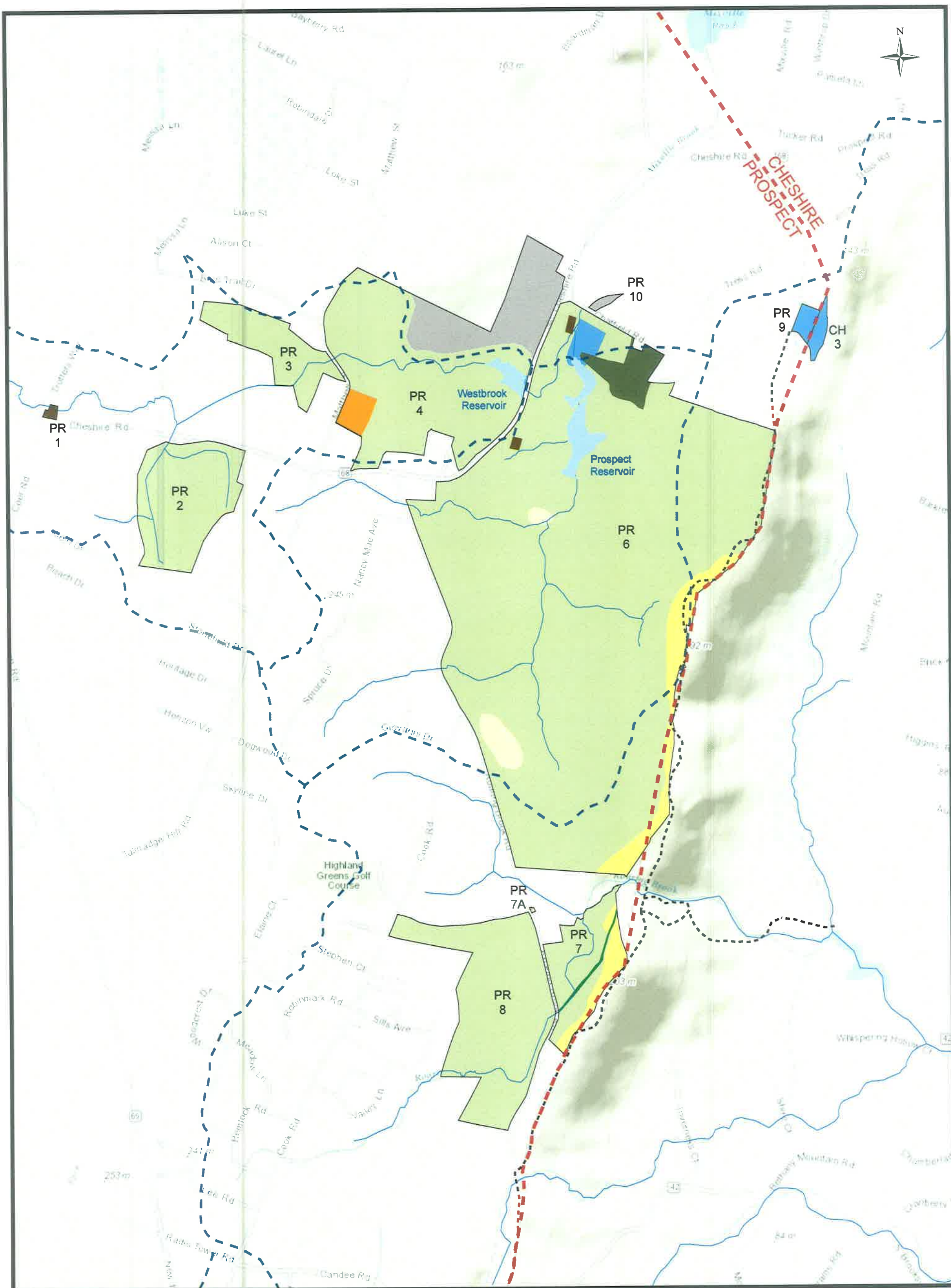
NON-WATER SYSTEM LAND

Approximately 54 acres in the Prospect System are Class III land and 34 acres are designated for disposition. These acres are not needed for other water system uses. Most of this acreage is downstream of the West Brook Reservoir on the north side of Route 68. A

smaller parcel is north of Chatfield Road. The town may have some interest in the parcel downstream of the West Brook Reservoir since it abuts the town's public works facility. The other 20 acres of Class III land will be retained by the Authority since they have limited development potential or provide access to other Authority property and assets.

**Table 9
Prospect System Land Use Summary**

PROSPECT LAND USE SUMMARY				
LAND USE	Land Unit Number	Description	Acres	Status
WATER SUPPLY AND FACILITIES USES				
Reservoir land	PR 4, PR 6	North of Cornwall Avenue	10.6	Existing
Facilities	CH 3, PR 4, PR 6, PR 9		9.1	Existing
PRESERVATION USES				
Scenic areas	PR 6, PR 7	West of Quinnipiac Trail	27.2	Existing
Historic areas	PR 1, PR 6	Button factory foundation and old house foundations	1.6	
Natural areas	PR 6	Glacial kettle hole and springs	7.3	
RECREATION AND EDUCATION USES				
Town-leased Recreation Area	PR 4	former parking and soccer field east of Matthews Street	4.8	Existing
Blue-blazed Trails	PR 6, PR 7	Quinnipiac Trail	1.4 mi.	
NATURAL RESOURCE USES				
Forest Management	Numerous locations		703.2	Existing
Agriculture	PR 6	south of Chatfield Rd.	10.5	Existing and Future
Utility ROW	PR 7	AT&T ROW	1.1	Existing
NON-WATER SYSTEM USES				
Non-water System Land	PR 4, PR 10	north of Rt. 68, north of Chatfield Rd.	34.2	Proposed disposition
Total			809.6	



Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way
- Recreation and Education Use**
- Recreation
- Recreation Trail

Preservation

- Natural
- Scenic
- Historic

Non Water System Land

- Non-water System Land

- PR 1 Land Unit Number
- Town Boundary
- Blue Blaze Trail
- Conservation Easement

**Land Use Plan
Prospect System**

0 1,000 2,000 Feet

1:15,000

BIRMINGHAM SYSTEM

SUMMARY

In January 2008, the Authority acquired the assets of Birmingham Utilities, Inc. (BUI). This acquisition included a total of 1,592 acres in seven towns. Most of the acreage is found in the Peat Swamp Reservoir and the Hopp Brook diversion watersheds.

These landholdings will be managed for the primary purpose of protecting the reservoirs as potential water supplies. Renewable natural resources, such as forest and timber, will be managed to maintain the productive capacity of the land. A trail system of more than three miles is open for recreational use.

INTRODUCTION

The majority of land in the Birmingham System is located in the Naugatuck Valley towns of Seymour, Ansonia, and Derby. These landholdings surround Peat Swamp Reservoir, which is bounded by Rimmon Road, Maple Street, and Haddad Road. Some smaller parcels with water supply facilities are scattered throughout the three towns. The other landholdings in the Birmingham system are in Bethany and Beacon Falls, upstream of the Hopp Brook diversion.

In addition to Peat Swamp Reservoir, the Birmingham System includes a handful of small impoundments. Immediately downstream of Peat Swamp is a small pool called the Aeration Reservoir. Downstream from that is Middle Reservoir, which has a waterfall that can be seen from Rimmon Road. On the south side of Rimmon Road is another small pond called the Filtration Reservoir which is not considered a source of water to the Peat Swamp system. In addition, Peat Swamp Reservoir is supplied by numerous diversions, some of which have small pools associated with them. The largest is the Hopp Brook diversion pond which is mostly filled with sediment at this time.

WATER SUPPLY

The Authority intends to retain the Peat Swamp Reservoir system as a source of public water supply for possible use in the future and will continue to own and maintain the lands needed for this supply. Peat Swamp's natural watershed is only slightly more than one-half square mile. Birmingham Utilities and its predecessors constructed numerous small diversions in the immediate area to bring additional water to the reservoir. These diversions add nearly a full square mile to Peat Swamp's watershed. The Hopp Brook diversion is another 2.17 square miles of watershed that adds water to Peat Swamp Reservoir. Finally, an additional 0.2 square miles of watershed were diverted to Middle Reservoir, which is the terminal reservoir of the system. The total watershed area of the Peat Swamp system, including diversions, is approximately four square miles.

WATERSHED CHARACTERISTICS

The Authority owns approximately 56 percent of the total watershed area of the Birmingham tracts. Thirty-five acres in Woodbridge drain to the Wepawaug Reservoir in Orange which is part of the Maltby System.

Most of the watersheds in the Birmingham System consist of moderate to shallowly

sloped hills. Deep, upland soils are predominant in the area. The wetlands in the area are mostly associated with streams and small intermittent watercourses.

Almost the entire watershed is forested. About 80 acres in the Hopp Brook watershed and 25 acres in the Peat Swamp watershed are in agriculture. There are only a handful of residences in the Hopp Brook watershed and even fewer in Peat Swamp's watershed in Woodbridge and Seymour. Population density is quite low. Route 313 (Rimmon Road/Maple Street) is the only state road that travels through these watersheds.

LAND USE HISTORY

In the 19th century, the Birmingham tracts were much like the rest of Connecticut. Most of the land was cut over for use as small farms and for the production of charcoal. Many stone walls and cellar holes can be found today throughout the property.

The land in this area was acquired by the Ansonia Water Company between the late 1800s and the 1920s, with the majority being purchased between 1900 and 1910. A couple of small impoundments were found along the streams, but most of the land was cleared for small family farms. Work on the first stage of the Peat Swamp dam was started in 1895 and completed in 1916. The final stage was not completed until 1925. It is unknown when the diversions were constructed, but believed to have been in the 1920s.

The Ansonia Water Company began planting trees, mostly conifers, for forestry in 1906. The rest of the property was allowed to naturally grow back into forest when the last agricultural field was abandoned in 1931. Modest timber harvests started in the 1960s and increased in subsequent decades.

In 1955, a stone quarry was opened between Silver Mine Road and Haddad Road in Seymour. Three contractors removed stone until 1975. The largest of these operations provided riprap for the banks of the Naugatuck River in 1969.

PLANNED LAND USES

WATER SUPPLY FACILITIES AND SOURCE PROTECTION

The Birmingham System includes 22 acres that are designated for water supply facilities. These include two groundwater supplies. Peat Swamp Reservoir is not currently used for water supply. There are no plans to restore it to service within the 50-year planning period.

In 2011, it was decided to keep the level of Peat Swamp Reservoir several feet below its spillway. This was done in consultation with the DEEP to maintain an adequate margin of safety for the dam. The lake level will remain low while the Authority considers whether to restore or breach the dam.

The Authority will continue to direct its attention towards the protection of its water supply by acquiring key tracts of land and easements for water supply source protection and by conducting watershed inspections, police patrols of Authority lands, and reviews of proposed land development applications before municipal land use boards.

The Authority has sold two parcels that came through the Birmingham Utilities acquisition. One was a 2.3-acre commercial property in Guilford that was sold in 2009. The

other property was the Birmingham Utilities headquarters on Beaver Street in Ansonia. That property was 2.8 acres. Both properties were on Class III land and sold to private individuals.

PRESERVATION

Scenic Resources

While many of the properties in the Birmingham System have scenic qualities, we have not designated any acreage specifically to the scenic resources category. Arguably the most scenic location, the drive along Haddad Road along the northern end of Peat Swamp Reservoir, has been impacted by the lowering of the lake. Since that operation was for the purpose of dam safety, its importance trumps the aesthetic scenic values that were impacted.

Historic Sites

As previously noted, much of the area was used for small farms and charcoal production in the 1800s and early 1900s. Evidence of these uses can be found in numerous stone walls and cellar holes. Some evidence suggests that two of the cellar holes may be attributed to a Native American family who lived in the area until the 1800s. Additionally, there are rumors that a Native American burial ground was on the property. However, the notes on these attributes are not specific enough to designate on a map. These locations may be on land that was sold to the DEEP prior to the Authority's acquisition of BUI. In summary, none of the cellar holes are historically significant enough to designate as historic sites in this Land Use Plan.

Natural Areas

Many of the Birmingham tracts have interesting natural areas and features. The only site that has been designated as worthy of preservation as a natural area is the small valley between Falls Road and Pole Hill Road in Bethany. In this location, two streams cascade down steep slopes to create waterfalls during most of the year. The streams merge and become Hopp Brook which is diverted to Peat Swamp farther to the south.

RECREATION AND EDUCATION

Prior to acquisition, Birmingham Utilities permitted hiking at two areas. One was at Falls Road in Bethany in the previously described natural area. The other trail system was north of Rimmon Road in Seymour and Woodbridge. In 2008, the Authority closed the trails at Falls Road and obtained a DPH recreational activity permit for the trails north of Rimmon Road, the Pine Hill Recreation Area. Hiking is allowed at that location. One trailhead is on Authority property at the rental house on Rimmon Road. Another trailhead is located at the end of Hemlock Hollow Road in Woodbridge.

NATURAL RESOURCES

Timber

Like many other forests in southern Connecticut, the forests in the Birmingham System had red pine salvages in the 1970s and hemlock salvages in the 1980s. Many timber sales occurred from the 1960s until present day. Timber will continue to be harvested on the Birmingham tracts. Forest land will benefit from thinnings, improvement cuttings,

regeneration harvests, and clearcuts.

When feasible, nearby firewood permit holders will be permitted to harvest the tops of hardwood sawtimber trees for fuelwood. In areas distant from the road, logging slash and tops within timber sales will be left uncut or lopped to the height designated by the Forester. This will act as a natural barrier to deer browsing in an effort to aid the regeneration of higher value timber species. In areas immediately adjacent to public roads, the tops of harvested trees and other logging slash will be kept low to improve the appearance of a timber sale area soon after the completion of logging.

Wildlife

The forests within the Birmingham System support abundant wildlife populations. Deer are the predominant large herbivores. Their presence at high density continues to have a negative impact on many plants and animals in the forest. Numerous mammal and bird species, including coyotes and turkeys, have been observed on the properties. Timber harvesting will be planned to protect wildlife habitat, especially for birds and waterfowl during nesting periods.

In 2012, approximately 160 acres south of Rimmon Road in Seymour and Ansonia were opened for a controlled archery hunt. Few deer have been harvested from this location. One reason may be hunting on the adjacent DEEP property has helped reduce deer density. It will take several years before the impact of deer harvesting on forest regeneration can be assessed.

Agriculture

There are no fields in agriculture in the Birmingham System on the Authority's property.

NON-WATER SYSTEM LAND

Two rental houses in Seymour are designated for disposition as allowed by the 2013 amendment to the Authority's enabling legislation. One is at 189 Maple Street and is on Class I and II property. The other is at 59 Rimmon Road and is on Class II land. The Authority will attempt to dispose of these properties, with approved building lots, after DPH review.

STATUS OF LAND

WATER SYSTEM LAND

In total, 1,573 acres of the Birmingham System have been designated Water System Land. The Authority anticipates continuing to hold and manage this land. Water Supply Lands include land for water supply facilities and all of the land on watersheds tributary to Peat Swamp and Middle Reservoirs. Two active wellfields near the Housatonic River are part of the Birmingham tracts.

NON-WATER SYSTEM LAND

About 12 acres in the Birmingham System are designated as Class III, Non-Water System Land and not used or useful for water system purposes, now or in the future. Most of this acreage is forested land that provides scenic open space for the communities in which

this land is located.

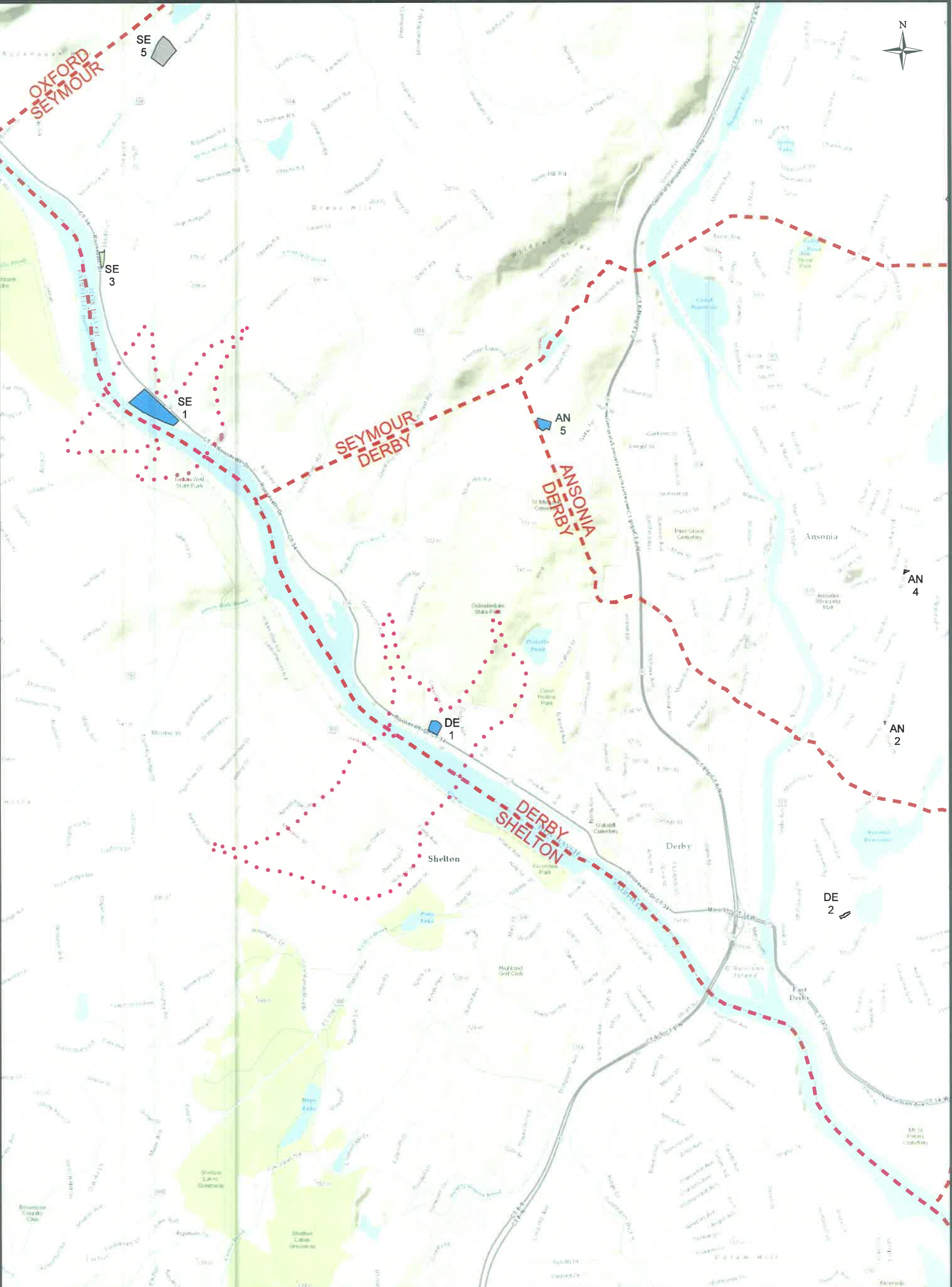
Three parcels have been noted for possible disposition within the next 10 years. Four acres along Haddad Road in Seymour are currently forested. Another five acre parcel is on the west side of Squantuck Road in Seymour. It was once held as a potential tank site, but the Authority recently determined it will not be needed for that purpose. This site is also wooded. The final parcel is less than one acre and is along a small stretch of stream next to High Street in Derby. A water main used to run the length of this property, but has since been abandoned. This parcel is in a residential area and is mostly open with some small trees and shrubs. All other Class III land that might be sold is not expected to enter the disposition process in the next ten years.

Three acres associated with the two rental houses are listed under the Non-Water System Land category even though they are located on Class I and II land. This is due to the 2013 amendment to the Authority's enabling legislation that allows for their disposition.

**Table 10
Birmingham System Land Use Summary**

BIRMINGHAM SYSTEM LAND USE SUMMARY				
LAND USE	Land Unit Number	Description	Acres	Status
WATER SUPPLY AND FACILITIES USES				
Reservoir Land	BE 36, BE 37, SE 7, SE 8, SE 11	Peat Swamp Reservoir, Middle Reservoir, Filtration Reservoir, Hopp Brook diversion pond	81.3	Existing
Facilities	Numerous locations		21.7	Existing
PRESERVATION USES				
Natural areas	BE 34	Waterfalls and ravine off of Falls Rd.	26.6	Existing
RECREATION AND EDUCATION USES				
Visitor parking	SE 11	at 59 Rimmon Rd.	*	Existing
Hiking and cross-country ski trails	Numerous locations	Pine Hill recreation area	3.2 mi.	Existing
NATURAL RESOURCE USES				
Forest Management	Numerous locations		1,442.9	Existing
NON-WATER SYSTEM USES				
Non-water System Land	AN 2, DE 2, SE 5, SE 11	Class III acreage	9.4	Proposed dispositions
Maple St. rental house	SE 11	189 Maple St.	1.5	Proposed disposition
Rimmon Rd. rental house	SE 11	59 Rimmon Rd.	1.5	Proposed disposition
		Total	1,584.9	

* - The parking area for the Pine Hill trails falls within the 1.5 acres at the Rimmon Road house.



Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way
- Recreation
- Recreation Trail

Preservation

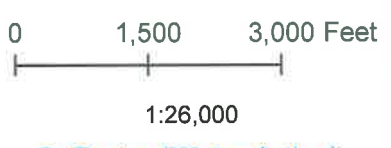
- Natural
- Scenic
- Historic

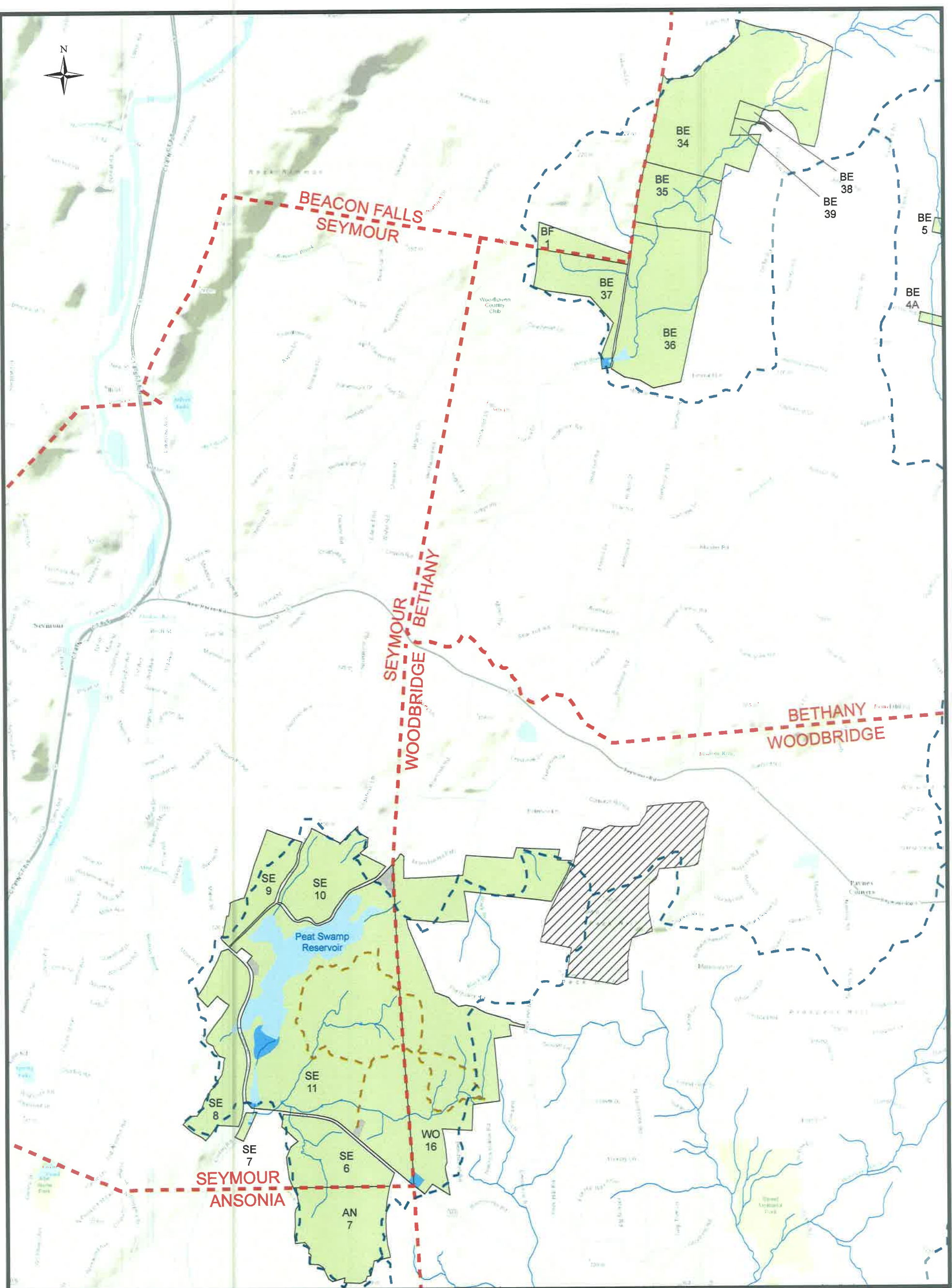
Non Water System Land

- Non-water System Land

- MA 1 Land Unit Number
- Town Boundary
- Blue Blaze Trail
- Conservation Easement

**Land Use Plan
Birmingham System
Map 1**





Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way

Recreation and Education Use

- Recreation
- Recreation Trail

Preservation

- Natural
- Scenic
- Historic

Non Water System Land

- Non-water System Land

- SE 9 Land Unit Number
- Town Boundary
- Blue Blaze Trail
- Conservation Easement

**Land Use Plan
Birmingham System
Map 2**



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NORTH CHESHIRE WELLFIELD

SUMMARY

The North Cheshire Wellfield consists of 117 acres along the Quinnipiac River north of Black's Road in Cheshire. This property will be managed for the protection of existing and future wells. Timber, sand and gravel resources will be managed in a manner compatible with groundwater protection. The Authority will continue to own and maintain this land for water supply.

INTRODUCTION

As stated above, the land associated with the North Cheshire Wellfield is along the Quinnipiac River north of Blacks Road in Cheshire. Honeypot Brook, a major tributary to the Quinnipiac River, flows northeast through the property.

WATER SUPPLY

The first well on this land was placed in production in 1959 to supplement the Prospect Reservoir water supply and meet the growing water demands of Cheshire. A groundwater diversion permit, granted by the DEEP in 1991, allowed the Authority to increase its allowable withdrawal of groundwater.

WATERSHED CHARACTERISTICS

The majority of the property is underlain by deep deposits of sand and gravel. Prior to acquisition by the New Haven Water Company, there was an extensive gravel-mining operation on the property. Other portions of the land were used for truck farming and tree nurseries. Under Company and Authority ownership, the open fields and reclaimed gravel mining areas were planted with larch, spruce, and white pine. About 90 acres on the western side of the property are in mixed hardwoods. This portion of the property is crossed by two major natural gas transmission lines and a sanitary sewer trunk line.

The limits of the aquifer, known as the Aquifer Protection Area (APA), have been modeled and mapped in accordance with DEEP Level A mapping standards. The APA covers approximately 1,700 acres extending southwest beyond Creamery Road and north to the Southington town line. A substantial portion of the land over the APA is zoned for industrial use. In 1994, the Town amended its zoning regulations to establish an aquifer protection zone that restricted the establishment of certain high-risk land uses. These regulations were amended in 2003 to be more protective. In 2004, the State of Connecticut adopted comprehensive statewide Aquifer Protection Regulations for stratified drift public water supply aquifers, which are mandated to be implemented at the municipal level. These regulations were adopted by the Town in 2008, replacing the prior local regulations. The regulations prohibit the establishment of 28 high-risk land uses within the APA and require existing high-risk uses to register with the Town as regulated activities and comply with specified best management practices. These existing regulated activities are inspected regularly by the Authority source water protection staff.

LAND USE HISTORY

The deep deposits of sand and gravel, known as stratified drift, are highly permeable and are the source of an abundant supply of groundwater. However, this permeability also allows pollutants to enter the groundwater freely, making the resource highly susceptible to contamination from substances that cannot be degraded or removed in the groundwater environment. Trichloroethylene (TCE), a common organic solvent, is one such substance that was discovered in the wellfield in 1979. In 1987, an aeration tower was constructed and, by a process known as air-stripping, the operation of the aeration tower has been successful in reducing concentrations of TCE and similar volatile contaminants to nearly undetectable levels. Since that time, TCE concentrations in the groundwater prior to treatment have declined to near or below laboratory detection limits.

In 1987, a release of fuel oil from a 1,000 gallon underground storage tank serving two emergency generators at the wellfield facility was discovered. Migration of the fuel oil was restricted by a natural low permeable layer of silt underlying the release area. In 1989, a groundwater recovery and treatment system was installed to remove fuel oil present in the groundwater and to further restrict migration of petroleum compounds. Since that time, the geology of the release area, natural attenuation processes, and continued use of groundwater recovery and treatment technologies have been successful in containing the contamination, and the release has not affected the production wells. An ongoing groundwater monitoring program is in place in order to detect any changes in the extent or concentrations of petroleum compounds. All fuel storage at the wellfield is now in protected aboveground storage tanks with secondary containment.

PLANNED LAND USES

WATER SUPPLY FACILITIES AND SOURCE PROTECTION

Because of the importance of the North Cheshire wells as a water supply for Cheshire and the vulnerability of the wells to contamination, only uses which are compatible with protection of the underlying aquifer will be allowed on the Authority's 117 acres. Land north of Honeyport Brook will be reserved for expansion of the wellfield. The Authority will continue to cooperate with the Town in evaluating proposed industrial and commercial land uses within the aquifer protection zone and in the enforcement of the Town's regulations.

PRESERVATION

Scenic Areas

There are no scenic areas on the North Cheshire Wellfield tract.

Historic Sites

An 18th-century frame colonial dwelling, situated near Blacks Road, was sold in 1983 and was restored by the buyers. The land under the building is under a long-term ground lease to private individuals.

Natural Areas

There are no natural areas on the North Cheshire Wellfield tract. Land over the easements for the gas transmission lines and sanitary sewer trunk line cannot be built upon

and must be kept clear of brush and trees.

RECREATION AND EDUCATION

Currently, there are no plans for recreation at the North Cheshire Wellfield tract. The Authority may cooperate with the Town and the easement holders for planning and implementing compatible recreation uses by the public.

NATURAL RESOURCES

Timber

The developing forest on the North Cheshire Wellfield property will be managed to promote optimum growth of the conifer and hardwood stands until land is needed for wellfield expansion or an approved recreation use.

Wildlife

Forests, brushy areas, and wetlands all provide food and cover for animals and increase the diversity of wildlife that the land can support. Whenever possible, favorable wildlife habitat will be maintained and protected.

NON-WATER SYSTEM LAND

No other uses are proposed for this property in this Plan.

STATUS OF LAND

WATER SYSTEM LAND

All of the land at the North Cheshire Wellfield is used or useful for water supply protection and water supply facilities. The Authority will continue to own and maintain this land for these purposes.

NON-WATER SYSTEM LAND

No land has been placed in this category.

**Table 11
North Cheshire Wellfield System Land Use Summary**

NORTH CHESHIRE WELLFIELD LAND USE SUMMARY					
Land Use	Land Unit Number	Description	Acres	Status	
WATER SUPPLY AND FACILITIES USES					
Facilities	CH 1		56.8	Existing	
PRESERVATION USES					
Historic	CH 1	Colonial Dwelling	1.1	Building sold w/ 99 yr. ground lease	
RECREATION AND EDUCATION USES					
		(none)			
NATURAL RESOURCE USES					
Forest Management	CH 1	Numerous areas	56	Existing	
Utility ROW	CH 1	Gas pipelines (2) and sanitary sewer line	3.5	Existing	
NON-WATER SYSTEM USES					
		(none)			
		Total	117.4		

Land Use Plan North Cheshire System



Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way

Recreation and Education Use

- Recreation
- Recreation Trail

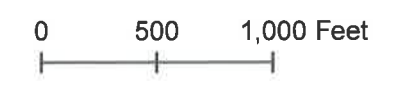
Preservation

- Natural
- Scenic
- Historic

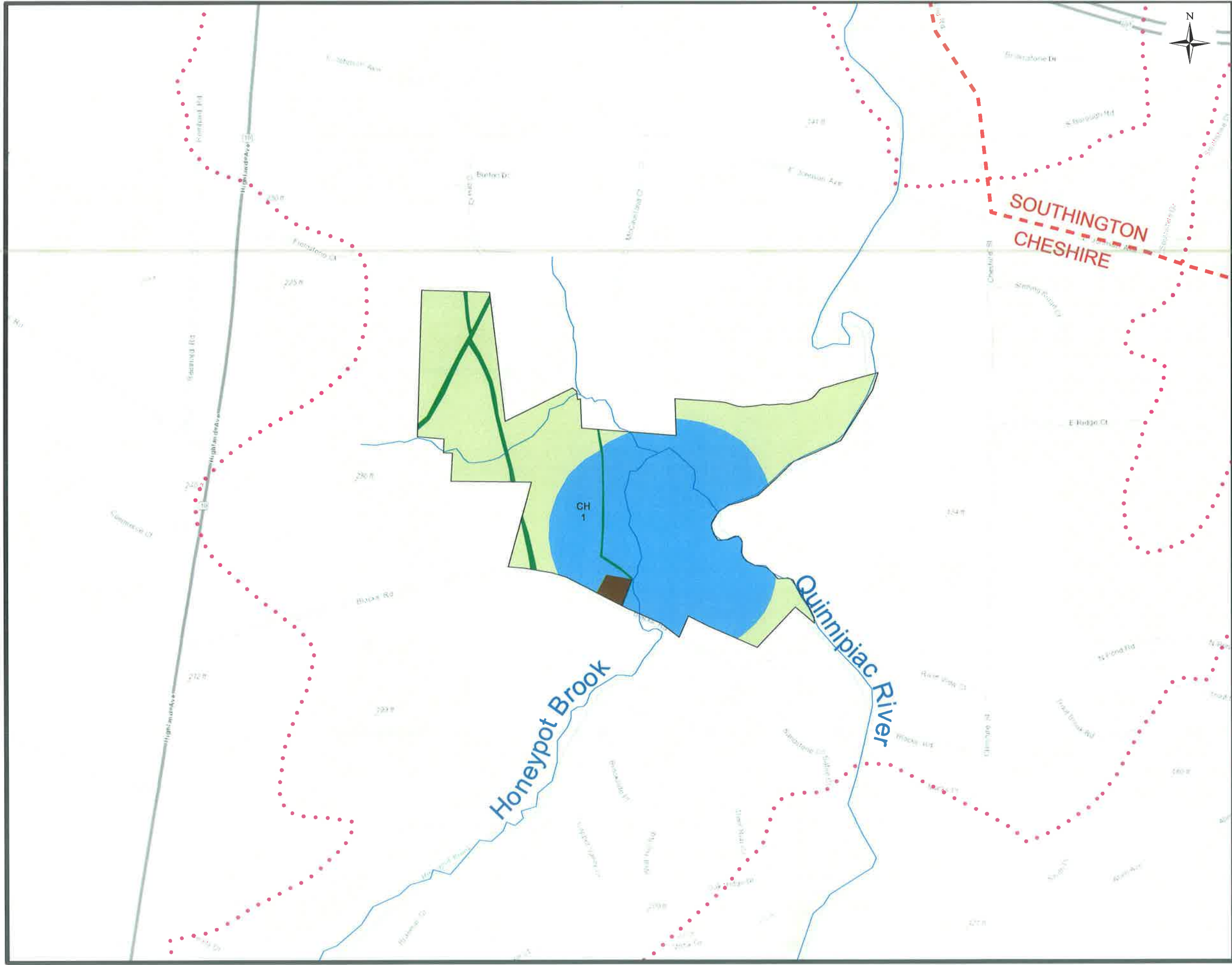
Non Water System Land

- Non-water System Land

- CH
1 Land Unit Number
- Town Boundary
- Blue Blaze Trail
- Conservation Easement



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MISCELLANEOUS PARCELS

SUMMARY

This section identifies 15 parcels of land totaling 17 acres in seven towns. They range in size from seven acres to 1,300 square feet. Many of these parcels are now in use for water supply facilities or are reserved for such use in the future.

They are not close to any of the extensive land systems previously described. The parcels are mostly found in residential areas. The status of each parcel is discussed in its narrative.

PLANNED LAND USES

Five parcels are considered -Water System Land and could be sold or leased with the Authority retaining easements for any needed water system purposes. The other ten parcels will continue to be used, or held for, water supply facilities for the foreseeable future.

The following pages list miscellaneous parcels by town and summarize the Authority's intent on retention or potential disposition.

ANSONIA

Kimberly Lane, AN 6. Located on Kimberly Lane in Ansonia, this two-acre parcel was retained by Birmingham Utilities, Inc. when they sold the surrounding property to the DEEP many years ago. This parcel will be retained for water system purposes.

Benz Street, AN 3. This 0.2-acre parcel is located on the south side of Ford Street, with frontage on Ford and Benz Streets. It was acquired during the Birmingham Utilities, Inc. acquisition. This parcel will be retained for water system purposes.

EAST HAVEN

Forbes Place, EH 5. This 50-foot-wide rectangular parcel is located on Forbes Place near its intersection with Sidney Street. This 0.1-acre parcel is located in an older residential part of East Haven. When the property was purchased in 1912, the former owner reserved a right to pass over the property from Pardee Place to his remaining land. This encumbrance remains with the land. This property may be offered for sale to the adjoining land owners after reserving an easement. If the property is sold, the parcel may be used for general lawn or garden purposes.

Pardee Place, EH 6. This 50-foot-wide rectangular parcel is located off Main Street near its intersection with Pardee Place. This property may be offered for sale to the adjoining property owners after reserving an easement. If the property is sold, the parcel may be used for general lawn or garden purposes.

Saltonstall Parkway, EH 7. This is a 0.28-acre parcel on the eastern bank of the Farm River and north side of Saltonstall Parkway (Route 1). This property may be offered for sale to the adjoining land owners, after reserving an easement. If the property is sold, the parcel may be used for general lawn or garden purposes.

MILFORD

Ford Street, MI 12. This is a somewhat rectangular parcel of approximately 2.9 acres on a knoll of ledge outcrop. This parcel will be retained for water system purposes.

West Avenue, MI 13. This 1.3-acre parcel is bounded on the south by West Avenue between Naugatuck Avenue and Utica Street. It is rectangular-shaped and situated in a residential area of Devon. This parcel will be retained for water system purposes.

NEW HAVEN

Hillside Avenue, NH 8. This 0.10-acre parcel is situated in a dense residential area on the eastern side of New Haven. This parcel will be retained for water system purposes.

90 Sargent Drive, NH 10. This parcel of 7.2 acres, the site of the Regional Water Authority's headquarters, has 342.5 feet of frontage on the north side of Sargent Drive.

The Authority will retain this land for office and utility construction yard use. In 1990, the Authority entered into an agreement with the South Central Regional Council of Governments to provide a site for a household hazardous waste collection center. The center, HazWaste Central, has been developed with the participation of 14 towns of the Regional Water Authority district and two towns outside the district. The Authority will continue to support HazWaste Central by allowing its land to be used for this purpose, provided that the participating communities continue to pay for the expense of its operation.

ORANGE

Indian River Road, OR 9. This is a minute triangular-shaped parcel of approximately 1,300 square feet on Indian River Road near the Milford town line. It was the site of a pressure-reducing valve chamber that was removed from service. The Authority has determined that this property is Non-Water System Land and is no longer needed for water supply operations. The parcel may be conveyed to adjoining property owners.

WEST HAVEN

Spring Street, WH 5. This 0.3-acre parcel was bought by the New Haven Water Company in 1958. It is rectangular in shape and bounded by commercial and residential properties. This parcel will be retained for water system purposes.

Allings Crossing Road, WH 6. This narrow triangular parcel is on the east side of Allings Crossing Road along the south side of the railroad. It is approximately 0.20 acres. Adjoining land is developed in residential use. This property was purchased by the New Haven Water Company for water system purposes. At the time of purchase, it was stipulated in the deed that the Water Company could not erect any structures on the property or acquire any riparian rights to Lake Phipps. The prior owner, the Lake Phipps Corporation, also conveyed to the Company a drainage easement in an existing ditch to adjacent land of Lake Phipps Corporation. The Water Company granted a slope easement to the State in 1969 and another easement has been granted to the Town of West Haven for sanitary sewers. The Authority has determined that the fee interest in this property is not necessary. If an offer is received and accepted, the Authority will reserve an easement for water system purposes.

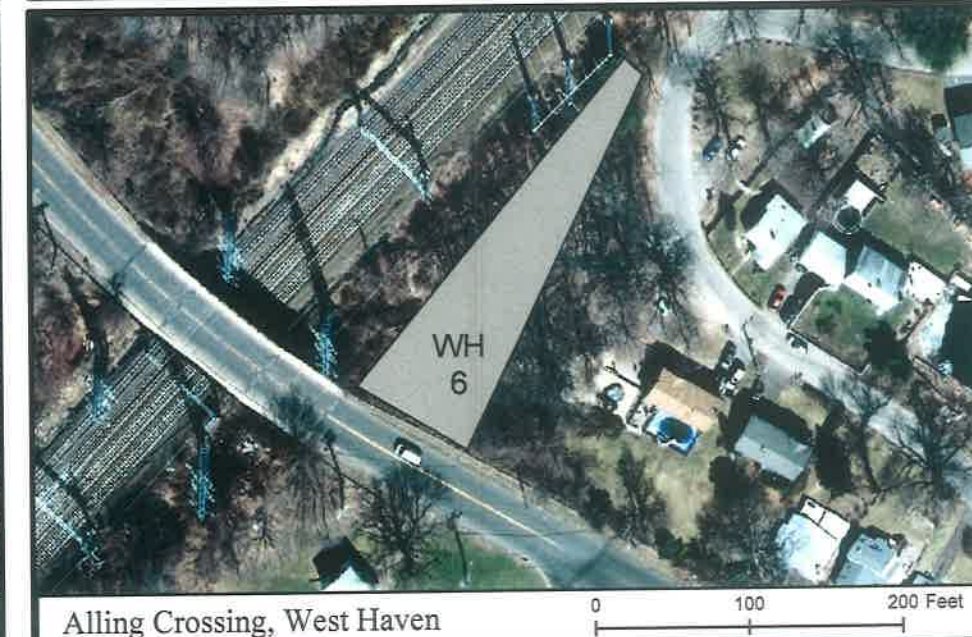
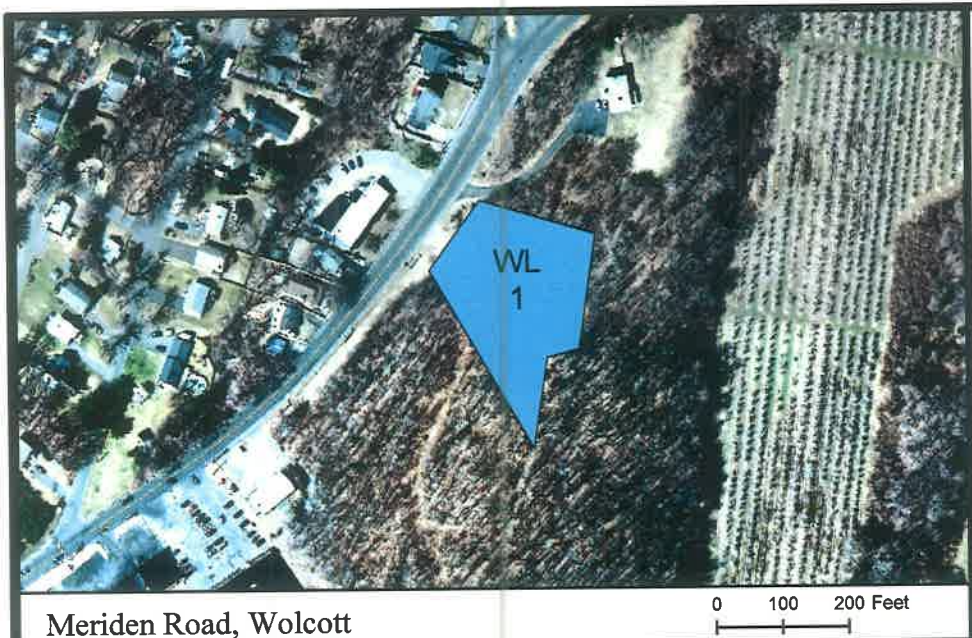
Shingle Hill Road, WH 7. The 0.2-acre parcel at this location is at the summit of Shingle

Hill. This parcel is in a largely residential area of West Haven, but is immediately surrounded by fields and a small farm. This parcel will be retained for water system purposes.

Hood Terrace, Rear of Saw Mill Road, WH 8. This is rear land in the vicinity of Hood Terrace accessible via a 20-foot-wide right-of-way from Saw Mill Road. The parcel is rectangular, contains approximately 14,200 square feet, and is located in an industrial zone. This parcel will be retained for water system purposes.

WOLCOTT

Meriden Road, WL 1. This 1.1-acre lot was purchased in 2010 when the Authority exercised an option over land it leased in Wolcott. As part of the acquisition, a water service line was installed through the Authority's property to the former owner's house. This parcel will be retained for water system purposes.



Water Supply Facilities		Natural Resource and Conservation Use		Preservation		WH 8 Land Unit Number	
	Reservoir		Forest		Natural		
	Water Supply Facility		Agricultural		Scenic		Blue Blaze Trail
	Water Quality Basin		Right of Way		Historic		Conservation Easement
	Watercourse	Recreation and Education Use		Non Water System Land			
	Watershed		Recreation		Non-water System Land		
	Aquifer		Recreation Trail				

Land Use Plan
Miscellaneous Parcels
Map 1

N



Water Supply Facilities

- Reservoir
- Water Supply Facility
- Water Quality Basin
- Watercourse
- Watershed
- Aquifer

Natural Resource and Conservation Use

- Forest
- Agricultural
- Right of Way
- Recreation and Education Use**
- Recreation
- Recreation Trail

Preservation

- Natural
- Scenic
- Historic

Non Water System Land

- Non-water System Land

- Land Unit Number
- Town Boundary
- Blue Blaze Trail
- Conservation Easement

Land Use Plan
Miscellaneous Parcels
Map 2



APPENDICES

Appendix A: Glossary of Terms

This glossary defines certain words and terms in the Land Use Plan to clarify their meaning. Several of the defined terms in the glossary are based on information in the Environmental Regulatory Glossary, Sixth Edition, published by Government Institutes, Inc., while others are based, in part, on definitions found in Connecticut laws.

A-2 Survey - A survey which conforms to the “Recommended Standards for Surveys and Maps in the State of Connecticut” and which has been prepared by a land surveyor licensed in the State of Connecticut and complies with the minimum detail requirements for urban land title surveys.

Alum Sludge - A nontoxic material composed of a mixture of aluminum hydroxide and naturally-occurring materials removed from water at a water treatment plant.

Aquifer - A natural underground bed or layer of earth, gravel, or porous stone that is capable of yielding a significant amount of water to a well.

Aquifer Protection Area (APA) - Any area consisting of well fields, areas of contribution, and recharge areas, identified on Level A maps approved by the Commissioner of the Department of Energy and Environmental Protection pursuant to sections 22a-354b to 22a-354d, inclusive, within which land uses or activities shall be required to comply with regulations adopted pursuant to section 22a-354o by the municipality where the Aquifer Protection Area is located. Certain high risk land uses and activities are considered regulated and thus prohibited within the APA. Existing regulated activities need to be registered with the DEEP and the local municipality and meet certain best management practices.

Best Management Practice (BMP) - Methods, measures, or practices selected by an agency to meet its nonpoint source control needs. BMPs include, but are not limited to, structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during, and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters.

Class I Land - A legal definition of all land owned by a water company, a water authority or a municipal water department in Section 25-37c of the Connecticut General Statutes that is within 250 feet of high water of a reservoir used for public drinking water supply, 100 feet of a stream flowing to such a reservoir, 200 feet of a public water supply well or has features matching additional criteria for Class I land found in Section 25-37c of the Connecticut General Statutes.

Class II Land - A legal definition of all land owned by a water company, a water authority, or a municipal water department in Section 25-37c of the Connecticut General Statutes that is either: (1) on a public drinking water supply watershed which is not included in Class I, or (2) completely off a public drinking water supply watershed but is within 150 feet of a distribution reservoir (terminal storage reservoir) or first-order stream tributary to a distribution (terminal storage) reservoir.

Class III Land - A legal definition of all land owned by a water company, a water authority or a municipal water departments in Section 25-37c of the Connecticut General Statutes that

is unimproved land off public drinking water supply watersheds and beyond 150 feet from a distribution (terminal storage) reservoir or first-order stream tributary to a distribution (terminal storage) reservoir.

Conservation - Avoiding waste of, and renewing when possible, human and natural resources. The protection, improvement, and use of natural resources according to principles that will assure the greatest benefit for present and future generations.

Conservation Easement - A legal agreement made between a property owner and a land trust or similar conservation agency protecting specified features or areas of a parcel of land by restricting the type and amount of development that may take place on the owner's property. A conservation easement is conveyed by a deed that is filed on the public land records.

Department of Energy and Environmental Protection (DEEP) - A State of Connecticut agency charged with conserving, improving, and protecting the natural resources and the environment of the State of Connecticut as well as making cheaper, cleaner, and more reliable energy available for the people and businesses of the State. It is responsible for protecting the environment including the air, surface water, groundwater, wetlands, state parks and state forests, and the implementation of laws enacted to protect the environment.

Department of Public Health (DPH) - A State of Connecticut agency responsible for implementing state and federal laws enacted to protect public health. More specifically, this agency has regulatory powers concerning the purity and adequacy of public drinking water supplies, as well as the disposition, change in use or recreation use of Class I and Class II lands.

Deed Restriction - A restriction against use of a specified parcel of land for certain uses as stated in a deed filed on the public land records. A deed restriction normally "runs" with the land - it survives changes in ownership.

Disposition of Land - Any sale, transfer, lease, or assignment of any ownership interest in land.

Distribution System - A network of water mains and appurtenances, pumping stations, and water storage tanks, operated to provide public drinking water, water for domestic, commercial, and industrial purposes, and for fire protection.

Diversions - Any activity which causes, allows, or results in the withdrawal of water from any stream, lake, pond, or aquifer.

Easement - A right or interest in land granted by the owner of land to another person, company, organization, public agency or utility.

Ecosystem - The interaction of a biological community and its non-living surroundings.

Eutrophication - A slow aging process by which a reservoir, lake, estuary, or bay evolves into a bog or marsh and eventually disappears. During the latter stages of eutrophication, the water body is choked by abundant plant life as a result of increased amounts of nutritive compounds, such as nitrogen and phosphorus. Human activities that add nutrients to a water body can accelerate the process. Eutrophic bodies of water are prone to excessive and frequent algae blooms, factors contributing to generally low levels of dissolved oxygen.

Evaluation of Potential Impact (EPI) - A document required by Special Act 77-98, as amended, to be prepared by the Authority and submitted to the RPB in support of an application for approval to sell, lease, dispose of, or to develop land.

Fee (Simple) Interest - All of the rights owned in a parcel of land subject only to state, federal, and local governmental regulations.

Fifty-year Planning Period - In Connecticut, every water company is required to plan to meet projected demand on its water system and water resources. Fifty years is the time period required for planning.

Forestry - The art and science of growing and managing forests for one or more of the following: the production of wood, protection of water runoff, protection of wildlife habitat, and aesthetic benefits, such as scenery viewed from public roads.

Fuelwood – Wood grown or used for fuel.

Groundwater - Water in a saturated zone or stratum beneath the surface of the ground.

HazWaste Central - A facility located on Authority property at 90 Sargent Drive, New Haven operated under an agreement with the South Central Regional Council of Governments (COG) for household hazardous waste collection. Household hazardous wastes are brought to the facility at specified dates and times, are handled by a professional waste collection company, and transferred to a secure and federally-approved disposal site or sites in accordance with all laws and regulations.

Interior Habitat - Habitat required for the survival of certain species of birds and other wildlife, usually large continuous tracts of forest land of 1,000 or more acres.

Kettle - A relatively smooth indentation of a local land surface created by a remnant of retreating glacial ice imbedded in the earth which melted in place. The largest kettles on Authority property can be found north of Clark's Pond in Hamden and at Cook's Road near Roaring Brook Road in Prospect.

Land Use Plan Amendment - Any change in the use of land for a purpose other than the use or uses identified on the Land Use Plan approved by the Representative Policy Board. A Land Use Plan Amendment requires the approval of the Representative Policy Board, which approval may be granted only after the Authority has submitted an application supported by an EPI and a public hearing (where the amendment is of a substantial nature).

Less Than Fee (Simple) Interest - Any legal interest in land owned by someone other than the property owner, such as an easement or right-of-way or use restriction.

Level A Aquifer Mapping - Lines shown on maps prepared and approved in accordance with Section 22a-354b-1 of the Regulations of Connecticut State Agencies defining the land area contributing ground water to a public water supply wellfield. Based on hydrogeological data of aquifer geometry, hydraulic characteristics and connection to surface water features, groundwater level data, and surface water discharge information.

Mixed Hardwoods - A stand of hardwood tree species consisting of oak, hickory, beech, sugar maple, ash, tulip poplar, cherry, and, to a lesser extent, black birch, yellow birch, and red maple.

Non-Water System Land – Class III land that is not needed for the operation, protection,

and maintenance of the water system, now or in the future.

Open Space - Undeveloped areas of land identified in the Land Use Plan for the following uses: (1) water supply and source protection (exclusive of above ground facilities constructed for water supply purposes); (2) preservation of scenic, historic, and natural areas; (3) recreation and education (exclusive of buildings erected or maintained for recreation and educational purposes); (4) natural resource conservation and development which encompasses the use of land for forestry, agriculture, and to a limited extent, the removal of earth materials.

Preliminary Assessment - In the case of a sale or transfer of land that is unlikely to have a significant effect on the environment, the Authority may submit a preliminary assessment of the impact to occur in lieu of an Evaluation of Potential Impact (EPI), and the Representative Policy Board may, on the basis of such preliminary assessment, waive or modify the requirement of such detailed statement.

Prime Farmland - Land suitable for cultivation and production of farm crops where the farming activity may be undertaken with minimum adverse effect on surface and groundwater quality, and in sufficient acreage and/or close proximity to an operating farm to be a viable undertaking.

Recharge Area - An area in which water reaches an aquifer by surface infiltration.

Representative Policy Board (RPB) - A 21-member body consisting of one representative from each of the 20-member towns appointed by the chief elected official with the approval of the town legislative body and one person appointed by the Governor of the State.

Powers conferred by Special Act 77-98, as amended, to the RPB. The RPB has power to approve or disapprove any application submitted by the Authority:

1. For standards and criteria for land use (land use plan) and policies for the disposition of land.
2. To amend a land use plan previously approved by the RPB.
3. To dispose of any interest in land.
4. To establish just and equitable rates or charges for use of the water supply system by any customer of the Authority.
5. To make a capital expenditure for a single project that exceeds more than \$2 million.
6. To approve the issuance of bonds.
7. To approve a site for a water filtration plant where such plant is not allowed by local zoning.

The RPB also has power to appoint individuals to the Five-Member Authority; remove any individual from the Five-Member Authority for cause; ratify the appointment of a chief executive officer, approve an outside auditor, and appoint an individual to the Office of Consumer Affairs. RPB members serve three-year staggered terms.

Reservoir - An artificial impoundment used to store, regulate, or control the release of water.

Safe Drinking Water Act - An act first passed by Congress in 1974 and amended in 1986 establishing standards for water purity monitoring and reporting for public drinking water

served to customers of water utilities, whether they are privately or publicly owned.

Sawtimber - A stand of trees in the forest whose diameter and height is sufficient to produce logs that can be commercially sawed into lumber.

South Central Connecticut Regional Water Authority (the Authority) - A public corporation and political subdivision of the State created for the purposes, charged with the duties, and granted the powers provided in Special Act 77-98, as amended. The Representative Policy Board appoints five members to the Authority. The Authority has duties and responsibilities similar to a board of directors.

Spillway - Part of a dam that allows impounded water in a reservoir to overflow without damaging the physical integrity of the dam.

Surface Water - Water above the surface of the ground, including but not limited to lakes, ponds, reservoirs, artificial impoundments, streams, rivers, springs, seeps, and wetlands.

Terminal Storage Reservoir - A reservoir from which water is released or pumped to a public drinking water treatment plant.

Upstream Storage Reservoir - A reservoir from which water may be released to a terminal storage reservoir.

Water Treatment Plant - A public drinking water supply facility designed to remove impurities from water such as particulate matter, microorganisms, color, and other organic and inorganic impurities that may occur in surface or groundwater.

Watershed - The land area that drains into a stream or other body of water. This term is synonymous with "catchment area".

Wellfield - An area over an aquifer in which one or more wells capable of producing large quantities of water for public water supply purposes have been developed.

Whitney Water Center - An Authority-supported water science education center for teaching elementary school children.

Appendix B: Department of Public Health Jurisdiction Over Watershed Land Owned By Water Companies

Sec. 25-32. Department of Public Health jurisdiction over and duties concerning water supplies, water companies and operators of water treatment plants and water distribution systems. (a) The Department of Public Health shall have jurisdiction over all matters concerning the purity and adequacy of any water supply source used by any municipality, public institution or water company for obtaining water, the safety of any distributing plant and system for public health purposes, the adequacy of methods used to assure water purity, and such other matters relating to the construction and operation of such distributing plant and system as may affect public health.

(b) No water company shall sell, lease, assign or otherwise dispose of or change the use of any watershed lands, except as provided in section 25-43c, without a written permit from the Commissioner of Public Health. The commissioner shall not grant: (1) A permit for the sale of class I land, except as provided in subsection (d) of this section, (2) a permit for the lease of class I land except as provided in subsection (p) of this section, or (3) a permit for a change in use of class I land unless the applicant demonstrates that such change will not have a significant adverse impact upon the present and future purity and adequacy of the public drinking water supply and is consistent with any water supply plan filed and approved pursuant to section 25-32d. The commissioner may reclassify class I land only upon determination that such land no longer meets the criteria established by subsection (a) of section 25-37c because of abandonment of a water supply source or a physical change in the watershed boundary. Not more than fifteen days before filing an application for a permit under this section, the applicant shall provide notice of such intent, by certified mail, return receipt requested, to the chief executive officer and the chief elected official of each municipality in which the land is situated.

(c) The commissioner may grant a permit for the sale, lease, assignment or change in use of any land in class II subject to any conditions or restrictions in use which the commissioner may deem necessary to maintain the purity and adequacy of the public drinking water supply, giving due consideration to: (1) The creation and control of point or nonpoint sources of contamination; (2) the disturbance of ground vegetation; (3) the creation and control of subsurface sewage disposal systems; (4) the degree of water treatment provided; (5) the control of watershed land by the applicant through ownership, easements or use restrictions or other water supply source protection measures; (6) the effect of development of any such land; and (7) any other significant potential source of contamination of the public drinking water supply. The commissioner may grant a permit for the sale, lease or assignment of class II land to another water company, municipality or nonprofit land conservation organization provided, as a condition of approval, a permanent conservation easement on the land is entered into to preserve the land in perpetuity predominantly in its natural scenic and open condition for the protection of natural resources and public water supplies while allowing for recreation consistent with such protection and improvements necessary for the protection or provision of safe and adequate potable water. Preservation in perpetuity shall not include permission for the land to be developed for any commercial, residential or industrial uses, nor shall it include permission for recreational purposes requiring intense development, including, but not limited to, golf courses, driving ranges, tennis courts, ballfields, swimming pools and uses by motorized vehicles other than vehicles needed by water companies to carry

out their purposes, provided trails or pathways for pedestrians, motorized wheelchairs or nonmotorized vehicles shall not be considered intense development. The commissioner may reclassify class II land only upon determination that such land no longer meets the criteria established by subsection (b) of section 25-37c because of abandonment of a water supply source or a physical change in the watershed boundary.

(d) The commissioner may grant a permit for (1) the sale of class I or II land to another water company, to a state agency or to a municipality, (2) the sale of class II land or the sale or assignment of a conservation restriction or a public access easement on class I or class II land to a private, nonprofit land-holding conservation organization, or (3) the sale of class I land to a private nonprofit land-holding conservation organization if the water company is denied a permit to abandon a source not in current use or needed by the water company pursuant to subsection (c) of section 25-33k, if the purchasing entity agrees to maintain the land subject to the provisions of this section, any regulations adopted pursuant to this section and the terms of any permit issued pursuant to this section. Such purchasing entity or assignee may not sell, lease or assign any such land or conservation restriction or public access easement or sell, lease, assign or change the use of such land without obtaining a permit pursuant to this section.

(e) The commissioner shall not grant a permit for the sale, lease, assignment or change in use of any land in class II unless (1) the land in class II is being sold, leased or assigned as part of a larger parcel of land also containing land in class III and use restrictions applicable to such land will prevent the land from being developed, (2) the applicant demonstrates that the proposed sale, lease, assignment or change in use will not have a significant adverse impact upon the purity and adequacy of the public drinking water supply and that any use restrictions which the commissioner requires as a condition of granting a permit can be enforced against subsequent owners, lessees and assignees, (3) the commissioner determines, after giving effect to any use restrictions which may be required as a condition of granting the permit, that such proposed sale, lease, assignment or change in use will not have a significant adverse effect on the public drinking water supply, whether or not similar permits have been granted, and (4) on or after January 1, 2003, as a condition to the sale, lease or assignment of any class II lands, a permanent conservation easement on the land is entered into to preserve the land in perpetuity predominantly in its natural scenic and open condition for the protection of natural resources and public water supplies while allowing for recreation consistent with such protection and improvements necessary for the protection or provision of safe and adequate potable water, except in cases where the class II land is deemed necessary to provide access or egress to a parcel of class III land, as defined in section 25-37c, that is approved for sale. Preservation in perpetuity shall not include permission for the land to be developed for any commercial, residential or industrial uses, nor shall it include permission for recreational purposes requiring intense development, including, but not limited to, golf courses, driving ranges, tennis courts, ballfields, swimming pools and uses by motorized vehicles other than vehicles needed by water companies to carry out their purposes, provided trails or pathways for pedestrians, motorized wheelchairs or non-motorized vehicles shall not be considered intense development.

(f) Nothing in this section shall prevent the lease or change in use of water company land to allow for recreational purposes that do not require intense development or improvements for water supply purposes, for leases of existing structures, or for radio towers or

telecommunications antennas on existing structures. For purposes of this subsection, intense development includes golf courses, driving ranges, tennis courts, ballfields, swimming pools and uses by motorized vehicles, provided trails or pathways for pedestrians, motorized wheelchairs or non-motorized vehicles shall not be considered intense development.

(g) As used in this section, (1) "water supply source" includes all springs, streams, watercourses, brooks, rivers, lakes, ponds, wells or underground waters from which water is taken, and all springs, streams, watercourses, brooks, rivers, lakes, ponds, wells or aquifer protection areas, as defined in section 22a-354h, thereto and all lands drained thereby; and (2) "watershed land" means land from which water drains into a public drinking water supply.

(h) The commissioner shall adopt and from time to time may amend the following: (1) Physical, chemical, radiological and microbiological standards for the quality of public drinking water; (2) minimum treatment methods, taking into account the costs of such methods, required for all sources of drinking water, including guidelines for the design and operation of treatment works and water sources, which guidelines shall serve as the basis for approval of local water supply plans by the commissioner; (3) minimum standards to assure the long-term purity and adequacy of the public drinking water supply to all residents of this state; and (4) classifications of water treatment plants and water distribution systems which treat or supply water used or intended for use by the public. On or after October 1, 1975, any water company which requests approval of any drinking water source shall provide for such treatment methods as specified by the commissioner, provided any water company in operation prior to October 1, 1975, and having such source shall comply with regulations adopted by the commissioner, in accordance with chapter 54, in conformance with The Safe Drinking Water Act, Public Law 93-523, and shall submit on or before February 1, 1976, a statement of intent to provide for treatment methods as specified by the commissioner, to the commissioner for approval. The commissioner shall adopt regulations, in accordance with chapter 54, requiring water companies to report elevated levels of copper in public drinking water.

(i) The department may perform the collection and testing of water samples required by regulations adopted by the commissioner pursuant to this section, in accordance with chapter 54, when requested to do so by a water company. The department shall collect a fee equal to the cost of such collection and testing. Water companies serving one thousand or more persons shall not request routine bacteriological or physical tests under this subsection.

(j) The condemnation by a state department, institution or agency of any land owned by a water company shall be subject to the provisions of this section.

(k) The commissioner may issue an order declaring a moratorium on the expansion or addition to any existing public water system that the commissioner deems incapable of providing new services with a pure and adequate water supply.

(l) The commissioner may issue, modify or revoke orders as needed to carry out the provisions of this part. Except as otherwise provided in this part, such order shall be issued, modified or revoked in accordance with procedures set forth in subsection (b) of section 25-34.

(m) The commissioner shall adopt regulations, in accordance with the provisions of chapter

54, to include local health departments in the notification process when a water utility reports a water quality problem.

(n) (1) On and after the effective date of regulations adopted under this subsection, no person may operate any water treatment plant, water distribution system or small water system that treats or supplies water used or intended for use by the public, test any backflow prevention device, or perform a cross connection survey without a certificate issued by the commissioner under this subsection. The commissioner shall adopt regulations, in accordance with chapter 54, to provide: (A) Standards for the operation of such water treatment plants, water distribution systems and small water systems; (B) standards and procedures for the issuance of certificates to operators of such water treatment plants, water distribution systems and small water systems; (C) procedures for the renewal of such certificates every three years; (D) standards for training required for the issuance or renewal of a certificate; and (E) standards and procedures for the issuance and renewal of certificates to persons who test backflow prevention devices or perform cross connection surveys. Such regulations shall be consistent with applicable federal law and guidelines for operator certification programs promulgated by the United States Environmental Protection Agency. For purposes of this subsection, "small water system" means a public water system, as defined in section 25-33d, that serves less than one thousand persons and has no treatment or has only treatment that does not require any chemical treatment, process adjustment, backwashing or media regeneration by an operator.

(2) The commissioner may take any disciplinary action set forth in section 19a-17, except for the assessment of a civil penalty under subdivision (6) of subsection (a) of section 19a-17, against an operator, a person who tests backflow prevention devices or a person who performs cross connection surveys holding a certificate issued under this subsection for any of the following reasons: (A) Fraud or material deception in procuring a certificate, the renewal of a certificate or the reinstatement of a certificate; (B) fraud or material deception in the performance of the certified operator's professional activities; (C) incompetent, negligent or illegal performance of the certified operator's professional activities; (D) conviction of the certified operator for a felony; or (E) failure of the certified operator to complete the training required under subdivision (1) of this subsection.

(3) The commissioner may issue an initial certificate to perform a function set forth in subdivision (1) of this subsection upon receipt of a completed application, in a form prescribed by the commissioner, together with an application fee as follows: (A) For a water treatment plant, water distribution system or small water system operator certificate, two hundred twenty-four dollars, except there shall be no such application fee required for a student enrolled in an accredited high school small water system operator certification course; (B) for a backflow prevention device tester certificate, one hundred fifty-four dollars; and (C) for a cross-connection survey inspector certificate, one hundred fifty-four dollars. A certificate issued pursuant to this subdivision shall expire three years from the date of issuance unless renewed by the certificate holder prior to such expiration date. The commissioner may renew a certificate for an additional three years upon receipt of a completed renewal application, in a form prescribed by the commissioner, together with a renewal application fee as follows: (i) For a water treatment plant, water distribution system or small water system operator certificate, ninety-eight dollars; (ii) for a backflow prevention device tester certificate, sixty-nine dollars; and (iii) for a cross-connection survey inspector

certificate, sixty-nine dollars.

(o) The commissioner may adopt regulations, in accordance with the provisions of chapter 54, that incorporate by reference the provisions of the federal National Primary Drinking Water Regulations in 40 C.F.R. Parts 141 and 142, promulgated by the United States Environmental Protection Agency, provided such regulations (1) are consistent with other regulations adopted pursuant to this section, and (2) explicitly incorporate any future amendments to said federal regulations.

(p) The commissioner may grant a permit for the lease of class I land associated with a groundwater source for use for public drinking water purposes to another water company that serves one thousand or more persons or two hundred fifty or more customers and maintains an approved water supply plan pursuant to section 25-32d, provided a water company acquiring such interest in the property demonstrates that such lease will improve conditions for the existing public drinking water system and will not have a significant adverse impact upon the present and future purity and adequacy of the public drinking water supply. Any water company requesting a permit under this subsection may be required to convey an easement that provides for the protection of the public water supply source and shall submit such easement and any provisions of the lease that pertain to the protection of the public water supply to the commissioner for approval.

Sec. 25-33k. Abandonment of source of water supply. Definition. Application and notification to municipalities. Basis for commissioner's decision. (a) For purposes of this section, "safe yield" means the maximum dependable quantity of water per unit of time that may flow or be pumped continuously from a source of supply during a critical dry period without consideration of available water limitations.

(b) No source of water supply shall be abandoned by a water company or other entity without a permit from the Commissioner of Public Health. A water company or other entity shall apply for such permit in the manner prescribed by the commissioner. Not later than thirty days before filing an application for such permit, the applicant shall notify the chief elected official of any municipality and any local health department or district in which such source of supply is located. Not later than sixty days after receipt of such notification, the municipality or municipalities and local health departments or districts receiving such notice, and any water company as defined in section 25-32a, may submit comments on such application to the commissioner. The commissioner shall take such comments into consideration when reviewing the application.

(c) (1) In determining whether to approve an application, the commissioner shall (A) consider the water supply needs of the water company, the state and any comments submitted pursuant to subsection (b) of this section, and (B) consult with the Commissioner of Energy and Environmental Protection, the Secretary of the Office of Policy and Management and the Public Utilities Regulatory Authority. The Commissioner of Public Health shall not be required to make a consultation pursuant to subparagraph (B) of this subdivision if the commissioner determines the source of water supply to be abandoned is a groundwater source with a safe yield of less than ten gallons per minute and is of poor water quality.

(2) The Commissioner of Public Health shall grant a permit upon a finding that any groundwater source with a safe yield of less than 0.75 millions of gallons per day, any

reservoir with a safe yield of less than 0.75 millions of gallons per day, any reservoir system with a safe yield of less than 0.75 millions of gallons per day, or any individual source within a reservoir system when such system has a safe yield of less than 0.75 millions of gallons per day will not be needed by such water company for present or future water supply and, in the case of a water company required to file a water supply plan under section 25-32d, that such abandonment is consistent with a water supply plan filed and approved pursuant to said section. No permit shall be granted if the commissioner determines that the source would be necessary for water supply by the company owning such source in an emergency or the proposed abandonment would impair the ability of such company to provide a pure, adequate and reliable water supply for present and projected future customers. As used in this section, a future source of water supply shall be considered to be any source of water supply necessary to serve areas reasonably expected to require service by the water company owning such source for a period of not more than fifty years after the date of the application for a permit under this section.

(3) The Commissioner of Public Health shall grant a permit upon a finding that any groundwater source with a safe yield of more than 0.75 millions of gallons per day, any reservoir with a safe yield of more than 0.75 millions of gallons per day, any reservoir system with a safe yield of more than 0.75 millions of gallons per day, or any individual source within a reservoir system when such system has a safe yield of more than 0.75 millions of gallons per day is of a size or condition that makes it unsuitable for present or future use as a drinking water supply by the water company, other entity or the state. In making a decision, the commissioner shall consider the general utility of the source and the viability for use to meet water supply needs. The commissioner shall consider any public water supply plans filed and approved pursuant to sections 25-32d and 25-33h, and any other water system plan approved by the commissioner, and the efficient and effective development of public water supply in the state. In assessing the general utility of the source, the commissioner shall consider factors including, but not limited to, (A) the safe yield of the source, (B) the location of the source relative to other public water supply systems, (C) the water quality of the source and the potential for treatment, (D) water quality compatibility between systems and interconnections, (E) extent of water company-owned lands for source protection of the supply, (F) types of land uses and land use controls in the aquifer protection area or watershed and their potential impact on water quality of the source, and (G) physical limitations to water service, system hydraulics and topography

Sec. 25-33I. Sale of source, potential source or abandoned source of water supply. (a) Whenever any water company intends to sell a source, potential source or abandoned source of water supply, it shall notify the Commissioner of Public Health. The commissioner shall order such company to notify, in writing, by certified mail, return receipt requested, other water companies that may reasonably be expected to utilize the source, potential source or abandoned source of its intention and the price at which it intends to sell such source. The commissioner shall determine the water companies that shall receive notice after consideration of public water supply plans filed and approved pursuant to section 25-32d and any other water system plan approved by the commissioner. No agreement to sell such source may be entered into by the water company except as hereinafter provided.

(b) Within ninety days after notice has been mailed pursuant to subsection (a) of this section, a water company receiving notice of the sale pursuant to said subsection shall give notice to

the water company selling the source, potential source or abandoned source of water supply by certified mail, return receipt requested, of a desire to acquire such source and such water company shall have the right to acquire the interest in such source for water supply purposes. If two or more water companies seek to acquire such source, potential source or abandoned source at the price at which it is offered, the Commissioner of Public Health shall hold a hearing to determine which company shall be allowed to acquire such source. In making his determination, the commissioner shall consider any public water supply plans filed and approved pursuant to section 25-32d, any other water system plans approved by the commissioner, the needs of each company and the efficient and effective development of public water supply in the state. The decision of the commissioner shall be subject to appeal pursuant to section 4-183 and shall have precedence in the order of trial as provided in section 52-191.

(c) If a water company fails to give notice pursuant to subsection (b) of this section by certified mail, return receipt requested, of its desire to acquire such source, potential source or abandoned source of water supply, such water company shall have waived its right to acquire the source or potential source of water supply in accordance with the terms of this section.

(d) The water company desiring to acquire the interest in the source, potential source or abandoned source of water supply shall acquire such interest within twelve months of the determination by the commissioner of which water company shall be allowed to acquire such source. If the rates of the water company acquiring such source are regulated by the Public Utilities Regulatory Authority, the source acquired may be included in the rate base of such company at the acquisition price.

(e) The water company desiring to acquire the interest in the source, potential source or abandoned source of water supply shall acquire such interest within twelve months of the determination by the commissioner of which water company shall be allowed to acquire such source. If the rates of the water company acquiring such source are regulated by the Public Utilities Regulatory Authority, the source acquired may be included in the rate base of such company at the acquisition price.

Sec. 25-33m. Priority for acquisition of source, potential source or abandoned source of water supply. Notwithstanding the provisions of section 16-50d, any water company given written notice pursuant to subsection (b) of section 25-33l shall have priority to acquire a source, potential source or abandoned source of water over any municipality in which such source is located or the Commissioner of Energy and Environmental Protection

Sec. 25-37b. Definitions. As used in sections 25-32 and 25-37a to 25-37e, inclusive, "critical components of a stream belt" means (1) the watercourse of a defined stream including banks, beds and water; (2) land subject to stream overflow; (3) associated wetlands, and (4) shorelines of lakes and ponds associated with the stream. "First-order stream" means a stream which directly enters a reservoir; "purity and adequacy of public drinking water supply" means the quality and quantity of public drinking water as determined by the commissioner of health services under subsection (d) of section 25-32; "water company" means any water company as defined in section 25-32a, and "commissioner" means the commissioner of health services.

Sec. 25-37c. Regulations. Classification of land owned by or acquired from a water company. The Department of Public Health shall adopt, in accordance with chapter 54, regulations establishing criteria and performance standards for three classes of water-company-owned land.

(a) Class I land includes all land owned by a water company or acquired from a water company through foreclosure or other involuntary transfer of ownership or control which is either: (1) Within two hundred and fifty feet of high water of a reservoir or one hundred feet of all watercourses as defined in agency regulations adopted pursuant to this section; (2) within the areas along watercourses which are covered by any of the critical components of a stream belt; (3) land with slopes fifteen per cent or greater without significant interception by wetlands, swales and natural depressions between the slopes and the watercourses; (4) within two hundred feet of groundwater wells; (5) an identified direct recharge area or outcrop of aquifer now in use or available for future use, or (6) an area with shallow depth to bedrock, twenty inches or less, or poorly drained or very poorly drained soils as defined by the United States Soil Conservation Service that are contiguous to land described in subdivision (3) or (4) of this subsection and that extend to the top of the slope above the receiving watercourse.

(b) Class II land includes all land owned by a water company or acquired from a water company through foreclosure or other involuntary transfer of ownership or control which is either (1) on a public drinking supply watershed which is not included in class I or (2) completely off a public drinking supply watershed and which is within one hundred and fifty feet of a distribution reservoir or a first-order stream tributary to a distribution reservoir.

(c) Class III land includes all land owned by a water company or acquired from a water company through foreclosure or other involuntary transfer of ownership or control which is unimproved land off public drinking supply watersheds and beyond one hundred and fifty feet from a distribution reservoir or first-order stream tributary to a distribution reservoir.

Appendix C: Recreation Request Procedure

The Authority receives many requests to expand recreational opportunities on its property. Most of these requests are to extend existing trails or blaze new ones. The following procedure was developed in 2008 to allow the Authority to consider such requests and cover the resources - time and financial - for them.

The Authority first receives the request and considers the merits of the proposal. If there is no inherent problem or objection to the proposal, the Authority and the requesting organization may enter into a Memorandum Of Agreement (MOA).

The MOA will include details of the proposal, such as the siting of the activity. This may include, but not be limited to, such items as soils, mapping of sensitive areas, access points, and parking. The MOA will also consider the preparation of the DPH applications, including any recreation activity and/or change-of-use permits as needed. The MOA will cover the possible need for a Land Use Plan amendment as well. These steps may require the preparation of a Preliminary Assessment and/or Evaluation of Potential Impact. Finally, the MOA will address the maintenance agreement between the Authority and the requesting organization that will put the onus of maintenance on the requesting organization.

The MOA will require the requesting organization to cover the costs of the proposal. This will include, but not be limited to, such expenses as Authority staff time, environmental reports, surveys, maps, application fees for local permits, and any other ancillary costs associated with the proposal (e.g. DPH requiring a portable toilet as part of the recreation activity permit).

Appendix D: Procedure for Future Renewable Economic Resource Projects

November 3, 2011

Present project to Authority* to obtain

- (a) approval for a renewable resource project and, if needed,
- (b) authorization to prepare a LUP amendment application +/- disposition of interest in land application (based upon revocable license agreement suitability).

Recruit RPB member from community where project will be sited on RWA land.

Invite LUC chair and one LUC designee to join the host RPB member (**total of three RPB members**) along with Management and the business partner for the project.

Schedule meeting with host town representatives one week prior to requested meeting.

1. Conduct meeting with host town representatives to discuss:
 - Benefits of project for host community,
 - Controls over project available to host community regulatory agencies, and
 - Controls using environmental protection best management practices to minimize impacts/disturbance of Class I, II and III land.
This discussion with all attendees is completed with the limitation of a hand-shake agreement to keep topic confidential until the business partner and Management are ready for public communication plan roll-out.
2. In executive session (confidentially), Management provides report to Authority with recommendation for next steps that might be:
 - Project stops,
 - Project continues and Land Use Plan application +/- Disposition of Interest application is filed by Authority for filing with RPB.
3. RPB follows normal process for applications and schedules public hearing in host town.
4. RPB approves application or not and project continues forward or not.

* In some cases, the Authority may be requested by Management to approve a sole source for the project based upon a justification to be defended by Management.

Appendix E: Changes in Land Ownership Since 1996

Since 1996, the Authority has acquired 2,364 acres of land for water supply uses and watershed protection. The cost of these land purchases as of 2015 was more than \$26.6 million. These figures do not include the acquisition of Birmingham Utilities in 2008. Table 12 lists the land acquisitions from 1996 to date. During this same time, the Authority received more than \$2.9 million in grants from various sources including the Watershed Fund, the DEEP, and local land trusts. All acquisitions and dispositions between 1983 and 1996 were listed in the previous Land Use Plans.

Additionally, the Authority acquired conservation easements over 1,304 acres. Table 13 lists the conservation easements that were acquired from 1996 to date.

Since the adoption and approval of the last Land Use Plan update in 1996, the Regional Water Authority has sold or exchanged 713 acres of land. Most of these 713 acres are outside public water supply watersheds on Class III land. Any change to increase the amount of land that may be slated for disposition will be subject to Authority policies and RPB approval. On the following pages of this report, each disposition is listed by town and described as it related to sections of the Land Use Plan.

Some 611 acres were sold to municipalities or local land trusts for park or preservation use while 102 acres were sold to developers. Of the 102 acres sold to developers, many acres are limited by deed restriction to open space uses. The sale of land has generated proceeds of approximately \$14.3 million that was deposited in the construction fund to be used for capital projects. Water consumers benefited because the land sales reduced the need to borrow through the sale of bonds to finance capital construction. Major construction projects completed since the last Land Use Plan update was approved include the construction of the Lake Whitney Water Treatment Plant.

The legislation creating the Authority required that an Evaluation of Potential Impact (EPI) be prepared for all proposals for sale, lease or development of land. An EPI for a proposed land disposition is made available to the public and distributed to municipal agencies at least 60 days before the Representative Policy Board holds a public hearing in the towns where the land is located. The EPI describes the land to be sold, the use to be made of it after disposition, and the expected benefits and potential adverse effects of the sale on water supply, the natural environment, and the community. It examines the consistency of the proposed action with local and state land use plans. It also sets forth conditions of sale, including any measures that will be incorporated to mitigate adverse impacts. The Town and the State, respectively, have a right of first refusal for the purchase of all unimproved land following RPB approval.

When the Authority sells land, deeds are drafted to ensure that special features of the land will be protected or that specific reference is made to an applicable land use plan for the tract that has been sold. Deeds are filed on the public land records. Because title attorneys often review the land records on behalf of their clients, land formerly owned by the Authority with land use restrictions usually triggers an inquiry, especially when a land use is proposed that may not be consistent with the conditions of the deed. Any release of a land use restriction, or an easement, is a disposition of an interest in land and requires RPB approval in most cases.

Since the last approved Land Use Plan in 1996, several amendments were adopted. A table listing Land Use Plan amendments approved by the RPB since 1996 can be found in Table 6.

LAND DISPOSITIONS

Land that was disposed of prior to 1996 can be found in the 1983 and 1996 Land Use Plans. This section lists in detail all the parcels that the Authority sold from 1996 to date. In addition to the two condemnations listed below, there have been three takings by the Department of Transportation that added up to less than 0.2 acres. These takings occurred to widen roads at Ives Street in Hamden, Whalley Avenue in New Haven, and Mount Carmel Avenue in Hamden.

ANSONIA

228-230 Beaver Street, AN 1. This 2.79-acre parcel was the Birmingham Utilities, Inc. headquarters. It was sold to a limited liability corporation in May 2008.

BRANFORD

Brushy Plains Road, part of BR 7. The Department of Transportation acquired two parcels by condemnation in March 2004. They totaled one acre. This is for the future relocation of the road.

GUILFORD

3250 Durham Road, GU 13 and part of GU 12. These two parcels are on opposite sides of Durham Road (Route 77) and held a house and barn that were formerly rented out by the Authority. The parcels added up to 5.09 acres. They were sold in December 2002 to a private individual.

Fire Tower Road, GU 10. This 60.8-acre parcel was sold to the Guilford Land Conservation Trust in January 2003.

2935-2941 Boston Post Road, GU 22. This 2.31-acre parcel was acquired in January 2008 as part of the Authority's acquisition of Birmingham Utilities, Inc. It included a commercial office building. It was sold in May 2009.

MADISON

Opening Hill Road, part of MA 1. In June 1998, 2.16 acres were split off this parcel and sold to the North Madison Congregational Church to expand their parking lot. This land is to the southwest of the traffic circle.

Route 80, part of MA 1. In August 2003, the remainder of MA 1 was sold to the Madison Land Conservation Trust. This parcel was 45.26 acres at the time of conveyance. This land is to the southwest of the traffic circle.

Route 80/Route 79, part of MA 2. The Authority sold 69.75 acres on the northwest side of the traffic circle to the Madison Land Conservation Trust on the same day as the previously mentioned parcel.

MILFORD

Bic Drive, MI 9 and MI 9A. The Authority sold two parcels on either side of Bic Drive to

Subway, Inc. The parcels totaled 9.48 acres. They were sold in December 1998.

Grinnell Street, part of MI 10. In March 1999, the Authority sold the remaining two lots from land unit MI 10 to a private developer. Most of MI 10 had already been sold to the City of Milford. These two lots totaled 2.4 acres and have been developed into single-family housing.

Tower Street, MI 14. This 0.4-acre lot was sold to a private individual in March 1999. It has since been developed into two house lots.

West Avenue, MI 4. In April 2001, the Authority sold 56.9 acres to the Kingdom Life Christian Church. The Authority placed a restrictive covenant on 41 acres of this parcel to conserve open space.

West Avenue, MI 6. This 17.2-acre parcel was sold to a limited liability corporation in July 2005. Restrictive covenants protect three portions of the property as open space. The total area covered by the restrictive covenant is about two acres.

Burnt Plains Road, MI 15. This 7.4-acre parcel was originally bought for a proposed tank. The tank was never built and it was determined the tank would never be needed. In September 2009, the Authority sold the property to the City of Milford to be incorporated into an adjacent city park.

NEW HAVEN

Quinnipiac Avenue, NH 6. This 16.8-acre parcel, known as “Quinnipiac Meadows”, was sold to the New Haven Land Trust in June 1999. The Authority retained an easement over the property for water system purposes.

ORANGE

Racebrook Road, OR 6. The part of the Racebrook Tract located in Orange was sold to the Town of Orange in May 2000. The tract totaled 230 acres and included the entrance and parking lot to the former Authority recreation area. The DEEP holds a conservation easement over the property since the town received an open space grant from the State for the purchase. The Authority retained an easement over part of the parcel for water system purposes.

SEYMOUR

111A Squantuck Road, SE 4. The Town of Seymour acquired this 2.17-acre tract by condemnation in September 2014. The Authority retained an easement over the parcel for water system purposes.

WOODBIDGE

Racebrook Road, WO 12. The Town of Woodbridge acquired the 180.9 acres of the former Racebrook Tract that were within Woodbridge and not associated with the Maltby Lakes watershed or its diversions. The town took title to the acreage in three phases during May 2005, December 2006, and December 2009. The DEEP holds conservation easements over the entire property since the town received open space grants from the State for the purchases. The Authority retained an easement over part of the parcel for water system purposes.

Table 12
Land Acquisitions Since 1996

Date	Transaction	Grantor	Town	System	Acres	LU Number
7/25/1997	Purchase	Hammonasset Fishing Association	Madison	Hammonasset	95.51	MA 4A
1/29/1998	Purchase	Hinman	Bethany	West River	49.189	BE 6A
2/25/1998	Purchase	Rossiter	Guilford	Menunketuc	9	GU 9A
2/26/1998	Purchase	Hein	Bethany	West River	49.51	BE 6B
4/16/1998	Purchase	Rossiter	Guilford	Menunketuc	19.97	GU 9B
9/11/1998	Purchase	National Associated Properties	North Haven	n/a	0.7	NO 11
10/30/1998	Purchase	Ackerman	Madison	Hammonasset	33.4	MA 2B
12/4/1998	Purchase	Hoblitzelle	North Branford	Gaillard	29.066	NB 4B
8/16/1999	Purchase	Schipper	Hamden	Whitney	0.2	HA 31
9/23 '1999	Purchase	Cinque	North Branford	Saltonstall	35.5	NB 12; EH 3A
11/10/1999	Purchase	Pope	Hamden	Whitney	0.59	HA 31A
12/17/1999	Purchase	Larson	Killingworth	Hammonasset	7.01	KI 9
3/10/2000	Purchase	Wiese	Haddam	Hammonasset	103.6	HD 1
5/23/2000	Purchase	Abbott	Madison	Hammonasset	82.3	MA 11; KI 10
6/29/2000	Purchase	Arrigoni	Durham	Hammonasset	40.9	DU 1
9/21/2000	Purchase	Larson	Killingworth	Hammonasset	20.14	KI 11
11/10/2000	Purchase	Berry	Bethany	West River	18.8	BE 8A
12/4/2000	Purchase	Jaycox	Killingworth	Hammonasset	128.8	KI 9A
5/23/2001	Purchase	Burr	Durham	Hammonasset	6.5	DU 2
6/11/2001	Purchase	Shuler	Durham	Hammonasset	39.8	DU 3
6/22/2001	Purchase	Bugai	Durham	Hammonasset	9.86	DU 2A
10/9/2001	Purchase	Daley	East Haven	Saltonstall	0.57	EH 4A
10/31/2001	Purchase	Lorman	Killingworth	Hammonasset	13.14	KI 11A
11/6/2001	Purchase	Smulders	Killingworth	Hammonasset	26.21	KI 12
11/19/2001	Purchase	Killingworth Common Ltd.	Killingworth	Hammonasset	64.88	KI 13
12/31/2001	Purchase	Pierce	Guilford	Menunketuc	19.14	GU 6A
1/22/2002	Purchase	Jerome	Killingworth	Hammonasset	41.3	KI 14
1/23/2002	Purchase	Shuler	Durham	Hammonasset	5	DU 2B
3/12/2002	Judgement	Venuti	Killingworth	Hammonasset	11.71	KI 3A
4/11/2002	Purchase	Tilson	Durham	Hammonasset	30.22	DU 4
4/25/2002	Abndmmt	Town of Bethany	Bethany	West River	0.02	BE 4A
5/1/2002	Purchase	Brinsmade	Bethany	West River	15.693	BE 23A

Date	Transaction	Grantor	Town	System	Acres	LU Number
6/19/2002	Purchase	McGrail Estates Partnership	Hamden	Whitney	0.76	HA 5A
7/30/2002	Purchase	Benedetti	Bethany	West River	11.775	BE 28
8/2/2002	Purchase	Williams	North Branford	Gaillard	2.63	NB 13
8/27/2002	Purchase	Giuffrida	Durham	Hammonasset	16.46	DU 3A
9/20/2002	Purchase	Cuomo	Durham	Hammonasset	11.6	DU 1A
10/18/2002	Purchase	Stahl	Killingworth	Hammonasset	14.739	KI 9B
10/29/2002	Purchase	Hines/LaRoche	Killingworth	Hammonasset	27.899	KI 15A; KI 15B
11/12/2002	Purchase	ABC	Hamden	Whitney	51.5	HA 33A; HA 33B
12/20/2002	Purchase	Martucci	Bethany	West River	2.69	BE 28A
12/20/2002	Purchase	Pollock	Bethany	West River	2.83	BE 28B
12/23/2002	Purchase	Smith	Killingworth	Hammonasset	40.1	KI 16
2/14/2003	Purchase	Guerra	Bethany	West River	5.25	BE 28C
3/18/2003	Purchase	Parada	Killingworth	Hammonasset	16.36	KI 13A
3/24/2003	Purchase	A&D Construction	Hamden	Whitney	0.07	HA 22A
9/19/2003	Purchase	Evans/TPL	Killingworth	Hammonasset	21.091	KI 14A
11/21/2003	Purchase	Oslander/TNC	Madison	Hammonasset	63.82	MA 12
12/23/2003	Purchase	Sullivan	Durham	Hammonasset	6.57	DU 3B; DU 5
2/3/2004	Purchase	McCormack	Killingworth	Hammonasset	11.89	KI 13B
6/11/2004	Purchase	Town of North Branford	North Branford	Gaillard	0.57	NB 1C
6/11/2004	Purchase	Rogers	North Branford	Gaillard	34.14	NB 4C
6/15/2004	Purchase	Skelton/Rose	Guilford	Gaillard	8.28	GU 4A
7/8/2004	Abndmnt	Town of Hamden	Hamden	West River	3.6587	HA 28A
7/13/2004	Purchase	Ravenswood Construction	Hamden	Whitney	0.37	HA 34
8/12/2004	Purchase	Martyn	Bethany	West River	6.33	BE 22A
10/21/2004	Abndmnt	Town of Bethany	Bethany	West River	0.63	BE 17B
12/14/2004	Purchase	McCarthy	North Branford	Saltonstall	17.916	NB 14
12/14/2004	Purchase	Michel	Bethany	West River	19	BE 31
4/22/2005	Purchase	Town of Branford	Branford	Saltonstall	27.55	NB 15
6/15/2005	Purchase	Sheperd/Eicher	Woodbridge	West River	22.7	WO 3A
6/30/2005	Purchase	American Expedition	North Branford	Gaillard	33.199	NB 16
6/30/2005	Purchase	Busch	North Branford	Saltonstall	15.388	NB 14A
7/14/2005	Purchase	Celmer	North Branford	Gaillard	9.9	NB 4D
7/26/2005	Purchase	Romboli	Madison	Hammonasset	16.08	MA 13
8/31/2005	Purchase	Swajchuk	North Branford	Gaillard	28.54	NB 17
12/6/2005	Purchase	Saxton	Bethany	West River	17	BE 7A

Date	Transaction	Grantor	Town	System	Acres	LU Number
3/29/2006	Abndnmnt	Town of Bethany	Bethany	West River	4.17	BE 1A
3/29/2006	Abndnmnt	Town of Bethany	Bethany	West River	1.06	BE 3A
4/28/2006	Purchase	MacDiarmid	Bethany	West River	2.3278	BE 32
10/26/2006	Purchase	Raudat	Killingworth	Hammonasset	88.398	KI 17
11/28/2006	Purchase	Vynalek	Durham	Hammonasset	39.51	DU 6
1/5/2007	Purchase	Connecticut Water	Bethany	West River	15.3	BE 33
4/23/2007	Purchase	Mulvey	Madison	Hammonasset	10.51	MA 14
5/7/2007	Purchase	Martin	Madison	Hammonasset	15.3	MA 5A
6/29/2007	Purchase	Frechette	Orange	Maltby	21.33	WO 15
7/31/2007	Purchase	Camp	Bethany	West River	27.63	BE 8B
9/28/2007	Purchase	Drabkin	Hamden	Whitney	14.12	HA 35
1/12/2008	Purchase	Perez	Madison	Hammonasset	31.7	MA 2C; MA 6A
1/16/2008	Purchase	BUI	Ansonia	Birmingham	2.7896	AN 1
1/16/2008	Purchase	BUI	Ansonia	Birmingham	0.03	AN 2
1/16/2008	Purchase	BUI	Ansonia	Birmingham	0.28	AN 3
1/16/2008	Purchase	BUI	Ansonia	Birmingham	0.12	AN 4
1/16/2008	Purchase	BUI	Ansonia	Birmingham	1.42	AN 5
1/16/2008	Purchase	BUI	Ansonia	Birmingham	2.08	AN 6
1/16/2008	Purchase	BUI	Ansonia	Birmingham	92.48	AN 7
1/16/2008	Purchase	BUI	Beacon Falls	Birmingham	21.5	BF 1
1/16/2008	Purchase	BUI	Bethany	Birmingham	213.69	BE 34
1/16/2008	Purchase	BUI	Bethany	Birmingham	56.64	BE 35
1/16/2008	Purchase	BUI	Bethany	Birmingham	142.17	BE 36
1/16/2008	Purchase	BUI	Bethany	Birmingham	53.11	BE 37
1/16/2008	Purchase	BUI	Bethany	Birmingham	5.25	BE 38
1/16/2008	Purchase	BUI	Bethany	Birmingham	3.92	BE 39
1/16/2008	Purchase	BUI	Derby	Birmingham	1.55	DE 1
1/16/2008	Purchase	BUI	Derby	Birmingham	0.36	DE 2
1/16/2008	Purchase	BUI	Seymour	Birmingham	8.67	SE 1
1/16/2008	Purchase	BUI	Seymour	Birmingham	70.38	SE 10
1/16/2008	Purchase	BUI	Seymour	Birmingham	436.04	SE 11
1/16/2008	Purchase	BUI	Seymour	Birmingham	0.69	SE 3
1/16/2008	Purchase	BUI	Seymour	Birmingham	2.17	SE 4
1/16/2008	Purchase	BUI	Seymour	Birmingham	4.99	SE 5
1/16/2008	Purchase	BUI	Seymour	Birmingham	69.01	SE 6
1/16/2008	Purchase	BUI	Seymour	Birmingham	3.32	SE 7
1/16/2008	Purchase	BUI	Seymour	Birmingham	72.2	SE 8

Date	Transaction	Grantor	Town	System	Acres	LU Number
1/16/2008	Purchase	BUI	Seymour	Birmingham	44.45	SE 9
1/16/2008	Purchase	BUI	Woodbridge	Birmingham	282.87	WO 16
1/16/2008	Purchase	BUI	Guilford	n/a	2.31	GU 22
1/28/2008	Purchase	Hawke	Killingworth	Hammonasset	4.3	KI 18
3/14/2008	Purchase	Vecchiarino	Madison	Hammonasset	4.5	MA 5B
4/1/2008	Purchase	Santa Barbara Dev.	Bethany	West River	58.649	BE 13A
8/27/2008	Purchase	Cole	Bethany	West River	1.64	BE 17C
10/29/2008	Purchase	Berntsen	Madison	Hammonasset	11.07	MA 13A
12/16/2008	Purchase	Shea	Guilford	Menunketuc	12.72	GU 6B
12/22/2008	Purchase	Shepherd/Prentice Partnership	Bethany & Hamden	West River	57.15	BE 14B; HA 28B; HA 28C
2/18/2009	Purchase	Crosby	Hamden	Whitney	60.402	HA 36
5/21/2009	Purchase	Neubig	East Haven	Saltonstall	30.36	EH 9
7/30/2009	Purchase	Neubig	East Haven	Saltonstall	44.47	EH 10; EH 11; EH 12
8/26/2009	Purchase	Emielita	Branford	Saltonstall	10.367	BR 19
12/18/2009	Purchase	Morrissey	Durham	Hammonasset	42.79	DU 7
5/14/2010	Purchase	Adomelis	Wolcott	n/a	1.15	WL 1
9/29/2010	Purchase	Neubig	East Haven	Saltonstall	15.57	EH 13
12/29/2011	Purchase	Ruge	Madison	Hammonasset	34.61	MA 2D
6/10/2014	Purchase	Dandio	Guilford	Menunketuc	60.81	GU 12A
2/3/2015	Purchase	Lorman/LM Investors LP	Killingworth	Hammonasset	64.88	KI 13C

Table 13
Conservation Easements Since 1996

Date	Former/Current Owner	Address	Town	System	Acres
9/30/1998	Hammonasset Fishing Association		Killingworth	Hammonasset	304.05
4/4/2000	Town of Woodbridge	Peck Hill Rd.	Woodbridge	Maltby	200
12/4/2000	Jaycox	Bunker Hill Rd.	Killingworth	Hammonasset	30
3/14/2001	Podgewaite	740 Brooksvale Ave. rear	Hamden	Whitney	11.35
4/26/2002	Wettemann	Sea Hill Rd. ext.	North Branford	Gaillard	15.851
7/30/2002	Benedetti	off 255 Wooding Hill Rd.	Bethany	West River	3.213
10/29/2002	Hines/LaRoche	Burr Hill Rd.	Killingworth	Hammonasset	23.38
12/23/2002	Smith	Little City Rd.	Killingworth	Hammonasset	11.25
1/13/2003	Swift/MLCT	862 Summer Hill Rd.	Madison	Hammonasset	24.26
4/16/2003	Hauer	303 Wooding Hill Rd. rear	Bethany	West River	2.76
12/17/2003	Jaynes	Gaylord Mt. Rd. rear	Hamden	Whitney	10
12/23/2003	Sullivan	31 Old Johnson Rd.	Durham	Hammonasset	11.07
1/5/2004	Panko/Town of North Branford	Totoket Rd.	North Branford	Saltonstall	65.7
1/27/2004	DeDominicis/Town of Cheshire	Corliss La.	Cheshire	Whitney	183.5
7/9/2004	Kelly/Town of Hamden	Gaylord Mt. Rd./Still Hill Rd./Brooksvale Rd.	Hamden	Whitney	185.14
4/22/2005	Town of Branford	Rolling Hills Dr.	Branford	Saltonstall	34.87
11/18/2005	JRR Associates & Mills	Lot 1 & 18, Corliss La.	Cheshire	Whitney	1.308
12/6/2005	Hungerford	Hilldale Rd.	Bethany	West River	1.63
12/27/2005	Cheshire Land Trust	Cook Hill Rd. & Sperry Rd.	Cheshire	Whitney	40.06
2/6/2007	Hamden Land Conservation Trust	277 Thornton St.	Hamden	Whitney	3
7/31/2007	Camp	Hilldale Rd. & Litchfield Tpk.	Bethany	West River	2.26
3/10/2008	Simon	244 Amity Rd.	Bethany	West River	3.718
8/27/2008	Cole	483 Downs Rd.	Bethany	West River	1.45
9/12/2008	Town of Hamden	370 & 400 Brooksvale Ave.	Hamden	Whitney	40
11/18/2008	Paprosky	274 Amity Rd.	Bethany	West River	6.933
7/27/2009	McKee	S. Brooksvale Rd.	Cheshire	Whitney	47.83
1/14/2010	Benedict/Juniper Assoc.	4280 & 4296 Whitney Ave. rear	Hamden	Whitney	38.92

Table 14
Land Use Plan Amendments Since 1996

Date	Amendment
8/21/1997	Approved amendment to Land Use Plan and Lease of a Portion of MA 1, Madison and release of reversionary interest in a deed from New Haven Water Company to North Madison Congregational Church.
1/22/1998	Approved Land Use Plan Amendment and Lease of approximately 9,978 square feet of Class II land on Authority parcel OR 2, off Ogg Meadow Road.
2/17/2000	Approved amendment to the Land Use Plan to construct a third visitor parking lot.
3/22/2001	Approved non-substantial recreation amendment to the Maltby System of the Land Use Plan (bicycle trails).
8/16/2001	Approved application to change land designation of 2.2 acres of NB 4 from preservation/scenic use to Water Supply Facility.
7/22/2004	Approved non-substantial recreation amendment to the Lake Saltonstall System of the Land Use Plan to allow bicycling at Lake Saltonstall on a pilot basis.
9/23/2004	Approved non-substantial recreation amendment to the Genesee-Hammonasset System of the Land Use Plan to allow construction of a one-quarter mile hiking trail at Coan Pond in Madison.
1/20/2005	Approved disposition of 181+/- acres of Class III land in Woodbridge, being a portion of the Racebrook Tract, to the Town of Woodbridge, for \$3.1 million and incorporated Land Use Plan Amendment.
1/18/2007	Approved donation, removal, and relocation of Gasoline Filling Station Attendant's Shelter, 714 Foxon Road, North Branford to the Town of North Branford.
10/22/2009	Approved non-substantial amendment to the Land Use Plan to allow the attachment of a cellular communications antenna to the Rabbit Rock Standpipe on Land Unit NO 1, located at 3 Horseshoe Hill Road, North Haven, CT.
11/19/2009	Approved non-substantial amendment to the Land Use Plan to allow construction of a hiking trail on Land Units GU 18 and GU 19 located in Guilford, CT in the Genesee-Hammonasset System.
5/19/2011	Approved Authority Application for Proposed Disposition of Class III Lands and Amendment of the Land Use Plan, Portions of NB 4 and all of NB 4A, Beech Street and Poms Lane, North Branford.
6/18/2015	Approved non-substantial amendments to the Land Use Plan to allow the installation and construction of cell phone tower sites at Land Units EH 2 (Saltonstall Ridge) and NO 1 (Rabbit Rock).

*As allowed by Section 18 of the Authority's enabling legislation and General Policy IA and Specific Policy IIA in the Land Use Plan, an amendment is not required for the construction of a water supply facility. On August 16, 2001, the Representative Policy Board conducted a public hearing and subsequently approved the application. Approximately 2.2 acres of Authority property in North Branford, referred to as Land Unit NB 4, are affected. The designation of this land will be changed from preservation use/scenic to water supply facility.

Big Gulph

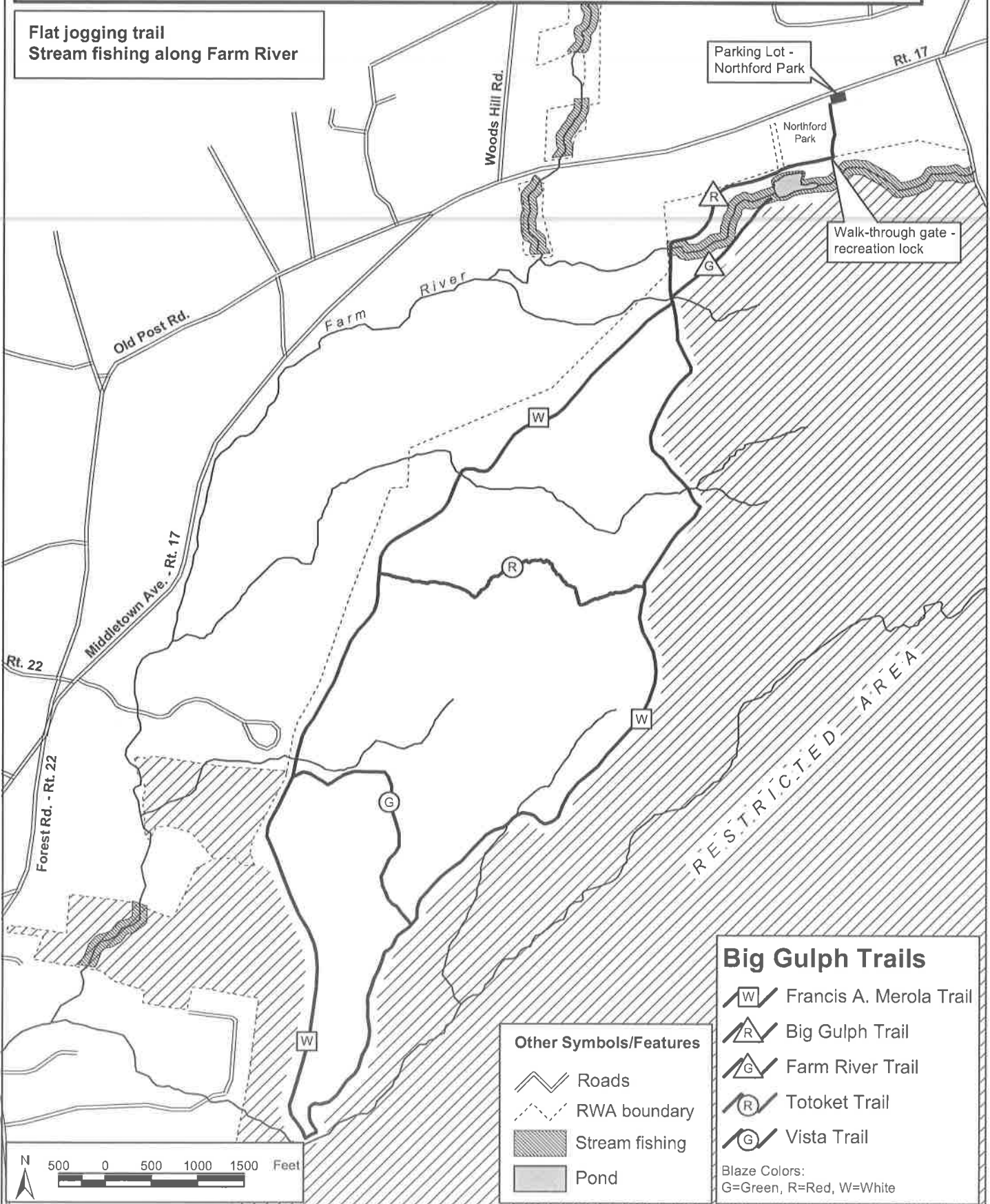


Flat jogging trail
Stream fishing along Farm River

Parking Lot -
Northford Park

Northford
Park

Walk-through gate -
recreation lock



Big Gulph Trails

- Francis A. Merola Trail
- Big Gulph Trail
- Farm River Trail
- Totoket Trail
- Vista Trail

Blaze Colors:
G=Green, R=Red, W=White

Other Symbols/Features

- Roads
- RWA boundary
- Stream fishing
- Pond

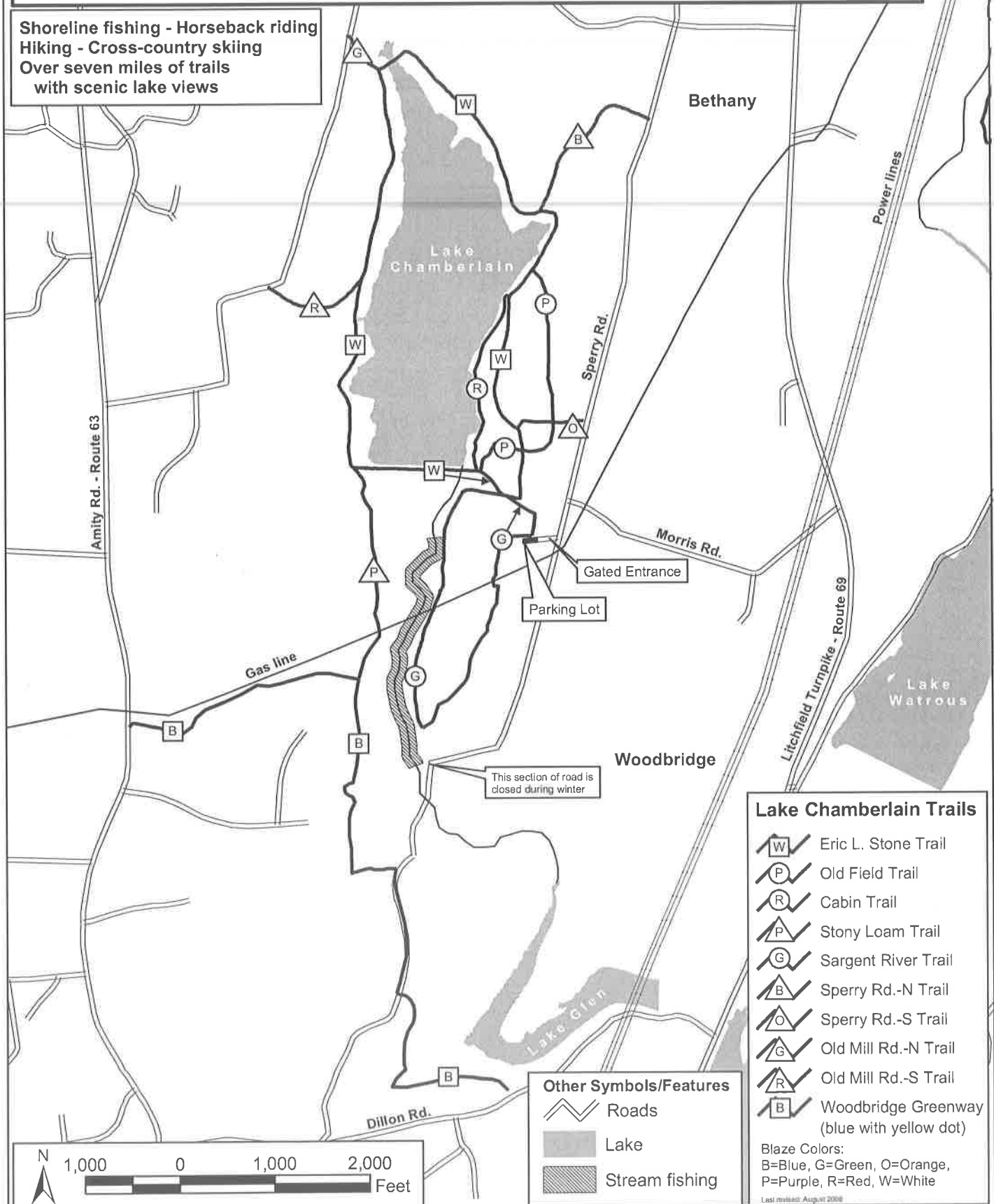


Lake Chamberlain



Regional
Water
Authority
Recreation

Shoreline fishing - Horseback riding
Hiking - Cross-country skiing
Over seven miles of trails
with scenic lake views



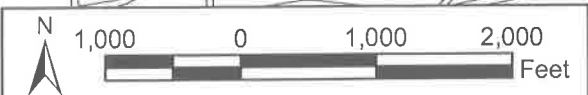
Lake Chamberlain Trails

- Eric L. Stone Trail
- Old Field Trail
- Cabin Trail
- Stony Loam Trail
- Sargent River Trail
- Sperry Rd.-N Trail
- Sperry Rd.-S Trail
- Old Mill Rd.-N Trail
- Old Mill Rd.-S Trail
- Woodbridge Greenway (blue with yellow dot)

Blaze Colors:
B=Blue, G=Green, O=Orange,
P=Purple, R=Red, W=White
Last revised: August 2006

Other Symbols/Features

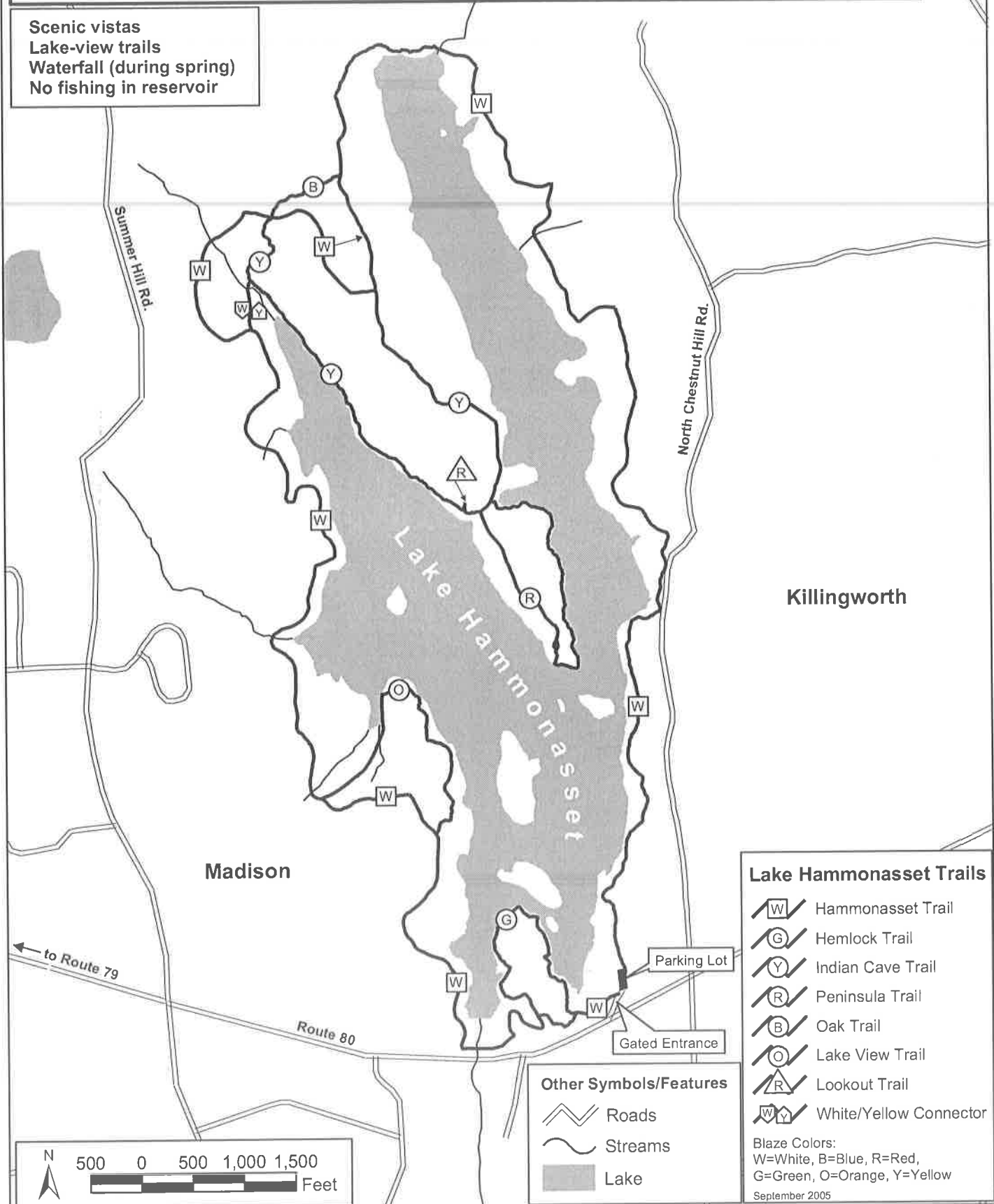
- Roads
- Lake
- Stream fishing



Lake Hammonasset



Scenic vistas
 Lake-view trails
 Waterfall (during spring)
 No fishing in reservoir



Lake Hammonasset Trails

- Hammonasset Trail
- Hemlock Trail
- Indian Cave Trail
- Peninsula Trail
- Oak Trail
- Lake View Trail
- Lookout Trail
- White/Yellow Connector

Other Symbols/Features

- Roads
- Streams
- Lake

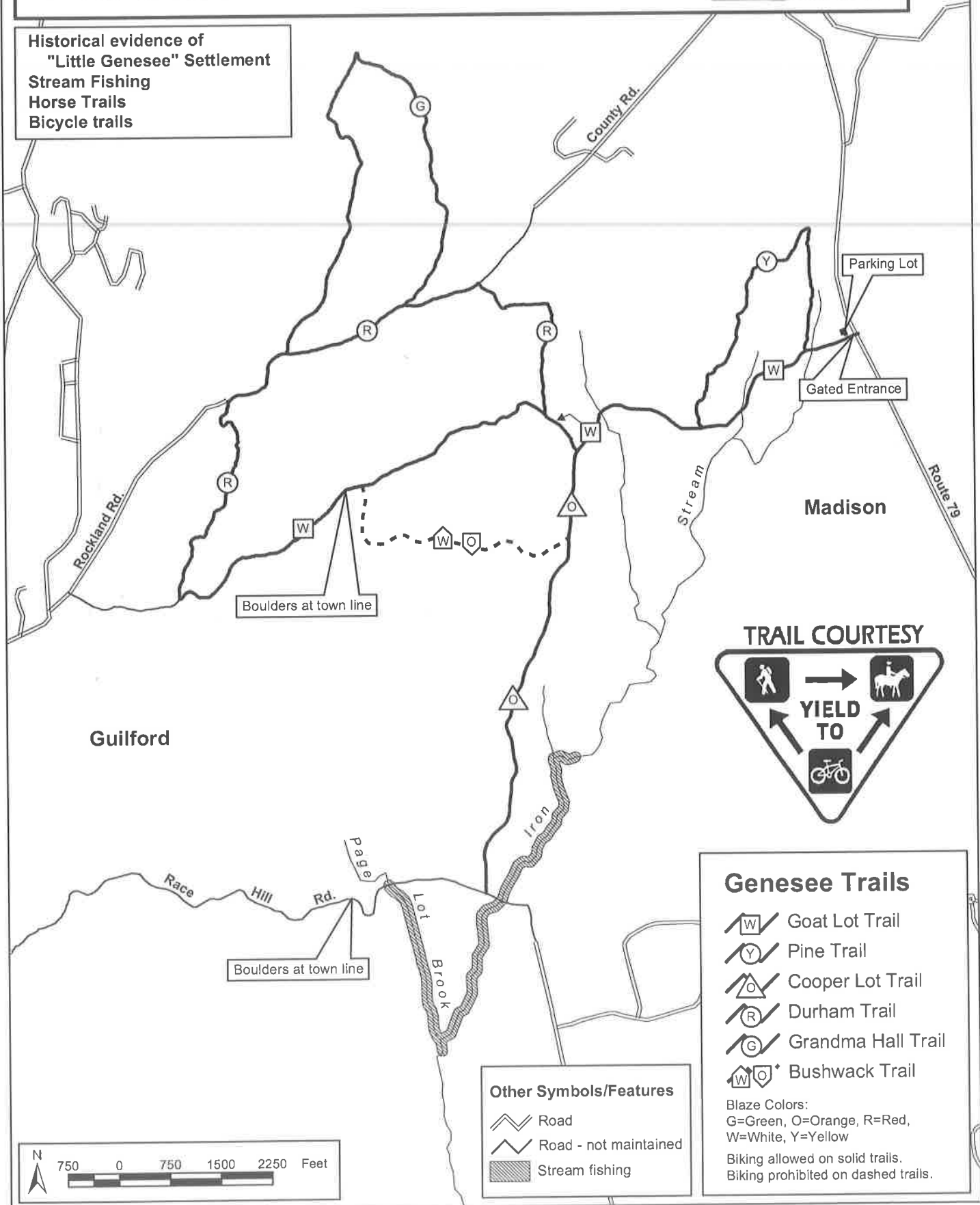
Blaze Colors:
 W=White, B=Blue, R=Red,
 G=Green, O=Orange, Y=Yellow
 September 2005

Genesee



Regional
Water
Authority
Recreation

Historical evidence of
"Little Genesee" Settlement
Stream Fishing
Horse Trails
Bicycle trails



Madison

Guilford

TRAIL COURTESY



Genesee Trails

- Goat Lot Trail
- Pine Trail
- Cooper Lot Trail
- Durham Trail
- Grandma Hall Trail
- Bushwack Trail

Blaze Colors:
G=Green, O=Orange, R=Red,
W=White, Y=Yellow

Biking allowed on solid trails.
Biking prohibited on dashed trails.

Other Symbols/Features

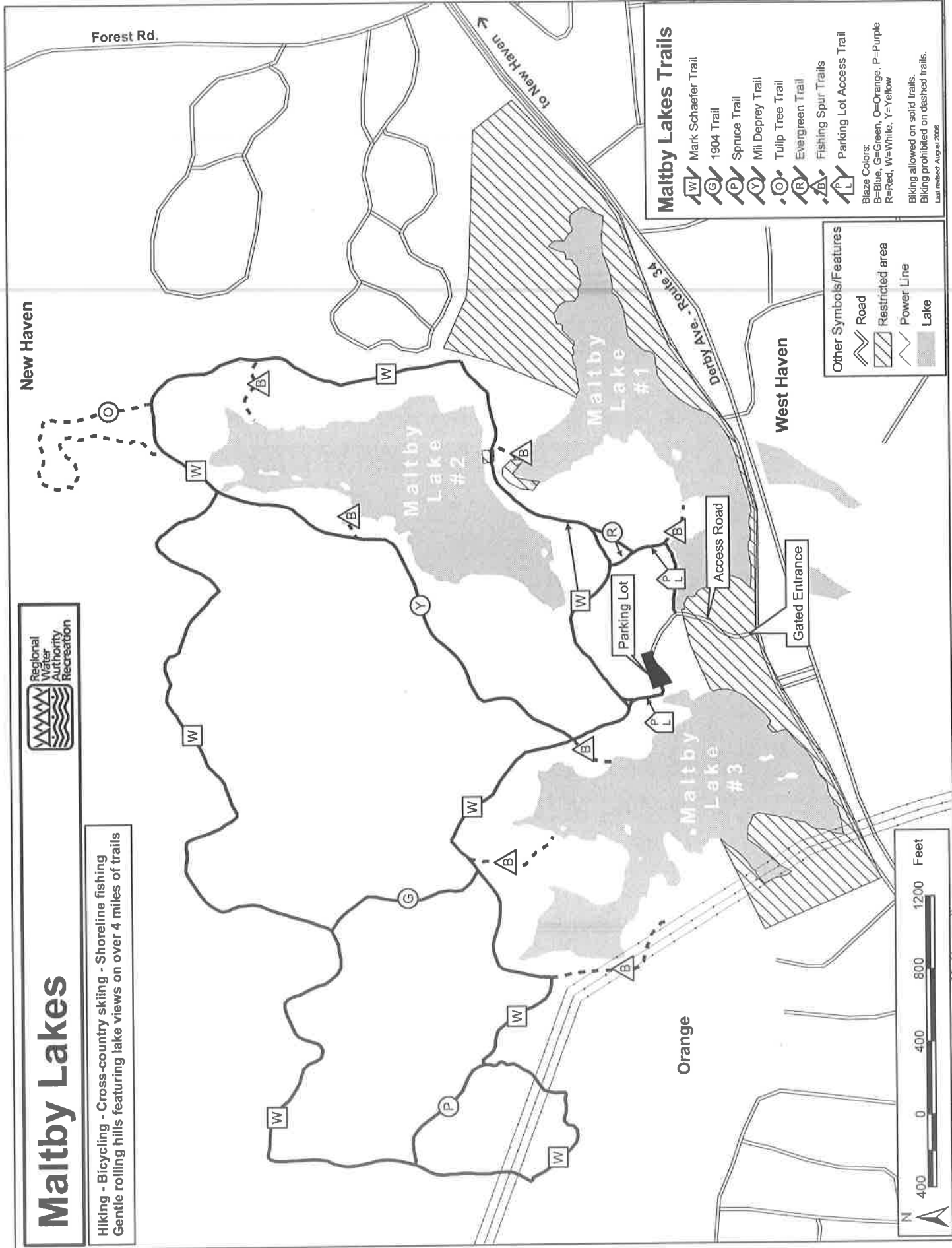
- Road
- Road - not maintained
- Stream fishing



Maltby Lakes



Hiking - Bicycling - Cross-country skiing - Shoreline fishing
Gentle rolling hills featuring lake views on over 4 miles of trails



Maltby Lakes Trails

- Mark Schaefer Trail
- 1904 Trail
- Spruce Trail
- Mill Deprey Trail
- Tulip Tree Trail
- Evergreen Trail
- Fishing Spur Trails
- Parking Lot Access Trail

Blaze Colors:
B=Blue, G=Green, O=Orange, P=Purple
R=Red, W=White, Y=Yellow

Biking allowed on solid trails.
Biking prohibited on dashed trails.
Last revised August 2006

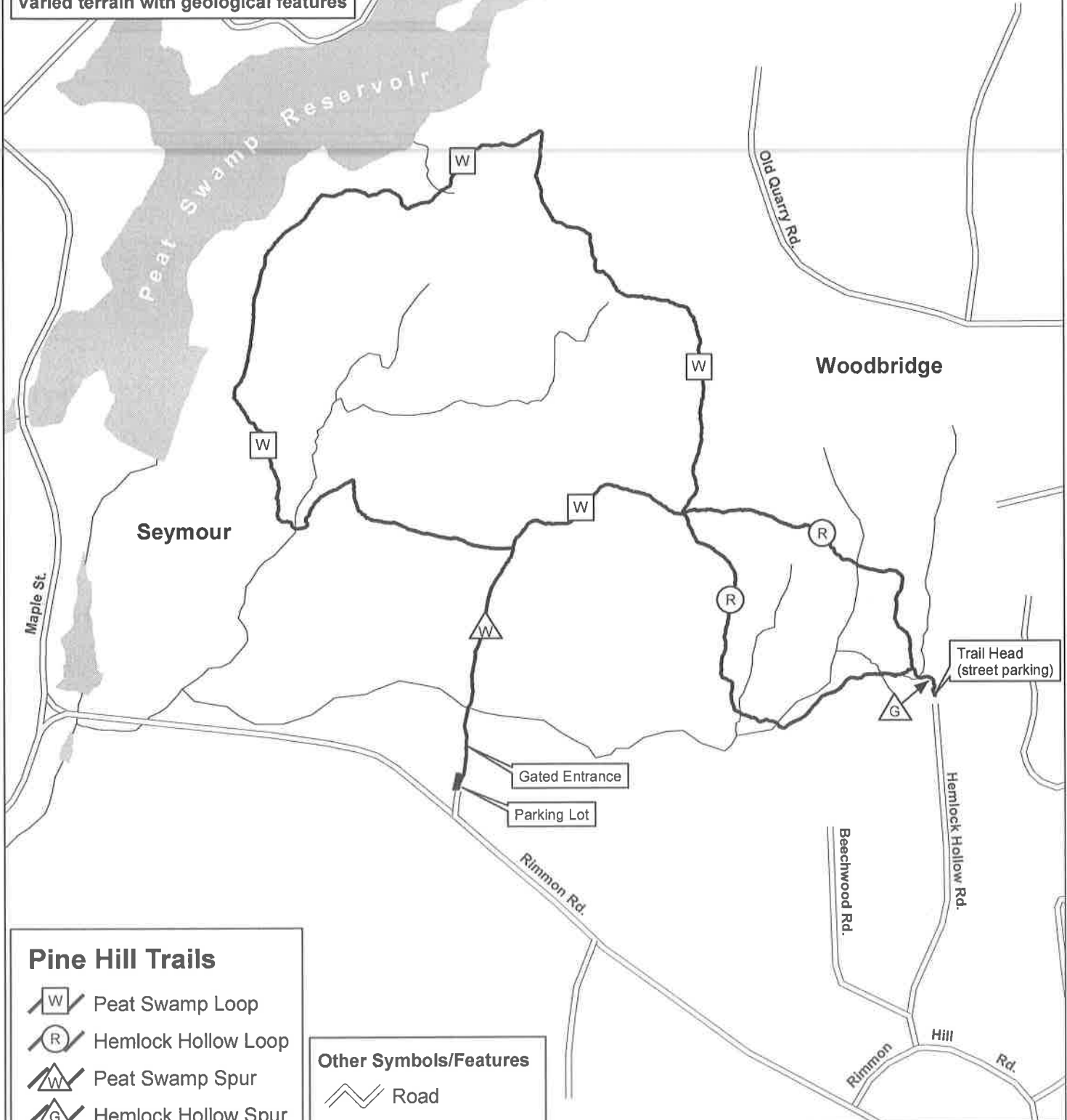
- ### Other Symbols/Features
- Road
 - Restricted area
 - Power Line
 - Lake



Pine Hill



Hiking and cross country skiing
on over 3 miles of trails
Varied terrain with geological features



Pine Hill Trails

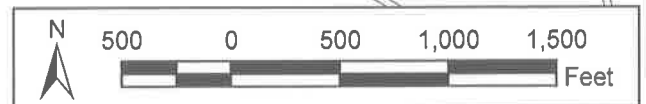
- Peat Swamp Loop
- Hemlock Hollow Loop
- Peat Swamp Spur
- Hemlock Hollow Spur

Blaze Colors:
G=Green, R=Red, W=White

Last revised: May 2008

Other Symbols/Features

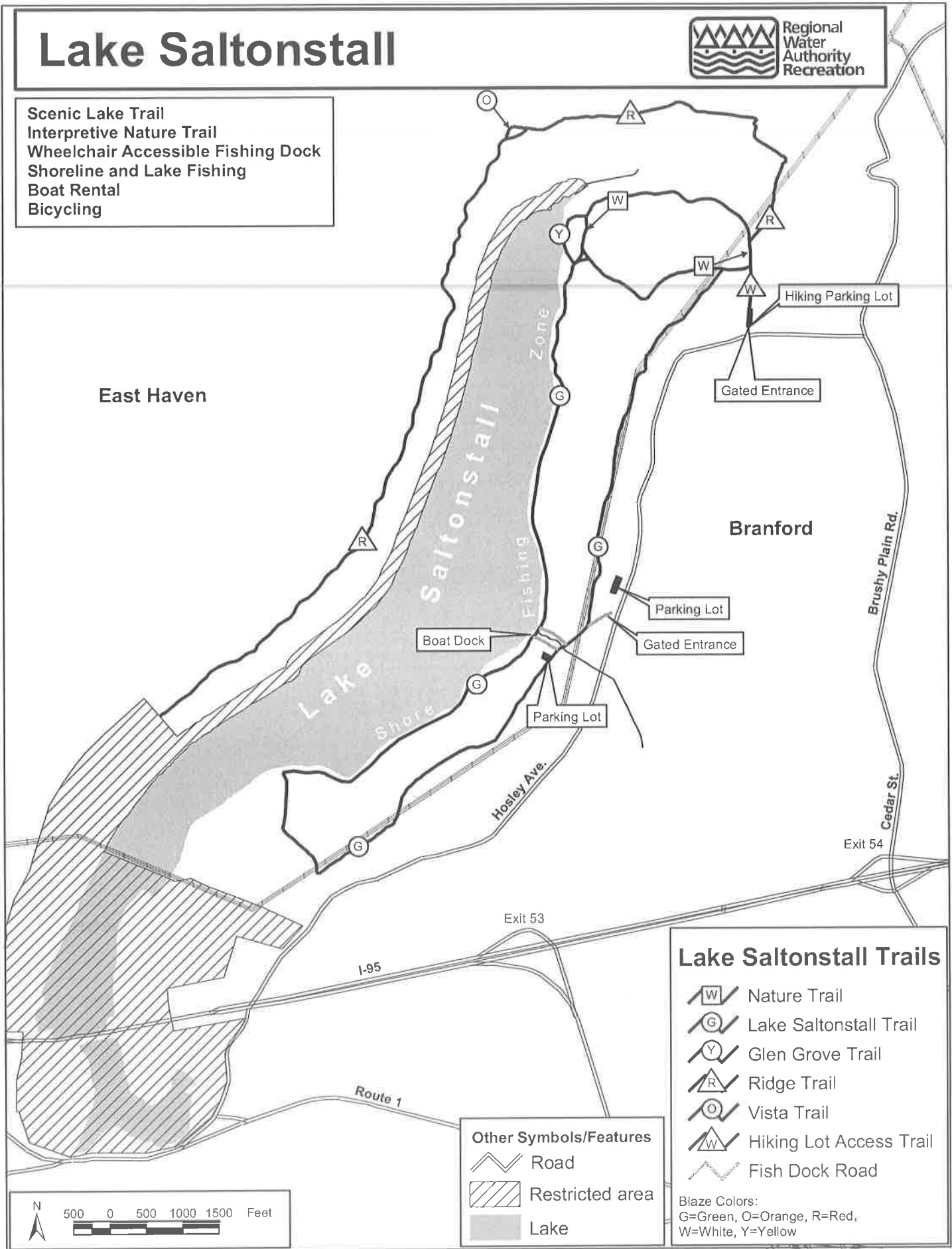
- Road
- Stream
- Lake



Lake Saltonstall



Scenic Lake Trail
 Interpretive Nature Trail
 Wheelchair Accessible Fishing Dock
 Shoreline and Lake Fishing
 Boat Rental
 Bicycling



East Haven

Branford

Lake Saltonstall
 Fishing Zone
 Shore

Boat Dock

Hiking Parking Lot

Gated Entrance

Parking Lot

Gated Entrance

Parking Lot

Hosley Ave.

Brushy Plain Rd.

Cedar St.

Exit 54

Exit 53

I-95

Route 1

Lake Saltonstall Trails

- Nature Trail
- Lake Saltonstall Trail
- Glen Grove Trail
- Ridge Trail
- Vista Trail
- Hiking Lot Access Trail
- Fish Dock Road

Other Symbols/Features

- Road
- Restricted area
- Lake

Blaze Colors:
 G=Green, O=Orange, R=Red,
 W=White, Y=Yellow

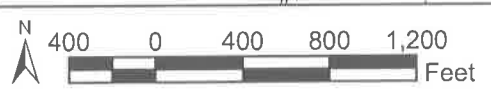
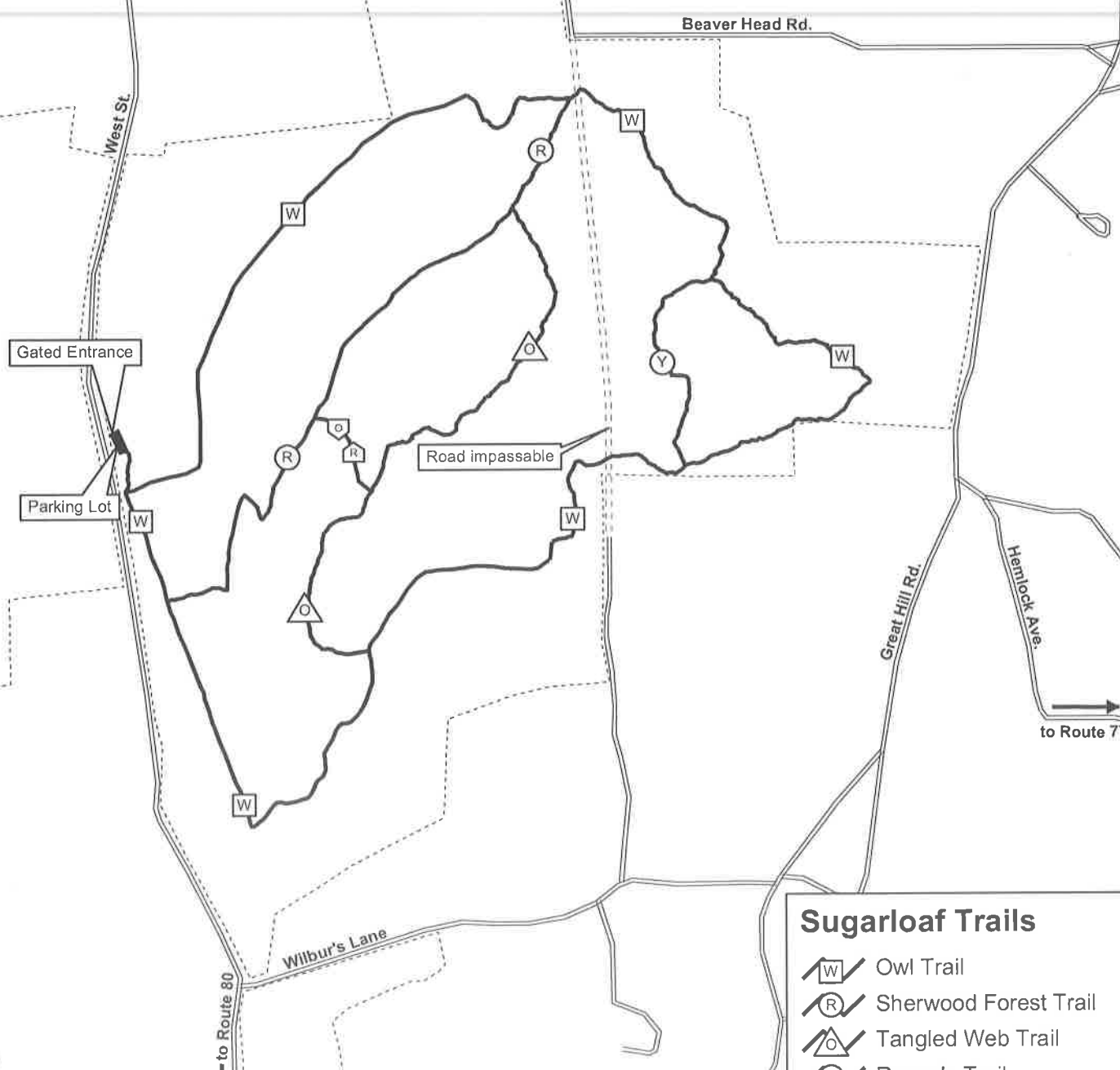


Sugarloaf



Steep hills for intermediate and advanced cross-country skiing
Good birdwatching

Guilford



Other Symbols/Features

- Roads
- RWA boundary

Sugarloaf Trails

- W Owl Trail
- R Sherwood Forest Trail
- O Tangled Web Trail
- Y Raven's Trail
- O/R Merlin's Way

Blaze Colors:
O=Orange, R=Red, W=White, Y=Yellow