

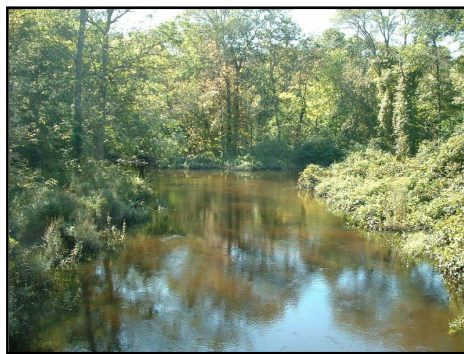
Scenic Resources and Unique Environments

While, the Massachusetts Department of Environmental Management's SCENIC LANDSCAPE INVENTORY does not list any known unique scenic areas in Norton, the Land Preservation Society of Norton has preserved the area known as King Phillip's Cave. A few *glacial erratics* (large boulders left by glaciers) are located on Plain Street and are said to have provided shelter to King Phillip during a storm.

Scenic Landscapes

The following areas were identified as being scenic areas in Norton. Whether hiking, walking, canoeing or just pulling over on the side of the road to eat lunch, residents find these areas the most appealing.

Crane farm pond is located on the northerly side of Pine Street nearly opposite Crane Street. The pond is filled with water lilies, turtles and frogs and is home to several ducks and mallards. Dragonflies can be seen flying close to the surface of the water. When the water is high, the whole pond is filled with wildlife and keenly observed by a red-tailed hawk.



The Three-Mile River at the Crane Street bridge is an excellent example of the dynamic functions of a river and the adjacent floodplain. In the spring the entire area is filled with water melting from the snow and the spring rains. The water rushes in a wide swath through trees and throughout the wetland area. In the fall, the river is narrowed to a defined channel that meanders and displays its sharp bends. The point-bars and oxbows are clearly observed when the water has receded at this time of year. It is filled with cardinal flowers, grapes and grasses.



The Erwin S. Wilder Wildlife Management Area within the Hockomock Swamp Wildlife Management Area has extensive cornfields, cut fields and trails. As a result of the field habitat, several types of butterflies, moths, dragonflies, damselflies and other insects can be observed within fields visiting the wildflowers. It is located off Toad Island Road and extends into Taunton.



The islands in the Norton Reservoir are a scenic area. Some days there are a number of observers watching and photographing the birds fishing and hunting in the water. The islands in the Norton Reservoir serve as important wildlife habitat and a destination for boaters.



The stonework along the Wading River and bypass channels for the Taunton Copperworks is picturesque. Most of the stonework is found on private property but a significant area can be found within the conservation-restricted area behind Margaret Drive. The stonework creates a millpond and a stepped area near the Wading River that is visible in dry periods.

DCRs Scenic Landscape Inventory

The Open Space and Recreation Planning Committee has consulted the DCR Scenic Landscape Inventory at www.mass.gov/dcr/stewardship/histland/landSurveys.htm and have not found any of the locations listed within the Town of Norton, despite being a participant in the Pilot Program in 2002. Five locations that were studied in Norton as part of this program are listed in the Landscape Character section.

Scenic Roads Act (MGL Chapter 40 Section 15C)

Norton has designated six roads as scenic roads. They are Bay Road, Cross Street, Lincoln Street, Old Taunton Avenue, Red Mill Road and Walker Street. As a scenic road, any repair, maintenance, or paving on the road should not include any tree cutting or clearing, or the destruction of stone walls unless first approved by the Planning Board at a public hearing that has been twice advertised in the newspaper at least seven days before the public hearing. A town can adopt a bylaw so that the punishment for a violation of the Scenic Roads Act is clearly known to the public. A fine may be assessed up to \$300.00.

Major characteristic/unusual geologic formations

The major geologic resource is a sand and gravel *esker*, formed by glaciers, which exists in the Great Woods in Norton and Mansfield. A portion of the esker is protected by contiguous open space parcels, which are held by the Norton Conservation Commission and by the Norton Historical Society. Lake Winnecunnet is Norton's only *Great Pond*; it is 10 acres or more in its natural state. All of the other water bodies in Norton have been manipulated by human activity. The above-mentioned King Phillip's Cave is another unusual geologic feature.

Cultural, Archaeological, Historic Resources

Cultural resources

Norton is rich in historical and archaeological resources. Brona Simon, State Archaeologist reports that Norton has 284 inventoried historic resources in the Massachusetts Historic Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth. Such resources include buildings, burial grounds, structures and historic areas. The National Register of Historic Places contains records of the Norton Center Historic District, the Old Bay Road Historic District and the Reverend Pitt Clarke House. The State Register of Historic Places contains records of Bay Street Prehistoric District, the Canoe River Prehistoric District, the



Newcomb Street Site, Norton Historic District and the White Crow Site, which are all eligible for the National Register. In addition, there are 31 recorded ancient Native American archaeological sites and 15 historical archaeological sites listed in the MHC inventory. It would be wise for the town to work with an archaeologist in order to document the sites and assist local boards and commissions in their

review of projects so that the sites are not destroyed. (Brona Simon letter of May 25, 2004)

Photograph of Meadowbrook Pond 1941 contributed by Christopher Cox

Archaeological Resources,

A Brief Overview of The Archaeology and History of Norton *contributed by Christopher Cox*

NOTE: some material has been revised from the original submittal by Mr. Cox according to the State Archaeologist's recommendations.

The Town of Norton was incorporated as a Town in the year 1711 under the reign of England's Queen Anne. The first European settler to settle within the current limits of the Town of Norton was William Witherell who moved from Taunton to Norton in the year 1669. Although William Witherell is credited with being the first European settler, the area which now encompasses the Town of Norton was settled for thousands of years by the aboriginal "Indians" of this area. To understand the earliest inhabitants of this area, we must understand the environment and surroundings as they were thousands of years ago. Up until about the last 30 years, most archaeologists did not believe the area of present Norton was inhabited by indigenous people before 3,000 years ago. With the discovery of radio carbon dating and typology studies of the artifacts left behind by these aboriginal people, we now know how wrong these dates were. We must understand the topography and mammals of Norton as well as the climate were much different than that of today. The area we call Norton was formed some 75,000 years ago by the advancement and recession of enormous glaciers. At maximum these glaciers were over a mile thick and hundreds of miles wide. The glaciers brought with them tons of soil, and rock, that were deposited throughout the area as they advanced and retreated. (Many of the characteristic boulders and large stone formations seen throughout Norton and New England are good examples of glacial deposits. These stone formations and boulders are called "erratics.") The topography and landscape of Norton was shaped by this glacial movement as earth was pushed up ahead of the glaciers forming "terminal moraines" or areas of peaks and valleys marking the tracks of the glaciers. (Red Mill Road offers some good examples) As the glaciers stopped their advance and started to recede, and as this area underwent marked climatic changes, melting occurred. As runoff from the glaciers increased, river ways and streams were created.

The last glacial recession in this area was what geologists call the "Wisconsin Ice" and occurred some 15,000 years ago. It was during this time that ancient man is believed to have come to this area of New England. Archeologists divide the time frame of our ancient aborigines into cultural spans of development and occupation. The cultures include the Paleo, Archaic, and Woodland Periods. Each culture marked a significant change or advancement in living styles and tribal development.

The oldest known period is the "Paleo Indian" arriving in southern New England some 12,500 years ago (10,500 B.C.). These people were nomadic hunters who traveled and migrated with the larger mammals that once roamed our area of New England, mammals such as large bison, great woolly mammoths, caribou and elk. The climate and topography of ancient Norton was much more "tundra like" than that of our present town. Although as of the date of this writing no Paleo Indian artifacts have been discovered in Norton, doubtless they were here within the limits of the current town. Paleo artifacts have been recovered from sites in Taunton, Middleboro, and Berkley. The Paleo Indian developed a very effective spear point for hunting large game known as the "Fluted Point" made by pressure flaking sharp stone into a 3-5 inch point.

The Archaic Period (8000 B.C.), like the Paleo before, were hunters and gatherers. The people of

this period lived a “hand to mouth existence” following the migration of the animals. The climate of the Archaic culture was similar to today with relatively cool moist summers and cold winters. Norton at this time was “back country” for the Archaic Indians. These people spent much of their time near the ocean during the summer months and would move inland during the winter months. Norton has several identified Archaic sites, and the archeology from this area seems to suggest that Archaic Indians occupied this area for short periods of time over and over for hundreds of years. Sites yielding archaic artifacts in Norton include The Solmonese School Site, Red Mill Road, Newcomb Street, and Sachem Road. Archaic sites are relatively small and close to current or ancient waterways. The artifacts from Norton illustrate the advanced hunting skill of this culture and the abundance of game which thrived in this area.

The Woodland Period (1000-500 B.C.) began 3,000 and 2,500 years ago and lasted through the first contact with Europeans. The people of this period experienced many changes and advancements. The most significant is that of agricultural skills. The people of this culture learned to grow crops (maize or corn in particular) and tribal organization became structured, fishing both from the shore and on the water, and the construction of fishing weirs or areas to catch numerous fish using weighted nets sunk in the water. River systems like the Canoe, Wading, Snake, and Rumford Rivers became major “highways” of Indian transportation and more permanent villages were established. Gone were the days of “hand to mouth” living, of course hunting and gathering were still a big part of the Woodland Indian culture.

As the people of the Woodland Period developed and started growing crops, villages grew larger and entire federations of tribes were established each governed by a Sachem and several “Sub-Sachems.” (NOTE: “Large federations of permanent villages never were established in New England, unlike, New York, where the powerful Iroquois Federation developed. Archaeologists have often been disappointed in their search for the large permanent village sites that they thought should have existed in this area. Instead, the data show that New England tribal affiliations and alliances were fluid and people continued to practice seasonal movements into the Contact Period, although during certain times of the year they gathered in larger groups and for longer times than during earlier periods.”-Brona Simon, State Archaeologist, letter dated October 18, 2004)

The Woodland culture thrived for hundreds of years in this area and Norton abounds with Woodland Indian sites. Many generations growing up in Norton have found their share of Woodland period artifacts. The principal tribe governing most of Southern New England including the present town of Norton were the Wampanoag Indians whose seat of government was what is now Mount Hope Bristol RI. The Woodland culture thrived for hundreds of years in this area until interrupted by the arrival of the European settlers starting sometime in the late 1500’s. Many of the names given to lakes and roads around Norton derive their names from the Indian language. Lake Winnecunnett for example meaning “The place of black geese” and “King Philip’s Caves” named after the great Wampanoag Sachem Metacomet (called King Philip by the English). These caves, located on Plain Street are also good examples of glacial deposits in Norton. This culture was all but eradicated during King Philip’s War, and the massive expansion of colonial farms and settlements, European diseases, and forced conversion to the European way of living. Fortunately, many people have survived to remind us of this great race of people who occupied our land long before the name “Norton” was ever thought of and the oral histories of their race and culture.

As mentioned earlier, the first European settler to come to the area we call Norton was William Witherell in the year 1669. Young William came from England as a cabin boy to Taunton around 1643. He married in 1650 and in 1669 he and Dorothy, his wife, and children moved to the "Taunton North Purchase" as Norton at that time was called. His home was situated on the "Old Bay Road" across from Lake Winnecunnet. After the arrival of the Witherells many families also came to the "Taunton North Purchase." Some of the earliest families include the Deans, Leonards, Lincolns, Witherells, and these earlier families made up a large part of Winnecunnet Village. Taunton North Purchase continued to grow and by 1709 residents were calling for separation from Taunton as a separate precinct and to construct a house of worship within the boundaries of the present Town. Norton was incorporated in 1711, named after the town in England from which most of the residents came. William Witherell operated the first public



house or tavern in Norton and was a veteran of King Philip's War. George Leonard operated the first iron forge in Norton, and one of the first in the country, acquiring great wealth. The Leonard's built the first timber framed house in Norton and first mansion as well. During King Philip's War there was a skirmish between colonial militia from Taunton and Indian Warriors attached to Philip within the present boundaries of the Town of Norton on the banks of the Rumford River, known locally as the Lockety Neck Battle of 1675 (approximate location is

pictured left). After King Philip's war, Norton like many other colonial towns continued to grow and prosper. During the Indian wars of 1754 we call the "French and Indian War", Norton sent many men from the local militia to fight for "King and Country" and many saw action in Canada and Upstate New York at Fort Ticonderoga. Again on April 19, 1775 the Town of Norton sent two companies of militia to the Towns of Lexington and Concord to help repel the British troops from those towns and to assist in the battle that would turn into a war ending with American Independence. Many men and women from colonial Norton served their country during the American Revolution and before the end of the war in 1783, Norton raised two full regiments of infantry and one artillery company to join General Washington's Army.

In 1834 Laban Wheaton established Wheaton Female Seminary, a premier all-girls school later to become Wheaton College. Norton continued to grow as an agricultural community through the 18th and into the 19th century. Many mills were operated in the town, including textile mills, sawmills, and slitting mills. Coal and iron were mined in town for many years during the early 19th century. School houses were constructed and various houses of worship were built. As the industrial revolution swept across the town, Norton saw the industry of basket making, straw hat manufacturing, copper stamping, friction match production, and the construction of furnaces used in the iron industry. From its early colonial beginnings the town continued to grow and prosper into the fine community we see today.

Historic Resources (Refer to Section 3: History of the Community for additional information)

Historic Trails Information contributed by Ruth Goold

The Appalachian Mountain Club has listed several trails in the “A.M.C. Mass and R.I. Trail Guide”, 3rd edition, Section 7: Southeastern Massachusetts, Appalachian Mountain Club, Boston MA, 1972. The Wading River Trail begins at the newly acquired Lincoln Woods and traverses much of Norton through back woods and private trails. It crosses Wheaton College, Balfour Farm, and the former Taunton Copperworks on Taunton Ave, through South Worcester Street to West Main Street. Be careful if you use this hiking reference because some of the street names are incorrect and permission should be obtained when hiking through private property.

A second hiking trail is mentioned and extends from Fairlee Lane along the cranberry bogs, over the Mulberry Meadow Brook bridge, to King Phillip’s Cave at the end of Stone Run Drive. Again, nearly all of this land is private property and permission should be obtained prior to accessing it.

The Great Woods Walk is listed in the book as well. The Town of Mansfield and the Natural Resources Trust of Mansfield have acquired over 1000 acres of land within the Great Woods and the Mansfield property is the beginning of the Great Woods Walk. The trail now traverses the Tournament Players Club (TPC) golf course and it is unlikely that permission would be granted to continue on this course. However, another overland route may be found which could lead to the next section of trails. The Norton Historical Society has several trails along their property that connect to the Leo G. Yelle Conservation Area on Freeman Street.

Other trails listed in Norton include the Plain Street Link and the Wheaton Woods Walk. This reference is at least 32 years old so an updated version should be located and permission to access private property should be obtained prior to hiking the trails listed in the book.

Resources on archaeology, history and culture of Norton:

- History of the Town Of Norton Bristol County, Massachusetts 1669-1859. George Faber Clark, Boston: Crosby, Nichols, and Company, George Clark. 1859.
- The New England Indians. C. Keith Wilbur. The Pequot Press. 1978.
- Bulletin of the Massachusetts Archaeological Society. William S. Fowler. Massachusetts Archaeological Society. 1980.
- The Diary of King Philip's War. Colonel Benjamin Church. 1676 Lockwood Publications & Little Compton Historical Commission. 1975.
- Massachusetts Heritage Landscapes A Guide to Identification and Protection. PAL. Massachusetts Environmental Management. April 2003.

Areas of Critical Environmental Concern (ACEC)

An ACEC is an area containing concentrations of highly significant environmental resources that has been formally designated by the Commonwealth’s Secretary of Environmental Affairs following a public nomination and review process. The enabling legislation and the regulations for ACECs list several types of features within an ecosystem of regional or statewide significance. These features include fishery habitat, coastal features, estuarine wetlands, inland wetlands, inland surface waters, water supply areas, natural hazard areas, agricultural areas, historic or archaeological resources, habitat resources and special use areas. The nomination

must document at least four of these features for a given area to be eligible for designation. ACECs usually and almost inevitably contain many more categories of significant resources than four. The ecological interrelationships of the resources are just as important as the individual categories.

The formal designation of an ACEC by the Secretary of Environmental Affairs recognizes the environmental significance of an area to the Commonwealth and its citizens. The designation directs state environmental agencies to take actions to preserve, restore and enhance the resources of an ACEC, and is intended to encourage and facilitate the stewardship described above. Two ACECs have been designated within the Town of Norton. The Canoe River aquifer and adjoining parcels were designated in 1991 and the Hockomock Swamp (including land off Lincoln St. in Norton) was designated in 1990. A third ACEC was proposed by the City of Taunton and the Three-Mile River ACEC Stewardship Committee. The proposal was approved in 2008. A map of the three ACECs is found on the next page. It shows how the three ACECs are connected and join to form one large unique area in the region.



Canoe River

The following description and discussion of the Canoe River, Canoe River Aquifer, and the [Canoe River Aquifer Advisory Committee \(CRAAC\)](#) is taken in part from various CRAAC reports and correspondence. The watershed map is found on the next page.

The Canoe River Aquifer is approximately 25 square miles in area, and encompasses portions of the towns of Sharon, Easton, Mansfield, Norton, and Foxborough. The Canoe River begins its

headwaters south of Massapoag Lake in Sharon and flows in a southerly direction through Foxborough, Mansfield, Easton, and Norton to Lake Winnecunnet in Norton. The Canoe River Aquifer runs south through the northeastern corner of Norton and terminates at Winnecunnet Pond. The river leaves Lake Winnecunnet as the Snake River. This area of Norton consists of largely undeveloped open space, agricultural land and residential neighborhoods.



Canoe River at Plain Street

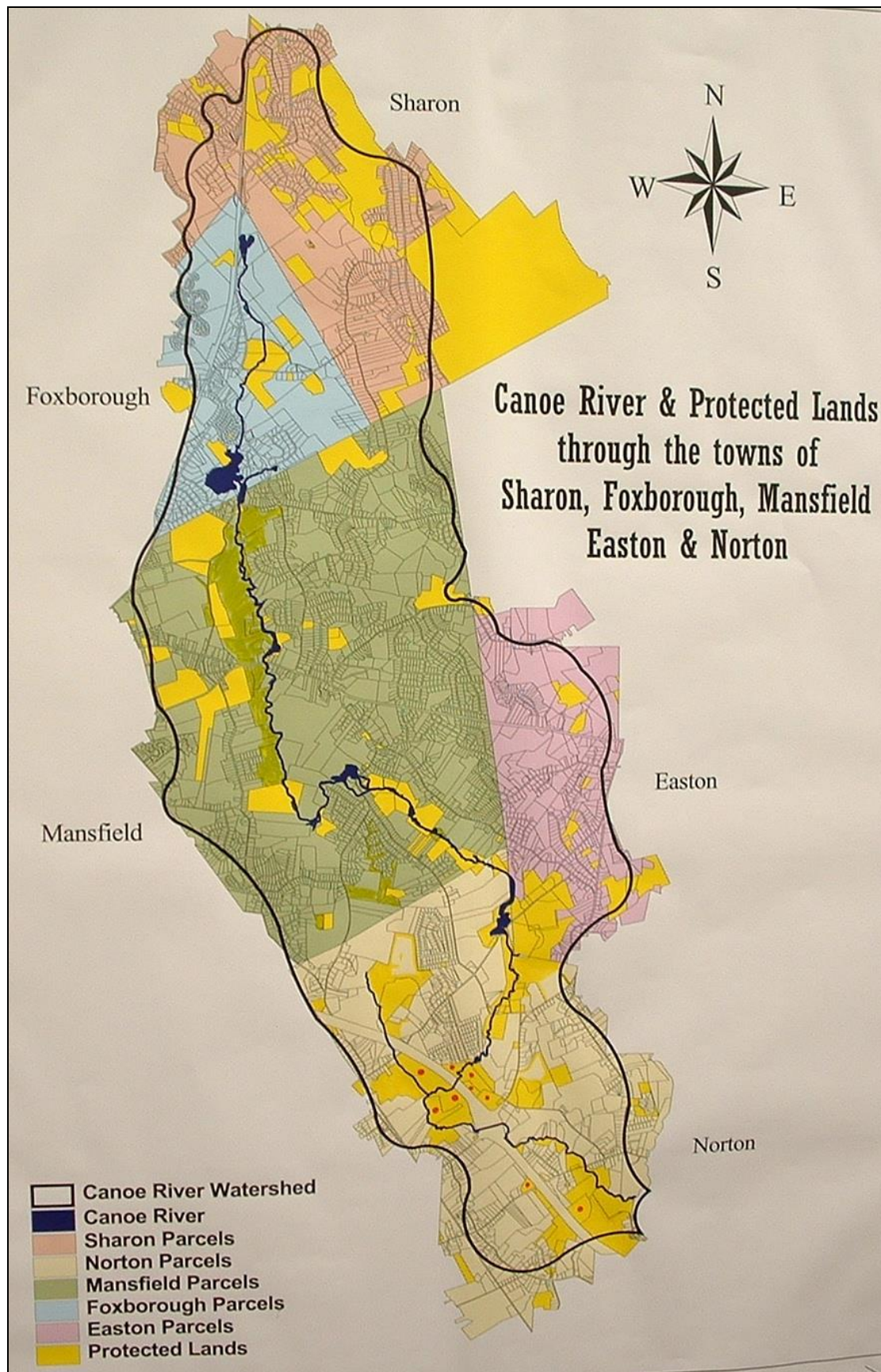
The surficial features above the Canoe River Aquifer are characterized by an extensive system of surface waters, wetlands, floodplains, and productive wildlife habitat. Based on review of various CRAAC reports, eleven municipal wells currently provide high drinking water to approximately 50,000 people within the five towns. Norton currently has four active municipal drinking water wells located within the Canoe River Aquifer that account for 100% of Norton's public average daily water use (the remainder of the Town uses private wells). A fifth well, located in the Three-Mile watershed, is not being used. Almost 100 rivers, brooks, streams, and extensive wetland and floodplain areas within the Canoe River Aquifer (within five towns) support a rich and ecologically diverse habitat for wildlife.

Historically, the water quality of the Aquifer has been very good. A 1988 Regional Protection Plan prepared for the CRAAC by IEP, Inc., indicated that the water quality for the municipal wells within the aquifer has been excellent. However, the aquifer is susceptible to contamination. Protective measures such as the Town's current Water Resource Protection District Overlay (totally revised in 1997) and other measures may be needed to protect drinking water quality from pollution from private septic systems and non-point source runoff. In 2003, the Department of Environmental Management contracted Horsely & Witten to conduct a resource study of the Canoe River Aquifer. This study included the assessment of existing

conditions (like by-laws and water distribution systems), the measurement of water quality and water flows, development of model ordinances and recommendations for emergency planning and operations of the water supply system. Findings of the study included the potential stressing of the aquifer and threats as a result of *induced infiltration* from surface water to some of the supply wells. Additional data would need to be gathered to determine the extent of induced infiltration and potential contaminants that could migrate from the river to the supply wells. Additional questions would also have to be addressed including the impacts to wildlife habitat and impacts to the *base flow* of the river due to this induced infiltration. Fecal coliform bacteria were found within the river at some of the sampling stations (stormwater). These areas should be investigated to determine the source, which may be natural or *anthropogenic*. The town may wish to discuss and/or adopt some of the model bylaws included in the study. The following recommendations for model bylaws were taken from the 2003 Horsley & Witten report.

H&W developed a set of model regulatory ordinances to unify the legal protection of aquifer resources within all five study area communities. The four model ordinances drafted include an Open Space Residential Development (OSRD) Bylaw, an Aquifer Protection Bylaw, a Drought Management Bylaw, a Water Withdrawal Prohibition Bylaw, and a Site Review Bylaw with accompanying regulations. The OSRD Bylaw seeks to promote the advancement of “cluster” developments in which development activities are clustered in a neighborhood setting with substantial portions of open space protected around the development core. Cluster development is in contrast with standard grid subdivision development requiring larger quantities of roadway and managed landscaping at the expense of natural open space. The Aquifer Protection Bylaw is intended to allow communities to regulate land use activities within the watershed to the aquifer that may potentially impact the quality and/or quantity of the water resources. The Drought Management Bylaw spells out a uniform set of water use restrictions to be enacted under specific state-declared water shortage conditions. The Water Withdrawal Prohibition Bylaw seeks to eliminate the siphoning of surface water within the aquifer watershed for use by tanker trucks (e.g. trucks utilized to transport and apply lawn fertilizers and pesticides). The Site Review Bylaw provides an early opportunity for potential developers and town representatives to identify potential issues with proposed projects.

Of these proposed bylaws, Norton has already adopted the Cluster Subdivision bylaw and the Water Resource Protection bylaw. While the Water Department does issue a ban on outside watering in the summer, the town has not adopted a drought management bylaw. A Water Withdrawal Prohibition bylaw would benefit the town. Currently, irrigation and hydroseeding companies park at the edge of rivers and water bodies to fill their tanker trucks. The problem arises when the hoses are not fitted with a back-flow prevention valve. Without the valve, any chemical and hydroseeding materials can flow from the truck into the water source. Either prohibiting the withdrawal of water altogether or requiring a back-flow prevention valve would protect the town’s resources. Norton residents have opted to prohibit water withdrawal altogether. While Norton does not have a Site Review bylaw, the town officials currently practice such a review. Anyone proposing a large project in Norton can request that all departments meet to review the plans and provide comments to their consultants.



Items in *italics* are included in the Glossary found in Section 12.

<u>Suggested Bylaw</u>	<u>Enactment Date</u>	<u>Responsible Dept.</u>
Residential Open Space (cluster bylaw)	1970s	Planning Board
Aquifer Protection (Water resource protection)	June 1996	Planning Board
Drought Management	not proposed	
Water Withdrawal Prohibition	passed 2004 town meeting	Water Dept.
Site Review	not proposed	

Canoe River Aquifer Advisory Committee

The towns of Easton, Mansfield, Foxborough, Sharon and Norton lie within the Canoe River Aquifer. The Canoe River Aquifer Advisory Committee was formed by an Act of the Massachusetts Legislature in 1987 and is comprised of three members from each of the towns. The goal of the committee is to protect the aquifer on a regional basis through public education, inter-municipal cooperation and through the promotion of uniform local regulations. Since 1988, the Committee has conducted annual Awareness Day programs including river clean-ups and canoe trip events.

In late 1990s, the Committee, with the support of the five towns, and the City of Taunton, applied to the Massachusetts Executive Office of Environmental Affairs (EOEA) to have the aquifer and adjacent areas (designated an Area of Critical Environmental Concern (ACEC). In May 1991, the Secretary of Environmental Affairs designated 17,200 acres of the Canoe River aquifer and adjoining land as an ACEC. This area abuts the 16,800-acre Hockomock Swamp ACEC. In 1993, the Committee was successful in obtaining official recognition of the water supply as a Sole Source Aquifer by the US. Environmental Protection Agency. The Sole Source Aquifer designation acknowledges that the quantity of drinking water withdrawn from the aquifer cannot be replaced by another source.

The *Canoe River Greenbelt Project* involves protecting by acquisition or easement a 500-foot corridor along the River through all five towns in order to create a contiguous recreation and wildlife corridor. Major projects on which CRAAC will continue working include the Canoe River Greenbelt, the Mulberry Meadow Brook wildlife corridor, preservation of forested land within the Great Woods and the preservation of the entire 186 acres of land along the Canoe River that were taken by *eminent domain* by the Massachusetts Department of Public Works for the construction of Route 495. Annually in May the Canoe River Aquifer Advisory Committee hosts a Canoe River Awareness Day at a location in one of the five towns. The Committee hosts a speaker, presents awards to individuals and organizations that promote environmental awareness and provide canoes for exploring the river. The map below illustrates the protected land in green and illustrates the Massachusetts Highway land in orange. The Canoe River is the blue line that travels from the northwest corner of the map to the southeast corner. One can see that the Mass Highway land can fill in a major gap in the Greenbelt Project.

In 2004, Norton completed some major accomplishments on the Greenbelt project. Together with the Canoe River Aquifer Advisory Committee, Mansfield Natural Resources Trust, Land Preservation Society of Norton, Norton Conservation Commission and Board of Selectmen, Senator Jo Ann Sprague, Representative Coppola and Representative Poirier, pressured the Division of Capital Asset Management to finalize the Care and Control Agreement between Massachusetts Highway and the Division of Fisheries and Wildlife on 126 acres. The town will work to acquire a 17-acre parcel next to Lincoln Woods, town wells and the town forest with the

assistance of the Water Department. A third parcel consisting of approximately 5 acres was scheduled for auction in August, was rescheduled for October and is now postponed indefinitely. The Town of Norton hopes to be able to acquire this parcel as well. Several desired parcels were removed from the original list of surplus land in the last year with the rescinded votes of the Massachusetts Highway Department. Although some of the parcels have been removed, the town still has been effective in preserving over 126 acres of land along the Canoe River for the Greenbelt project. None of this would have been accomplished if it had not been for the diligence and perseverance of Leonard Flynn, Mansfield Natural Resources Trust and acquisitions chairman of CRAAC. His hard work has been most appreciated by all involved.

Below, Wayne Southworth, Chairman of Canoe River Aquifer Advisory Committee, presents Senator Jo Ann Sprague with an award at the 2004 Canoe River Awareness Day held at Wheaton Farm, Easton, MA for her support of the Canoe River and the Committee's activities during her tenure as a Senator and Representative. Also shown is Leonard Flynn of the CRAAC and Mansfield Natural Resources Trust.

Resources on the Canoe River Aquifer and the Canoe River Aquifer Advisory Committee:



- Sole Source Aquifer Petition, Canoe River Aquifer, Bristol & Norfolk Counties, Massachusetts, Town of Sharon, Easton, Foxborough, Mansfield & Norton. Canoe River Aquifer Advisory Committee. September 14, 1992. Designation Approval in the Federal Register/Vol. 58, No. 91, Thursday May 13, 1993.
- Designation of Canoe River Area of Critical Environmental Concern by Secretary of Environmental Affairs, Susan F. Tierney, signed June 10, 1991, notification in memo of June 12, 1991.

- Canoe River Aquifer Regional Protection Plan. IEP, Inc. June 1988.
- Shoreline Survey Report for the Canoe River. MA Adopt-A-Stream/Riverways Programs and Canoe River Aquifer Advisory Committee.
- Chairman Wayne Southworth. Canoe River Aquifer Advisory Committee. Town of Easton.

Hockomock Swamp ACEC

On February 15, 1990 the Secretary of Environmental Affairs designated the Hockomock Swamp as an Area of Critical Environmental Concern. The Hockomock Swamp is the largest contiguous freshwater wetland in Southern New England. The watershed area comprises approximately 16,800 acres of land in Bridgewater, Easton Norton, Raynham, Taunton and West Bridgewater. The swamp contains extensive forested wetlands, floodplains and surface water bodies and waterways which provide critical flood control and absorption of storm water. The ACEC area is underlain with medium and high yield aquifers and provides water to Raynham and West Bridgewater. At the time of the nomination,

potential wells were identified for Bridgewater, Easton, and additional sites in Raynham. The swamp and surrounding upland areas are home to several rare, threatened or endangered species listed by the Natural Heritage and Endangered Species Program including plants, dragonflies, turtles, moths, and owls. The Massachusetts Historic Commission stated that the known historic and archaeological sites near the wetland complex span a period of 9,000 years and include features from the prehistoric, Colonial, Federal and Early Industrial Periods. Approximately 5,000 acres of land are owned and managed by the Department of Conservation and Recreation (formerly by the Division of Fisheries and Wildlife). Portions of the Hockomock Swamp within Norton can be found in locations on the east-southeast side of Lincoln Street and east of Bay Road. The fields, forests and wetlands of the Erwin S. Wilder Wildlife Management Section can be accessed from Toad Island Road for hiking, hunting and other passive recreation. Canoe access for the Snake River, the outlet of Lake Winnecunnet, can be accessed on the east side of Bay Road. Both areas have a parking lot and trail maps can be obtained at the Conservation Commission or the Division of Fisheries and Wildlife (Route 135, Rabbit Hill Road, Westborough, MA).

Three-Mile River ACEC

The Three-Mile River Watershed was nominated in 2008 as an Area of Critical Environmental Concern (ACEC). The Three-Mile River was nominated through the concerted efforts of the citizens of the three towns within the Three-Mile River Watershed Area who recognized the vast natural, historical and archaeological resources within the watershed. The Secretary of Energy and Environmental Affairs officially designated the “Three-Mile River Watershed ACEC” in 2009. The Three-Mile ACEC spans portions of Norton, Taunton and Dighton and is comprised of 14,275 acres of land in total. Norton has 5,400 acres, Taunton has 8,750 acres and Dighton has 125 acres. Public and private open space totals approximately 12% of the ACEC (818 acres in Norton, 803 in Taunton and 22 acres in Dighton).



The Three-Mile River ACEC was so designated for a number of reasons and, somewhat uniquely, includes all nine of the “inland resource features” listed in the ACEC Regulations. A proposed ACEC must have a minimum of five of the nine inland resource features. Each of these nine resource features are explained in greater detail below with an example from Norton, if applicable:

Fisheries Habitat- The Three-Mile River is generally a low-gradient warm water river formed by the confluence of the Rumford River and the Wading River. The catadromous (lives in freshwater and swims downstream to the ocean to spawn) American Eel and anadromous (lives in the ocean and swims upstream to spawn) blueback herring, alewife, white perch and many

residential warm water fish are found within the watershed. The Division of Marine Fisheries (DMF) has been involved in river herring restoration efforts for Alewife and Blueback Herring in the Three-Mile River for over a decade.

Inland Surface Waters- The Three-Mile River flows southwesterly a short distance through Norton to Taunton and Dighton until it joins the Taunton River in Dighton. The feeder streams and ponds are extremely important to the overall health of the watershed. Two of the seven ponds, Goose Branch Pond and Meadow Brook Pond, found within the ACEC are in Norton. Inland Surface Waters include a network of unnamed streams and brooks that contribute to the surface water that flows to the Three-Mile River.

Inland Wetlands- MassGIS analysis shows that wetlands cover 2,712 acres (19%), of the ACEC. There are numerous vernal pools, both certified and uncertified. Species protected under the Massachusetts Endangered Species Act (MESA) such as the Marbled Salamander, Eastern Spadefoot Toad and Blue-spotted Salamander all breed in vernal pools and the Blanding's Turtle, Eastern Box Turtle and Wood Turtle use vernal pools for feeding, hydrating and/or overwintering. These types of natural communities along with a complex of other inland wetlands are critical to the survival of these rare, threatened and endangered species. The watershed also boasts two natural communities that are recognized by NHESP as "exemplary". One, an Alluvial Red Maple Swamp, is in Norton and the other, a Small-River Floodplain Forest lies along the river in Taunton.

Natural Hazard Areas- Natural Hazard Areas are described in the ACEC Regulations as including floodplains. According to GIS data included with the nomination papers, approximately 11% or 1,524 acres of the ACEC is within the 100 year Floodplain. These are located primarily along the Three-Mile River and its tributaries and the Segreganset River. The Federal Emergency Management Agency (FEMA) designates floodplain areas and they are also subject to the regulations of the Massachusetts Wetland Protection Act.

Habitat Resources- The Three-Mile River ACEC contains diverse and extensive wildlife habitat types. Twelve state-listed (i.e. protected under MESA) species occur within the boundaries of the ACEC. There are globally rare and globally imperiled species within the ACEC as well.

Agricultural Areas- Though agricultural areas only represent 3% of the entire ACEC at the time of nomination these areas are highly important as they contribute to the economics and scenic quality of the area. Please see Section 5 of this OSRP for a complete discussion of the agricultural areas that occur within Norton, though it should be noted that not all of them are within the ACEC.

Water Supply Areas- There are significant drinking water resources within the ACEC including Class A and Class B surface waters and medium and high-yield aquifers. The area between Meadow Brook Pond in Norton and the Taunton River is the only high-yield aquifer in the watershed.

Historical/Archaeological Resources- The ACEC contains numerous recognized historic and archaeological resources dating back at least 12,000 years to Native American settlements particularly along the water courses. Many of these historical resources are associated with land

use practices as recent as the 20th Century. Historical properties within the ACEC include several properties listed on the National Registry of Historic Places. Two historic districts in Norton overlap each other and include multiple Wheaton College campus buildings and some civic buildings located in Norton Center.

Special Use Areas—“Special Use Areas” are considered to be the remaining features that are not officially protected or designated as “scenic” areas but are important to the high quality of life enjoyed by the residents. Special use areas include farmlands, rolling hillsides, meadows,

Three Mile River Watershed ACEC

Designated: August 25, 2008

Acreage: 14275 acres
 Dighton: 125 acres
 Norton: 5400 acres
 Taunton: 8750 acres

Massachusetts Department of
 Conservation and Recreation

Areas of Critical Environmental
 Concern (ACEC) Program

This map is intended to be used
 with the written boundary
 description contained in the
 ACEC designation document.
 The mapped boundary is not to
 be used by itself for definitive
 ACEC boundary delineation or
 regulatory interpretation. For
 review of site-specific projects
 within the ACEC boundary,
 determinations may need to be
 made in the field or in
 consultation with ACEC
 Program Staff.

For more information:
www.mass.gov/dcr/stewardship/acec

ACEC Boundaries by Type

- Road/Rail based
- River based
- Wetland based
- Floodplain based
- Tide based
- Contour based
- Political boundary
- Property line based
- Other
- Digital update required

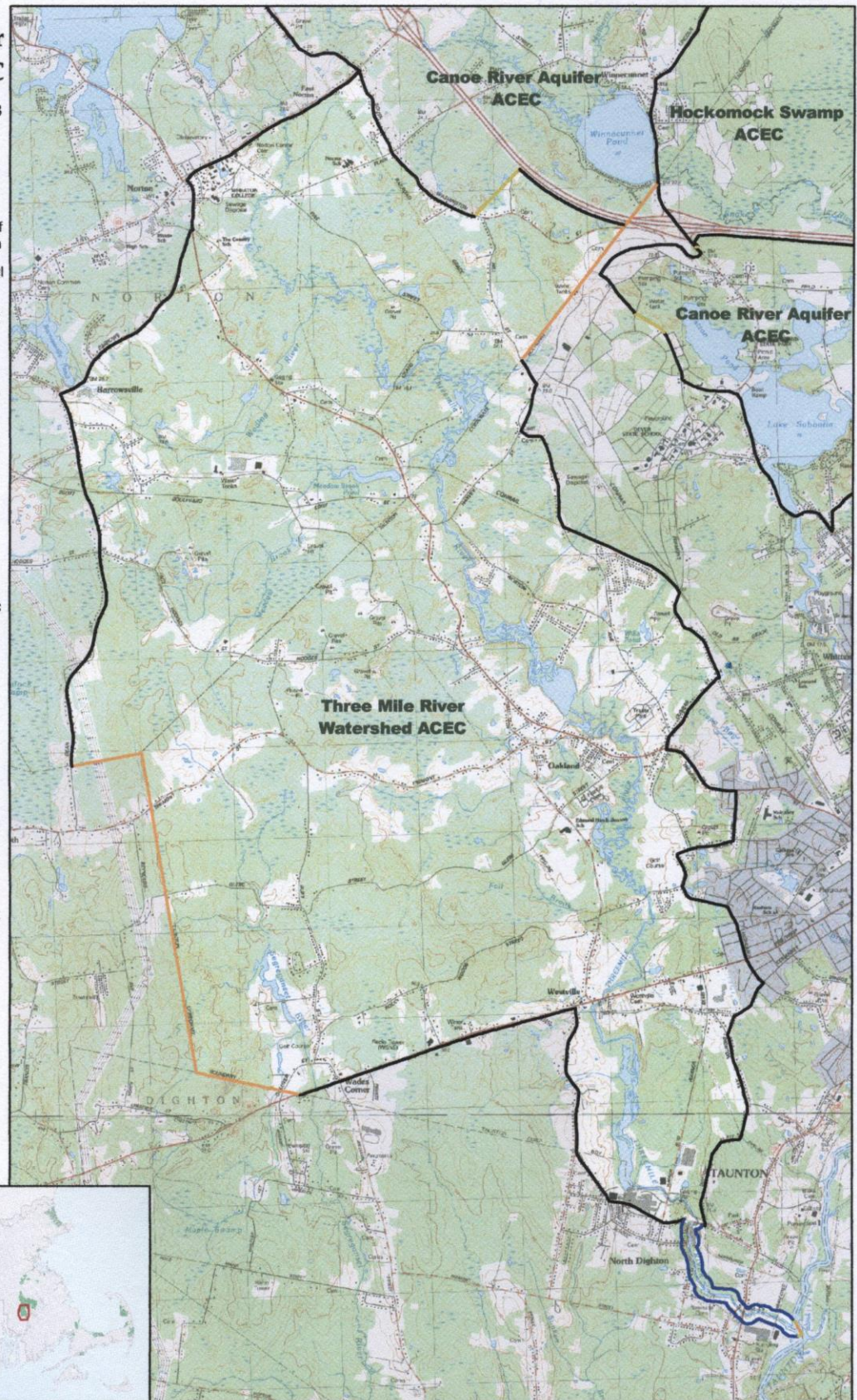
Areas not within this ACEC are
 shaded with a gray mask.

dcr
 Massachusetts



1

mile



wetlands and forests. These unprotected but significantly important features characterize the area and create a scenic and mixed rural and low-density residential area that many people value.

A Three-Mile River ACEC Stewardship Committee was formed within months after the official designation to develop a Three-Mile River ACEC Stewardship Plan. The Committee decided to model the format of the plan after the Taunton River Stewardship Plan. The Stewardship Plan has been drafted and should be available to the public in 2011. The Committee is planning to implement the action items identified in the Stewardship Plan that further the goal to protect the resources of the Three-Mile River Watershed ACEC and educate the stakeholder citizens about the valuable natural, historical and cultural resources in their area.

Outstanding Resource Waters (ORWs)

Outstanding Resource Waters are defined in the MA Surface Water Quality Standards (314 CMR 4.00). They include recharge areas for public water supplies (Zone I, II and Interim Wellhead Protection Areas for groundwater sources and Zone As for surface water supplies), bathing beaches, cold water fisheries, and shellfish growing areas, Class A public water supplies and their tributaries, DEP approved reservoirs, certain waters in Areas of Critical Environmental Concern (ACECS), certified vernal pools, wetlands bordering Class A, B, SB or SA waters. Certain standards must be met for all storm water management systems discharging to ORWs.

The Water Resource Protection District map illustrates Norton's Zone I, II and Interim Wellhead Protection Areas. Norton has nearly 100 certified vernal pools that are designated ORWs. Also, the portion of the Wading River from Mansfield to the confluence at the Three-Mile River and the Three-Mile River at this location to the confluence of the Taunton River are both listed as Class B waters.

BioMap, Living Waters Map, and BioMap2

The BioMap project is another initiative that has greatly aided in the protection of open space for *wildlife habitat*. The BioMap project describes areas as *core habitat* (unique natural communities and habitat for rare plants and animals) and its *supporting natural landscape* (buffer areas around core habitats, large undeveloped patches of vegetation, large "roadless" areas, and undeveloped watersheds). The BioMap represents the rare and exemplary biodiversity of Massachusetts and the long-term viability of wildlife and their habitats. Core habitat identified in Norton exists along the southeasterly side of Lincoln Street within the Hockomock Swamp. Core habitat has been identified south of East Main Street and east of Taunton Ave along the Rumford River and then includes the confluence of the Rumford and Wading Rivers that form the Three-Mile River and extends into Taunton for the entire length of the Three-Mile River. Core habitat includes the southeastern portion of town along the tributaries to the Three-Mile River including Crooked Meadow Brook, Birch Brook and Meadow Brook. Finally, core habitat is identified along the vast forested area known as the Great Woods beginning in Mansfield and extending into Norton up to West Main Street.

Supporting natural landscapes are identified along the Canoe River, areas north of Lake Winnecunnet extending into Easton, areas north of Barrowsville Pond, the Hemlock Swamp-Cedar Swamp in the southwestern portion of town, wetland areas south of Chartley Pond extending into Attleboro and a significant portion along the eastern side of the Wading River just

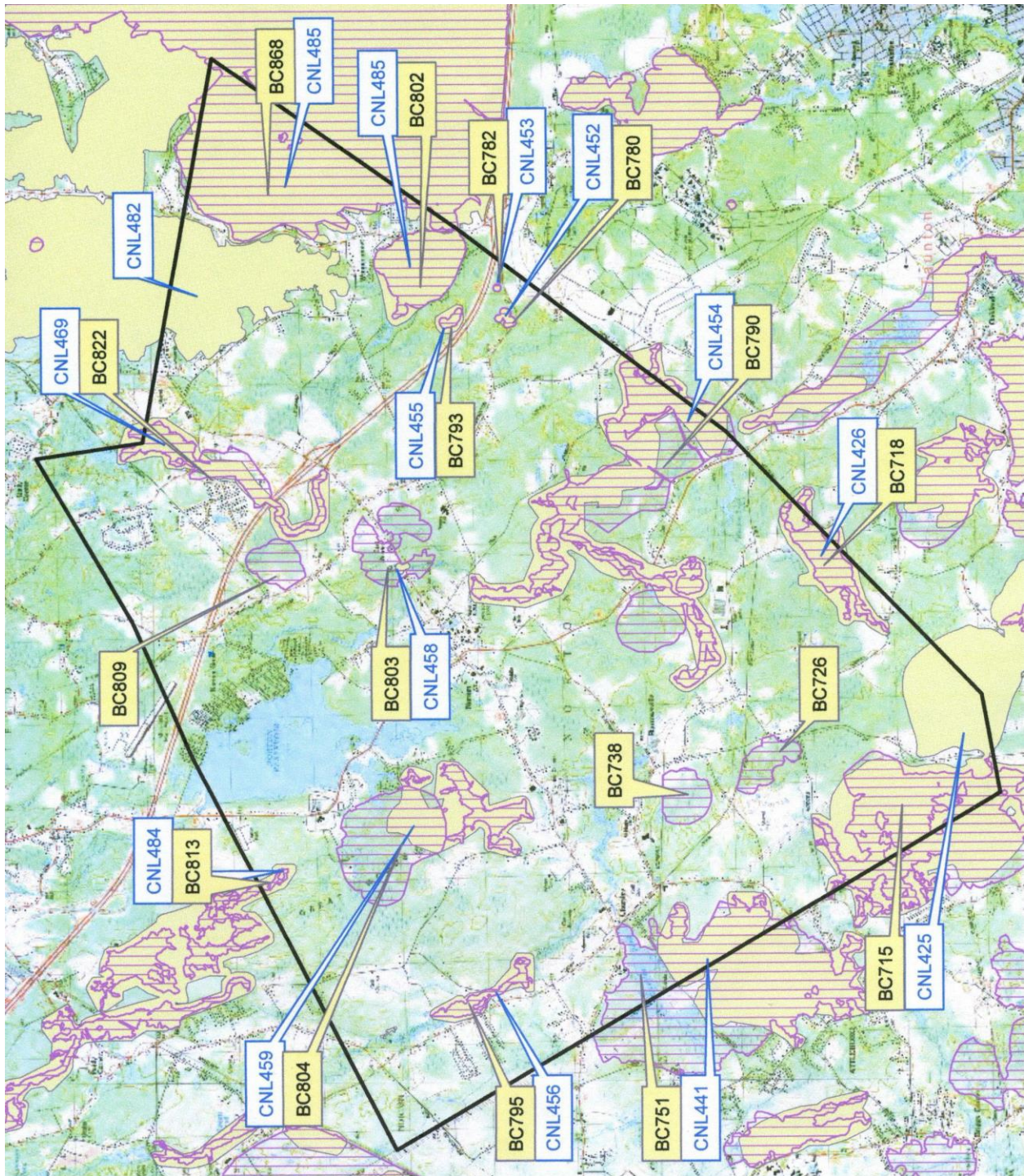
north of West Main Street. All areas are recommended for permanent protection to maintain the quality of wildlife habitat.

The Living Waters Map was the aquatic equivalent of the BioMap (also available from the NHESP). The rivers and water bodies that contain known populations of a rare species are listed as core habitats and the surrounding areas that are essential for the core habitat health are known as *critical supporting watersheds* (similar to the supporting natural landscape of the BioMap). Communities can use this map to determine ways to preserve significant habitat within and along their lakes, ponds, streams and other water bodies. These plans can also assist with creating management plans for water bodies. Locating the rare aquatic species will ensure that projects on lakes and ponds, particularly those projects that include eradication of *exotic, invasive species*, will not adversely affect a rare aquatic species.

The BioMap and Living Waters Map have (in 2010) since been revised in BioMap2. In addition to rare species, BioMap2 includes the goals and objectives of the State Wildlife Action Plan (SWAP) and areas of ecological significance like clusters of vernal pools, large unfragmented forest and unfragmented wetlands. BioMap has been presented by NHESP in 2010 but individual town maps are not yet available. NHESP has provided Norton with a small map and printout of the BioMap2 database. Particularly important to Norton are the polygons that show Eastern Box Turtle, Blandings Turtle, and Blue-spotted salamander habitats. Clusters of vernal pools, natural communities like the Alluvial Red Maple Swamp and the Forest Seep are also depicted on BioMap2. The next page contains the BioMap2 for Norton.

Resources on fisheries and wildlife:

- BioMap2. www.nhesp.org.
- BioMap: Guiding Land Conservation for Biodiversity in Massachusetts. Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Division of Fisheries, Wildlife and Environmental Law Enforcement, Natural Heritage and Endangered Species Program. 2001.
- Our Irreplaceable Heritage: Protecting Biodiversity in Massachusetts. Henry Barbour, Tim Simmons, Patricia Swain and Henry Woolsey. Natural Heritage and Endangered Species Program and the Massachusetts Chapter of the Nature Conservancy. 1998.
- Living Waters: Guiding the Protection of Freshwater Biodiversity in Massachusetts. Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Division of Fisheries, Wildlife and Environmental Law Enforcement, Natural Heritage and Endangered Species Program. 2003.
- The Nature Conservancy. www.tnc.org



BioMap2

BC=BioMap Core

CNL=Critical Natural Landscape