Appendix A.1 Maps

GIS maps:

A.1.1 Proposed ACEC Boundary
A.1.2 Water/Wetland Resources
A.1.3 Habitat/Wildlife Resources
A.1.4 Protected Open Space
A.1.5 Land Use
A.1.6 Forest Resources/Steep Slopes
A.1.7 Orthophoto- Map 1, North Part
A.1.8 Orthophoto- Map 2, South Part

See Maps on Following Pages

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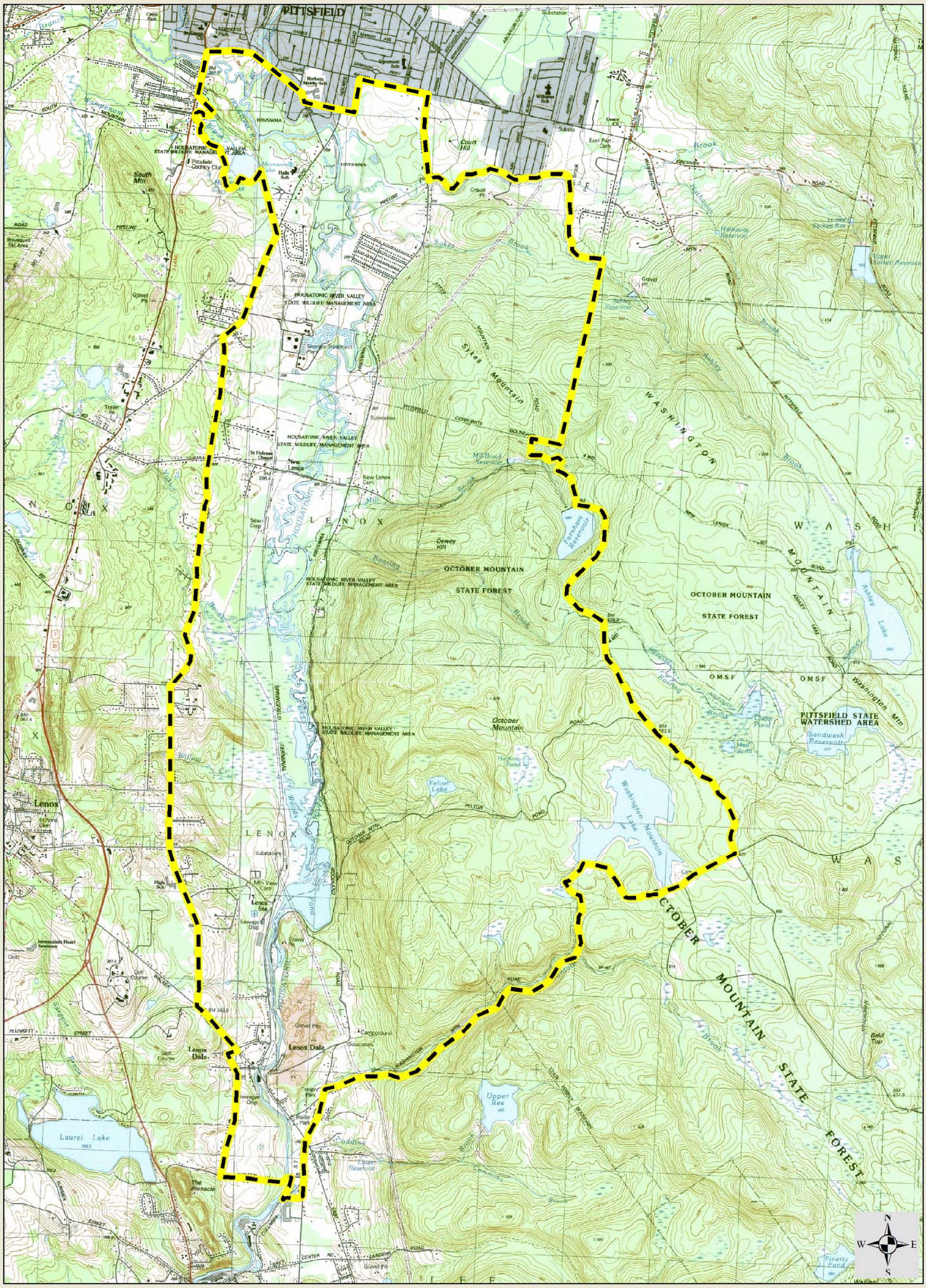
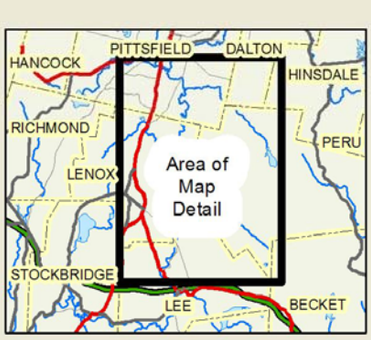


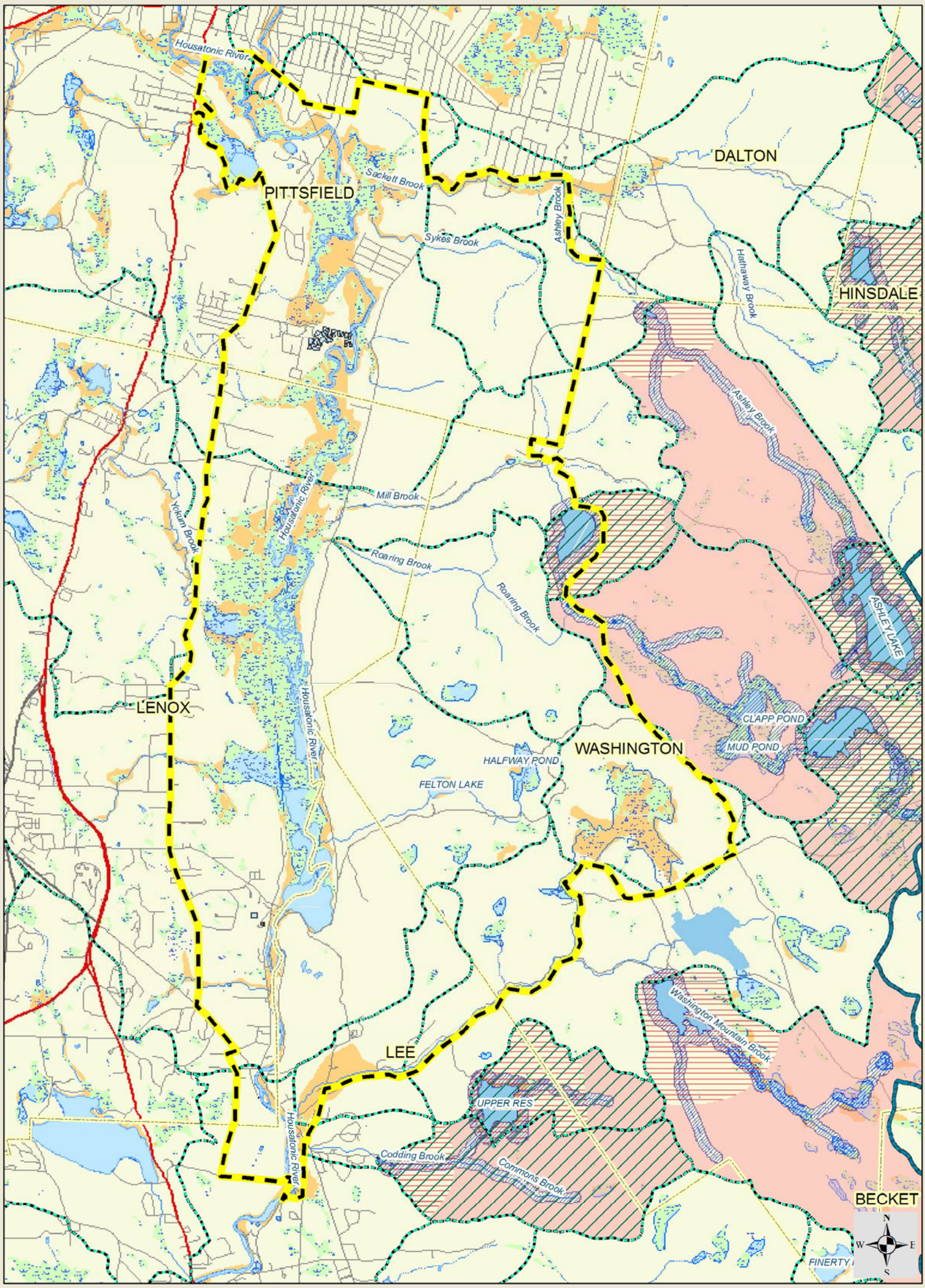


Upper Housatonic River ACEC Nomination
Proposed ACEC Boundary

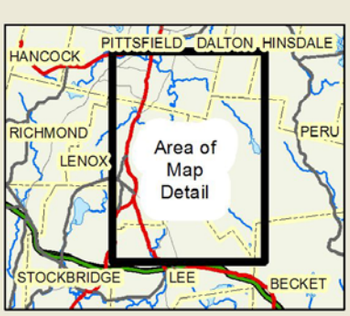
Proposed ACEC Boundary

USGS 1:25000 Quadrangle Maps for this area
last revised, 1987 and 1988

1 0.5 0 1 Miles



Upper Housatonic River ACEC Nomination
Water/Wetland Resources



Proposed ACEC Boundary
Sub-Basin Boundary
Major Basin Boundary
Town Boundary

Major Roads (EOT)
- Interstate
- U.S. Highway
- State Route
- Non-numbered route

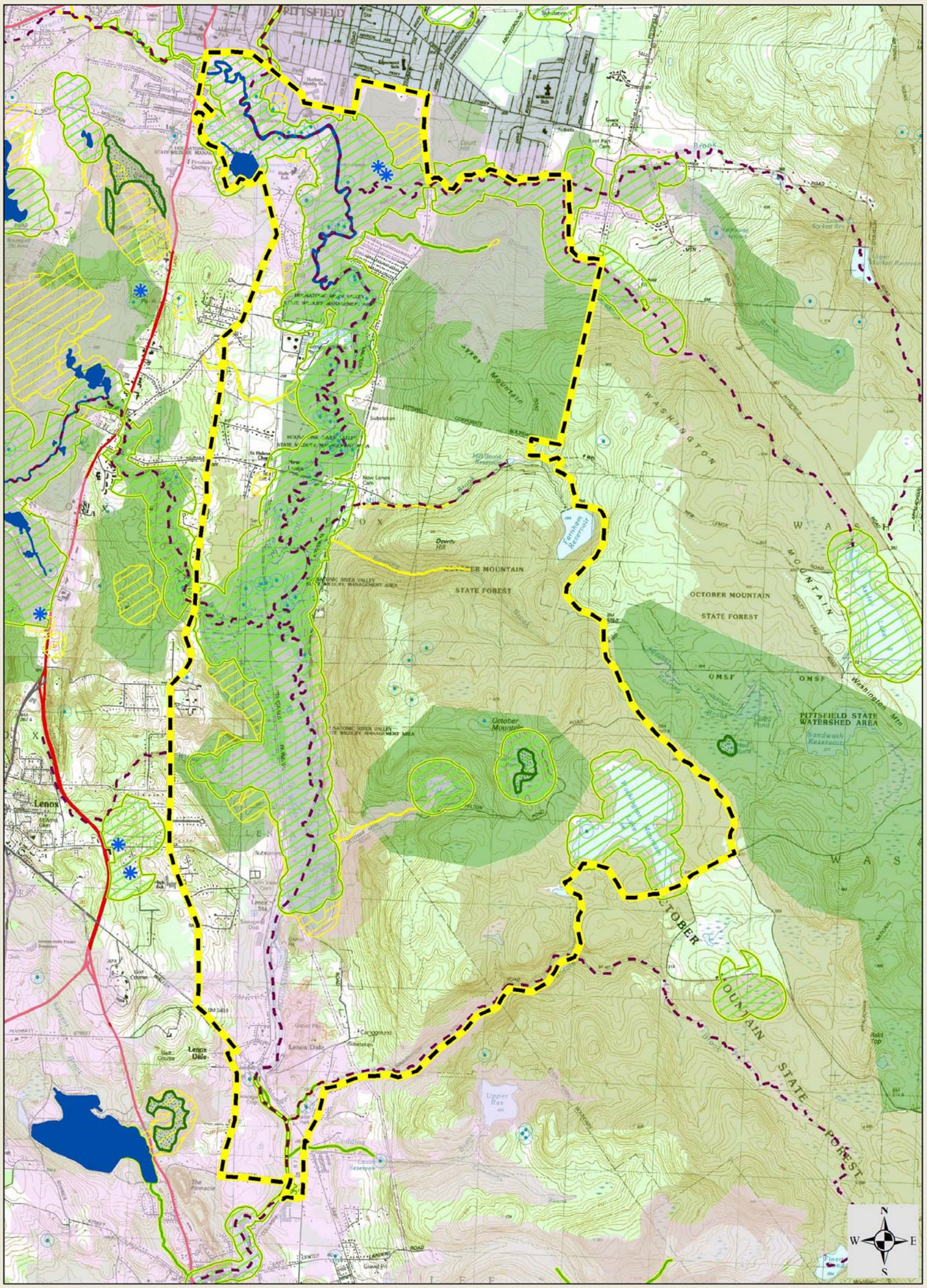
Water/Wetland Types *
- Open Water
- Reservoir
- Submerged Wetland
- Wooded marsh
- Marsh/Bog
- Perennial Stream
- Intermittent Stream
- Intermittent Shoreline
- Ditch/Canal
- Aqueduct

* From DEP 1:5000 Wetlands and MassGIS 1:25000 Hydrography

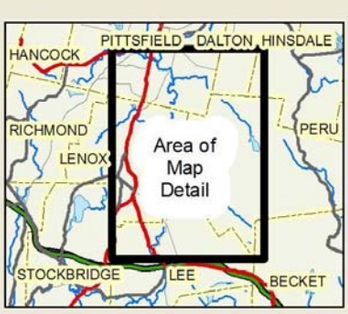
Outstanding Resource Waters
- Public Water Supply Contributor

Surface Water Protection Areas
- ZONE A
- ZONE B
- ZONE C
- FEMA 100-year flood zone

1 0.5 0 1 Miles

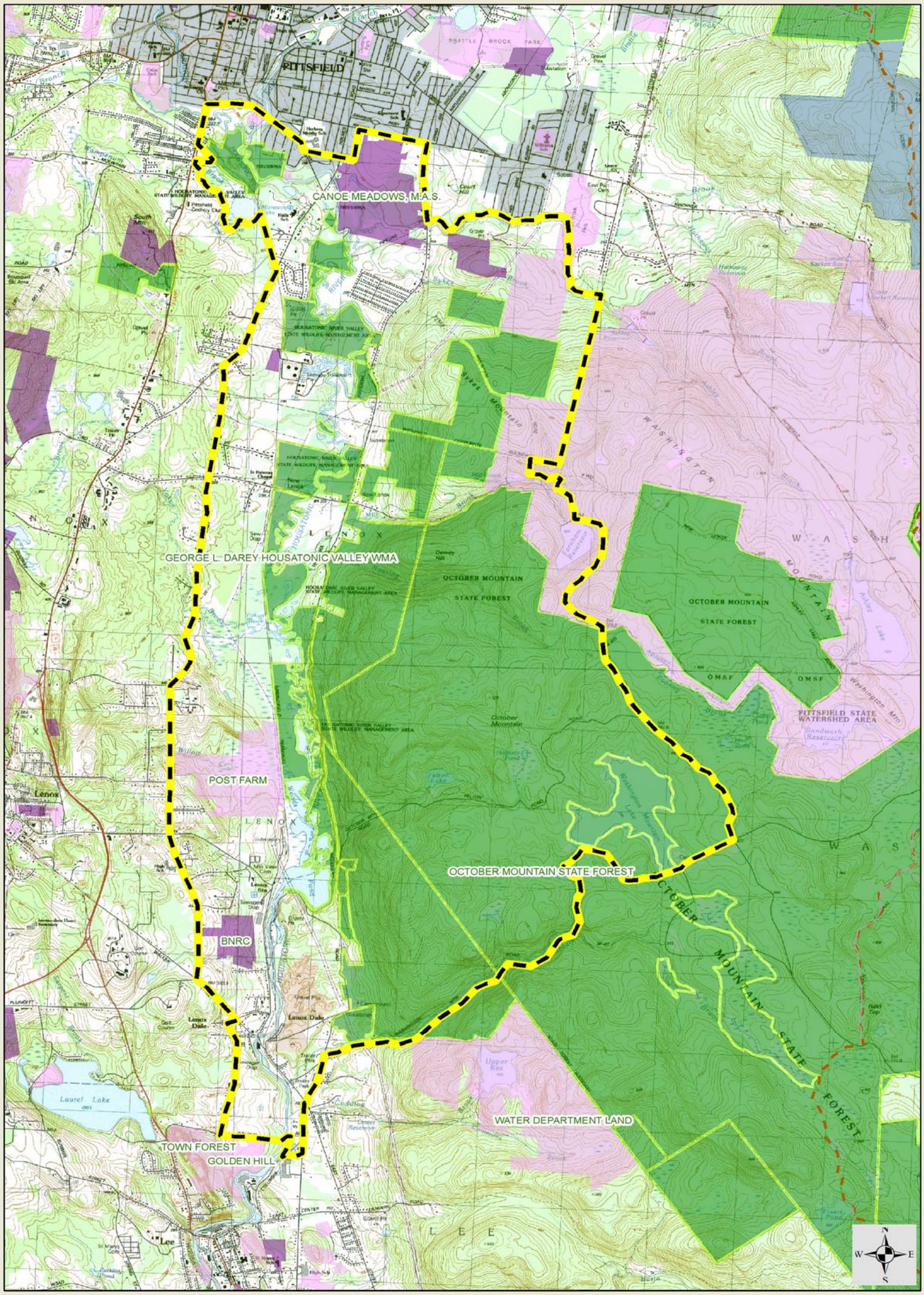


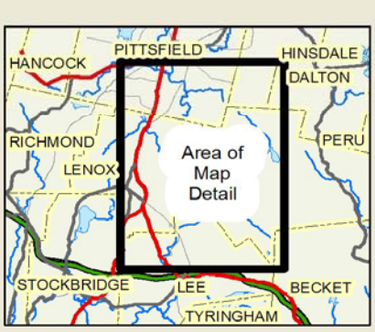
Upper Housatonic River ACEC Nomination
Habitat/Wildlife Resources



- Proposed ACEC Boundary
- NHESP Certified Vernal Pools
- Potential Vernal Pools
- Cold Water Fisheries Resource
- NHESP Estimated Habitats of Rare Wildlife
- NHESP Priority Habitats of Rare Species
- NHESP BioMap Core Habitat
- NHESP BioMap Supporting Natural Landscape
- NHESP Living Waters Core Habitats
- NHESP Living Waters Critical Supporting Watersheds
- NHESP Exemplary Natural Communities

1 0.5 0 1 Miles





Upper Housatonic River ACEC Nomination
Protected Open Space

Proposed ACEC Boundary

Open Space Categories:

- Federal
- State owned or managed, including Dept. Conservation and Recreation, Dept. of Fish & Game; Department of Agricultural Resources
- Municipal
- Public Non-Profit; Land Trust; Conservation Organization; Non-Profit

1 0.5 0 1 Miles

COMMONWEALTH of MASSACHUSETTS
DIVISION of FISHERIES & WILDLIFE

Upper Housatonic River ACEC Nomination
Land Use

Land Use Categories
(from 1999 MassGIS Land Use Data)

- Crop Land
- Pasture
- Forest
- Mining
- Open Land
- Commercial/Industrial
- Urban Open
- Woody Perennial
- High Density Residential
- Medium Density Residential
- Low Density Residential

Hydrography/Wetlands:

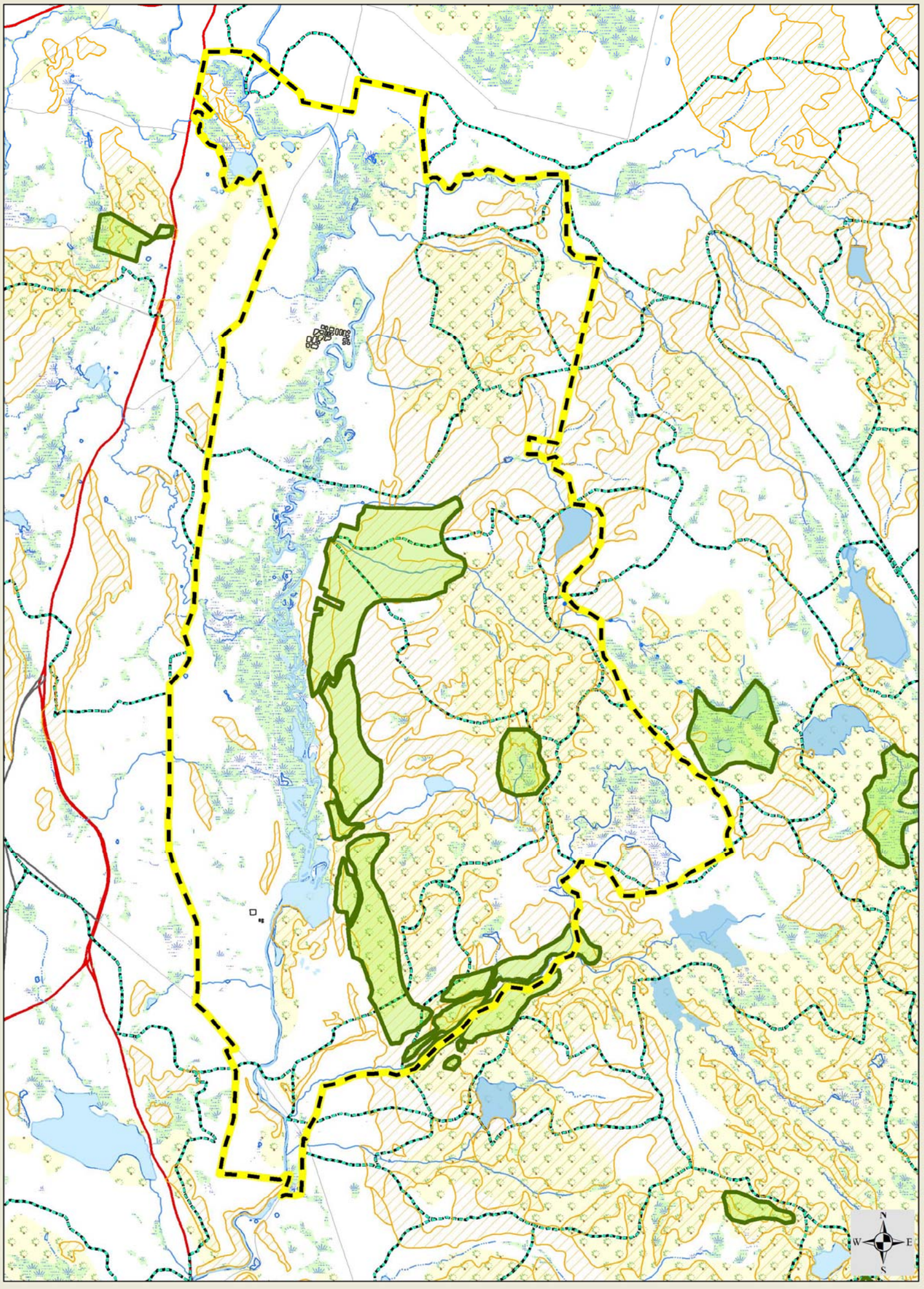
- Marsh/Bog
- Wooded marsh
- Open Water
- Reservoir
- Perennial Stream
- Intermittent Stream
- Shoreline
- Aqueduct

Proposed ACEC Boundary

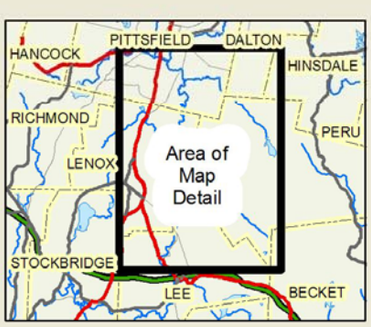
Major EOT Roads

- Interstate
- U.S. Highway
- State Route
- Non-numbered route

1 0.5 0 1 Miles



Upper Housatonic River ACEC Nomination
Forest Resources/Steep Slopes



- Proposed ACEC Boundary
- DCR Forest Reserve
- NRCS soils polygon- average slope greater than 25%
- Sub-basin boundary
- Forested in 1830s #

From Harvard Forest 1830s Mapping Project Data

Hydrography/Wetlands:

- Marsh/Bog
- Wooded marsh
- Open Water
- Reservoir
- Tidal Flats
- Perennial Stream
- Intermittent Stream
- Shoreline
- Intermittent Shoreline
- Aqueduct

Major EOT Roads

- Interstate
- U.S. Highway
- State Route
- Non-numbered route

1 0.5 0 1 Miles

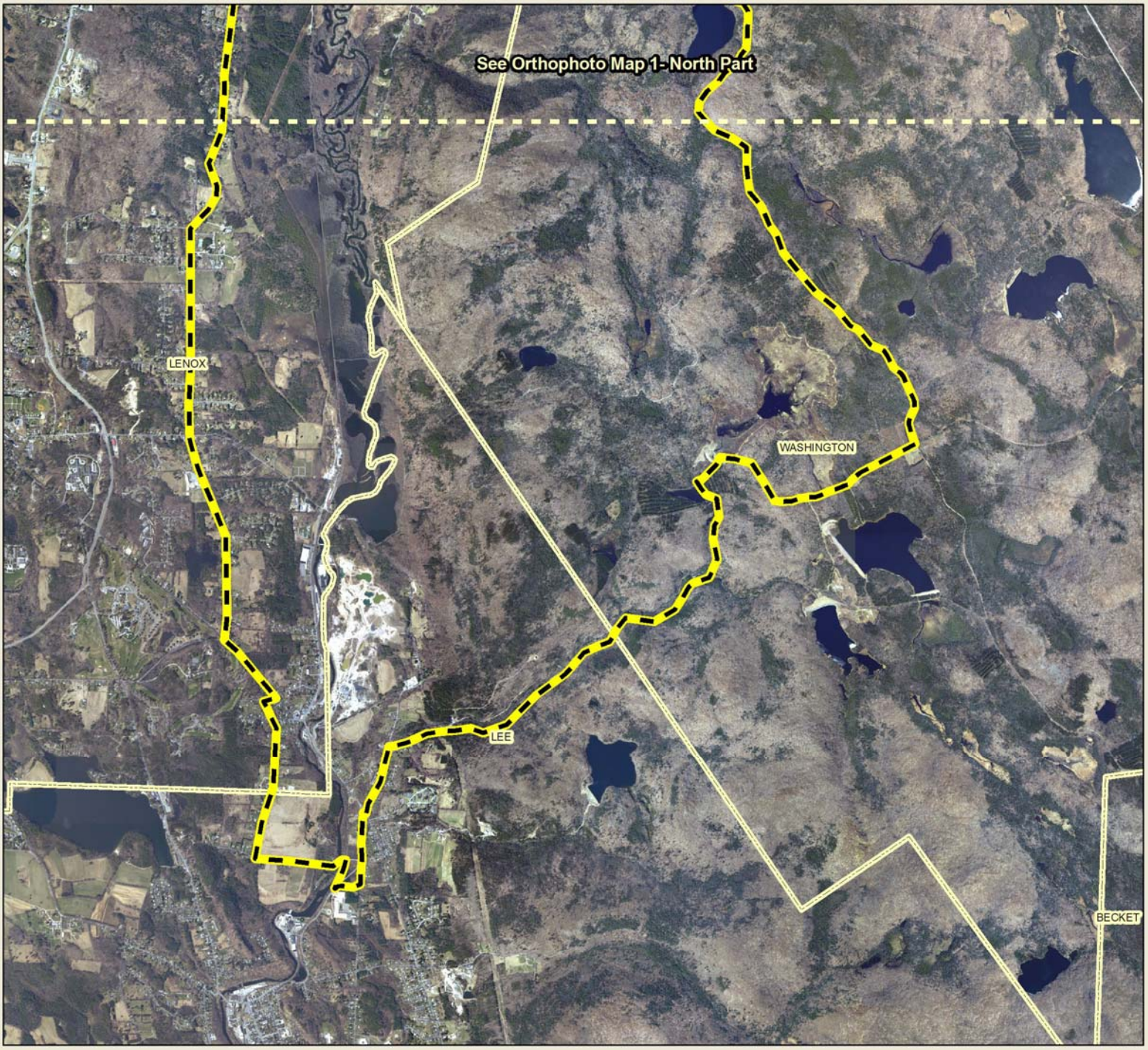
Upper Housatonic River ACEC Nomination
Orthophoto- Map 1, North Part

Proposed ACEC Boundary

Town Bounday

Orthophoto- Date: 2005, Source: MassGIS

1 0.5 0 1 Miles



Upper Housatonic River ACEC Nomination
Orthophoto- Map 2, South Part

Proposed ACEC Boundary

Town Bounday

Orthophoto- Date: 2005, Source: MassGIS

1 0.5 0 1 Miles

Appendix A.2 Map Documentation

The GIS maps and data are listed by thematic group.

A.2.1 Proposed ACEC Boundary

The Massachusetts Office of Geographic and Environmental Information (MassGIS) scanned United States Geological Survey (USGS) topographic quadrangles to create a digital database that can provide images of the paper maps. The paper maps were converted to image format by scanning. The topographic maps used in the mapping were from 1987 and 1988. The boundary was digitized at a scale of 1:24,000.
Full description: http://www.mass.gov/mgis/im_quad.htm

A.2.2 Water/Wetland Resources

A.2.2.1 DEP 1:5000 wetlands

The wetlands are interpreted from 1:12,000-scale, stereo color-infrared (CIR) photography by staff at the University of Massachusetts Amherst. The photography was captured in 1990, 1991, 1992, 1993, 1999 and 2000. The interpretation is field-checked by the Department of Environmental Protection (DEP) Wetlands Conservancy Program (WCP). Final quality control is performed by WCP Geographic Information System (GIS) staff.
Full description: http://www.mass.gov/mgis/wetdep.htm

A.2.2.2 MassGIS 1:25000 Hydrography

The MassGIS 1:25,000 Hydrography datalayer represents hydrographic (water-related) features, including surface water (lakes, ponds, reservoirs), wetlands, bogs, flats, rivers, streams, and others (see attributes below). The layer is a hybrid of data based on United States Geological Survey (USGS) Digital Line Graphs (DLGs), scanned mylar separates obtained from the USGS, and digitized hydrographic features from paper USGS 1:25,000 Topographic Quadrangle maps.
Full description: http://www.mass.gov/mgis/hd.htm

A.2.2.3 FEMA 100-year flood zone

These data represent a subset of the data available on the paper Flood Insurance Rate Maps (FIRM) as provided by the Federal Emergency Management Agency (FEMA). All zones with a value of A were selected.
Full description: http://www.mass.gov/mgis/q3.htm

A.2.2.4 Outstanding Resource Waters

This datalayer delineates those watershed areas in which some resources may be afforded Outstanding Resource Waters classification under the Massachusetts Surface Water Quality Standards of 1995. The entire datalayer was check-plotted by MA DEP and quality checked by MA DEP Wetlands Conservancy Program staff.
Full description: http://www.mass.gov/mgis/orw.htm

A.2.2.5 Surface Water Protection Areas

These Surface Water Supply Protection Areas delineate those areas included in 310 CMR 22.00, the Massachusetts Drinking Water Regulations, as Surface Water Supply Protection Zones.
Full description: http://www.mass.gov/mgis/swp.htm

A.2.2.5.1 ZONE A

Represents a) the land area between the surface water source and the upper boundary of the bank; b) the land area within a 400 foot lateral distance from the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05(3)(a); and c) the land area within a 200-foot lateral distance from the upper boundary of the bank of a tributary or associated surface water body.

A.2.2.5.2 ZONE B

Represents the land area within one-half mile of the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05(3)(a), or edge of watershed, whichever is less. Zone B always includes the land area within a 400-foot lateral distance from the upper boundary of the bank of a Class A surface water source.

A.2.2.5.3 ZONE C

Represents the land area not designated as Zone A or B within the watershed of a Class A surface water source, as defined in 314 CMR 4.05(3)(a). All zones were depicted.

A.2.2.6 Major and Sub-Basin Boundaries

MassGIS has produced a statewide digital datalayer of the twenty-seven major drainage basins of Massachusetts as defined by the USGS Water Resources Division and the Massachusetts Water Resources Commission. Sub-basins were aggregated together to make the twenty-eight basins of the major basins.
Full description: http://www.mass.gov/mgis/maj_bas.htm and http://www.mass.gov/mgis/subbas.htm

A.2.3 Habitat/Wildlife Resources

A.2.3.1 NHESP BioMap Core Habitat

The Core Habitat layer depicts the most viable habitat for rare species and natural communities in Massachusetts. Using a variety of data sources, primarily field data, ancillary literature, and color-infrared aerial photographs, Natural Heritage & Endangered Species Program (NHESP) scientists delineated Core Habitat polygons.
Full description: http://www.mass.gov/mgis/biocore.htm

A.2.3.2 NHESP BioMap Supporting Natural Landscape

The Supporting Natural Landscape buffers and connects Core Habitat polygons, which depict the most viable habitat for rare species and natural communities in Massachusetts, and identifies large, naturally vegetated blocks that are relatively free from the impact of roads and other development. The quality of undeveloped land considered in the landscape analysis was evaluated based on four major components:

- Natural vegetation patch characteristics
- Size of relatively roadless areas
- Sub-watershed integrity
- Contribution to buffering BioMap Core Habitat polygons for plants and exemplary communities.

Full description: http://www.mass.gov/mgis/biosnl.htm

A.2.3.3 NHESP Living Waters Core Habitats

The Core Habitat data layer represents areas of high-quality freshwater biodiversity. These Core Habitats are a compilation of all the aquatic species habitat and exemplary aquatic communities delineated by NHESP biologists. They were based primarily on site visits and field data stored in the NHESP database.
Full description: http://www.mass.gov/mgis/lwcore.htm

A.2.3.4 NHESP Critical Supporting Watersheds

Critical Supporting Watersheds are those areas with the most immediate hydrologic contribution to Core Habitat, and thus the highest potential to sustain or degrade it. They were created by 'AQUALAND,' a grid-based watershed model created through the combined efforts of the NHESP and the University of Massachusetts Landscape Ecology Program.
Full description: http://www.mass.gov/mgis/lwcsw.htm

A.2.3.5 NHESP Estimated Habitats of Rare Wildlife

Estimated Habitats are for use with the Wetlands Protection Act Regulations (310 CMR 10.00). The Estimated Habitats of Rare Wildlife datalayer contains polygons

that are a subset of the Priority Habitats of Rare Species. They are based on occurrences of rare wetland wildlife observed within the last 25 years and documented in the NHESP database. They do not include those areas delineated for rare plants or for rare wildlife with strictly upland habitat requirements. The Estimated Habitats presented here are those published in the 12th Edition of the Massachusetts Natural Heritage Atlas, and are effective beginning October 1, 2006.
Full description: http://www.mass.gov/mgis/esthab.htm

A.2.3.6 NHESP Priority Habitats of Rare Species

The Priority Habitats of Rare Species datalayer contains polygons representing the geographic extent of Habitat of state-listed rare species in Massachusetts based on observations documented within the last 25 years in the database of the NHESP. Priority Habitats are the filing trigger for proponents, municipalities, and other stakeholders for determining whether or not a proposed project must be reviewed by the NHESP for compliance with the Massachusetts Endangered Species Act (MESA). The Priority Habitats presented here are those published in the 12th Edition of the Massachusetts Natural Heritage Atlas, and are effective beginning October 1, 2006.
Full description: http://www.mass.gov/mgis/prihab.htm

A.2.3.7 NHESP Exemplary Natural Communities

The NHESP Natural Communities datalayer consists of polygons that represent the extent of various natural communities of biodiversity conservation interest in Massachusetts. These polygons are based on records of natural communities maintained in the NHESP database. Program scientists classify and delineate natural community polygons by analyzing "on-the-ground" field data and available information about the landscape (particularly topographic maps and aerial photographs). All sites in the NHESP database have been visited by NHESP biologists or by other biologists who have submitted reports on community occurrences that NHESP biologists have reviewed and accepted. Aquatic community types are not included.
Full description: http://www.mass.gov/mgis/natcomm.htm

A.2.3.8 NHESP Certified Vernal Pools

This datalayer contains points for all vernal pools that have been certified by the NHESP according to the *Guidelines for Certification of Vernal Pool Habitat* (Massachusetts Division of Fisheries and Wildlife, 2000). The data presented in the maps were current as of January 2008.
Full description: http://www.mass.gov/mgis/cvp.htm

A.2.3.9 NHESP Potential Vernal Pools

This datalayer identifies the locations of more than 29,000 potential, unverified, vernal pool habitats. Potential vernal pools visible on aerial photographs were

interpreted and included in this layer.
Full description: http://www.mass.gov/mgis/pvp.htm

A.2.3.10 Cold Water Fisheries Resource Areas

The Massachusetts Division of Fisheries and Wildlife (DFW) determines Cold Water Fisheries Resources based on the presence of cold water species. This includes streams with naturally reproducing salmonids (brook trout, brown trout, and/or rainbow trout), slimy sculpin, longnose sucker, or streams that are part of the Atlantic Salmon Restoration Effort.

A.2.4 Protected Open Space

The protected and recreational open space datalayer contains the boundaries of conservation lands *and* outdoor recreational facilities in Massachusetts. The associated database contains relevant information about each parcel, including ownership, level of protection, public accessibility, assessor's map and lot numbers, and related legal interests held on the land, including conservation restrictions. Conservation and outdoor recreational facilities owned by federal, state, county, municipal, and nonprofit enterprises are included in this datalayer. Open space for the maps was broken out be category of ownership - state, nonprofit, and municipal.
Full description: http://www.mass.gov/mgis/osp.htm

A.2.5 Land Use

The MassGIS Land Use datalayer has thirty-seven land-use classifications interpreted from 1:25,000 aerial photography. Photo interpretation and automation were done by the Resource Mapping Project at the University of Massachusetts Amherst. Land use data used in the maps were current as of 1999.
Full description: http://www.mass.gov/mgis/lus.htm

A.2.6 Forest Resources/Steep Slopes

A.2.6.1 1830s Forest

Using maps that were generated for each Massachusetts town in 1830, Harvard Forest developed maps indicating forest land, open land, meadows, and cultural features, including roads, mills, meeting houses, etc. Because 1830 was near the period of maximum forest clearance, the resulting data layers provide a reasonable approximation of the Massachusetts landscape at the height of agricultural activity. Those areas indicated as '1830s Forest' were selected from the data layer.
Full description: http://harvardforest.fas.harvard.edu/research/1830readme.html

A.2.6.2 DCR October Mountain Forest Reserves

Department of Conservation and Recreation (DCR) Forest Reserves are delineated for October Mountain State Forest as part of the 2007 DCR Central Berkshire

District Forest Resource Management Plan.
Full description:
http://www.mass.gov/dcr/stewardship/forestry/manage/planning.htm and
http://www.mass.gov/dcr/stewardship/forestry/manage/docs/cbk_resourceManagement.pdf

A.2.6.3 Steep Slopes

The Soils datalayer has been automated from 1:25,000 published soils surveys as provided on various media by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). All soils data released by MassGIS have been "SSURGO-certified," which means they have been reviewed and approved by the NRCS and meet all standards and requirements for inclusion in the national release of county-level digital soils data. Soil polygons were depicted that had an average slope value of 25-30%.
Full description: http://www.mass.gov/mgis/soi.htm1830s forest

A.2.7 Orthophotos- North & South Parts (2005 Color Orthophoto)

Two orthophotos were produced for the Upper Housatonic River ACEC nomination to provide more detail for viewing the entire nominated area - one map for the north area, another for the south area.

A.2.7.1 2005 Color Orthophoto

These medium resolution true color images are considered the new "basemap" for the Commonwealth the Executive Office of Energy and Environmental Affairs (EOEEA) and MassGIS. The photography for the entire commonwealth was captured in April 2005 when deciduous trees were mostly bare and the ground was generally free of snow.
Full description: http://www.mass.gov/mgis/colororthos2005.htm

A.2.7.2 EOT Roads

This layer is the official state-maintained street transportation dataset available from MassGIS and represents local and major roadways, including designations for Interstate, U.S., and State highways. The Executive Office of Transportation, Office of Transportation Planning (EOT-OTP), which maintains this layer, added other line work using the Color Orthophoto Imagery as a base.
Full description: http://www.mass.gov/mgis/eotroads.htm