Natural Resources and Wildlife Inventory

Sustainable CT Action 2.5

2.5.1 Create a Natural Resource and Wildlife Inventory (15 points)

With support from the Naugatuck Valley Council of Governments, the following natural features were mapped in the Town of Woodbury to "Create a Natural Resource and Wildlife Inventory". (See Attachment A)

- Street Map
- Farmland Soils
- Inland Wetland Soils
- Soil Drainage Classes
- Land Use
- Water Quality Classifications
- Aquifer Protection Areas
- Drainage and Sub Regional Basins
- Flood Zones
- Open Space
- Natural Diversity Database Areas (NDDB)
- Critical Habitats
- Contour and Elevation Data

2.5.2 Integrate your Natural Resource and Wildlife Inventory (NRWI) into municipal planning documents and/or decision making (5 points)

Chapter one of the current (2010) Plan of Conservation and Development (POCD) incorporates a set of goals, recommendations and policies related to natural resource protection (See Attachment B).

"Woodbury has enacted protective land use regulations that have successfully maintained a high level of environmental quality notwithstanding the significant amount of development that has occurred to-date. These regulations have allowed orderly growth to occur without impeding the vital functions of natural resources. Land use boards continue to review new development proposals and require that applicants take all reasonable measures to protect the Town's environment."

It should be noted that the Town is in the process of updating the POCD and will be integrating additional strategies and actions dedicated to continued natural resource protection.

Inland Wetlands and Watercourse Agency

The Woodbury Inland Wetlands and Watercourse Agency plays a crucial role in shielding Aquatic and Riparian areas for undo harm, safeguarding some of Woodbury's most prominent natural resources. Through their efforts, Woodbury continues to protect the integrity of wetlands from the impacts of development practices. Several maps associated with the NRWI are utilized by the Agency and staff during their reviews denoting floodplain, wetland soils, soil drainage classes and areas included in the Connecticut Natural Diversity Database (NDDB).

Conservation easements are also utilized by the Agency to ensure the protection of ecologically sensitive land. The Agency regularly requests assurances preventing undo harm to species listed on the NDDB maps, during and after construction. In addition, the wetland regulations have been revised to require an expanded regulatory review area of 500 feet in recognition of the ecological importance and fragility of vernal pools.

As stated in the 2010 POCD, Woodbury will continue to pursue and include the following policies in the updated POCD:

- Review all development applications within the jurisdiction of the IWWA and require all feasible measures to prevent negative impacts on wetlands and watercourses.
- Conduct environmental education programs to increase awareness of the valuable function's wetlands serve.
- Where development has degraded wetlands, work with state and regional agencies to restore the areas to a pristine condition.
- Require compensatory wetland creation where no practical alternative exists to lawful development activities.
- Establish riparian buffers as appropriate to minimize alteration of vegetation along streams, protect fisheries, trap sediments from erosion, maintain stream temperature, preserve wildlife habitat, provide corridors for travel, and prevent nitrogen, phosphorus, pesticides, and other pollutants from reaching water courses.

Conservation Commission

Open space includes land or water protected or restricted for wildlife habitat, agriculture, passive recreation and parks, forestry, aquifer protection, riparian corridor protection, and scenic vistas. It includes land protected in fee simple ownership by the Town or a conservation land trust, as well as privately-owned land restricted by an easement that prevents development, such as "open space" in an open space subdivision. Increasing use of the open space subdivision mechanism allowed under the zoning regulations has resulted in the protection of a large amount of private open space at no cost to the Town.

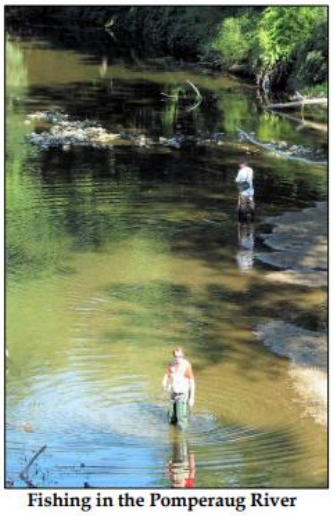
Three Rivers Meadow Park

The Town of Woodbury places a great deal of importance on the protection of open space and moving forward, seeks to acquire and support the acquisition of more strategic open space properties. In the 2010 POCD, the open space target was set for 20% to 25% of the total land area placed under permanent protection.

Acquisitions for open space should be done strategically and in a manner that places the highest value on properties that will expand contiguous open space, have the greatest impact on water quality, have unique environmental resources, and provides links in a greenway network or complete gaps in wildlife habitat and corridors. The NDDB, open space, critical habitats and wetland maps all provide important information when strategically evaluating a property for open space acquisition.

Zoning/Flood Plain/Aquifer Protection

The purpose of the Town's zoning regulations with respect to natural resources and wildlife is to provide for the best use of land in the Town of Woodbury; to promote health, safety and the general welfare; to regulate and determine the size and location of yards; to provide adequate open spaces for light and air; and to provide for the preservation of desirable open space, tree cover, historic related resources, water resources, ridgelines, and other environmentally important lands, soils and geologic phenomena. Information in the various NRWI maps is often utilized by staff and Land Use Boards, Agencies and Commissions when reviewing applications to evaluate the potential environmental impact of development projects.


Fishing in the Pomperaug River

The Zoning Commission administers the Flood Plain Regulations and utilizes the FEMA Flood Zone Map to obtain information regarding the location of flood zones with respect to proposed developments. The map is used to assist in the Commission's decision.

The Commission also serves as the Aquifer Protection Agency (APA) charged with enforcing the 2012 APA regulations. The Aquifer Protection Area map enables the Commission to identify critical water supply aquifers and identify ways to protect them from pollution by managing land use.

Land Use Staff

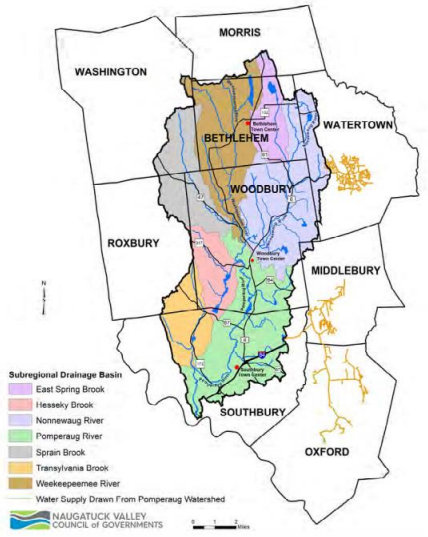
The Town of Woodbury also encourages pre-application meetings for development projects. These meetings are important, especially for larger projects, because they provide the Town and the applicant with an opportunity to discuss the project and to possibly identify ways that impacts can be reduced or eliminated, prior to the application being submitted. Pre-application meetings also provide an opportunity to identify aspects of the project which could make the

application difficult to approve. In these instances, there is the additional opportunity to discuss possible alternatives.

Pomperaug River Watershed Coalition

The Pomperaug River Watershed Coalition's, Watershed Based Plan (2018) is another important planning document that is used by the Town to protect natural resources. The Plan identifies several recommendations and best management practices that can be implemented to improve the overall quality of the Pomperaug River Watershed.

The objectives of the Plan are to:

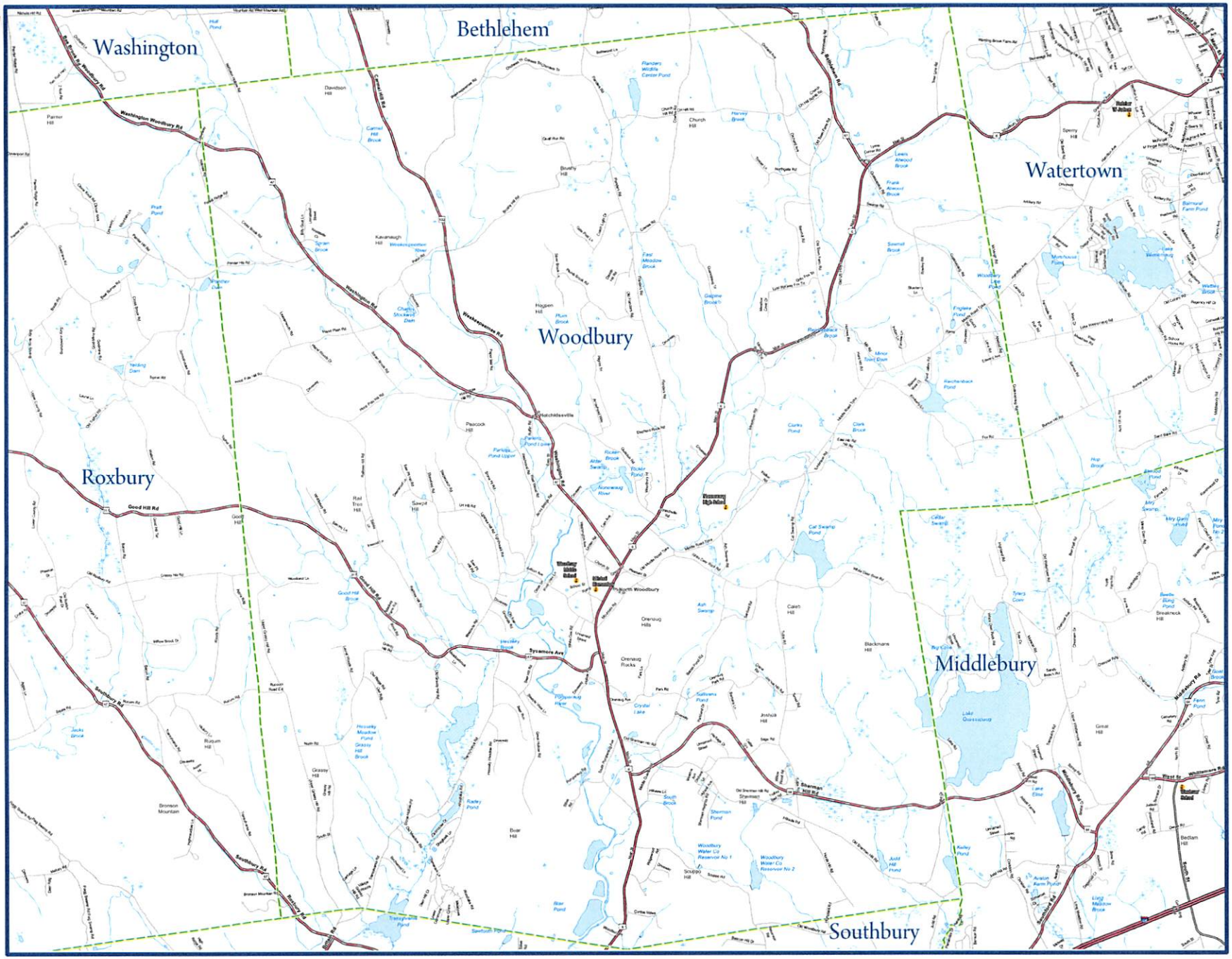


- Establish an up-to-date baseline of water quality and land use conditions in the watershed.
- Evaluate contributing factors in areas of known impairments
- Identify water quality monitoring needs to support plan implementation
- Establish community buy-in through public engagement in the planning process
- Identify and prioritize actions to reduce pollutant inputs to impaired rivers and streams
- Incorporate proactive measures to protect/maintain high quality streams.

"This Plan is a guidance document that seeks to resolve surface water quality impairments and related water resource issues within the Pomperaug watershed. This document is not intended to "point fingers" but is to help make all aware of how individual and collective actions are interconnected and can impact the Pomperaug's water resources. Unless identified as a required action under an existing local, State or federal regulation or permit, the recommendations in this Plan for specific projects/actions are intended to be voluntary undertakings, carried out with willing, cooperative partners, working together to protect and improve water quality. Towards this end, this Plan identifies potential partners and funding sources to assist with achieving the recommendations presented herein."

The complete Plan can be found at the following link https://www.pomperaug.org/water-resources-management-plan.

APPENDIX A



STREET MAP
Woodbury, CT

EXPLANATION

This map displays street-level data for towns in Connecticut. Included are major interstates, US routes, state routes, streets, railroads, and ferry crossings. Also displayed are airports, hospitals, schools, universities, train stations, town boundaries, and waterbodies such as rivers, streams, and lakes. Important geographic locations and waterbodies are labeled.

DATA SOURCES

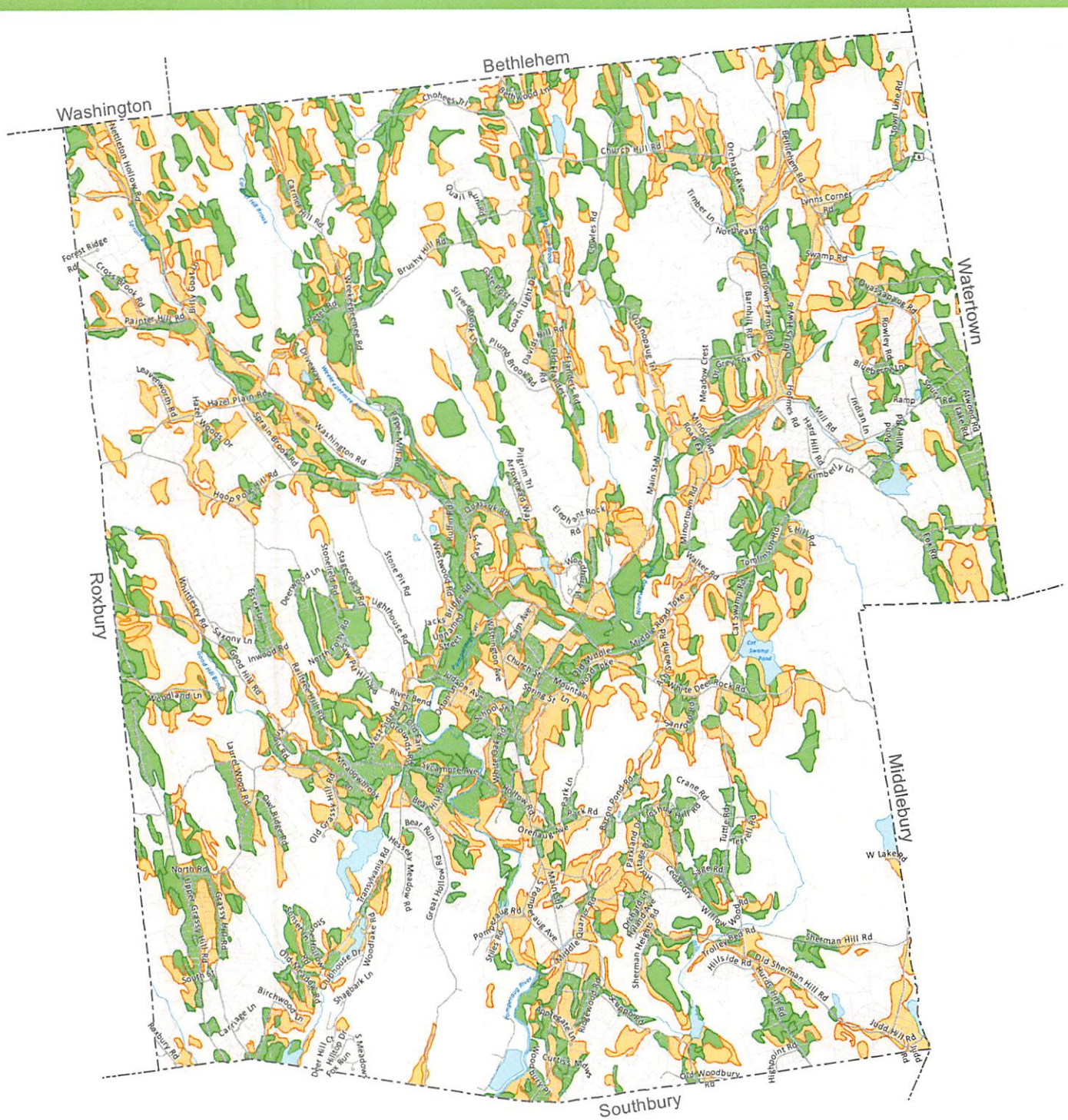
BASE MAP DATA - All data is based on 1:24,000 scale and displays geographic names, places and their symbols, town boundaries, railroads, airports, and hydrography. Base map data is neither current nor complete.
STREET DATA - Based on TeleAtlas copyrighted data.
MAPS AND DIGITAL DATA - Visit the CT ECO website for this map and a variety of others in PDF format. Visit the CT DEP website to download the base map digital spatial data shown on this map.

0 900 1,800 3,600 5,400 7,200 Feet

Map prepared by CT DEP, August 2010.
Map is not colorfast.
Protect from light and moisture.

STATE OF CONNECTICUT
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Woodbury Farmland Soils



Parcel Boundaries
Water
Roads

farmlandsoils

Prime Farmland Soils
Statewide Important Farmland Soils

0 0.25 0.5 1 Miles

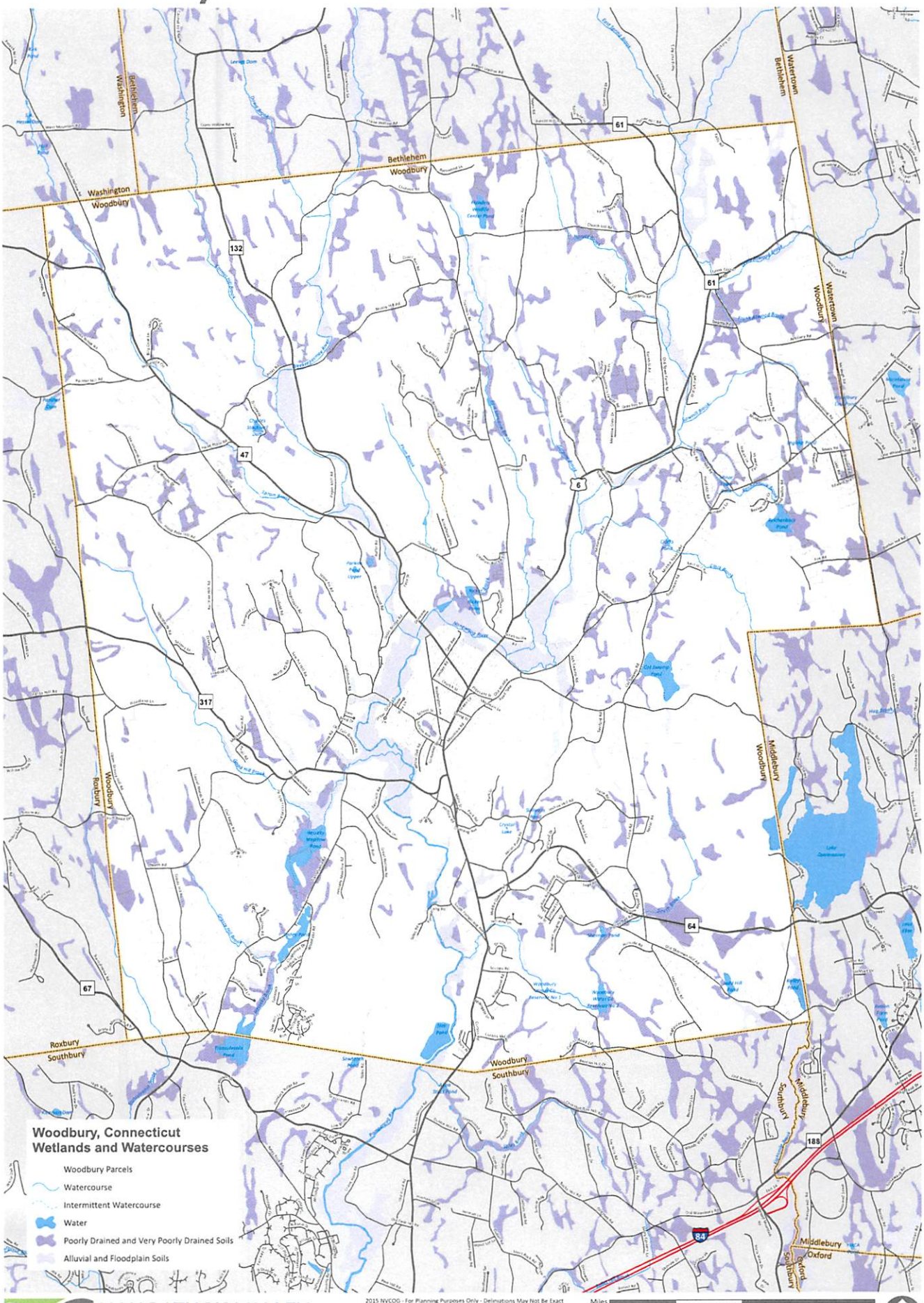
For planning purposes only.
Delineations may not be exact.

Sources:
Town of Woodbury
CT 911 Roads: CTDPS/TeleAtlas
Parcels: New England Geosystems
Hydrography: CT DEEP

Revised: 5/28/2019

NAUGATUCK VALLEY COUNCIL of GOVERNMENTS

Woodbury Wetlands and Watercourses



NAUGATUCK VALLEY COUNCIL of GOVERNMENTS

2015 NVCOG - For Planning Purposes Only - Delineations May Not Be Exact

Sources: Woodbury Parcels: NEGEO
CT911 Roads (Rel.11/2013): CT DESPP/ TeleAtlas
Hydrography, Wetland Soils, Town Boundaries: CT DEEP

Miles
0 0.5 1 2

SOIL DRAINAGE CLASS

WOODBURY, CONNECTICUT

LEGEND

Excessively drained - Water is removed very rapidly. The occurrence of internal free water commonly is very rare or very deep. The soils are commonly coarse-textured and have very high hydraulic conductivity or are very shallow.

Somewhat excessively drained - Water is removed from the soil rapidly. Internal free water occurrence commonly is very rare or very deep. The soils are commonly coarse-textured and have high saturated hydraulic conductivity or are very shallow.

Well drained - Water is removed from the soil readily but not rapidly. Internal free water occurrence commonly is deep or very deep; annual duration is not specified. Water is available to plants throughout most of the growing season in humid regions. Wetness does not inhibit growth of roots for significant periods during most growing seasons. The soils are mainly free of features that are related to wetness.

Moderately well drained - Water is removed from the soil somewhat slowly during some periods of the year. Internal free water occurrence commonly is moderately deep and transitory through permanent. The soils are wet for only a short time within the rooting depth during the growing season, but long enough that most mesophytic crops are affected. They commonly have a moderately low or lower saturated hydraulic conductivity in a layer within the upper 1 m, periodically receive high rainfall, or both.

Somewhat poorly drained - Water is removed slowly so that the soil is wet at a shallow depth for significant periods during the growing season. The occurrence of internal free water commonly is shallow to moderately deep and transitory to permanent. Wetness markedly restricts the growth of mesophytic crops, unless artificial drainage is provided. The soils commonly have one or more of the following characteristics: low or very low saturated hydraulic conductivity, a high water table, additional water from seepage, or nearly continuous rainfall.

Poorly drained - Water is removed so slowly that the soil is wet at shallow depths periodically during the growing season or remains wet for long periods. The occurrence of internal free water is shallow or very shallow and common or persistent. Free water is commonly at or near the surface long enough during the growing season so that most mesophytic crops cannot be grown, unless the soil is artificially drained. The soil, however, is not continuously wet directly below plow-depth. Free water at shallow depth is usually present. This water table is commonly the result of low or very low saturated hydraulic conductivity of nearly continuous rainfall, or of a combination of these.

Very poorly drained - Water is removed from the soil so slowly that free water remains at or very near the ground surface during much of the growing season. The occurrence of internal free water is very shallow and persistent or permanent. Unless the soil is artificially drained, most mesophytic crops cannot be grown. The soils are commonly level or depressed and frequently ponded. If rainfall is high or nearly continuous, slope gradients may be greater.

Not Rated - Soils have characteristics that show extreme variability from one location to another. Often these areas are urban land complexes or miscellaneous areas. An on-site investigation is required to determine soil conditions present at the site.

EXPLANATION

Soil Drainage Class refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized - excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. Drainage classes are from observations of water tables, soil wetness, landscape position and soil morphology. In many soils the depth and duration of wetness relate to the quantity, nature, and pattern of redoximorphic features. Redoximorphic features are soil features associated with wetness. They result from the reduction and oxidation of iron and manganese compounds in the soil after saturation with water and desaturation, respectively.

Drainage classes provide a guide to the limitations and potentials of the soil for field crops, forestry, wildlife, and recreational uses.

The class roughly indicates the degree, frequency, and duration of wetness, which are factors in rating soils for various uses.

As the minimum soil map unit size delineation is approximately 3 acres, this map does not all soils that are dominated by the drainage classification. Soil map units are not homogeneous units. They contain both similar and dissimilar soils. Flooding class map units are dominated by soils that flood, but have inclusions of non-flooding soils. Non-flooding soil map units may contain inclusions of flooding soils. This map indicates those types of soils that are dominated by the drainage classification. For those map units that have miscellaneous areas (Rock Outcrop, Urban Land, Dumps, Pits), the classification refers to the soil portion.

This map does not incorporate current land use changes which may affect the drainage class designation.

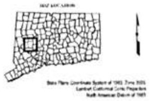
DATA SOURCES

SOIL DATA - Soil map units shown on this map are from the 2007 Soil Survey Geographic Database (SSURGO) database produced by the USDA, Natural Resources Conservation Service (NRCS). The soils were mapped at a scale of 1:12,000 with a minimum size delineation of three acres. Enlargement of this map beyond the original source scale will not show additional detail and can cause misunderstanding of the detail of mapping. For the most recent soils data contact the NRCS.

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries, railroads, airports, hydrography, geographic names and geographic places. Streets and street names are from Tele Atlas copyrighted data. Base map information is neither current nor complete.

RELATED INFORMATION
This map is intended to be printed at its original dimensions in order to maintain the 1:24,000 scale (1 inch = 2000 feet).

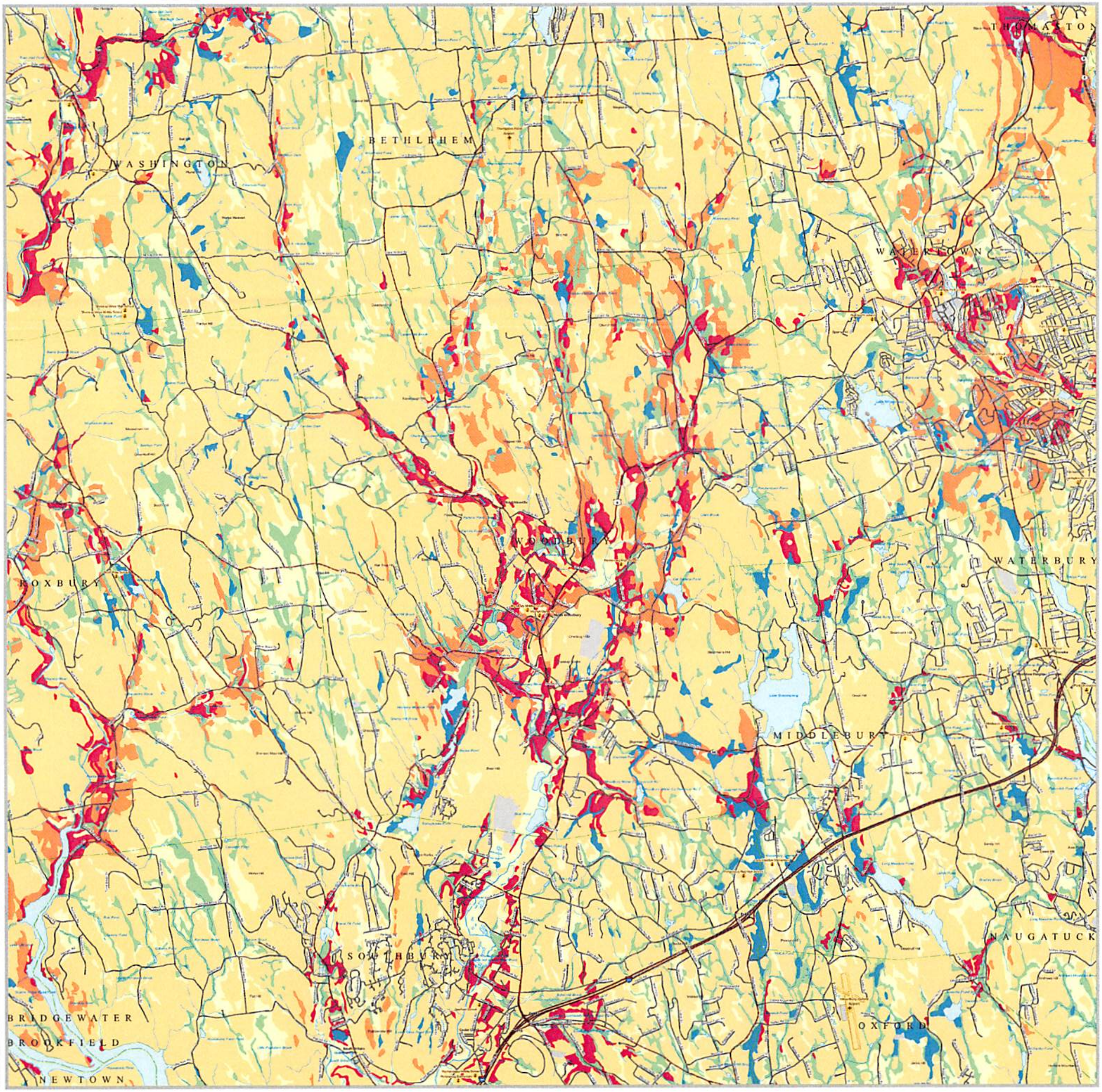
MAPS AND DIGITAL DATA - Visit the CT ECO website for this map and a variety of others. Visit the NRCS soils website for the soils data shown on this map. Visit the CT DEP website to download the base map digital spatial data shown on this map.



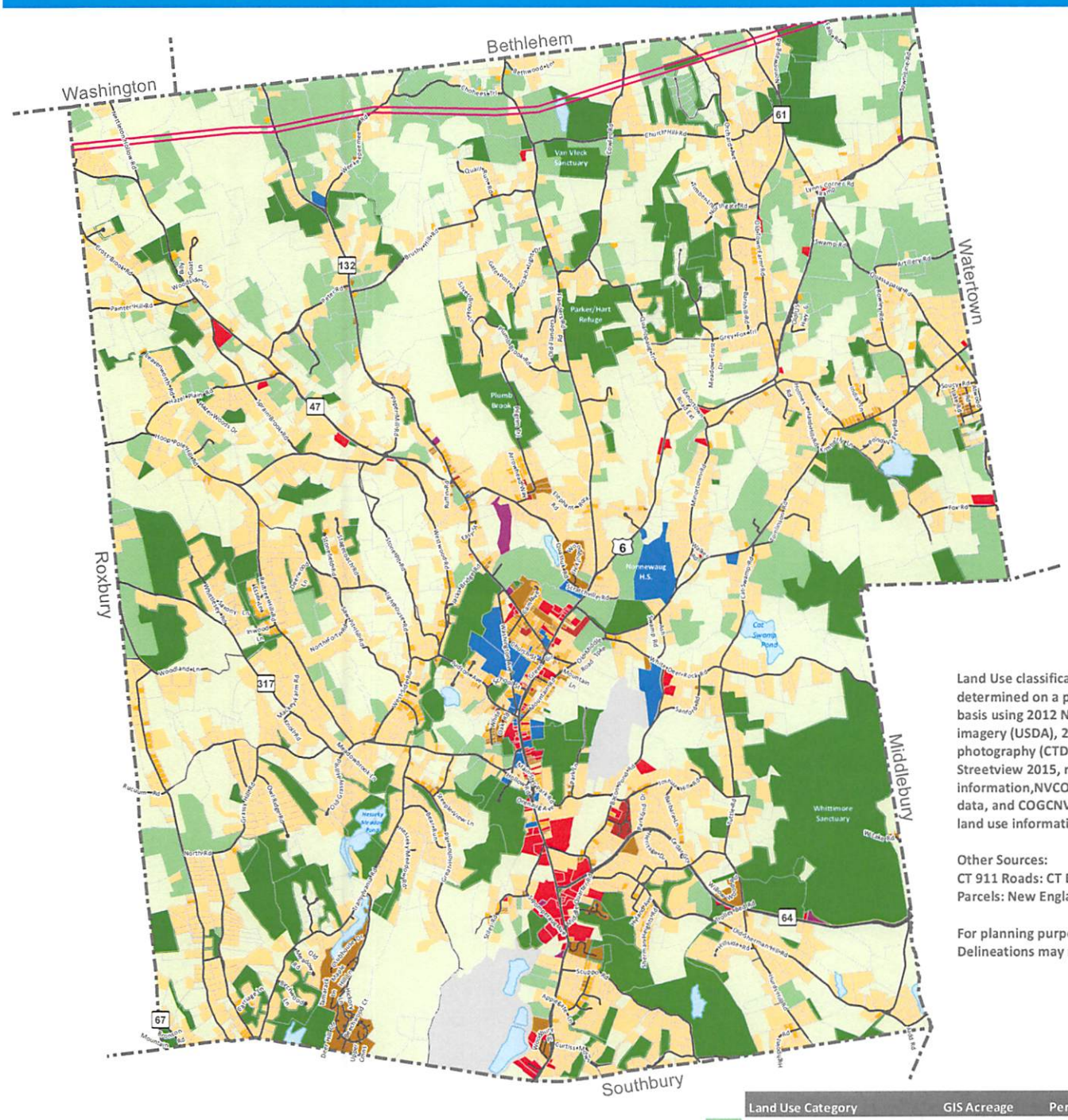
STATE OF CONNECTICUT
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Map prepared by CT DEP
April 2010

U.S. Department of Agriculture
NRCS Natural Resources Conservation Service



Woodbury Land Use 2017



Land Use classification was determined on a parcel by parcel basis using 2012 NAIP satellite imagery (USDA), 2012 leaf-off aerial photography (CTDEEP), Google Streetview 2015, municipal assessor information,NVCOG open space data, and COGCNV 2000 generalized land use information.

Other Sources:
CT 911 Roads: CT DESPP/TeleAtlas
Parcels: New England Geosystems

For planning purposes only.
Delineations may not be exact.

Land Use Category	GIS Acreage	Percent
Agriculture	2,836.4	12.0%
Commercial	247.8	1.0%
Community Facility	235.6	1.0%
Industrial	27.9	0.1%
Recreational or Open Space	3,593.4	15.2%
Residential - Low	6,336.9	26.8%
Residential - Medium-Low	302.1	1.3%
Residential - Medium Density	308.6	1.3%
Residential - High Density	27.1	0.1%
Resource Extraction	352.5	1.5%
ROW	893.4	3.8%
Utilities	1.5	0.0%
Undeveloped	8,266.2	35.0%
Water	187.2	0.8%
Totals:	23,616.6	100.0%

Electric Transmission Lines

Miles
0 0.5 1 2

Revised: 7/26/2017 Document Path: S:\ArcGIS\projects\LandUse\LandUse\LandUse_2017\WDBY_LandUse_2017.mxd

NAUGATUCK VALLEY COUNCIL of GOVERNMENTS

WATER QUALITY CLASSIFICATIONS
WOODBURY, CT

SURFACE WATER QUALITY CLASSES

Areas	Lines
A	A
AA	AA
B, B*	B, B*
SA	SA
SB	SB

NOTES:
Surface Water Classifications beginning with S refer to Coastal and Marine Surface Water.
B* is a subset of Class B where no direct wastewater discharges are allowed other than those consistent with Class AA, A and SA surface waters.

GROUND WATER QUALITY CLASSES

- GA (white background)
- GAA, GAAs
- GA, GAA may not meet current standards
- GB
- GC
- Area of Contribution to Public Supply Well
- Final Aquifer Protection Area (Level A)
- Major Basin Boundary

EXPLANATION

WATER QUALITY CLASSIFICATIONS (WQC) MAPS are one of the elements of the Water Quality Standards (WQS) for the State of Connecticut. The WQS are a part of Connecticut's clean water program and are essential for protecting and improving water quality. The WQS follow the principles of Connecticut's Clean Water Act which is in Chapter 446k of the Connecticut General Statutes. The WQS provide policy guidance in many areas, for example decisions on acceptable discharges to water resources, siting of landfills, remediation or prioritization of municipal sewerage system projects. The first two elements of the WQS are the Standards, which set an overall policy for management of water quality, and the Criteria, which are descriptive and numerical standards that describe the allowable parameters and goals for various water quality classifications. A discussion of these two elements is found in the Water Quality Standards document available on the CT DEEP website. The third element is the Classifications and the Water Quality Classification Maps which show the Classification assigned to each surface and groundwater resource throughout the State. The WQS are adopted using a public participation process. The WQC maps are also adopted using a public participation process but go through hearings separately from the Standards and Criteria hearings. Revision and adoption of the WQC data occurs in accordance with the public participation procedures contained in Section 22a-426 of the Connecticut General Statutes. Ground WQC is subject to Connecticut regulation and changes must be reviewed and adopted. All changes to the Surface WQC require an adoption process which is subject to federal review and approval in addition to CT regulation. The adoption dates for the WQC by major drainage basin are: Housatonic River, Hudson River and Southwest Coastal Basins - March 1999; Connecticut River and South Central Coastal Basins - February 1993; Thames River, Pawcatuck River and Southeast Coastal Basins - December 1986. Surface Water Classifications do not change after the adoption date until the next major revision. Ground Water Classifications may change after the adoption date under specific circumstances. The map may have more than one WQC adoption date because a town may be in more than one major drainage basin.

SURFACE WATERS in Connecticut are divided into freshwater classified as AA, A, B or B* and saline waters classified as SA or SB. Class AA designated uses are existing or proposed drinking water supplies, habitat for fish and other aquatic life and wildlife, recreation, and water supply for industry and agriculture. Class A designated uses are habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; navigation; and water supply for industry and agriculture. Class SA designated uses are habitat for marine fish, other aquatic life and wildlife, shellfish harvesting for direct human consumption, recreation, industrial water supply, and navigation. Class B designated uses are habitat for fish and aquatic life and wildlife; recreation; navigation; and industrial and agricultural water supply. Class B*, applicable to Candlewood Lake, is a subset of Class B and is identical in all ways to the designated uses, criteria and standards for Class B waters except for the restriction on direct discharges. Class SB designated uses are habitat for marine fish and aquatic life and wildlife; commercial shellfish harvesting; recreation; industrial water supply; and navigation.

Surface waters which are not specifically classified shall be considered as Class A or Class AA. Surface waters in GA ground water areas are assumed Class A or Class SA unless otherwise indicated. Surface waters in GAA ground water areas are assumed Class AA unless otherwise indicated.

On the WQC map a surface water quality goal of A is represented by blue colored water bodies. Surface water quality goal of AA is represented by purple colored water bodies. Surface water quality goal of B is represented by gold colored water bodies.

GROUND WATERS in Connecticut are classified as GAA, GA, GB and GC. Class GAA designated uses are existing or potential public supply of water suitable for drinking without treatment and baseflow for hydraulically-connected surface water bodies. The Class GAAs is a subclass of GAA for ground water that is tributary to a public water supply reservoir. The area of contribution to a public water supply well is represented by a 500 foot radius around the well and is assumed to be Class GAA unless otherwise classified. Class GA designated uses are existing private and potential public or private supplies of water suitable for drinking without treatment and baseflow for hydraulically-connected surface water bodies. All ground waters not specifically classified are considered as Class GA. Class GB designated uses are industrial process water and cooling waters and baseflow for hydraulically-connected water bodies and is presumed not suitable for human consumption without treatment. Class GC designated uses are assimilation of discharges authorized by the Commissioner pursuant to Section 22a-430 of the General Statutes.

On the WQC map GA is represented by white colored land areas. Class GAA and class GAAs are represented by blue colored land areas. The area of contribution to a public water supply well is shown by a blue cross-hatch overprint. A notation of GAA followed by a state abbreviation indicates a watershed that contributes to the public water supply for a state other than Connecticut. Class GA or Class GAA areas that currently may not be meeting the GA or GAA standards are represented on the WQC maps by tan colored land areas. Class GB is represented by green colored land areas. Class GC is represented by magenta colored land areas.

FINAL AQUIFER PROTECTION AREAS (Level A) are included on the WQC maps for informational purposes. These areas are anticipated to be reclassified GAA during the next major basin updates, subject to public participation. The Aquifer Protection Program helps protect Connecticut's public drinking water resources by delineating aquifer protection areas (also called wellhead protection areas) for public supply wells and establishing land use regulations within these areas. These areas represent the land area contributing ground water to active public water supply wells or well fields that serve more than 1000 people and are set in sand and gravel aquifers (stratified drift deposits).

DATA SOURCES

WATER QUALITY CLASSIFICATIONS DATA - Water quality classifications shown on this map are based on information from the following digital spatial datasets that are typically shown together - Ground Water Quality Classifications Poly, Surface Water Quality Classifications Line, and Surface Water Quality Classifications Poly. The map legend above reflects the content of these three data sources. These WQC data were initially compiled on 1:24,000-scale 7.5 minute USGS topographic quadrangle maps and later digitized at 1:24,000 scale. For example, the Surface Water Quality Classifications Line and Surface Water Quality Classifications Poly digital data assigns surface water quality classifications to water bodies such as rivers, streams, reservoirs, lakes, ponds and coves found in 1:24,000-scale hydrography data available from CT DEEP. The hydrography may not include all the waterbodies in Connecticut. The Ground Water Quality Classifications Poly data assigns ground water quality classifications, at 1:24,000 scale, to the remaining land areas in Connecticut.

AQUIFER PROTECTION AREA DATA - Aquifer Protection Areas shown on this map are from the Aquifer Protection Area digital dataset which contains polygon data intended to be used at 1:24,000 scale. The dataset contains regulated areas classified as Level A Aquifer Protection Area (Final) and Level B Aquifer Protection Area (Preliminary). The Level B areas are not shown on the WQC maps. The data was collected from 1991 to the present and is actively updated as Final area mapping replaces earlier Preliminary areas. The Aquifer Protection Areas are delineated by the individual water companies owning the well fields and submitted to the CT DEEP for approval. Preliminary mapping provides a general estimate of the area contributing ground water to the well field. Final mapping is based on extensive, site-specific, detailed modeling of the ground water flow system. CT DEEP may adjust Final area boundaries to be consistent with 1:24,000 scale topography and base map data where appropriate during the approval process.

MAJOR DRAINAGE BASIN DATA - Major drainage basins shown on this map are from Major Basin Line data developed by CT DEEP and intended to be used at 1:24,000 scale.

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries, railroads, airports, hydrography, geographic names and geographic places. Streets and street names are from Tele Atlas® copyrighted data. Base map information is neither current nor complete.

RELATED INFORMATION
This map is intended to be printed at its original dimensions in order to maintain the 1:24,000 scale (1 inch = 2000 feet).
WATER QUALITY STANDARDS - Go to the CT DEEP website for a summary and the full text of the "Water Quality Standards" and for other information on water quality.
AQUIFER PROTECTION AREAS - Go to the CT DEEP website for more information.

ADOPTED DATES

Water Quality Standards
February 25, 2011

Thames River, Pawcatuck River and Southeast Coastal Basins: December 1986

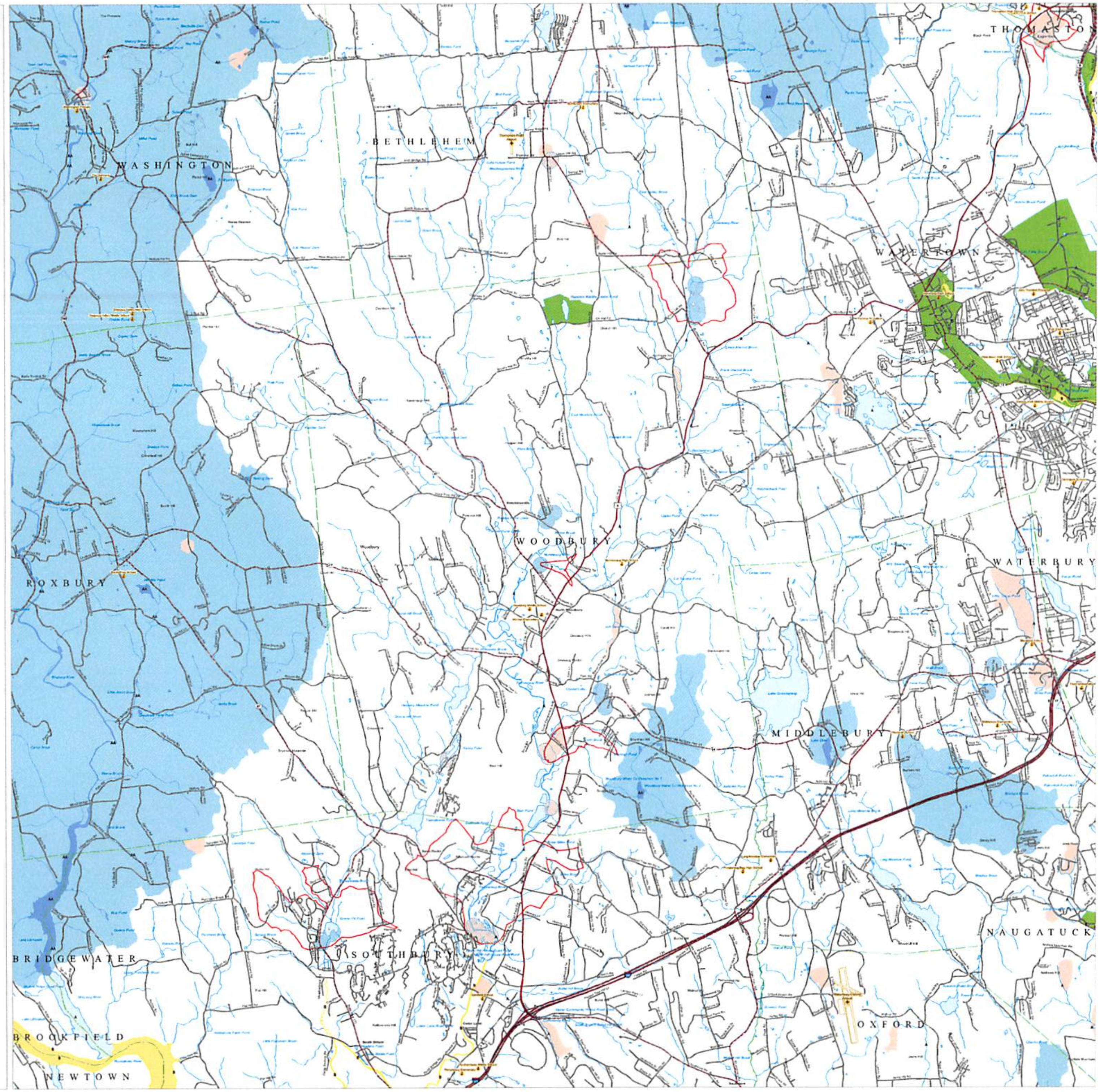
Connecticut River and South Central Coastal Basins: February 1993

Housatonic River, Hudson River and Southwest Coastal Basins: March 1999

SCALE 1:24,000 (1 inch = 2000 feet) when map is printed at original size

STATE OF CONNECTICUT
DEPARTMENT OF
ENERGY & ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Map created by CT DEEP
October 2018



AQUIFER PROTECTION AREAS

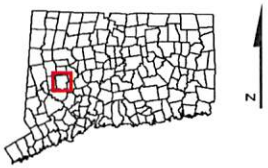
Woodbury, CT

March 19, 2019

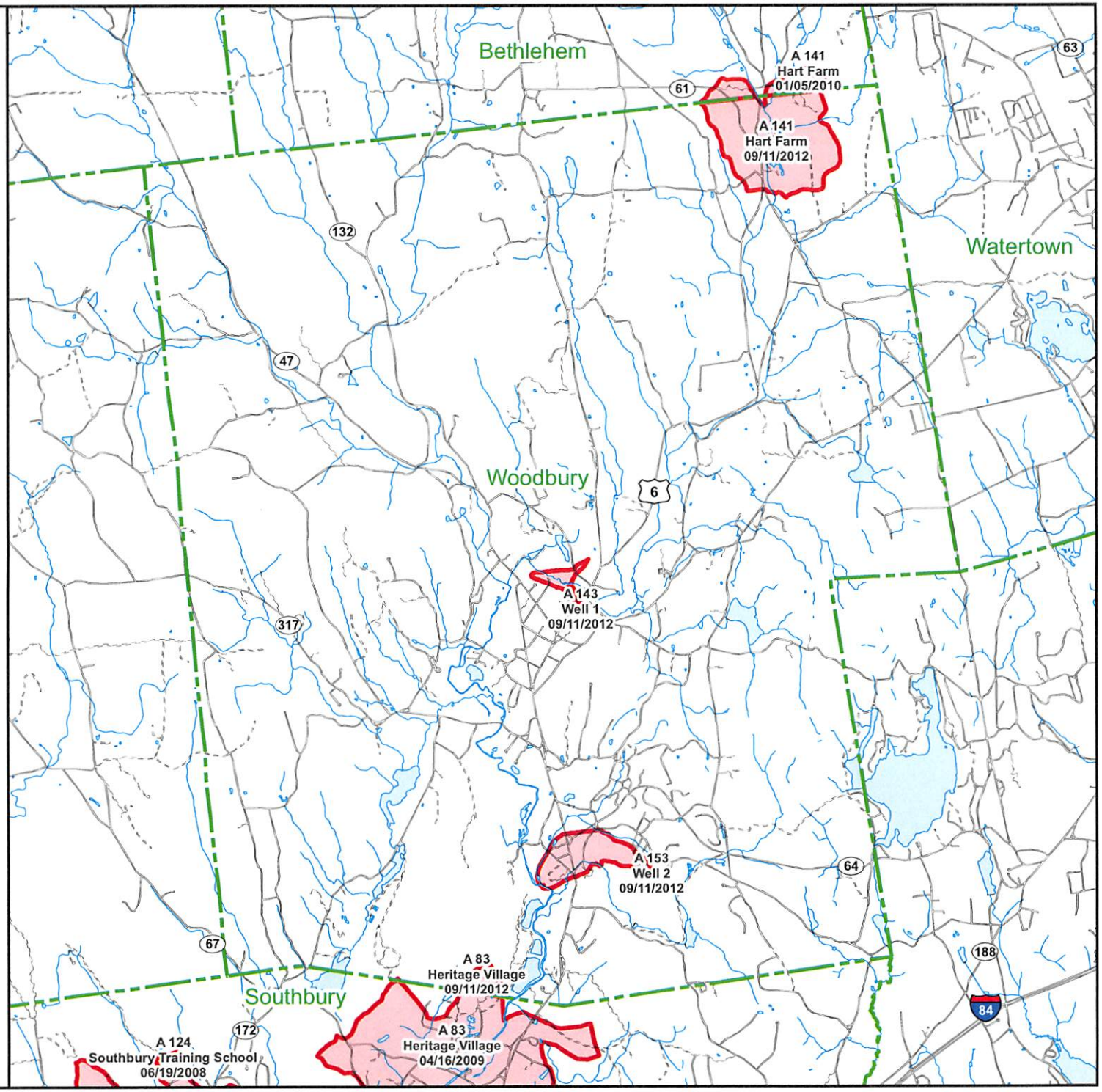
- Level A APA (Final Adopted)
- Level A APA (Final)
- Level B APA (Preliminary)
- Town Boundary

NOTE: The Aquifer Protection Areas were delineated through Connecitcut's Level A and Level B Mapping Processes. Aquifer Protection Areas are delineated for active public water supply wells in stratified drift that serve more than 1000 people, in accordance with Sections 22a-354c and 22a-354z of the Connecticut General Statutes. Level B Mapping delineates a preliminary aquifer protection area, providing an estimate of the land area from which the well draws its water. Level A Mapping delineates the final Aquifer Protection Area, which becomes the regulatory boundary for land use controls designed to protect the well from contamination. As Level A Mapping is completed for each well field and approved by DEEP, it replaces the Level B Mapping. Final Adopted Level A Areas are those where towns have land use regulations for them. Masschusetts and Rhode Island Wellhead Protection Areas may be shown for informational purposes.

QUESTIONS:
Bureau of Water Protection and Land Reuse
Planning and Standards Division
Phone: (860) 424-3020
www.ct.gov/deep/aquiferprotection



STATE OF CONNECTICUT
DEPARTMENT OF
ENERGY & ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127



NATURAL DRAINAGE BASINS

MAJOR, REGIONAL, SUBREGIONAL AND LOCAL
WOODBURY, CONNECTICUT

LEGEND

Basin Boundary
- Major Basin
- Regional Basin
- Subregional Basin
- Local Basin

Local Drainage Basin Direction
- Outlet Direction
- Main Stem Direction
- Coastal Direction

Elevation
- 100 ft Contour Line
- 20 ft Contour Line

EXPLANATION

This map shows the location and identification number of major, regional, subregional, and local drainage basins. It is intended to serve as a municipal guide for drainage basin delineation and identification. Local basins make up larger subregional, regional, and major drainage basin areas and are differentiated by their drainage basin boundary type and identification numbers. Arrows on the map represent general direction of surface water flow within local drainage basins. Local outlet direction is shown in purple. Main stem direction is shown in red. Coastal direction is shown in blue.

A 7-digit drainage basin number such as 4302-02 uniquely identifies local drainage basin areas shown on this map. Drainage basin areas are numbered sequentially beginning upstream and proceeding downstream. The quantification numbers are hierarchical. The four digit codeform 33 identifies the major basin, the first two digit-codeform 1-2) identify the regional basin, the first 4 digits codeform 1-4) identify the subregional basin, and the first seven digits (codeform 1-7) identify the local basin. For example, 4, 43, and 4302 are the major, regional and subregional basin numbers for local basin number 4302-02. As illustrated in the diagram below, this signifies that local basin number 4302-02 is part of subregional basin 4302, which is part of regional basin 43, which is part of major basin 4.

Drainage basin boundaries shown on this map were manually delineated by interpreting the 10 foot contour lines and hydrography features shown on USGS 1:24,000 scale topographic quadrangle maps. Only limited field checking was conducted to verify the location of these basin boundaries. Basin boundaries may not be accurate in areas that have been diked for flood control, upland wetland and reservoirs having outlets into two basins, areas where topographic mapping is not up to date, is inaccurate, or is not detailed enough to adequately define local drainage. Residential and commercial development, highway construction, and other changes to the landscape may have resulted in local modifications to the natural drainage patterns since the time these basin boundaries were delineated.

The elevation contour lines shown on this map are more accurate than those used to originally delineate the drainage basin boundaries as, in certain areas, the basin boundaries may not exactly reflect the shape of the land surface depicted by the contour lines shown on this map. These contour lines are based on information from a statewide collection of ground elevation LiDAR data for the year 2000. This information is only suitable for general planning and environmental purposes. It is not intended for exact determinations of elevation where a survey is normally required, or for detailed engineering, building, or design purposes. With this information, a general sense of the lay of the land can be ascertained. Gentle slopes are characterized by widely spaced contour lines, while steep slopes are represented by closely spaced contour lines. Contour lines that cross streams flowing through valleys of noticeable relief will form a V-shaped deflection with the apex of the V pointing upstream. However, river and stream features and watershed delineations that are based on USGS topographic, quadrangle maps at 1:24,000 scale may not align exactly with the terrain of stream valleys and elevation of hills and ridges depicted by these contour lines.

Note: The major, regional and subregional drainage basin boundaries shown on this map are the same as those published on the 1:125,000-scale, state map entitled Natural Drainage Basins in Connecticut, McKinney 1981. The basin boundaries shown on this town map were digitized from the 1:24,000-scale compilation sheets used to publish the state map of Natural Drainage Basins in Connecticut, 1981.

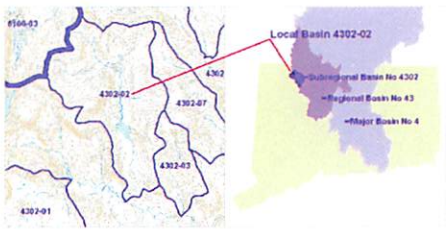


Figure 1. Example showing a typical local drainage basin and the subregional, regional, and major drainage basin it is part of.

DATA SOURCES

LOCAL DRAINAGE BASIN DATA – The drainage basin information shown on this map is based on the following digital spatial datasets: Connecticut Local Basin Line and Local Basin Poly. These two datasets were developed by CT DEP and depict major, regional, subregional, and local basin drainage areas and boundaries at 1:24,000 scale. These data depict drainage areas for Connecticut rivers, streams, brooks, lakes, reservoirs and ponds published on 1:24,000-scale 7.5 minute topographic quadrangle maps prepared by the USGS between 1969 and 1984.

ELEVATION CONTOUR DATA – The elevation contour line information shown on this map was derived from a statewide 10-foot Digital Elevation Model (DEM) surface. The DEM was based on the Connecticut LiDAR dataset for 2000, which captured ground elevations every 30 feet at a horizontal accuracy of approximately 3 feet on the ground. For inaccurate contour data was collected unevenly in some areas, which resulted in data gaps. The University of Connecticut, Center for Land Use Education and Research (CLEAR) created the DEM and added it to fill in data gaps with information from contour lines on USGS 1:24,000-scale topographic maps. However, some inaccuracies remain and the data should be used within the known limitations of the source data.

BASE MAP DATA – Based on data originally from 1:24,000 scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries, railroads, airports, hydrography, geographic names and geographic features. Streets and street names are from Tele Atlas® – copyrighted data. Base map information is neither current nor complete.

RELATED INFORMATION

This map is intended to be printed at the original dimensions in order to maintain the 1:24,000 scale (1 inch = 2000 feet).

To identify either all upstream basins draining to or all downstream basins flowing from a particular location, refer to the Gazetteer of Drainage Basin Areas of Connecticut, Nassi, 1977, CT DEP Water Resources Bulletin 15. For the hydrologic sequence benchmarks to outfall, of drainage basins.

MAPS AND DIGITAL DATA – Visit the CT DEP website for free maps and a variety of others at: PDF Format. Visit the CT DEP website to download the digital spatial data shown on this map.

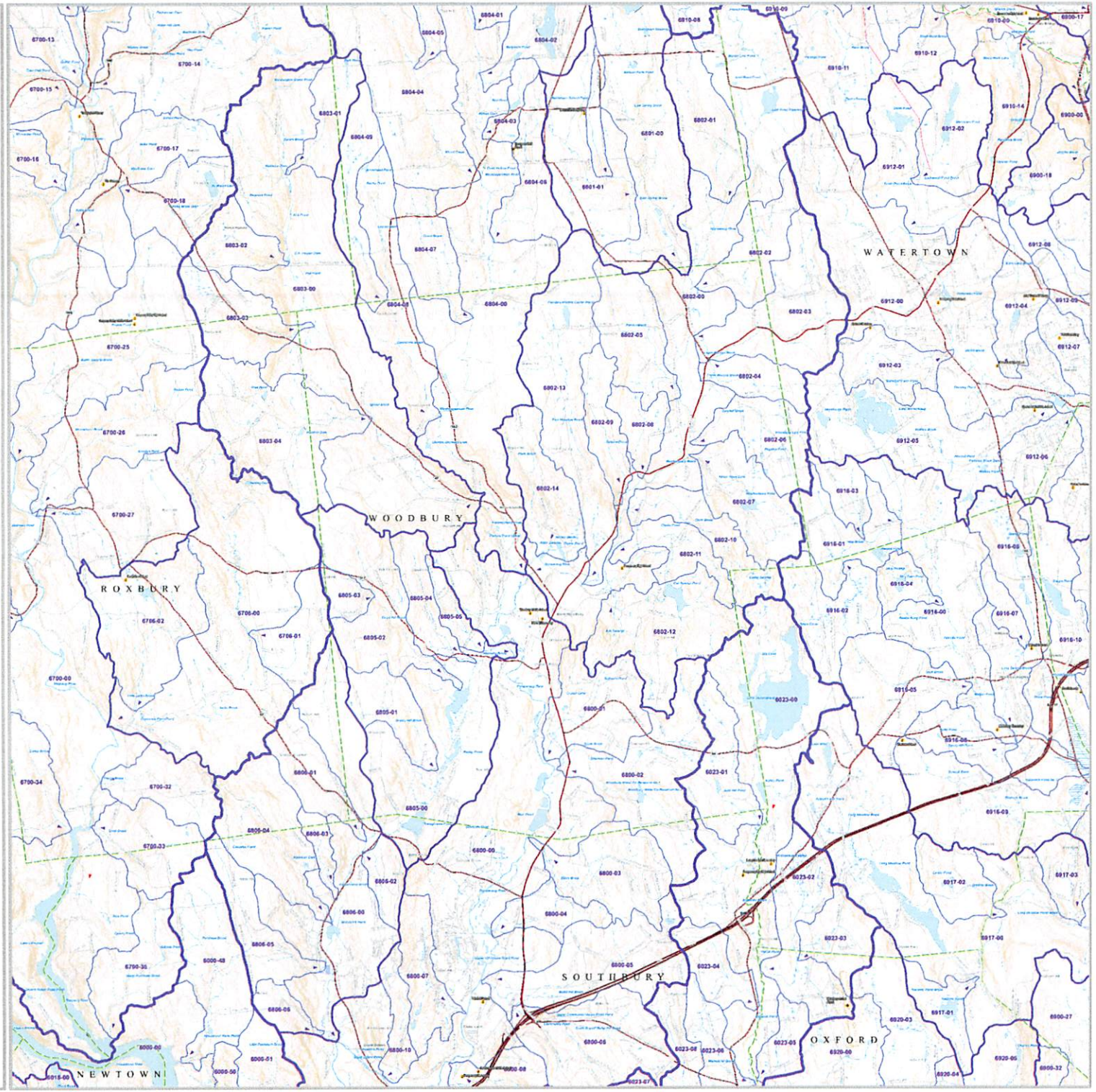
Map created by CT DEP
May 2011

This map replaces a series of natural drainage basin maps dated January 2010

STATE OF CONNECTICUT
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

University of Connecticut
College of Agriculture
and Natural Resources

CLEAR



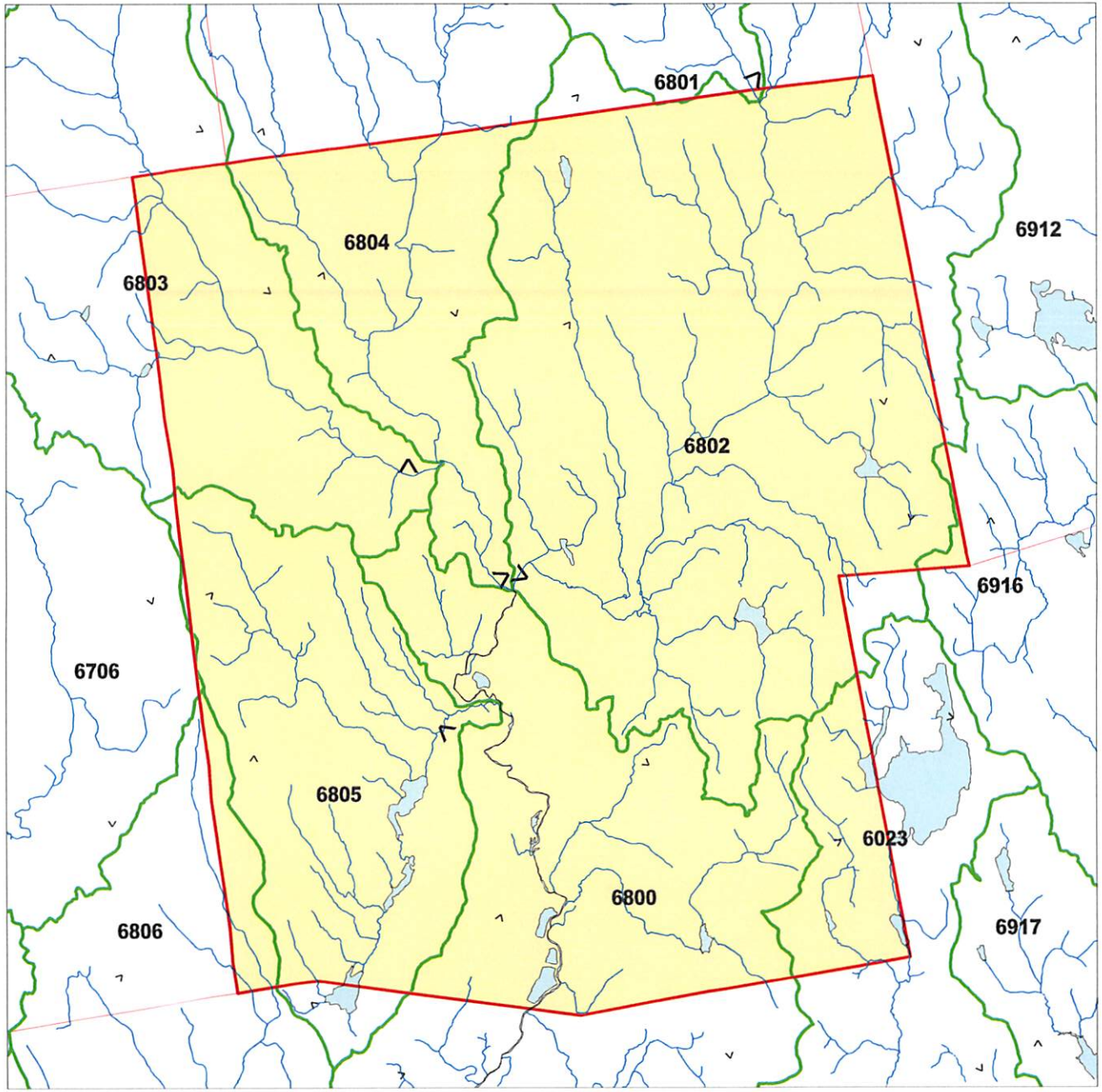
WOODBURY
CONNECTICUT SUBREGIONAL BASINS AND SURFACE WATER FLOW DIRECTIONS

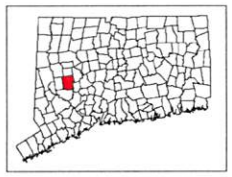
Explanation

- Town Boundary
- Subregional Watershed Boundary
- 4201 Subrg. Basin ID# - as designated by CTDEP
- Watercourse / Open Water
- < Basin Outlet
- < Surface Water Flow Direction

The table provides statistics for each subregional basin. Shown are the areas of the basin within the town, the percentage for that area, and the percent of the town covered by each basin.

Sbas_nc	AcresInTw	Percofbs	Percoftwn
6023	908.11	8.1	3.9
6706	5.46	0.1	0.0
6800	4240.40	31.0	18.0
6801	9.19	0.2	0.0
6802	9346.16	68.7	39.8
6803	2287.59	32.6	9.7
6804	2603.85	25.3	11.1
6805	3715.45	93.3	15.8
6806	327.08	7.1	1.4
6916	65.50	0.6	0.3





Town Area: 23509 Acres

Digital layers provided by the CTDEP.
Map composed by the NEMO project.
For educational purposes only.

1 0 1 Miles

The University of Connecticut, CES: November 02, 1999

Q3 Flood Zone Data
Woodbury, CT

Legend

- 100 Year Flood Zone
- 100 Year Flood Zone, COBRA
- 500 Year Flood Zone
- 500 Year Flood Zone, COBRA
- Floodway in Zone AE
- Other Flood Areas

Explanation

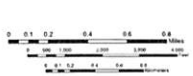
The Q3 Flood Data are derived from Flood Insurance Rate Maps, (FIRMs). They offer floodplain management, mitigation and provide insurance information for the National Flood Insurance Program (NFIP). 100 Year Flood Zones indicate that there is 1 out of 100 chances that the area will be flooded every year, while 500 Year Flood Zones indicate that there is 1 out of 500 chances that the area will be flooded every year. NOTE: The Q3 Flood Zone Data is the best flood zone mapping data available statewide. However, it is dated and may not represent current flood zone mapping. It is available for all towns except Windham. More accurate flood zone mapping data may be available for this town from FEMA. Refer to the National Flood Hazard Layer (NFHL) Database, which supercedes the Q3 Flood Data. The NFHL Database is not available for every county.

Data Sources

Q3 FLOOD DATA- Provided by the Federal Emergency Management Agency (FEMA).

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries and important geographic places and names. Streets and street names are from Tele Atlas copyrighted data. Base map information is neither current nor complete.

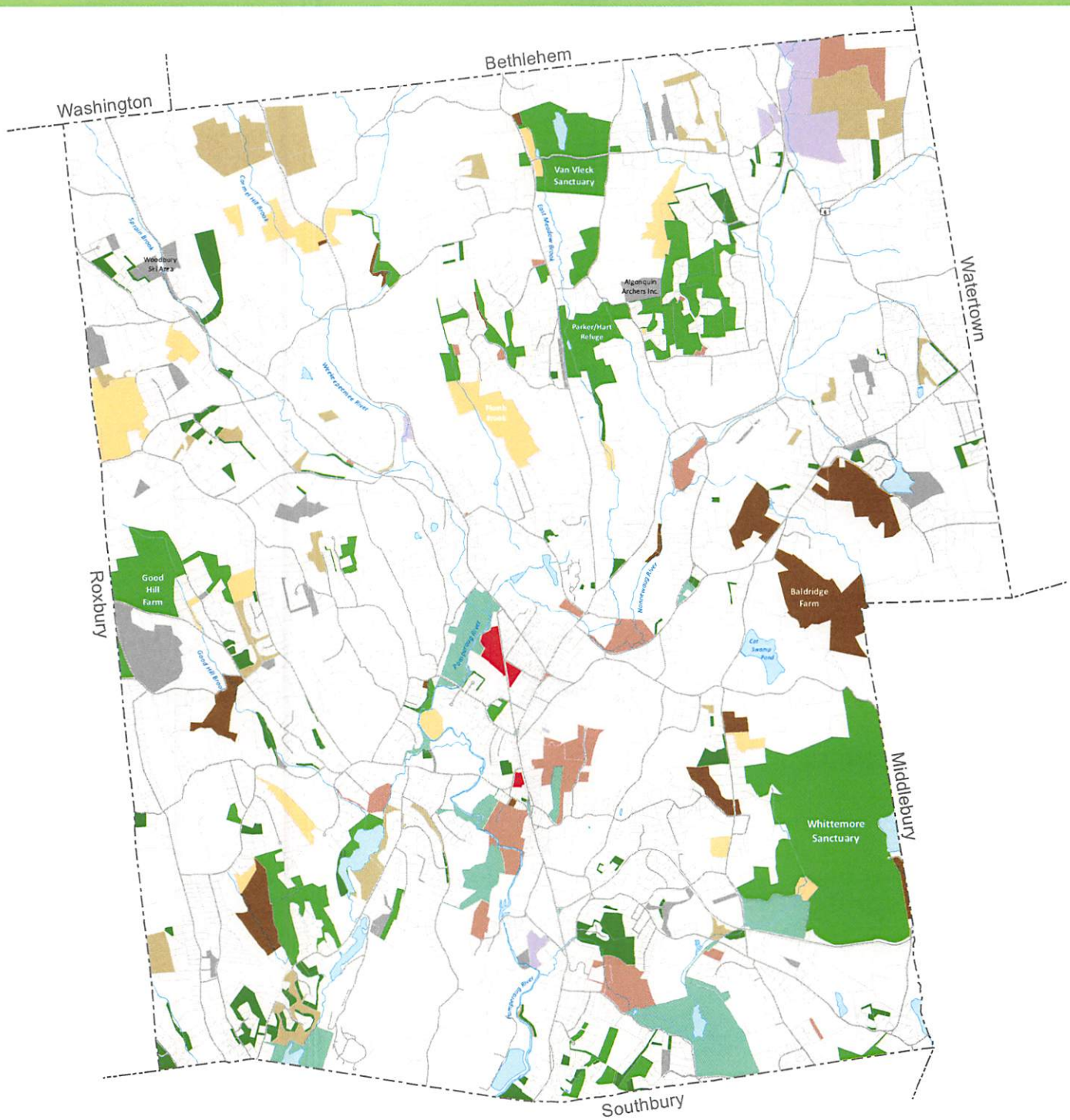
MAPS AND DIGITAL DATA - Visit the CT ECO website for this map and a variety of others. Visit the NRCS soils website for the soils data shown on this map. Visit the CT DEP website to download the base map digital spatial data shown on this map.



STATE OF CONNECTICUT
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Map prepared by CT DEP
September 2010
Map is not colorfast
Protect from light and moisture

Woodbury Open Space



Uncommitted Open Space

- Land Trust
- Town Owned
- Private
- Water

Committed Open Space

- Land Trust
- Town Owned
- Private -Neighborhood Associations, Roxbury Land Trust
- Conservation Restriction
- Water Company
- Cemetery
- Easement

0 0.25 0.5 1 Miles

For planning purposes only.
Delineations may not be exact.

Sources:
Town of Woodbury
CT 911 Roads: CTDPS/TeleAtlas
Parcels: New England Geosystems
Hydrography: CT DEEP

Revised: 4/26/2019

NAUGATUCK VALLEY COUNCIL of GOVERNMENTS

Natural Diversity Data Base Areas

WOODBURY, CT

December 2018

State and Federal Listed Species & Significant Natural Communities

Town Boundary

NOTE: This map shows general locations of State and Federal Listed Species and Significant Natural Communities. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a number of data sources . Exact locations of species have been buffered to produce the general locations. Exact locations of species and communities occur somewhere in the shaded areas, not necessarily in the center. A new mapping format is being employed that more accurately models important riparian and aquatic areas and eliminates the need for the upstream/downstream searches required in previous versions.

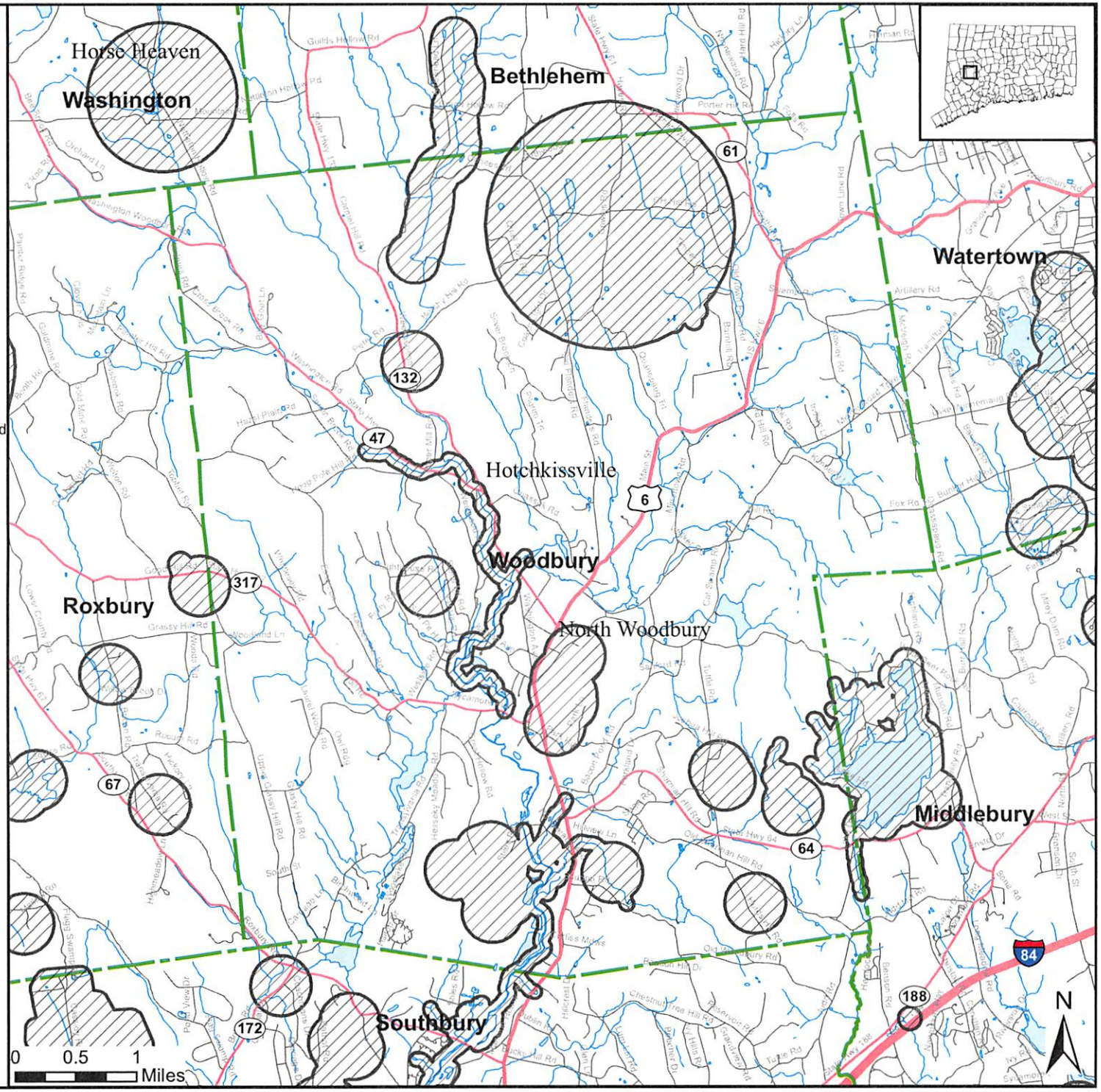
This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a shaded area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

www.ct.gov/deep/nddbrequest

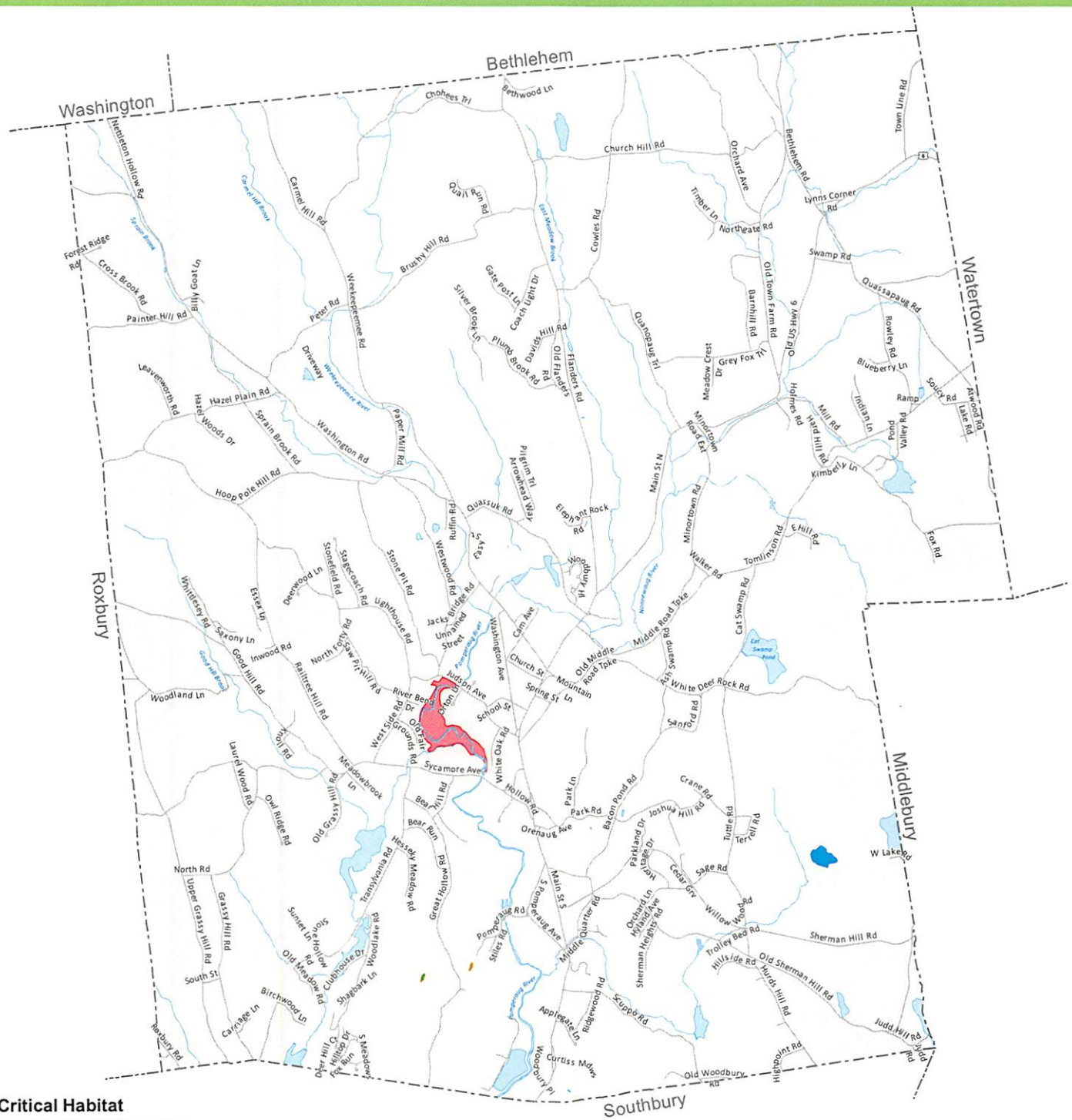
Use the CTECO Interactive Map Viewers at www.cteco.uconn.edu to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St., Hartford CT 06106
Phone (860) 424-3011

Connecticut Department of Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division



Woodbury Critical Habitats



Critical Habitat

PALUSTRINE FORESTED

- Floodplain Forest, FF

PALUSTRINE NON-FORESTED

- Poor Fen, PF

TERRESTRIAL FORESTED

- Dry Subacidic Forest, DSF

TERRESTRIAL NON-FORESTED

- Subacidic Rocky Summit Outcrop, SubRSO

- Water
- Roads

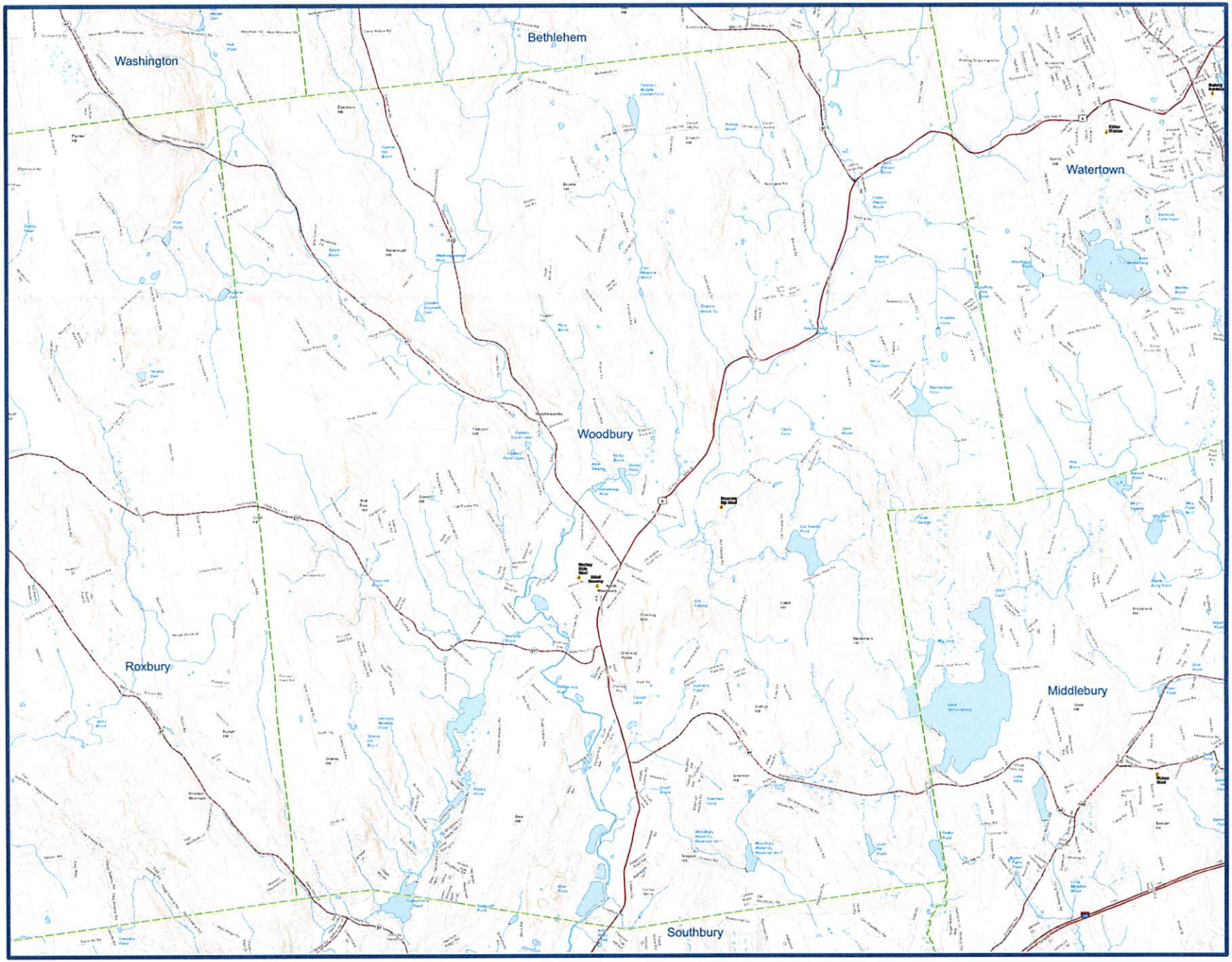
0 0.25 0.5 1 Miles

For planning purposes only.
Delineations may not be exact.

Sources:
Town of Woodbury
CT 911 Roads: CTDPS/TeleAtlas
Parcels: New England Geosystems
Hydrography, Critical Habitat: CT DEEP

Revised: 5/28/2019

NAUGATUCK VALLEY COUNCIL of GOVERNMENTS



CONTOUR MAP
Woodbury, CT

EXPLANATION

Contour lines are used to denote elevation above sea level. This map displays 20 foot contour lines based on information from a statewide collection of ground elevation LiDAR data for the year 2000. This information is only suitable for general planning and informational purposes. It is not intended for exact determinations of elevation where a survey is normally required, or for detailed engineering, building, or design purposes. The Connecticut LiDAR dataset for 2000 captured ground elevation every 20 feet at a horizontal accuracy of approximately 3 feet on the ground. For unknown reasons, data was collected unevenly in some areas. This resulted in data gaps that affect the overall accuracy and appropriate use of derived data products such as these contour lines. With this information, a general sense of the lay of the land can be ascertained. Gentle slopes are characterized by widely spaced contour lines, while steep slopes are represented by closely spaced contour lines. Contour lines that cross streams flowing through valleys of noticeable relief will form a V-shaped deflection with the apex of the V pointing upstream.

DATA SOURCES

BASE MAP DATA - All data is based on 1:24,000 scale and displays geographic names, places and their symbols, town boundaries, railroads, airports, and hydrography. Base map data is neither current nor complete.

STREET DATA - Based on TeleAtlas copyrighted data.

CONTOUR DATA - Derived from a statewide 10-foot Digital Elevation Model (DEM) surface based on the Connecticut 2000 LiDAR ground elevation data. The University of Connecticut, Center for Land Use Education and Research (CLEAR) created the DEM and edited it to fill in data gaps with information from contour lines on USGS 1:24,000-scale topographic maps.

MAPS AND DIGITAL DATA - Visit the CT ECO website for this map and a variety of others in PDF format. Visit the CT DEP website to download the base map digital spatial data shown on this map.

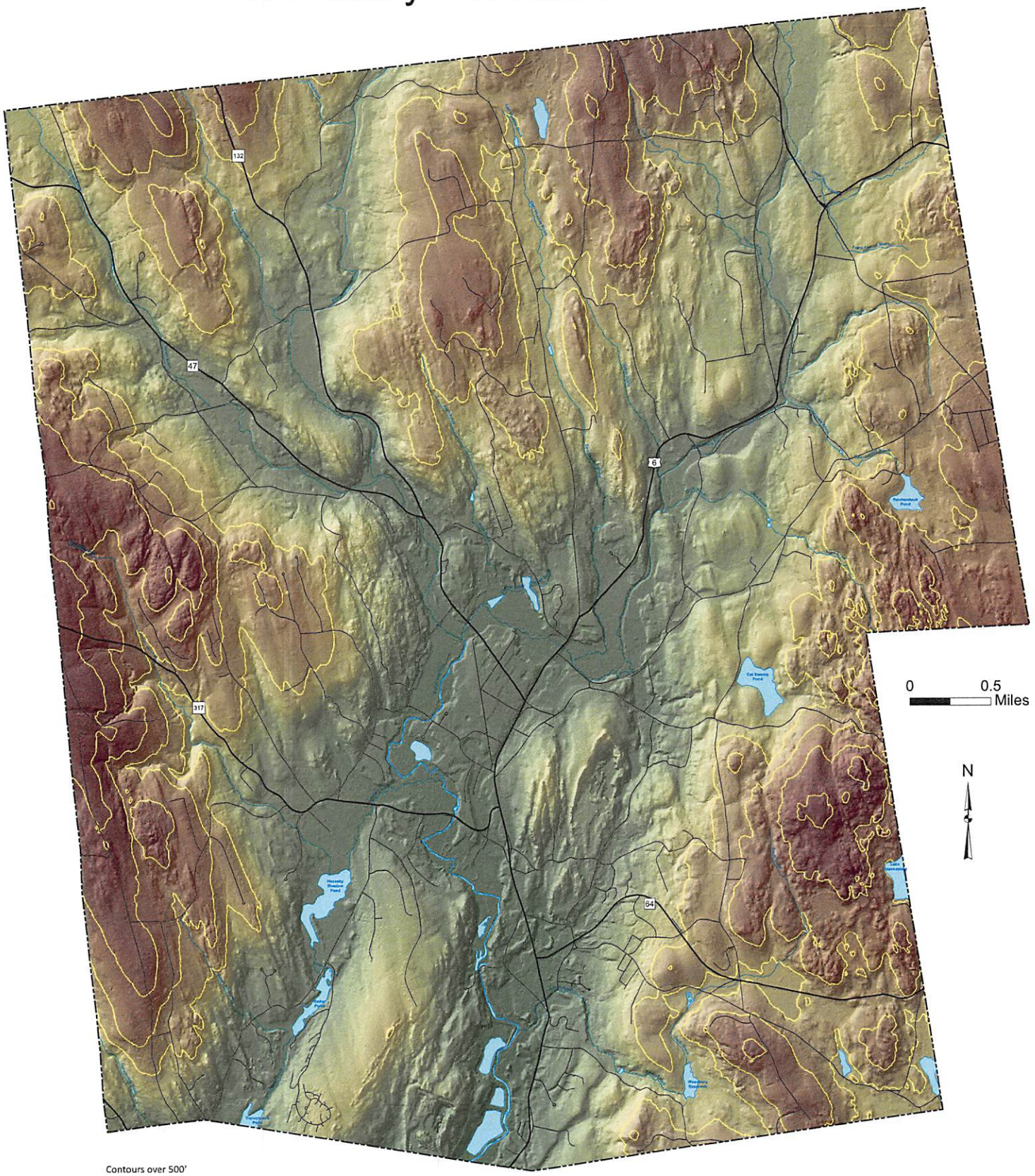
0 0.125 0.25 0.5 0.75 1 Miles

Map prepared by CT DEP, May 2011.
This map replaces a similar contour map that was dated August 2010.

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

CLEAR

Woodbury Elevation



Contours over 500'

- Major Roads
- Local roads
- Water

Elevation

High : 966 feet

Low : 192 feet

Source: State of Connecticut LIDAR-based digital elevation data, 2000.
Slope calculated by COGCNV using ArcGIS and Spatial Analyst.
For general planning purposes only.

NAUGATUCK VALLEY COUNCIL of GOVERNMENTS

APPENDIX B

CHAPTER 1

NATURAL RESOURCES AND OPEN SPACE

Natural Resource Protection

Woodbury has enacted protective land use regulations that have successfully maintained a high level of environmental quality notwithstanding the significant amount of development that has occurred to-date. These regulations have allowed orderly growth to occur without impeding the vital functions of natural resources. Land use boards will continue to review new development proposals and require that applicants take all reasonable measures to protect the Town's environment.

Map 1 displays the significant water resources in Woodbury that must be safeguarded against unwise development. Avoiding change in these areas will prevent degradation of the environment and a decline in the quality of life for Woodbury residents.

Aquifer

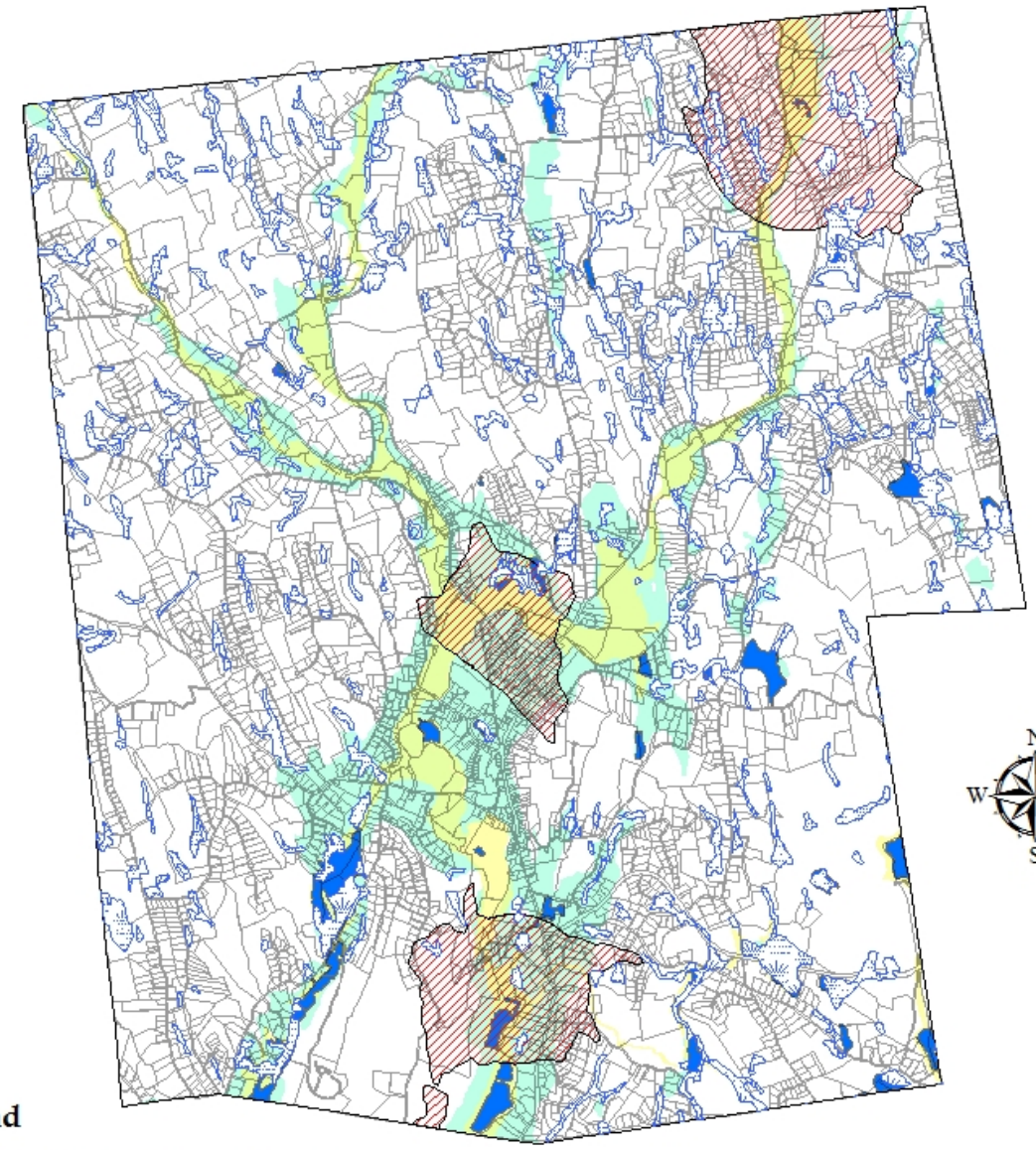
The Pomperaug River Aquifer provides an excellent source of drinking water for the United Water Company wells in Woodbury, the Heritage Water Company in Southbury, and the Watertown Fire District. With a limited public water system, many residents and businesses rely upon individual groundwater wells for their drinking water. It is essential to public health to safeguard this resource and to ensure that future generations may continue to reap the benefits of a low-cost, high-quality water supply. Woodbury will pursue the following policies:

- Adopt the Level A Aquifer Protection Area Map and Regulations to protect Woodbury's public water supplies from contamination.
- Require on-site recharge of stormwater to the extent practicable to help maintain ground water quantity.
- Implement Low Impact Development (LID) measures that allow for purification of stormwater on-site by relying on natural systems to recharge and cleanse stormwater, and by discouraging closed drainage systems that convey stormwater off-site as quickly as possible.
- Work closely with the Pomperaug River Watershed Coalition (PRWC), the Natural Resources Conservation Service, and the USGS in educating the public on best practices for protecting the aquifer.
- Manage withdrawal of water from the aquifer on a regional basis to maintain River flows and provide sufficient water to users during periods of drought.
- Continue to oversee cleanup of known contaminated sites and undertake appropriate steps to initiate investigations of any suspected contamination.
- Work cooperatively with the PRWC, watershed communities, and water utilities to prepare and implement an Integrated Watershed Management Plan to assure the long-term protection of the water resources of the Pomperaug River and Aquifer.

Map 1

Water Resources

Plan of Conservation and Development



Legend

- Aquifer Protection Area
- Watercourses
- 100-Year Flood Plain
- Pomperaug Aquifer
- Wetlands

Town of Woodbury

0 0.5 1 1.5 2 Miles

Woodbury

Source: Woodbury Land Use Office, January 2008

Wetlands and Watercourses

Manville Glacial Kettle

Wetlands perform vital functions in purifying contaminants in stormwater runoff, maintaining surface water flows in streams during dry periods, and providing flood storage areas that minimize damage caused by severe floods. They provide special habitat for a wide variety of plant, animal, and aquatic species, and their productive ecosystems are crucial to sustaining fish, waterfowl, and other wildlife. Primarily through the conscientious efforts of the Inland Wetlands and Watercourses Agency (IWWA), Woodbury will take care to protect the integrity of wetlands from unwise development practices. Woodbury will pursue the following policies:

- Review all development applications within the jurisdiction of the IWWA and require all feasible measures to prevent negative impacts on wetlands and watercourses.
- Conduct environmental education programs to increase awareness of the valuable functions wetlands serve.
- Where development has degraded wetlands, work with state and regional agencies to restore the areas to a pristine condition.
- Require compensatory wetland creation where no practical alternative exists to lawful development activities.
- Establish riparian buffers as appropriate to minimize alteration of vegetation along streams, protect fisheries, trap sediments from erosion, maintain stream temperature, preserve wildlife habitat, provide corridors for travel, and prevent nitrogen, phosphorus, pesticides, and other pollutants from reaching water courses.

Floodplains

Preservation of flood storage capacity is essential to preventing significant property damage from severe storm events. Woodbury participates in the National Flood Insurance Program, which enables property owners to obtain subsidized flood insurance. Existing zoning regulations strictly regulate development in flood plains. Woodbury will continue to enforce flood plain development standards in accordance with the following policies:

- Prevent development within flood plains that may cause loss of flood storage capacity and result in damage to properties downstream.
- Require compensatory flood storage whenever any filling or construction may affect the capacity of the floodplain to hold or convey floodwaters.
- Encourage compatible uses within the floodplain, such as agriculture and active and passive recreation uses and facilities. Floodplain uses should not affect recharge capacity or obstruct the flow of flood waters.

- Regulate development within flood plains to protect structures from flood damage at the time of construction.
- Encourage hiking trails and greenways for nature study and passive enjoyment of river environments, including fishing and boating where depths permit.

Ridgelines, Steep Slopes, and Scenic Vistas

Woodbury's growth concentrated in the Pomperaug River Valley where development constraints are few and soil conditions are favorable for treatment of septic waste at low densities. Surrounding the valley are areas of moderate to steep slope where developers can overcome constraints with costly engineering practices. Much of the moderately sloping land now contains low-density residential uses. Large tracts still remain for additional growth in accordance with minimum lot sizes that range from 40,000 to 100,000 square feet. A notable aspect of the Town landscape are the steep ridgelines that provide extensive areas of open space and afford scenic vistas from and to the surrounding countryside. In order to retain this essential component of the Town's landscape, Woodbury will pursue the following policies:

- Carefully monitor development along scenic ridges in order to minimize the visual impact upon the landscape from clear cutting and inappropriate siting of dwellings.
- Regulate subdivision development in a manner to preserve scenic views of ridgelines from public ways and parks, prevent soil erosion, preserve natural drainage patterns, and contribute to the Town's aesthetics.
- Acquire open space in ridgeline areas to preserve scenic views and retain corridors for wildlife.
- Consider adoption and implementation of CGS Chapter 124, Section 8-2, which names the Orenaug Hills as a trap rock ridge where the Town may adopt development restrictions in ridgeline setback areas.
- Promote use of open space subdivisions to steer development away from steep slopes and areas of ridges visible to public view.
- Regulate excavation activities to preserve significant ridgelines and protect public safety while allowing mining to occur.

Wildlife

In the community survey, residents expressed a keen desire to preserve wildlife habitat to promote a diversity of species in Woodbury. Sustaining wildlife requires a multi-prong strategy of protecting a variety of habitat communities to account for the needs of native species at all stages of life. Such areas include large expanses of woodland, agricultural fields to provide edge habitat, wetlands, ridges, and stream corridors. To insure a diversity of wildlife habitat and create healthy ecosystems, Woodbury will pursue the following policies:

- Acquire open space to create large expanses of contiguous land where species have sufficient area to forage and reproduce unencumbered by human development. Seek to extend wildlife preserves across town boundaries to dovetail with natural behaviors.

- Identify and protect wetland areas, vernal pools, and riparian areas that provide unique habitat for amphibious and wetland species.
- Establish linear corridors to link large open space tracts and enable migratory species to travel across wide areas. Corridors are especially necessary in suburbanizing areas.
- Incorporate wildlife protection planning in development reviews to shield important habitat areas from the impacts of development. Use of open space subdivisions is one way that such areas may be set aside while allowing density to remain unchanged. Where appropriate, require developers to construct mitigation measures that compensate for unavoidable impacts on wildlife habitat.
- Seek the assistance of ecologists to identify areas essential for wildlife preservation.
- Work closely with non-profit land trusts and public agencies to acquire key parcels that provide habitat for endangered species and contribute to preserving ecological diversity.

Prime Farmland Soils

Weekeepeemee Road Farm

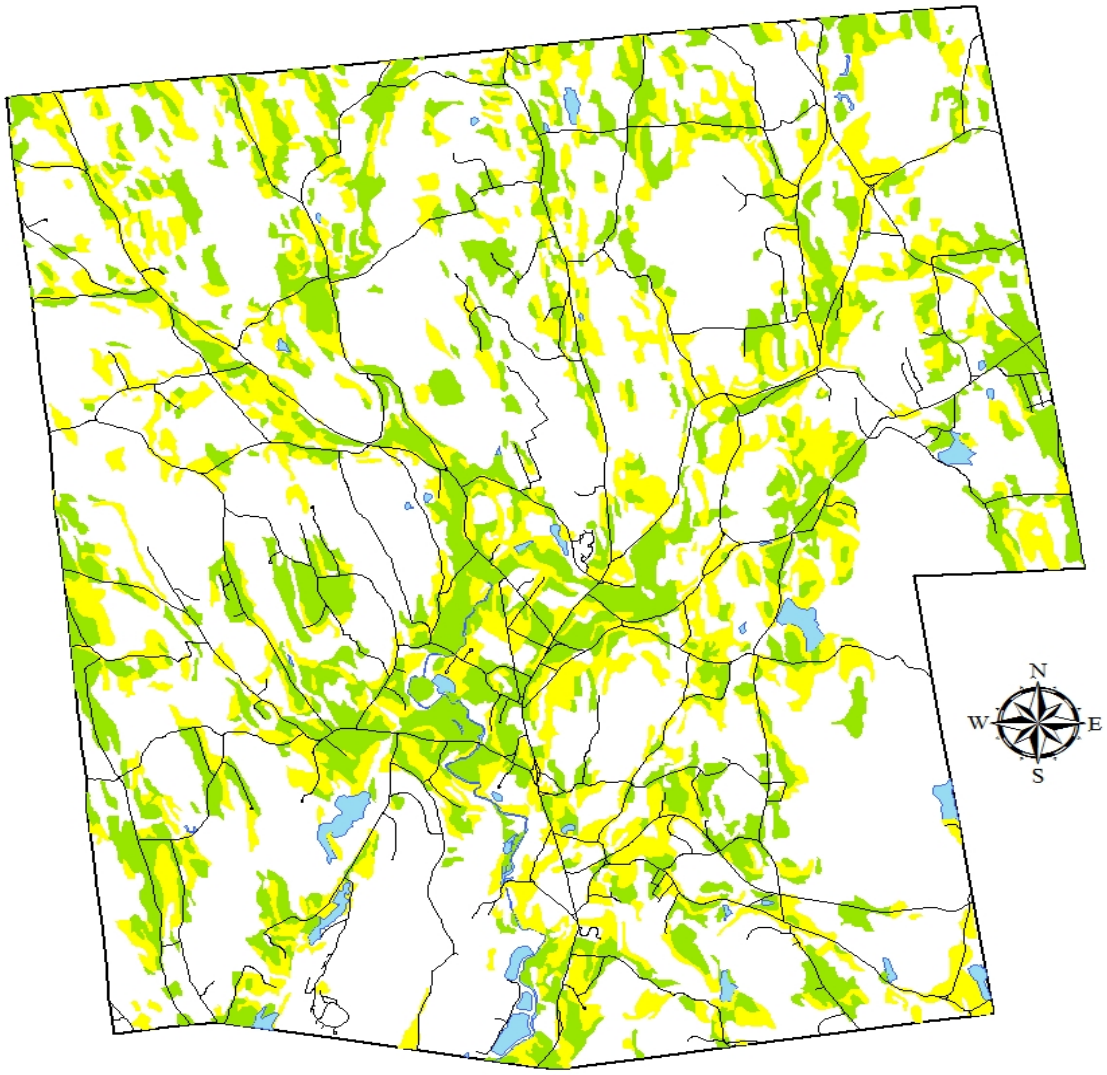
Woodbury has lost much of its agricultural capacity to development. Farmland soils generally make excellent development sites due to their low degree of slope and deep, well-drained texture that allows septic systems to function correctly. Preserving prime farmland soils and farmland soils of statewide importance retains the ability to grow food locally and reduces greenhouse gas emissions cause by hauling food long distances. Woodbury will take measures to preserve farms and prime farmland soils for future production, even if such soils are not currently in use. Map 2 displays these soils in Woodbury.

- Use open space subdivisions to steer development away from areas that contain prime soils.
- Target land acquisition and purchase of development rights to property with high agricultural potential.
- Establish community gardens on prime farmland soils to enable residents to obtain bountiful yields of fruits and vegetables through their own labor.
- Research the applicability of transfer of development rights for agricultural land. Such a program would provide farmers with monetary value for restricting development on land reserved for food production while giving purchasers increased development rights in other locations.
- Consider use of Town-owned land that possesses productive agricultural soils for farming.

Map 2

Farmland Soils

Plan of Conservation and Development



Town of Woodbury

Legend

- Prime Farmland Soils
- Additional Statewide Important Farmland Soils
- Water

0 0.5 1 1.5 2 Miles

Woodbury

Data Source:
U.S. Dept. of Agriculture

Open Space

Development in Woodbury is concentrated in the southern reach of Town and in subdivisions scattered elsewhere. The Town is on the verge of losing one of the defining characteristics of its town form. Large expanses remain undeveloped, providing an open quality to the community that allows the natural landscape to dominate the views from public ways. The low-density pattern of development throughout much of Woodbury has helped it retain the character of a traditional New England town.

Three Rivers Meadow Park

Slow but steady growth has begun to erode this pastoral quality and places strains upon the natural carrying capacity of the land to buffer the environment from development. As impervious surfaces increase, pollution from stormwater runoff degrades water quality of ponds and rivers. Erosion from disturbed areas results in sedimentation of surface waters, reducing the volume of water storage and increasing flood potential. Residential subdivisions create monocultures of lawn areas that limit biological diversity, fragment habitat, and release fertilizers that add excess nutrients to shallow ponds. Ground water levels may become lower with decreased recharge, and ground water quality may degrade because of pollution from leaking underground tanks, improper waste disposal, and failing septic systems. Preserving open space is a key component for maintaining environmental quality as development consumes a greater share of the Town's land area.

Yet, with the easiest and most suitable land already developed, it will be harder to prevent development on less suitable land from altering the environmental quality of the Town. Woodbury residents strongly support open space preservation for many reasons, including retaining rural character, preserving wildlife habitat, assuring environmental quality, and providing opportunities for passive enjoyment of nature.

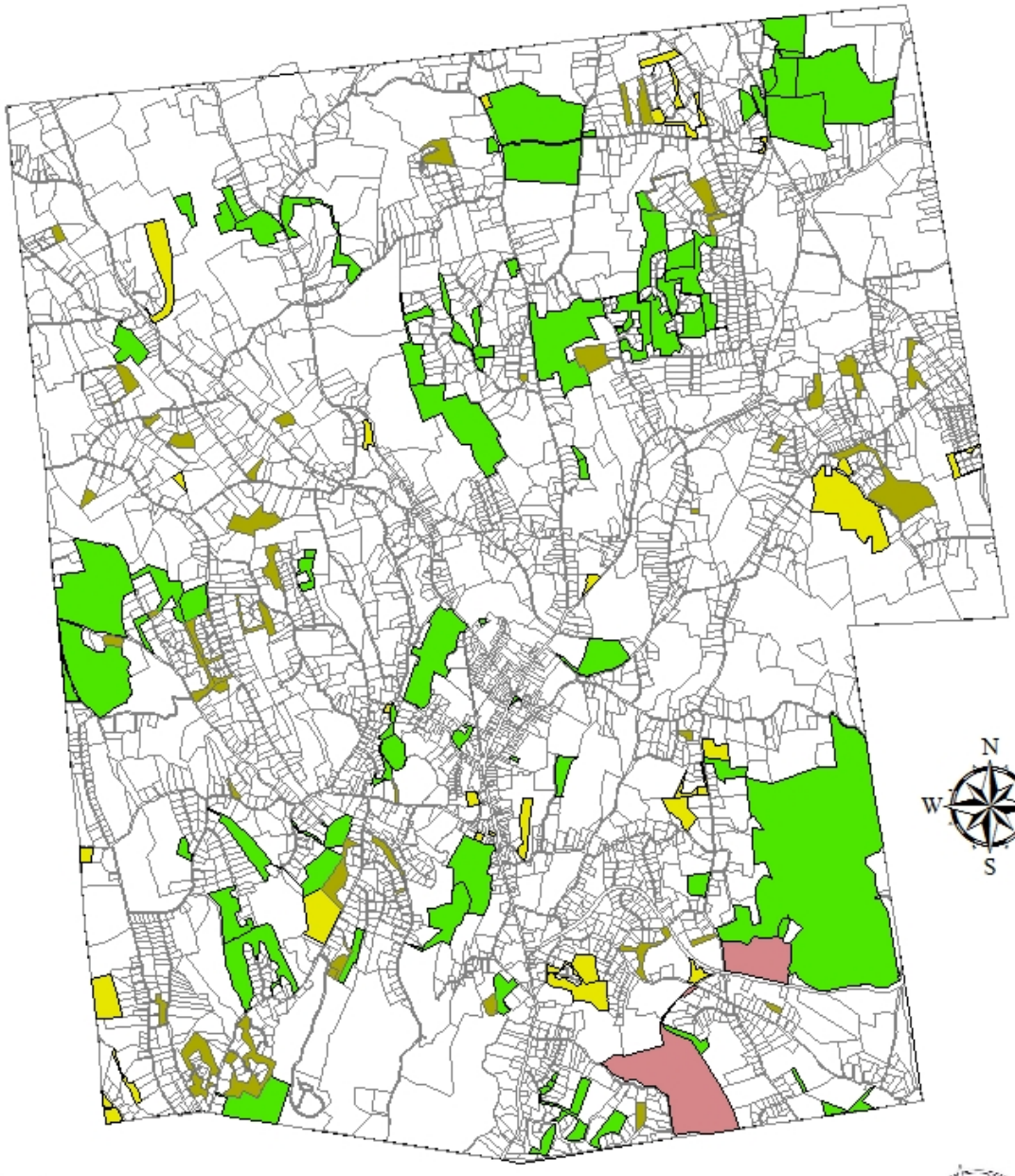
The state of Connecticut has set a goal of protecting 21% of its land area as open space. (CGS Chapter 447, section 23-8) The state itself will attempt to protect 10% of its land mass, while the remaining 11% falls to efforts of municipalities, land trusts, and water companies.

Woodbury's open space target is to put 20% to 25% of its land area into a form of permanent protection before the Town reaches a condition of complete build-out. Map 3 displays the current extent of protected open space, and Table 1 shows the distribution of this land by owner. "Open space" includes land or water protected or restricted for wildlife habitat, agriculture, passive recreation and parks, forestry, aquifer protection, riparian corridor protection, and scenic vistas. It includes land protected in fee simple ownership by the Town or a conservation land trust, and privately owned land restricted by an easement that prevents development, such as open space in an open space subdivision. It does not include land owned by the school district (133.6 ac.) because of its intensive use, or land under a temporary use assessment for farming, forestry, or open space.

Map 3

Protected Open Space

Plan of Conservation and Development



Legend

- Protected Open Space
- Restrictions and Easements
- Homeowners' Associations
- United Water Co. High Priority Sites

0 0.5 1 1.5 2 Miles

Town of Woodbury

Woodbury

Data Source: Woodbury GIS

Table 1
Protected Open Space, 2007

Type	Acreage
Land Trust Property	1,739.6
Southbury	45.5
Private Ownership	787.0
Municipal Parks, etc.	314.8
Water Company Land	165.3
Total	3,052.2
Town Area	23,506.0
2007 OS % of Town	13.0%
25% Goal	5,876.5

Source: Woodbury GIS Open Space Layer

- In 2007, protected land in Woodbury amounted to 3,052.2 acres, or 13% of its total land area.
- The state of Connecticut owns no open space in Woodbury. (The Town could make an argument to "spread the wealth" when seeking acquisition funding.)
- Increasing use of open space subdivisions has resulted in the protection of a large amount of private open space at no cost to the Town.
- To reach the 20-25% target, Woodbury will need to add between 1,417 and 2,592 acres of protected land, achieving a total of 5,876.5 acres.

Flanders Nature Center and Land Trust is by far the largest holder of open space in Woodbury. Flanders has been quite active both in purchasing open space and in obtaining stewardship of land set aside in open space subdivisions approved by the Planning Commission. The goals of the Land Trust and the Town often coincide when opportunities for land preservation occur, and the two entities should continue to work closely together when their common interests intertwine. A Land Trust can often act with alacrity when special opportunities arise, while the Town must pursue an open, deliberative process. As an active catalyst in land-preservation ventures, Flanders will remain a key player in helping the Town implement its aggressive open space agenda.

The table does not include some United Water Company property as permanently protected open space. This property was watershed land of the Town's original surface water supply, but with the development of new ground water sources in Woodbury, this land will become surplus to the Water Company's needs. United could decide to sell the land once the state DEP determines there is sufficient capacity in its ground water sources to meet the utility's water needs. The Company must first offer the land to the Town for market value. With two large parcels in close proximity to other open space tracts, the Town should seek to acquire

the property for conservation purposes by seeking state grants, entering into partnerships with local land trusts, and contributing local tax dollars.

Open Space Preservation Zones

With limited municipal finances, Woodbury must carefully allocate its resources in ways that will accomplish the greatest benefits of protecting natural resources and providing outdoor recreation opportunities for residents. In addition to outright purchases, Woodbury can use its land-use regulatory powers and engage in collaborative efforts with state, regional, and local partners to achieve its ends.

The previous Plan of Conservation and Development proposed the concept of "Preservation Zones" as a unifying framework to guide local actions to achieve its open space goals and preserve the Town's rural landscape. (See Table 2.) Preservation Zones constitute open space corridors and linkages within Woodbury that help to focus open space planning efforts. Potential conservation purchases within these areas meeting the criteria set by this Plan of Conservation and Development should receive high priority, although other sites meeting the criteria are worthy of preservation. Woodbury will continue to design its open space protection strategy around these themes.

Preservation Initiatives

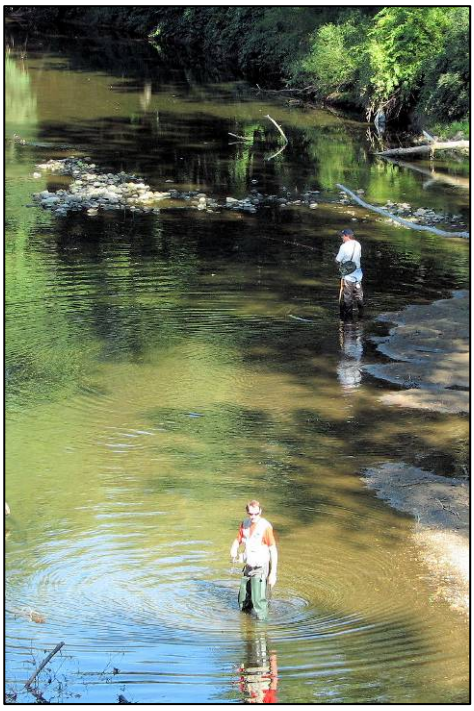
<u>Pomperaug River Greenway</u>

The importance of the Pomperaug River and Aquifer to the environmental health of the community cannot be understated. Woodbury's public water supplier, the United Water Company, obtains its water from wells in the aquifer. The quality of the water is very high, and there are minimal treatment costs. The River affords residents water access for hiking, fishing, and canoeing. Associated wetlands and flood plains act as sponges to soak up potentially damaging water during severe storms.

However, the Pomperaug is a relatively small river, and minor disruptions caused by human activity can erode these values. If aquifer recharge is ignored, long-term droughts can undermine the resource's ability to supply water to the utility customers. Low flows reduce recharge to public wells and can have severe impacts on wildlife and fisheries; maintaining surface inputs is essential to insuring adequate flows for ecological health and human requirements. Development in the flood plains reduces water storage capacity and can result in severe damage to property downstream.

Through the auspices of the Pomperaug River Watershed Coalition, Woodbury is working with other communities in the watershed to maintain the ecological integrity of this resource. Woodbury will develop and implement a Pomperaug River Greenway Plan (including the Nonnewaug and Weekeepeemee Rivers) that preserves the rivers' environmental integrity and maximizes benefits to residents. The COGCNV and DEP can offer resources to help in this endeavor. The key strategies include:

- Acquire open space parcels that provide opportunities for reasonable public access.
- Develop hiking trails along the River that connect principal open space parcels. Approach land-owners to acquire public easements across private property where land purchase is not necessary or too costly.



Fishing in the Pomperaug River

- Improve River access for canoeing and fishing. Develop parking areas on public lands to accommodate greater recreation use.
- Prepare brochures and web sites that identify access locations and set ground rules for responsible behavior.
- Through land-use approvals, set aside buffers along the River and its tributaries where development is discouraged in order to maintain water temperature and the filtering benefits of woodland cover.
- Cooperate with Bethlehem and Southbury to extend the Greenway across town lines.
- Seek expertise of local scientists, teachers, and the PRWC to develop nature trails that inform children and outdoor enthusiasts of the important ecological functions the River provides.

Ridges and Corridors

A defining characteristic of Woodbury's landscape is its gently sloping valley carved by the Pomperaug River, framed by steeply rising hillsides and distinctive ridges. Undeveloped ridges enhance scenic views from many locations in the community and afford habitat for numerous species of wildlife. In the southern end of Town where development density is greatest, the Ridge and River Corridor Conservation Plan (Map 4) provides a unifying framework for protecting open space and regulating development to maintain the contribution these resources make to the aesthetic qualities and natural environment of Woodbury. To implement this Plan, Woodbury will seek to:

- Preserve the properties identified as Protection Targets.
- Develop links between key parcels to accommodate wildlife migration patterns and establish long distance hiking trails for residents.
- Manage growth by encouraging development that is consistent with this Plan, and use creative preservation techniques when opportunities arise.

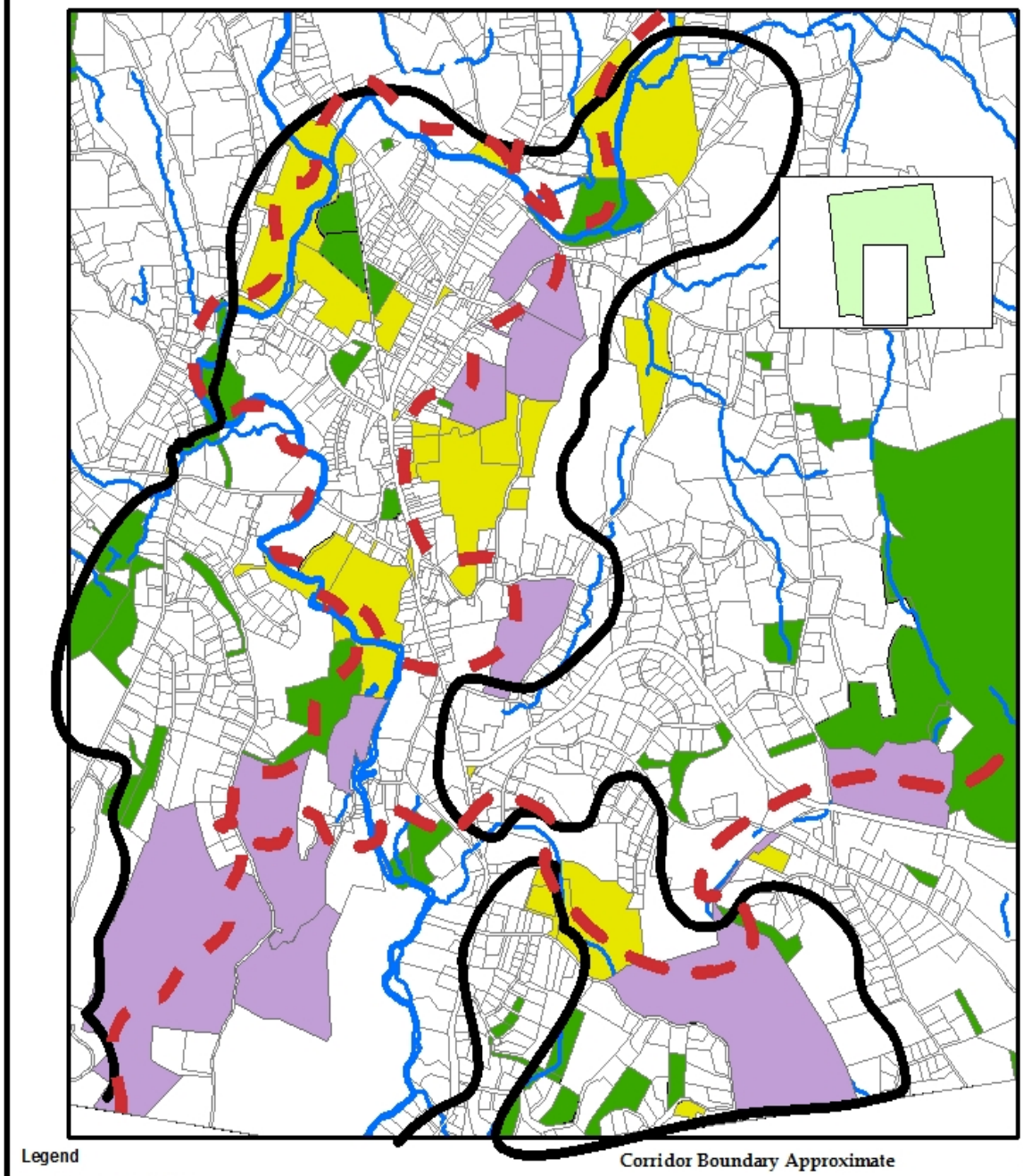
Table 2
Open Space Preservation Zones

Preservation Zone	Objectives	Criteria	Threats
River Valleys	Develop and maintain riparian corridor habitat and linkage. Protect Pomperaug River aquifer and watershed. Develop passive recreation access. Maintain riverbank stability.	Linear corridor parcels Parcels abutting or near existing parks and open space Threatened flood plain or flood plain buffer area High quality riparian habitat	Intensive land-uses and flood plain activities Aquifer contamination Riverbank stability Adjacent development Mining
The Eastern Border - Nonnewaug Falls to Woodbury Reservoir	Protect scenic and natural areas around the Falls. Preserve agricultural lands and support farming. Work with COGCNV, Watertown, and Bethlehem to implement the "Nonnewaug Falls Open Space Action Area." Develop and maintain natural habitat corridor and linkages. Establish low-density development buffer along eastern border of Town.	Parcels abutting or buffering falls area Active agricultural parcels Parcels abutting Whittemore Sanctuary and other large open space blocks Private parcels for easements or management agreements Utility lands	Subdivisions and roads Intensive forestry Vandalism Invasive pests
The Pomperaug Valley Traprock Ridges	Promote passive recreational access. Protect remaining unspoiled trap rock ridgelines from development and inappropriate land uses. Maintain scenic definition. Protect rare and unusual habitats.	Threatened ridgeline parcels Parcels abutting existing protected areas Linear ridgeline corridor parcels High quality habitats and State-listed species occurrence	Housing developments Intensive recreational uses Mining Forestry Invasive pests
The Western Uplands	Protect scenic uplands and natural habitats. Preserve agricultural lands and support farming. Retain large forest blocks.	Active or potential farmland Large forest blocks High visibility ridgelines	Subdivisions and roads Abandonment of farmland Invasive pests Intensive forestry

Ridge and River Corridor Conservation Plan

Map 4

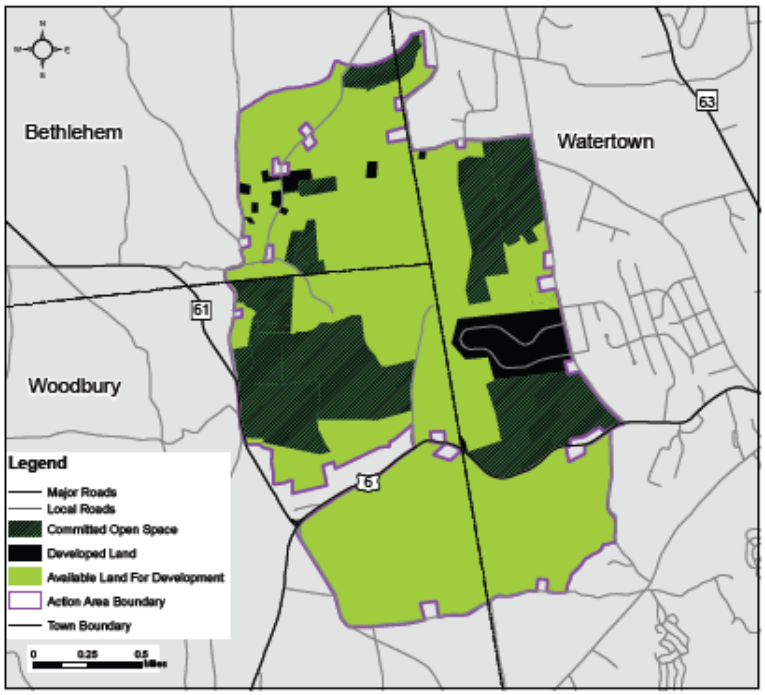
Plan of Conservation and Development



Nonnewaug Falls

As described above, Woodbury has targeted the Nonnewaug Falls area as an important preservation zone. The Town will manage growth for low intensity development along the eastern border to preserve its scenic and natural assets. The Council of Government of the Central Naugatuck Valley (COGCNV) has also identified the northeast corner of Woodbury and the adjoining sections of Bethlehem and Watertown as a regional open space preserve in its Regional Plan of Conservation and Development. Woodbury will assist COGCNV in its efforts to implement open space protection measures to preserve this unique resource and the surrounding rural landscape.

Nonnewaug Falls



Nonnewaug Falls Action Area, COGCNV,
Regional Plan of Conservation and Development

Farmland Preservation

New England has lost much of its agricultural heritage to suburban development starting with the post WW II era and continuing to the present day. Many of Woodbury's farms are no more than a memory, and the remaining farms could soon disappear as strong development pressures place a high economic value on farmland. Many farmers desire to continue farming, but need assistance from federal, state, and local agencies. Woodbury

residents support the continuation of agriculture because of the numerous benefits it offers in terms of adding to community character, preserving a rural landscape, and providing ready access to fresh farm products. The regional importance of preserving farmland is also evident in the joint work of COGCNV and the PRWC; the two agencies prepared a case study for preserving agricultural land and protecting water resources in the Pomperaug River Watershed[1]. To preserve the remaining farms in Town, Woodbury will work cooperatively with farmers and conservation organizations to implement the following strategies:

Pond View Farm

1. Use a variety of creative strategies to preserve farming in Woodbury, such as:
   - Buy farms when they go on the market. Record development restrictions to prevent future development. Then lease or sell the farm at agricultural value to people willing to farm it.
   - Sell development rights to increase density elsewhere. Identify receiving zones or let the market decide. Authorize the program in open space subdivisions.
   - Purchase the right of first refusal to gain time while working to raise the funds needed to buy all or part of the farm.
   - Upon acquiring a farm, sell off a few developable lots to help finance the acquisition. Lease the land to people interested in farming the land.
2. Expand the use of farmers markets. Initiate a campaign to buy local products. Support niche operations.
3. Educate residents on the importance of farming for food production, preservation of scenic views, and contributions to the local economy.
4. Establish an Agricultural Commission that can promote agriculture in Woodbury, assist farmers with town resources, and help to resolve disputes with residents over farming operations.

[1] "The Role of Agriculture in the Preservation of Open Space and the Protection of Water Resources," 2003

5. Pass a non-zoning right-to-farm ordinance to allow farmers to pursue agricultural activities free from potential conflicts from abutters when engaged in generally accepted agricultural practices.
6. Reach out to farmers, identify their needs, and determine assistance the Town can provide. Help with acquiring development rights (state program). When older farmers are contemplating retirement or selling the farm, act in concert with Land Trusts and funding entities to try to purchase the farm.
7. Consider allowing wind turbines and solar collectors on farms as source of energy and/or income for farmers.
8. To sustain agriculture in the community, target farm purchases in areas of concentrated farming and preserve prime and important farmland soils for future use.

Open Space and Natural Resources Goals

1. Strive to achieve permanent protection of 20% - 25% of the Town's land area by 2020.
2. Provide a superior system of both public and private open space that allows passive and active recreation opportunities and preserves environmentally significant areas. Target parcels critical to protection of aquifers and public drinking water supplies, wetlands, steep slopes, ridgelines, wildlife habitat, flood plains, and prime farmland soils.
3. Collaborate as appropriate with Flanders Nature Center and Land Trust and other conservation organizations to act quickly to preserve important open space lands when confronted with immediate development pressure.
4. Assess land-use regulations to maintain and enhance the water quality of the Pomperaug River and Aquifer, as well as that of the Nonnewaug and Weekeepeemee Rivers, which form the Pomperaug. Monitor water quality to detect threats at an early stage and develop appropriate regulatory strategies to reverse negative trends. Cooperate with watershed communities to determine sustainable well yields that will maintain the ecological health of the resources. Work with the Watershed Coalition on planning, education, drought management, and scientific studies, and participate in the Integrated Watershed Management Plan process to assure the long-term protection of the water resources of the river and aquifer.
5. Acquire land for Town parks that is compatible with adjacent land uses, and develop facilities to meet the Town's active recreation needs.
6. Link together the open space system by preserving connecting corridors that can accommodate wildlife movement and passive hiking trails.
7. Use a variety of creative techniques, such as the open space subdivision process, conservation easements, transfer of development rights, and financial contributions, to preserve land that advances key open space initiatives in lieu of public acquisition.
8. Institute a variety of measures that assists in the preservation of agricultural lands, including both working and non-active farms.

Recommendations

1. Retain the goal of permanent protection of 20% - 25% of Woodbury's land area as open space.

2. Purchase the United Water Co. watershed property when it becomes available.
3. Implement an annual appropriation of .5 mills for open space. In 2007, this would have yielded about $525,000. CGS Chapter 97, Section 7-131r allows communities to deposit two mills annually into an Open Space and Land Acquisition Fund.
4. Continue use of the Open Space Acquisition Fund to make purchases of strategic parcels that advance the open space preservation goals of the POCD.
5. Continue to implement the strategy of protecting key parcels that fall within Open Space Preservation Zones, including:
   - The River Valleys
   - The Eastern Border - Nonnewaug Falls to Woodbury Reservoir
   - The Pomperaug Valley Traprock Ridges
   - The Western Uplands
6. Create provision for ridgeline preservation for the Orenaug Hills and other sensitive ridgelines. Evaluate ridgeline protection provision of state law (CGS Chapter 124, Section 8-2). Determine if the "Watershed/Viewshed Regulated Area" regulation (Section 4.18) of the Planning Commission's Subdivision Regulations provides equal or better protections than the state provision.
7. Review open space subdivision regulations to insure that open space lands achieve the open space objectives of the POCD.
8. Work closely with Flanders and other conservation organizations to identify targets for acquisition or protection. When necessary, match town funds with state grants and non-profit land trusts (Flanders, Roxbury) to stretch limited local dollars.
9. Develop a mechanism for enforcing easements in open space subdivisions and prior lands and, where appropriate, prepare cross easements to allow the Town and Flanders to enforce the terms of the agreement. For parcels with no future municipal use, offer the option of Flanders ownership or control. Consider using staff and volunteers of Flanders to monitor compliance with terms of easements. Require periodic inspections to verify compliance. Require a deposit of funds into a dedicated account for long-term maintenance and stewardship of such lands.
10. Compile a catalogue of all open space easements and map their locations to provide a handy reference for legal conditions and exact locations of all easements.
11. Allow *off-site* land preservation in open space subdivisions, i.e. transfer of development rights. For example, preserving farmland or a scenic view would provide a developer with additional units in the subdivision. Such a system might vary the amount of additional development based on the natural resource value of the land preserved, whether by easement or ownership.
12. Engage landowners of large tracts proactively to inform them of the benefits of land preservation.
13. Implement the Ridge and River Corridor Conservation Plan (Map 4) through strategic protection of key parcels.

14. Develop a Greenway Plan for the Pomperaug, Weekeepeemee, and Nonnewaug Rivers that includes public access, walking trails, environmental education, fishing, canoeing, land protection, and parking. Put plan on the web and market as a tourist draw.
    - Develop educational materials to inform residents of the Town's important natural resources. Express concern for environmental quality and let residents know what they can do to prevent pollution.
    - Work with the Pomperaug River Watershed Coalition on river and aquifer protection issues.
    - Acquire land with river frontage and access for residents to appreciate first-hand the values the River has to offer.
    - Monitor low flows during the summer. Be careful with pumping rates to preserve fisheries and aquatic habitat.
    - Seek state and federal funding for eligible greenway projects.
15. Continue the planting, replacement, and maintenance of trees on public streets, in parks, and on building sites.
16. Continue to monitor development in the flood plain. Stress the need to maintain flood storage capacity. Consider compatible uses, such as agriculture and recreation.