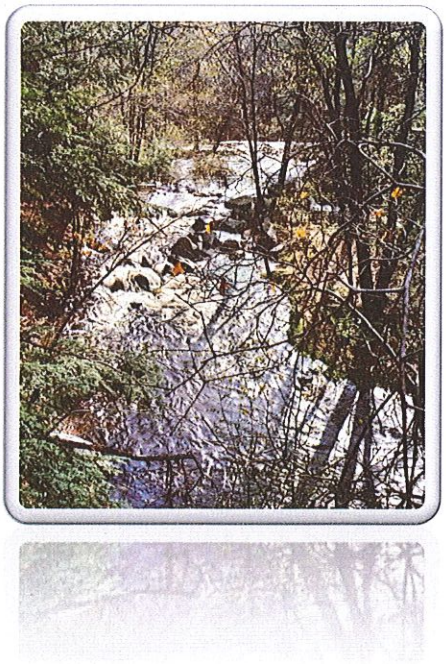
Sustainable CT Action 2.5- Natural Resources and Wildlife Inventory

I. Natural Resource and Wildlife Inventory

The Town of Glastonbury Office of Community Development as part of the Sustainable CT Action Item entitled "Create a Natural Resources and Wildlife Inventory" mapped the following natural features in Glastonbury:

1. Soil Parent Soils
2. Inland Wetland Soils
3. 150 Ft Upland Review Areas
4. Soil Types
5. Soil Drainage Classes
6. Committed Open Space
7. CT DEEP Owned Property Inventory
8. Land Cover Types
9. Water bodies
10. FEMA Flood Classifications
11. Groundwater Protection Zones Map

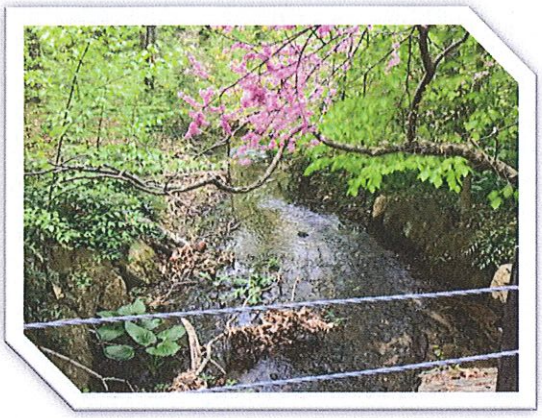
Shoddy Mill



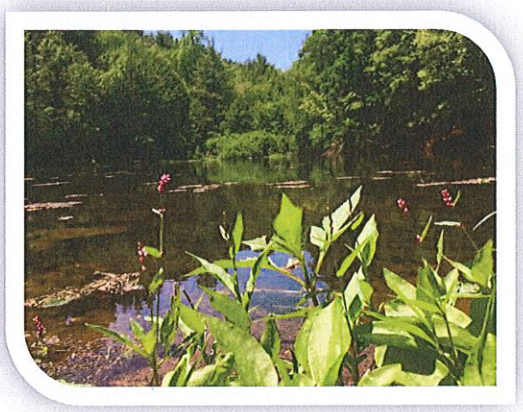
II. Land Use Decision-Making Process

Integrate your NRW inventory into municipal planning documents and/or decision-making process

Glastonbury integrates the natural resource and wildlife inventory in many steps in the land-use decision-making process. The NRWI is a very necessary part in decisions regarding development proposals. We work with applicants from the very beginning of the process starting with our preliminary application reviews to ensure that any new development or redevelopment will not have an adverse impact on our natural resources and wildlife habitats.



Grindle Brook



Roaring Brook

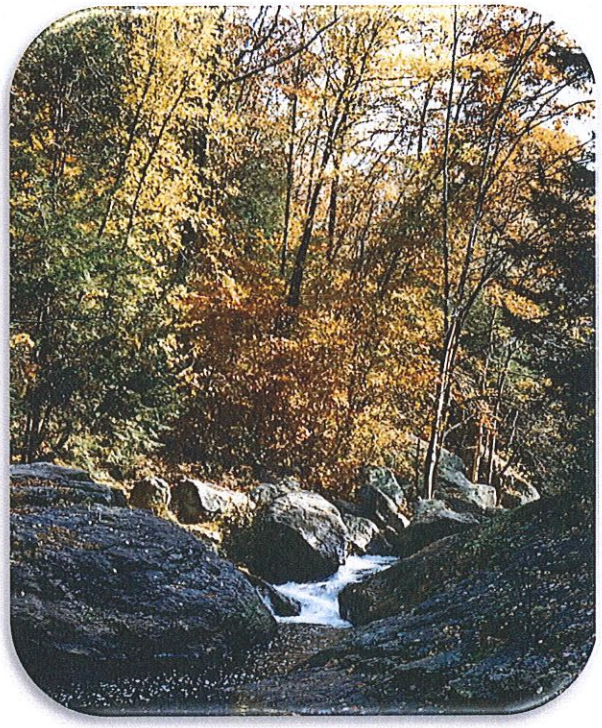
Staff Review – Preliminary Application Process

During our preliminary application review meetings, the land use staff advises the applicant on sensitive environmental features that exist in the area of the proposed development and how to develop without it being of detriment to the natural resources of wildlife. In addition, data included in maps such as the one that describes the Soil Parent Material helps to make assumptions about the potential soil suitability development, such as septic placement decisions. In addition, in guiding the applicant, we advise them on which boards and commission will be required for their approval process. Many projects have to get reviewed by the Conservation Commission and Inland Wetlands Watercourse Agency. The data within the NRWI helps to evaluate if the project should be reviewed by the Conservation Commission and if a permit will be necessary from the Inland Wetlands and Watercourse Agency.

Conservation Commission and Inland Wetlands and Watercourse Agency

The purpose of the Conservation Commission is to develop, conserve, supervise, and regulate the Town's natural resources, and develop, coordinate, study and promote matters of environmental protection. The Commission studies and make recommendations on all matters pertaining to water supply and water pollution; and reviews and make recommendations to the Town Plan and Zoning Commission regarding proposals for subdivisions and special permits. The Town Council is advised by the Conservation Commission and is provided with recommendations for zone change applications and Environmental Impact Statements.

The maps in the NRWI are a very critical part in the decision-making process of this Commission. The recommendations of this body gets referred to the Town Plan and Zoning Commission, and in some cases the Town Council, and becomes part of the motion of the approval for the project. Any conditions of approval recommended by the Conservation Commission that is based off of data in the NRWI becomes requirements that the landowner/applicant must follow through development of the project.



J.B. Williams Park

Inland Wetlands and Watercourse Agency (IWWA)

The IWWA is the same body as the Conservation Commission. The IWWA reviews and grants wetlands permits and makes declaratory rulings regarding development activities within a designated wetlands/watercourse or within a one hundred (100) foot to one hundred fifty (150) foot buffer zone of the wetlands/watercourse. The Hydric Soils Map shows where there is a presence of these wetland soils.

The 150 ft Upland Review Area Map shows the area of the Town where the buffer area is 150ft. These buffer areas are where the Town's critical watersheds exists that need a heighten level of permitting review and protection. These watersheds include Roaring Brook, Salmon River, Cold Brook and Grindle Brook. The soil type map and soil drainage classification map gives the staff and commission additional guidance in determining locations of environmentally sensitive areas and the suitability for development of land use proposals.

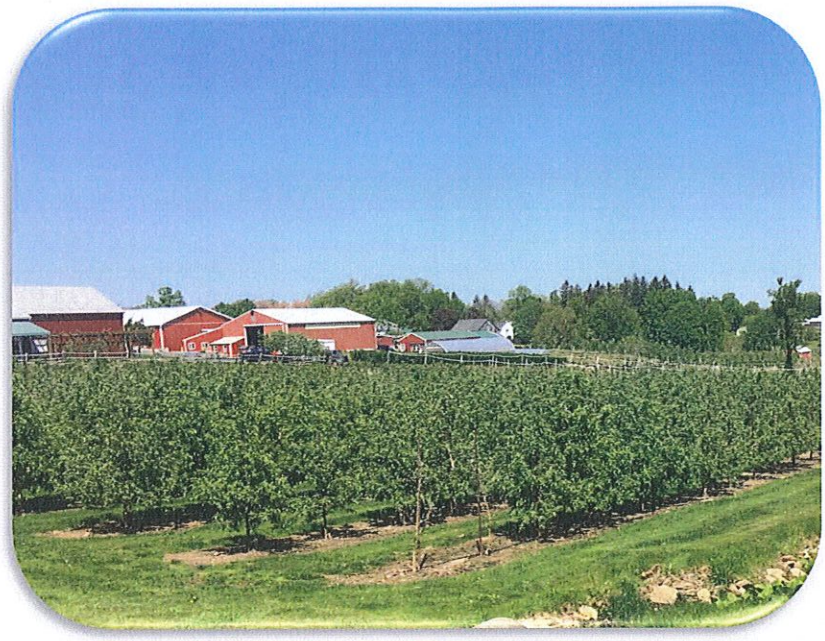
Land Acquisition and Purchase of Development Rights

Glastonbury has been dedicated to open space preservation through the years and thinks strategically about which parcels of land to pursue for open space acquisition and the purchase of development rights. It is important to make linkages between open space parcels wherever possible to helps preserve and protect the natural resource system which is vital to the existence of wildlife habitat. The Town has had a history of making open space acquisitions around already existing open space parcels such as state-owned open space land. When the Town makes decisions regarding these parcels, maps in the NRWI, such as the CT DEEP Owned Property and Committed Open Space maps provide very key pieces of information. The Committed open space map shows dedicated opens space that is owned by the State, the Town, state utility commissions, and private land trusts.

It has always been a goal of the Town to link open space parcels, wherever possible and this goal is reinforced in the Town's Plan of Conservation and Development. These maps are effective tools in making acquisition and development rights decisions so that the town can see where existing open space is located and use the information o evaluate the benefits of land purchase proposals before them.

In 8-24 Reviews referred by the Council to the Town Plan and Zoning Commission for the purchase of development rights or land acquisition decisions, the Commission also reviews existing preserved open space parcels in the area as well as other environmentally sensitive features identified on and around the parcel and uses it as a basis for their recommendation to the Council regarding said acquisition. The NRWI is a very effective tool in this process.

Rose's Berry Farm



Natural Resource/Wildlife Protection Tools:

Conservation Easements

The NRWI forms the basis in our application of many land use tools. The Conservation Commission often use tools such as conservation easements to implement protection of the natural resources as identified in the inventory. The purpose of a conservation easement is to protect in perpetuity significant natural features and to minimize the environmental impact of activities associated with land development within the Town of Glastonbury.

Plan Filing Requirements

Glastonbury requires that special permit, subdivision, Planned Area Development and Adaptive Redevelopment Zone approvals get filed on the land records in the Town Clerk's Office. This means that many site development plan sheets have to be filed. The NRWI is also a critical part

in our filing requirements for these plans. Certain natural resource and wildlife habitat protections requirements are noted on the official record that gets filed on the land records. For example, the NBBD Endangered Species Habitat map identifies the location of one of our endangered species, the timberhead rattlesnake. During subdivision plan filing process, we require that notations are made on the plans that will alert developers and potential property owners to the existence of an endangered species in the area so that necessary precautions are made during the development process.

Building-Zone Regulations

The Town Plan and Zoning Commission administers the zoning regulations, or Building-Zone Regulations, for the Town of Glastonbury. The NRWI is an integral part of two sections of the Town's zoning regulations. The Groundwater Protection Zone map provides information to help determine which groundwater classification zone an application is in and which regulations would apply to the land use application.

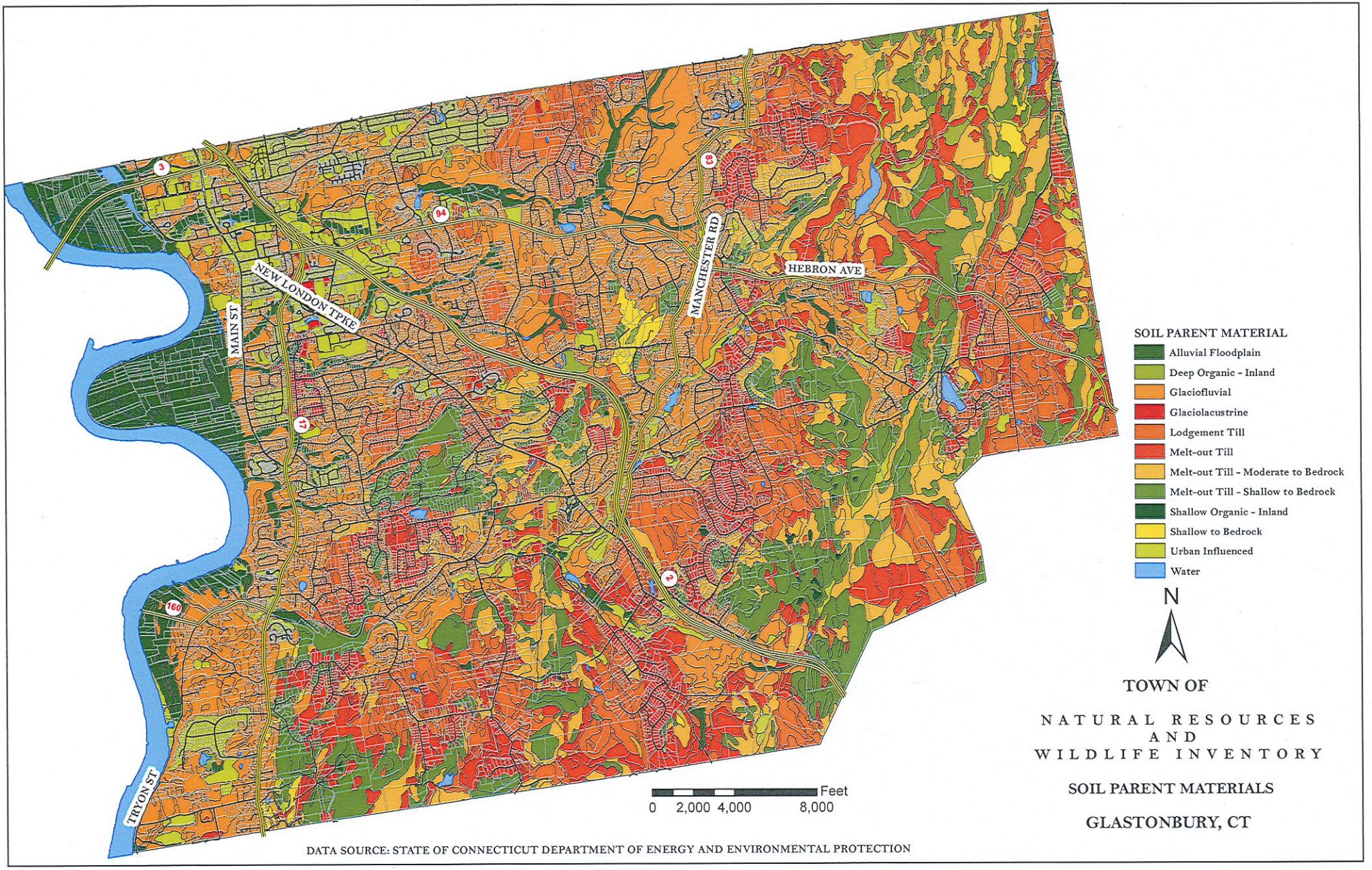
In the same regard, the FEMA Flood Zone map becomes a basis for the Commission's decision-making when applying the Flood Prone Area regulations.

Flood Plain on Naubuc Avenue/CT River

100-Year Flood Zone: Naubuc Avenue area

GIS database

Many of the NRWI elements have been integrated into the Town's Geographical Information Database. This database is used on a regular basis in order to guide applicants through the permitting process and to assist the land use commissions in making decisions on development applications. These data layers include open space, wetland soils, groundwater protection zones, FEMA flood zones, critical watersheds, natural resources, and watercourses. Environmental features can be viewed in the system on a town-wide or parcel by parcel basis.



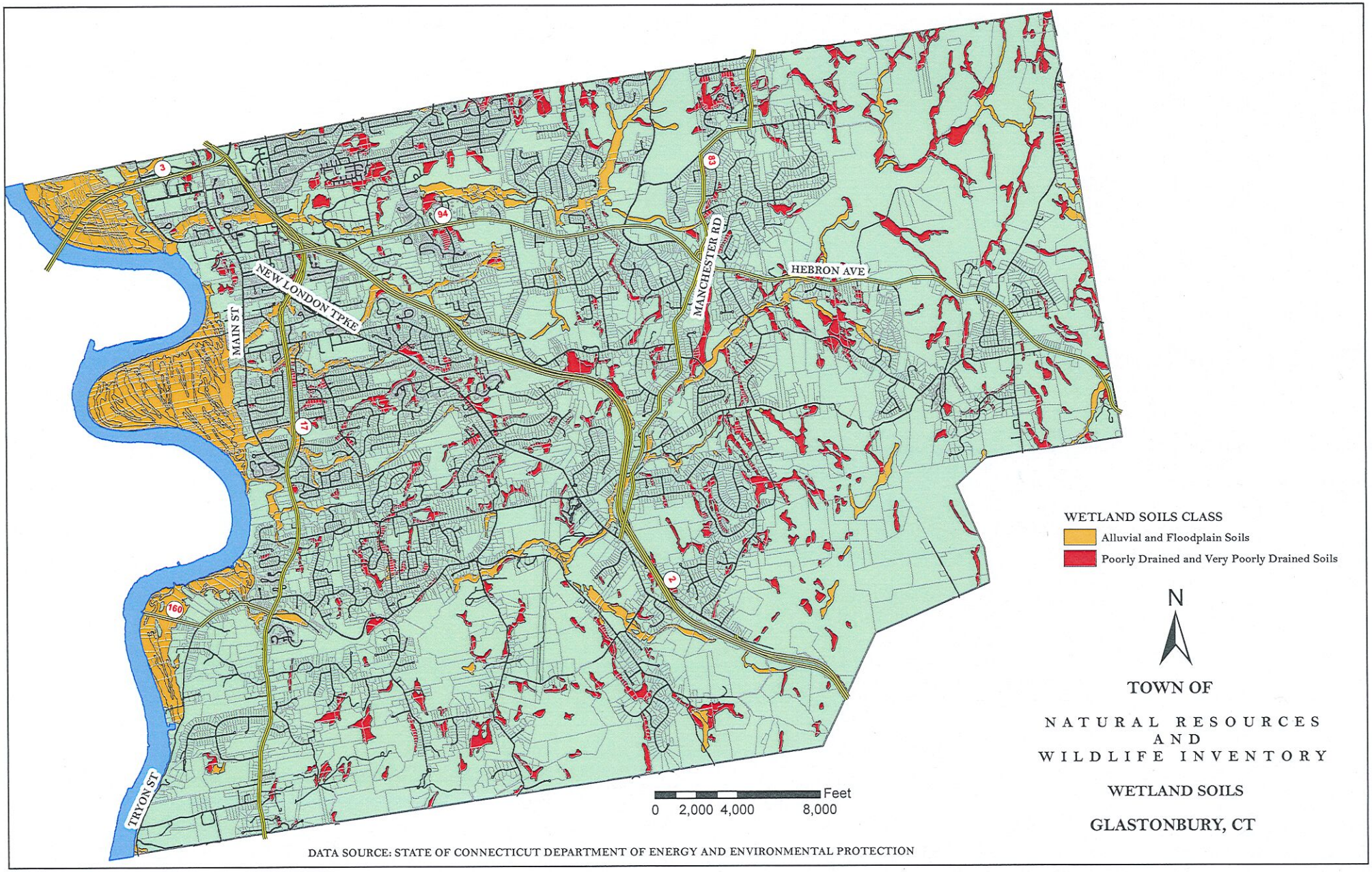
DATA SOURCE: STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

TOWN OF

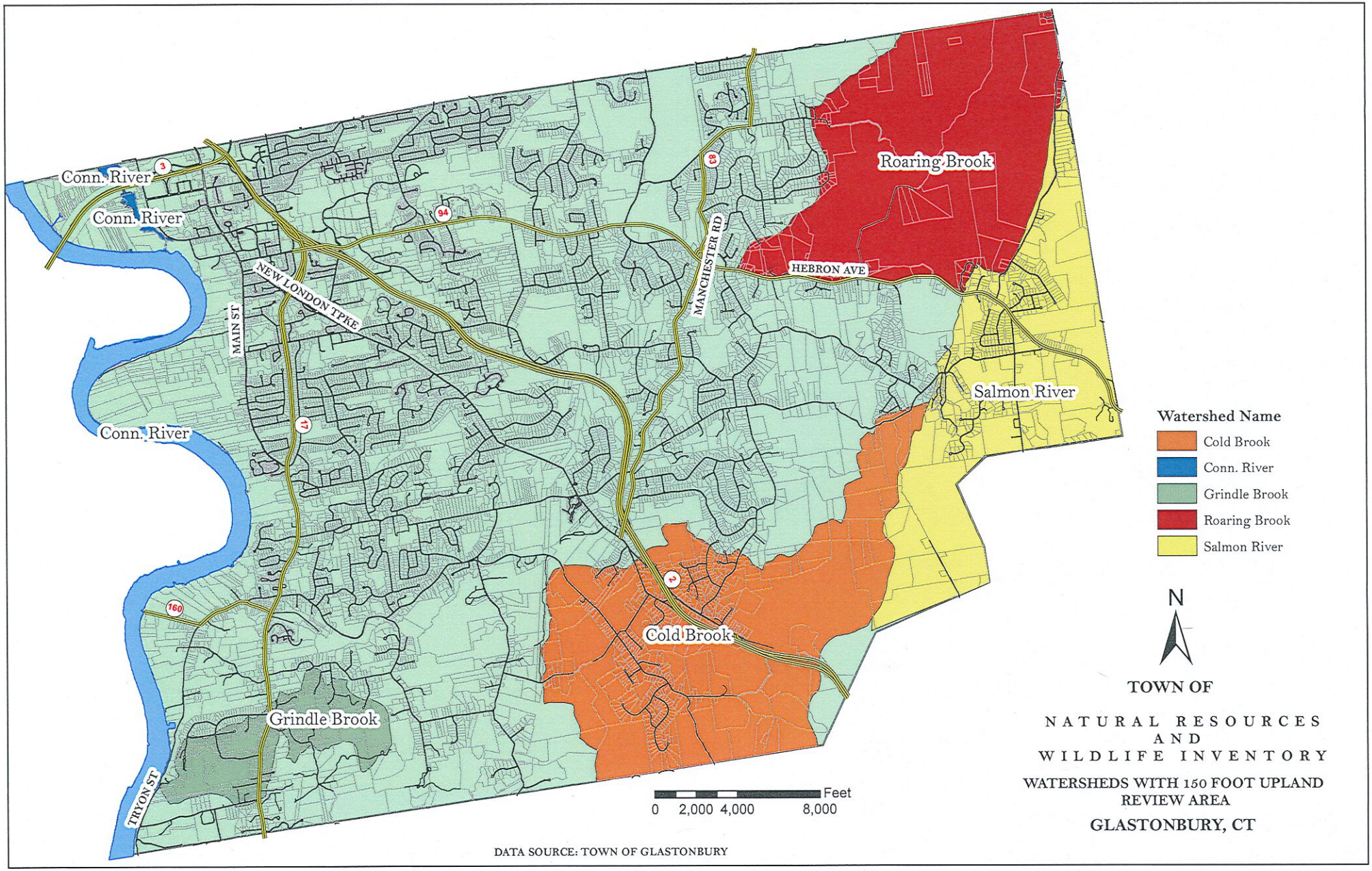
NATURAL RESOURCES AND WILDLIFE INVENTORY

SOIL PARENT MATERIALS

GLASTONBURY, CT



DATA SOURCE: STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION



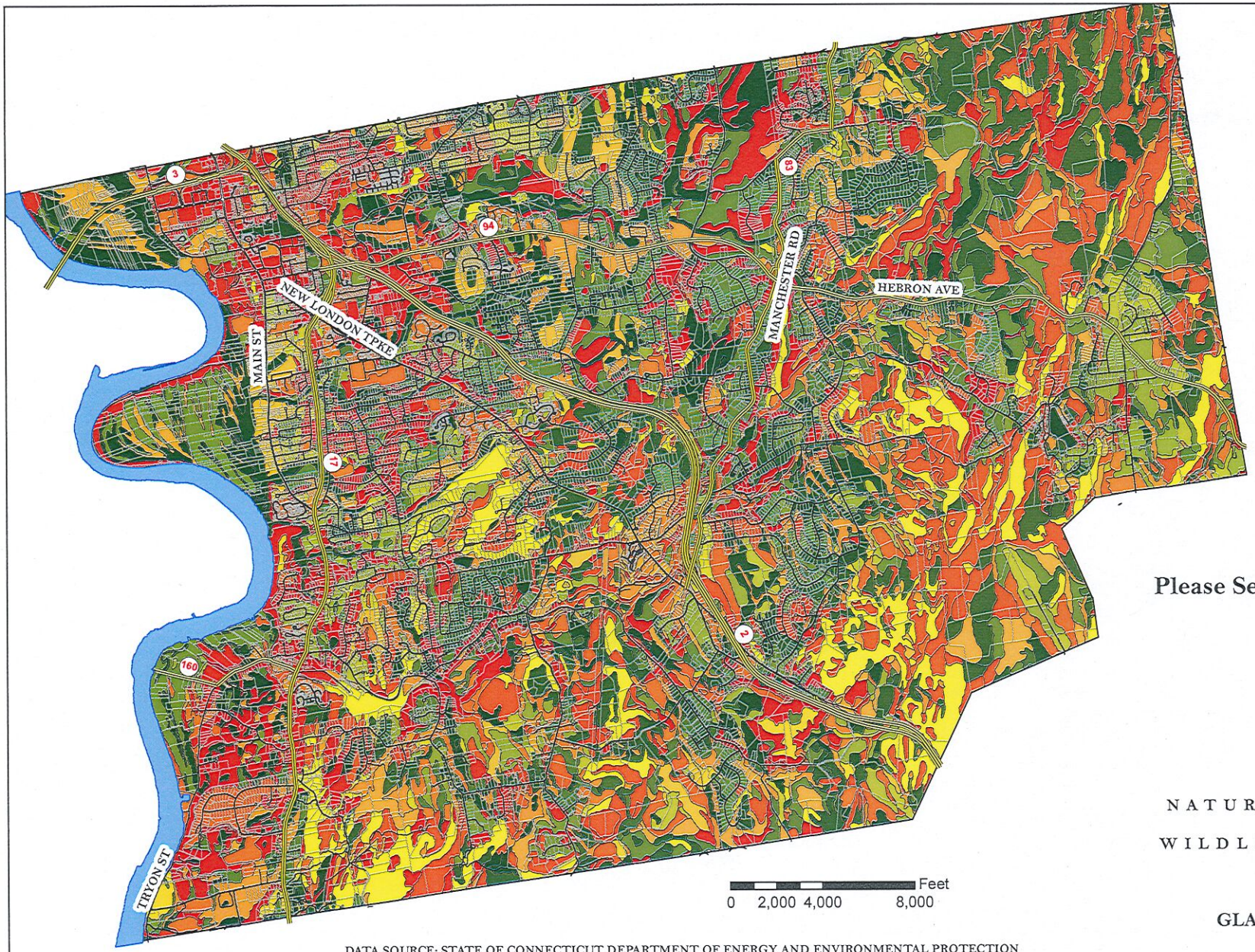
DATA SOURCE: TOWN OF GLASTONBURY

TOWN OF

NATURAL RESOURCES AND WILDLIFE INVENTORY

WATERSHEDS WITH 150 FOOT UPLAND REVIEW AREA

GLASTONBURY, CT



Please See Attached Legend

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AND
WILDLIFE INVENTORY

SOIL TYPE

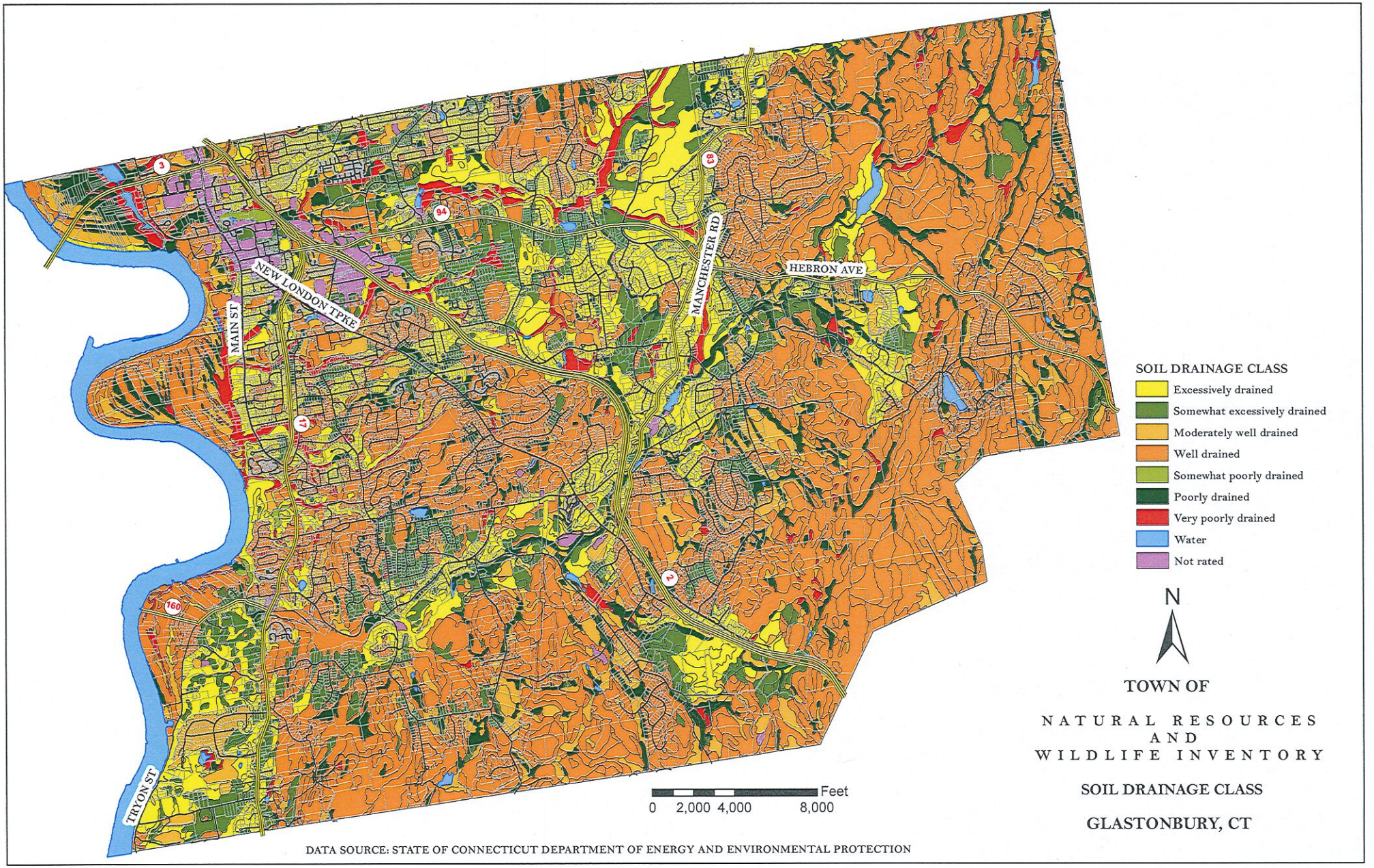
GLASTONBURY, CT

DATA SOURCE: STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

Town of Glastonbury Natural Resources and Wildlife Inventory

Soil Types Map Legend

- Ninigret-Urban land complex, 0 to 5 percent slopes
- Occum fine sandy loam
- Paxton and Montauk fine sandy loams, 15 to 25 percent slopes
- Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony
- Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony
- Paxton and Montauk fine sandy loams, 3 to 8 percent slopes
- Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony
- Paxton and Montauk fine sandy loams, 8 to 15 percent slopes
- Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony
- Penwood loamy sand, 0 to 3 percent slopes
- Penwood loamy sand, 3 to 8 percent slopes
- Penwood-Urban land complex, 0 to 8 percent slopes
- Pits, quarries
- Pootatuck fine sandy loam
- Rainbow silt loam, 0 to 3 percent slopes
- Rainbow silt loam, 3 to 8 percent slopes
- Raypol silt loam
- Ridgebury fine sandy loam
- Ridgebury, Leicester, and Whitman soils, extremely stony
- Rippowam fine sandy loam
- Rock outcrop-Hollis complex, 3 to 45 percent slopes
- Rock outcrop-Hollis complex, 45 to 60 percent slopes
- Saco silt loam
- Scarboro muck
- Scitico, Shaker, and Maybid soils
- Sudbury sandy loam, 0 to 5 percent slopes
- Suncook loamy fine sand
- Sutton fine sandy loam, 0 to 3 percent slopes
- Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony
- Sutton fine sandy loam, 2 to 8 percent slopes, very stony
- Sutton fine sandy loam, 3 to 8 percent slopes
- Timakwa and Natchaug soils
- Udorthents, flood control
- Udorthents, loamy, very steep
- Udorthents, smoothed
- Udorthents-Pits complex, gravelly
- Udorthents-Urban land complex
- Urban land
- Walpole sandy loam
- Watchaug fine sandy loam, 2 to 8 percent slopes, very stony
- Watchaug fine sandy loam, 3 to 8 percent slopes
- Water
- Wethersfield loam, 15 to 25 percent slopes
- Wethersfield loam, 15 to 35 percent slopes, extremely stony
- Wethersfield loam, 3 to 8 percent slopes
- Wethersfield loam, 3 to 8 percent slopes, very stony
- Wethersfield loam, 8 to 15 percent slopes
- Wethersfield loam, 8 to 15 percent slopes, very stony
- Wethersfield-Urban land complex, 3 to 8 percent slopes
- Wethersfield-Urban land complex, 8 to 15 percent slopes
- Wilbraham and Menlo soils, extremely stony
- Wilbraham silt loam
- Windsor loamy sand, 0 to 3 percent slopes
- Windsor loamy sand, 3 to 8 percent slopes
- Windsor loamy sand, 8 to 15 percent slopes
- Windsor-Urban land complex, 0 to 8 percent slopes
- Winooski silt loam
- Woodbridge fine sandy loam, 0 to 3 percent slopes
- Woodbridge fine sandy loam, 2 to 15 percent slopes, extremely stony
- Woodbridge fine sandy loam, 2 to 8 percent slopes, very stony
- Woodbridge fine sandy loam, 3 to 8 percent slopes
- Woodbridge fine sandy loam, 8 to 15 percent slopes
- Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony
- Agawam fine sandy loam, 0 to 3 percent slopes
- Agawam fine sandy loam, 3 to 8 percent slopes
- Agawam fine sandy loam, 8 to 15 percent slopes
- Agawam-Urban land complex, 0 to 8 percent slopes
- Bash silt loam
- Broadbrook silt loam, 3 to 8 percent slopes
- Broadbrook silt loam, 3 to 8 percent slopes, very stony
- Broadbrook silt loam, 8 to 15 percent slopes
- Broadbrook silt loam, 8 to 15 percent slopes, very stony
- Broadbrook-Urban land complex, 3 to 8 percent slopes
- Canton and Charlton soils, 15 to 25 percent slopes
- Canton and Charlton soils, 15 to 35 percent slopes, extremely stony
- Canton and Charlton soils, 3 to 15 percent slopes, extremely stony
- Canton and Charlton soils, 3 to 8 percent slopes
- Canton and Charlton soils, 3 to 8 percent slopes, very stony
- Canton and Charlton soils, 8 to 15 percent slopes
- Canton and Charlton soils, 8 to 15 percent slopes, very stony
- Catden and Freetown soils
- Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky
- Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky
- Cheshire fine sandy loam, 15 to 25 percent slopes
- Cheshire fine sandy loam, 15 to 35 percent slopes, extremely stony
- Cheshire fine sandy loam, 3 to 8 percent slopes
- Cheshire fine sandy loam, 3 to 8 percent slopes, very stony
- Cheshire fine sandy loam, 8 to 15 percent slopes
- Cheshire fine sandy loam, 8 to 15 percent slopes, very stony
- Cheshire-Holyoke complex, 3 to 15 percent slopes, very rocky
- Dumps
- Ellington silt loam, 0 to 5 percent slopes
- Elmridge fine sandy loam, 0 to 3 percent slopes
- Elmridge fine sandy loam, 3 to 8 percent slopes
- Elmridge-Urban land complex, 0 to 8 percent slopes
- Fluvaquents-Udifluvents complex, frequently flooded
- Gloucester gravelly sandy loam, 15 to 25 percent slopes
- Gloucester gravelly sandy loam, 15 to 35 percent slopes, extremely stc
- Gloucester gravelly sandy loam, 3 to 15 percent slopes, extremely stor
- Gloucester gravelly sandy loam, 3 to 8 percent slopes
- Gloucester gravelly sandy loam, 3 to 8 percent slopes, very stony
- Gloucester gravelly sandy loam, 8 to 15 percent slopes
- Gloucester gravelly sandy loam, 8 to 15 percent slopes, very stony
- Hadley silt loam
- Hartford sandy loam, 0 to 3 percent slopes
- Hartford sandy loam, 3 to 8 percent slopes
- Haven and Enfield soils, 0 to 3 percent slopes
- Haven and Enfield soils, 3 to 8 percent slopes
- Haven and Enfield soils, 8 to 15 percent slopes
- Haven-Urban land complex, 0 to 8 percent slopes
- Hinckley gravelly sandy loam, 0 to 3 percent slopes
- Hinckley gravelly sandy loam, 15 to 45 percent slopes
- Hinckley gravelly sandy loam, 3 to 15 percent slopes
- Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes
- Hollis-Chatfield-Rock outcrop complex, 3 to 15 percent slopes
- Leicester fine sandy loam
- Limerick and Lim soils
- Ludlow silt loam, 0 to 3 percent slopes
- Ludlow silt loam, 2 to 15 percent slopes, extremely stony
- Ludlow silt loam, 2 to 8 percent slopes, very stony
- Ludlow silt loam, 3 to 8 percent slopes
- Manchester gravelly sandy loam, 0 to 3 percent slopes
- Manchester gravelly sandy loam, 15 to 45 percent slopes
- Manchester gravelly sandy loam, 3 to 15 percent slopes
- Manchester-Urban land complex, 0 to 3 percent slopes
- Manchester-Urban land complex, 3 to 15 percent slopes
- Merrimac sandy loam, 0 to 3 percent slopes
- Merrimac sandy loam, 3 to 8 percent slopes
- Merrimac sandy loam, 8 to 15 percent slopes
- Ninigret and Tisbury soils, 0 to 5 percent slopes



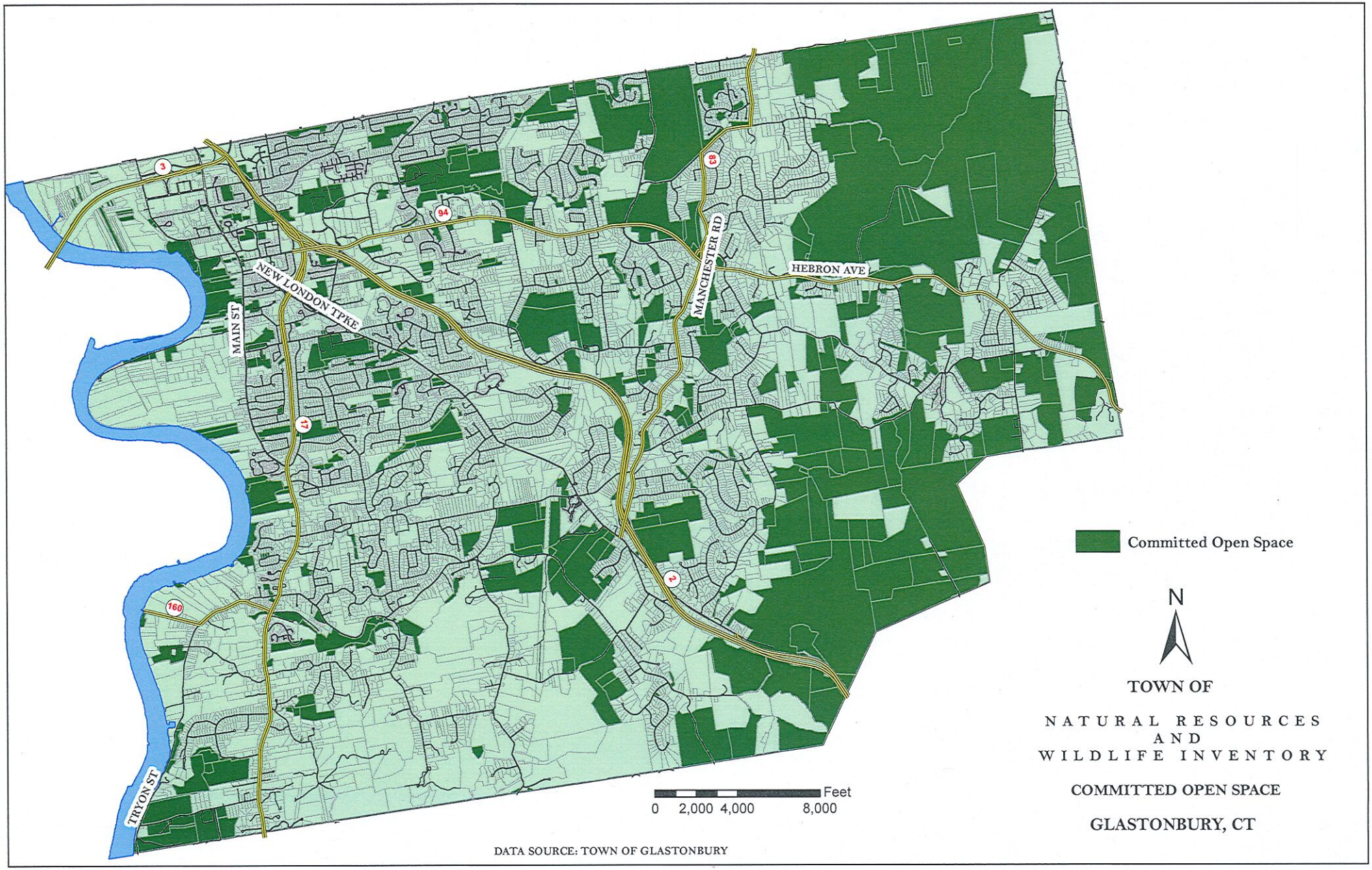
TOWN OF

NATURAL RESOURCES
AND
WILDLIFE INVENTORY

SOIL DRAINAGE CLASS

GLASTONBURY, CT

DATA SOURCE: STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION



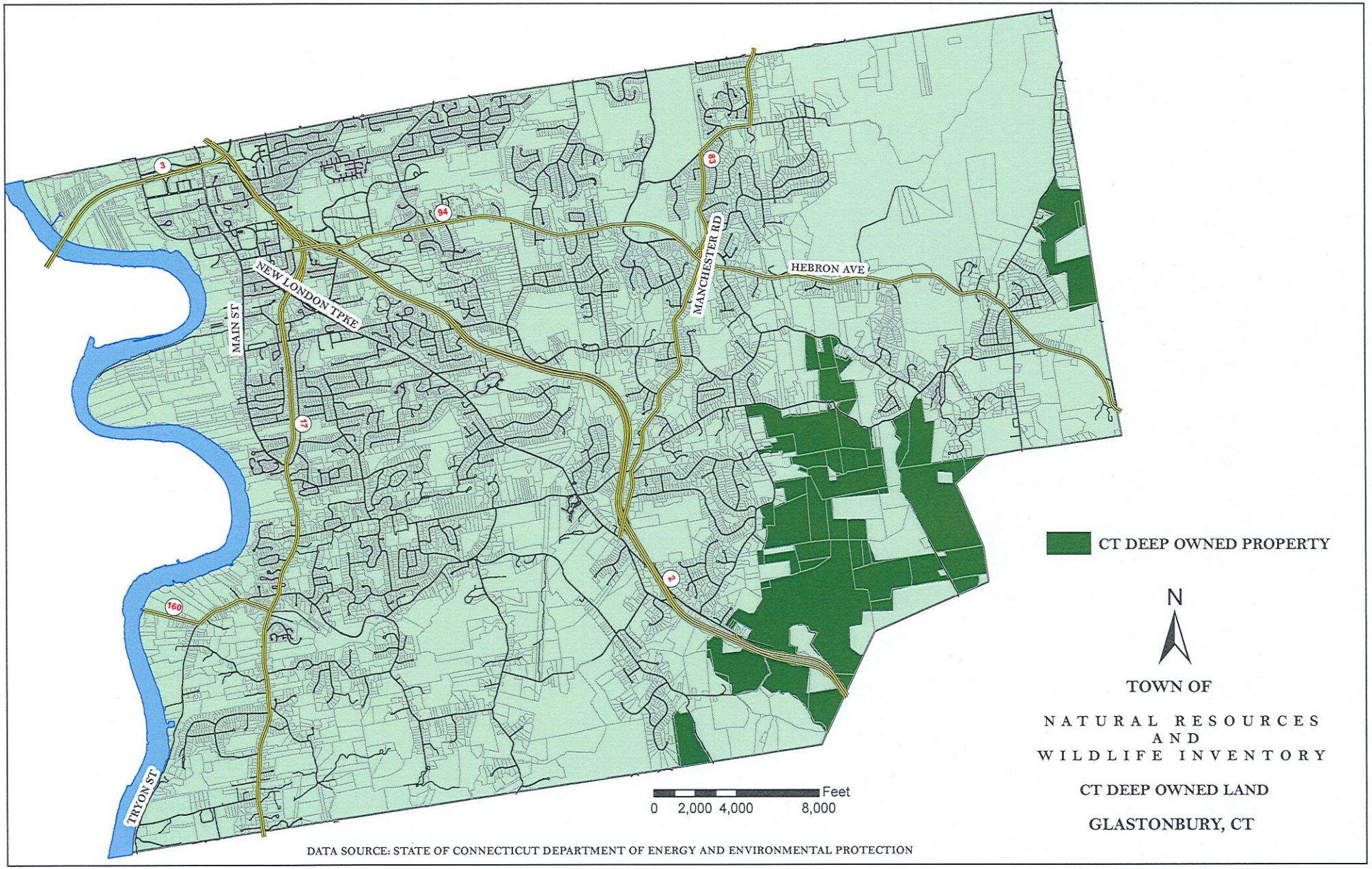
TOWN OF

NATURAL RESOURCES AND WILDLIFE INVENTORY

COMMITTED OPEN SPACE

GLASTONBURY, CT

DATA SOURCE: TOWN OF GLASTONBURY



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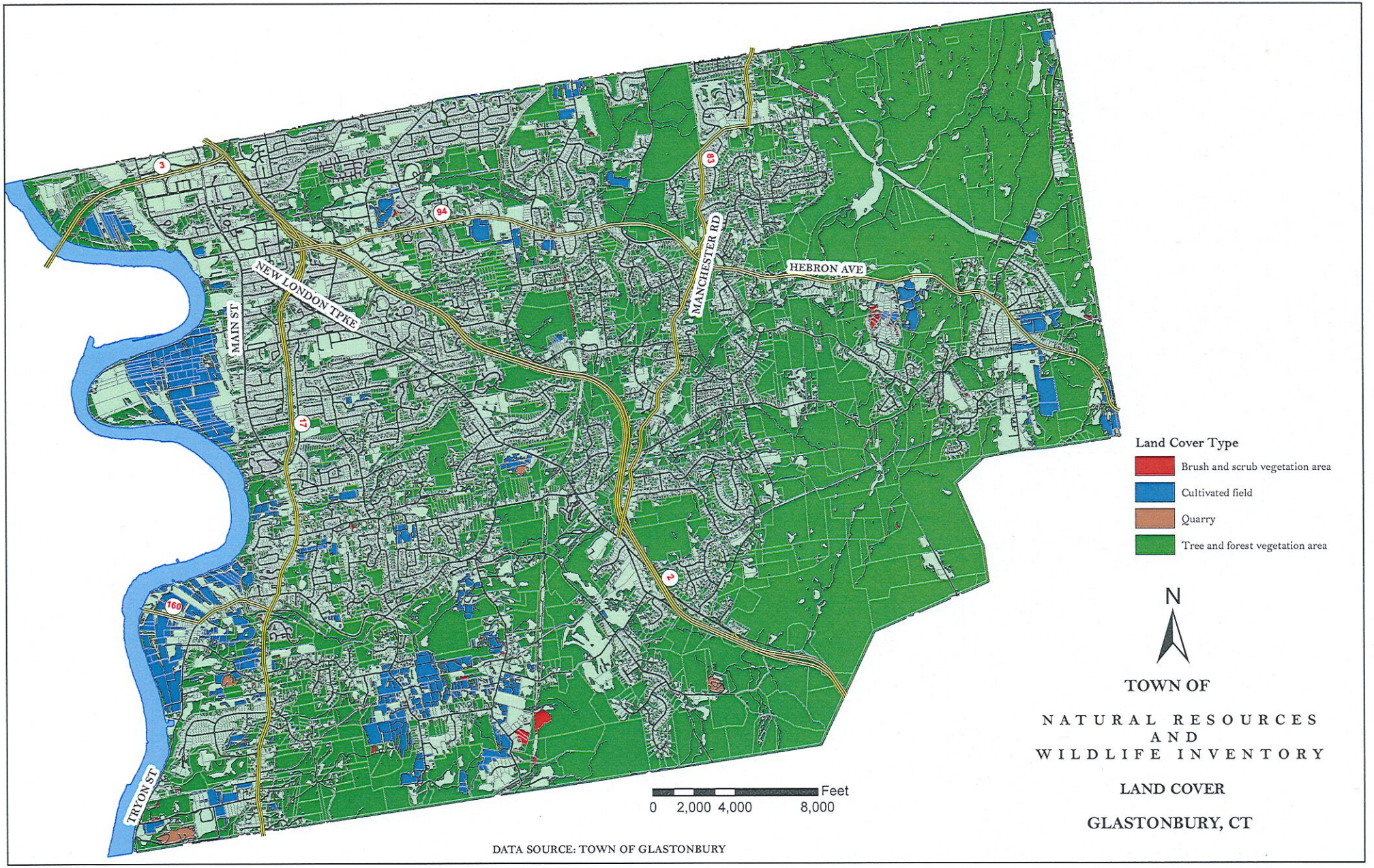

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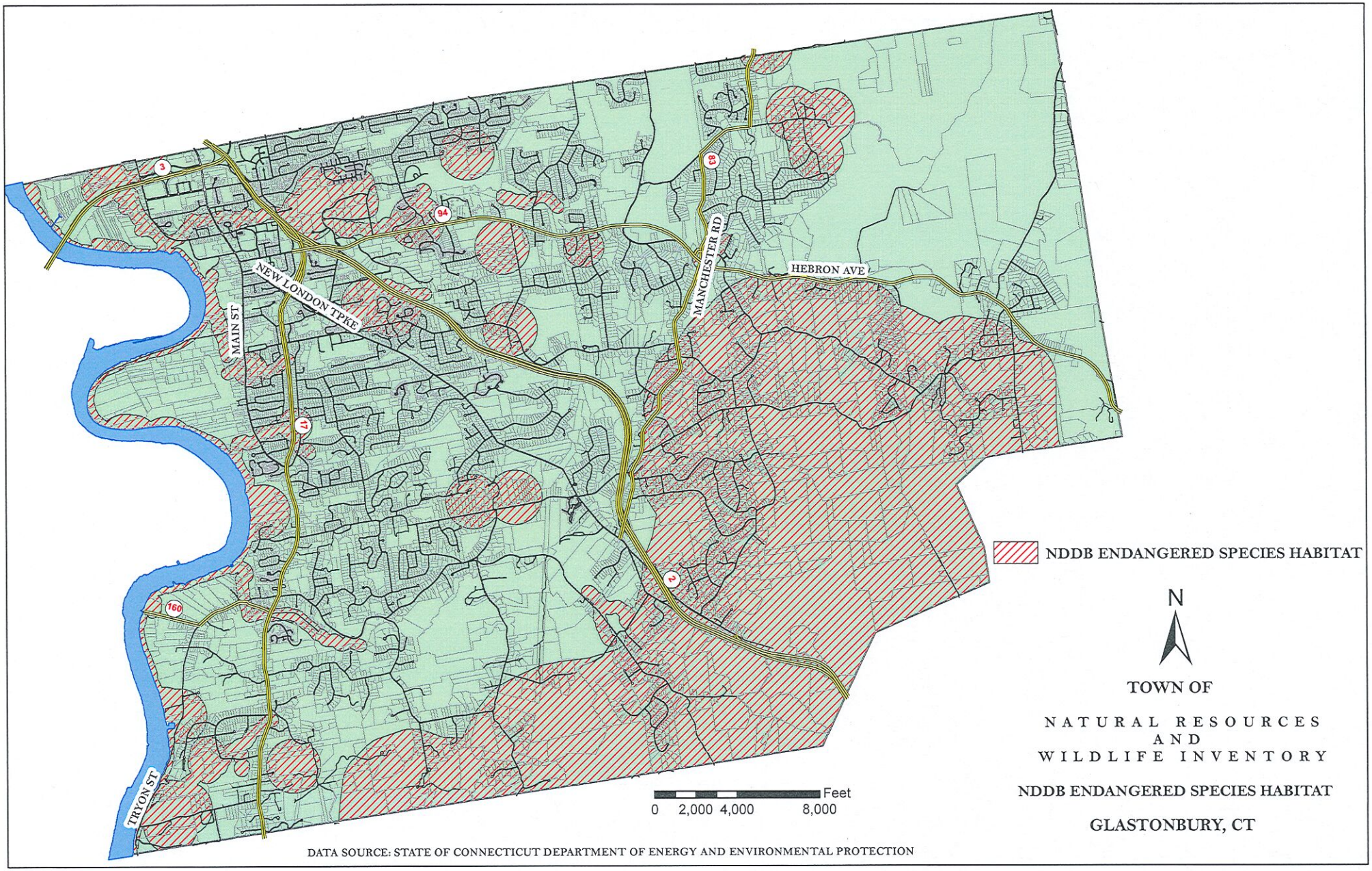
NATURAL RESOURCES AND WILDLIFE INVENTORY

LAND COVER

GLASTONBURY, CT

DATA SOURCE: TOWN OF GLASTONBURY



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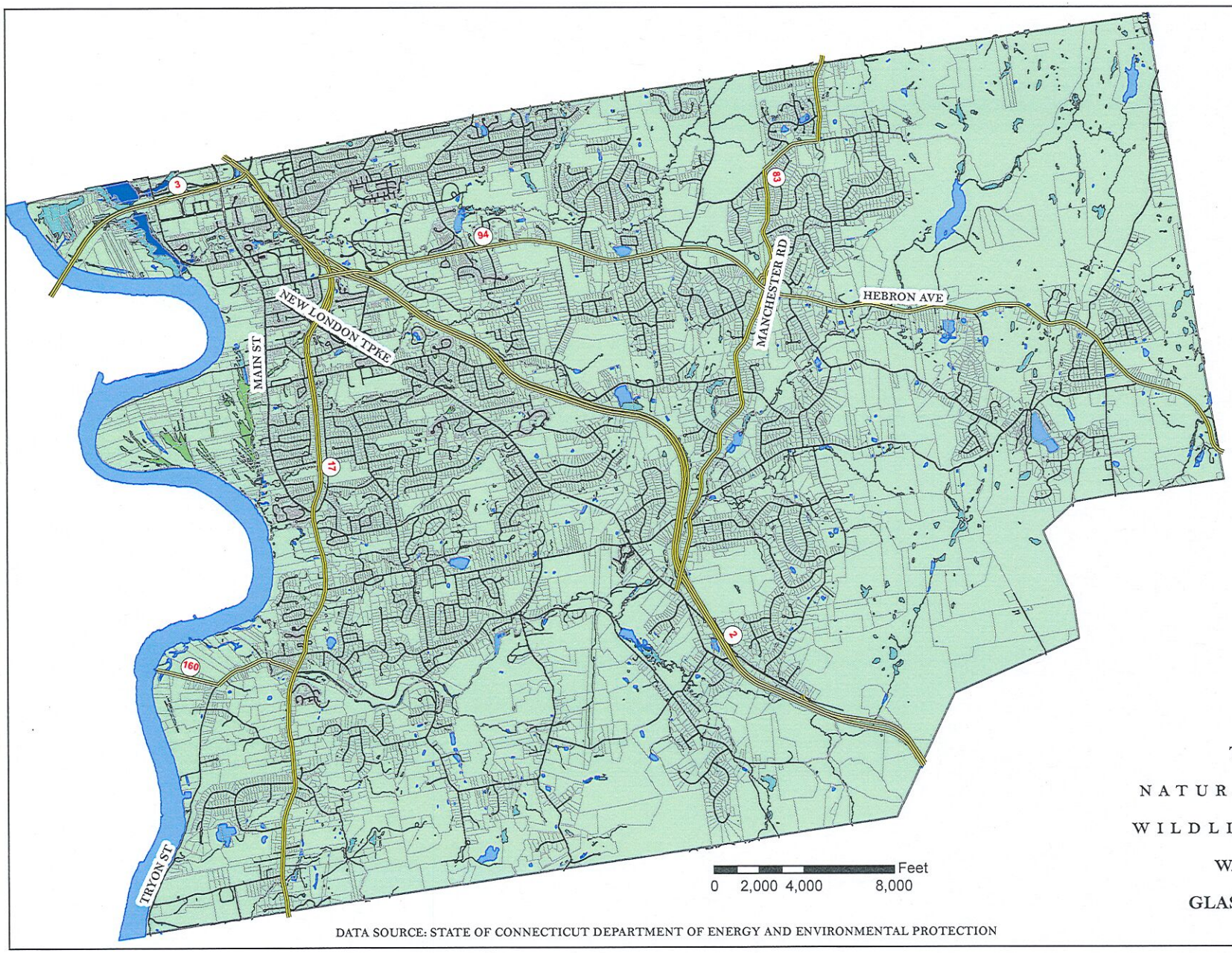
AND
WILDLIFE INVENTORY

NDDB ENDANGERED SPECIES HABITAT

GLASTONBURY, CT

DATA SOURCE: STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION



DATA SOURCE: STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

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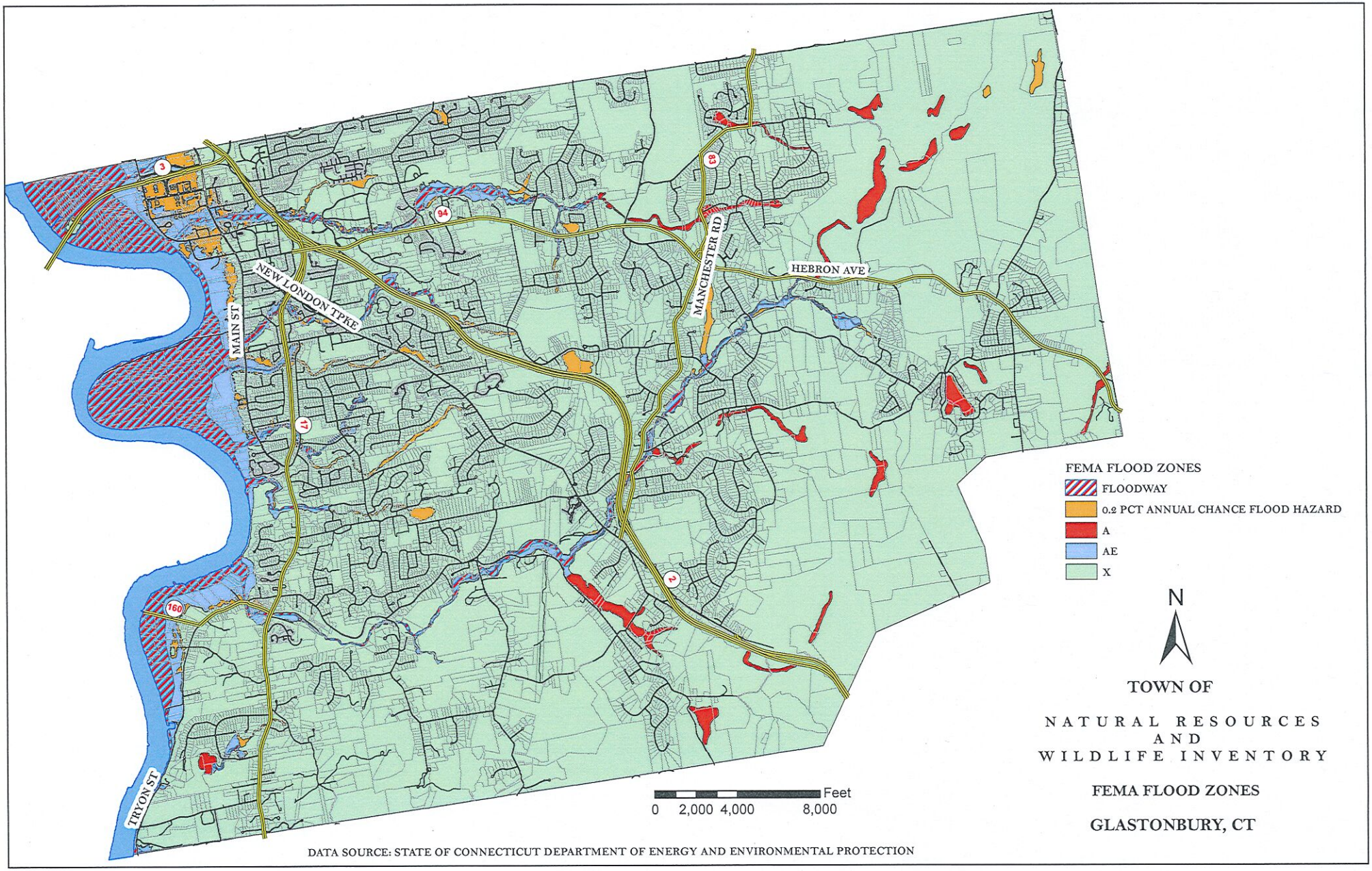
NATURAL RESOURCES AND WILDLIFE INVENTORY

WATER BODIES

GLASTONBURY, CT



TOWN OF

NATURAL RESOURCES AND WILDLIFE INVENTORY

FEMA FLOOD ZONES

GLASTONBURY, CT

DATA SOURCE: STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

Definitions of FEMA Flood Zone Designations

Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area.

Moderate to Low Risk Areas

In communities that participate in the NFIP, flood insurance is available to all property owners and renters in these zones:

ZONE	DESCRIPTION
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C and X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.

High Risk Areas

In communities that participate in the NFIP, mandatory flood insurance purchase requirements apply to all of these zones:

ZONE	DESCRIPTION
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.

High Risk Coastal Areas

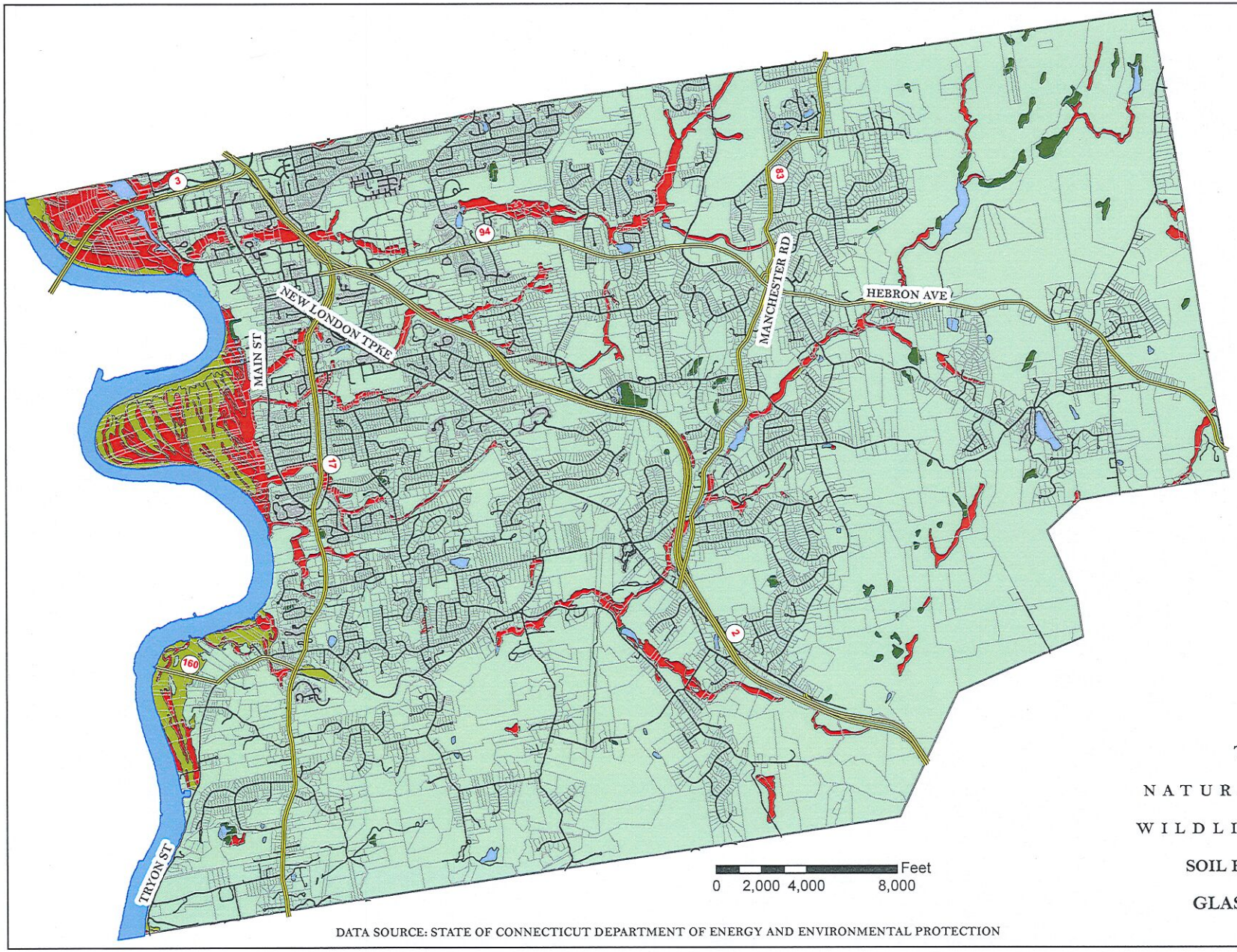
In communities that participate in the NFIP, mandatory flood insurance purchase requirements apply to all of these zones.

ZONE	DESCRIPTION
V	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.
VE, V1 - 30	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.

Undetermined Risk Areas

ZONE	DESCRIPTION
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.

From FEMA Map Service Center:
http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%20Flood%20Zone%20Designations



TOWN OF

NATURAL RESOURCES AND WILDLIFE INVENTORY

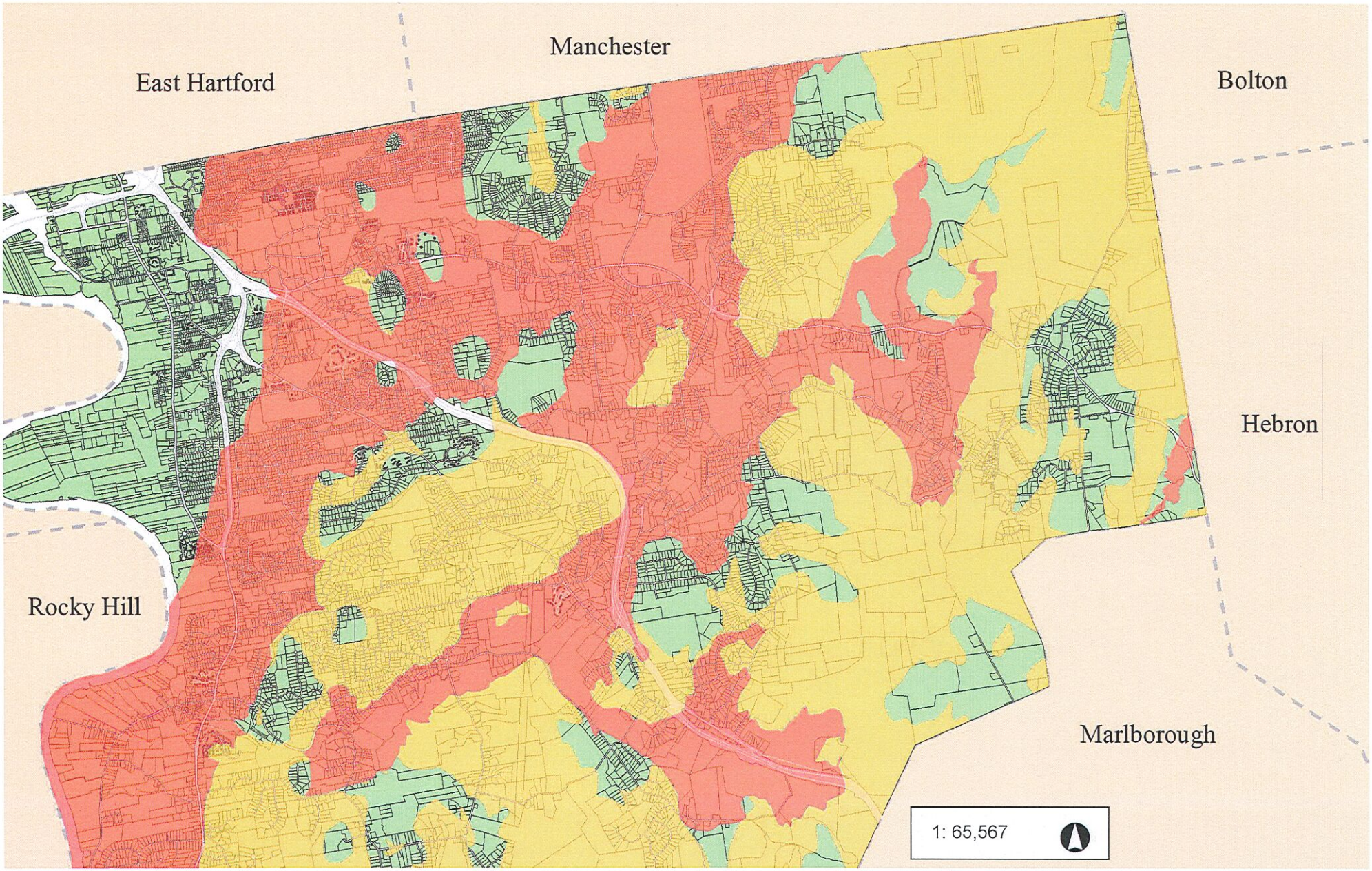
SOIL FLOODING CLASS

GLASTONBURY, CT

DATA SOURCE: STATE OF CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

Town of Glastonbury

Town of Glastonbury GIS Groundwater Protection Zones



10,928 0 5,464 10,928 Feet

NAD_1983_StatePlane_Connecticut_FIPS_0600_Feet

This map is a user generated static output from an Internet mapping site and is for reference only.
Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION