TORRINGTON POCD

# NATURAL RESOURCES

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*"When one tugs at a single thing in nature, he finds it attached to the rest of the world."*

John Muir

The City of Torrington has an abundant and varied inventory of natural resources. The City's close proximity to the Naugatuck River spurred its development during the industrial revolution. The large granite formations along the Still River corridor make the Winsted Road prime for quarrying operations. The high rolling hilltops with fertile land is important farmland producing milk, produce and other agricultural products.

This plan highlights and identifies different resources within Torrington that need protection and preservation.

**Watersheds, Water Resources and Water Quality**

The *Water Resources Plan* shows the limits and boundaries of minor watersheds within Torrington as well as delineates larger tributaries, water bodies and rivers.

Torrington is divided into two major drainage basins: the Housatonic River Watershed (the Naugatuck River, Bantam River and their tributaries) and the Farmington River/Connecticut River Watershed (the Still River and its tributaries). Torrington should work to protect and improve water quality in these resource areas. Creating riparian buffers, especially with a forested canopy, is one way to achieve this goal.

Torrington Water Supply is the municipal supplier of water purchased from the Torrington Water Company and serves approximately 250 customers along Winsted Road in the northern sections of Torrington. The Winsted Road distribution facilities are owned by the City of Torrington and include 4.5 miles of water main and 20 hydrants. The Torrington Water Company acts as an agent for the City.

The majority of public water supplies are supplied locally by individual wells or by the Torrington Water Company. The privately-held Torrington Water Company, established in 1873, supplies drinking water from its 5,400-acre watershed in Torrington, Goshen and Norfolk to residents of Torrington, Litchfield, New Hartford and Harwinton to nearly 9,000 households. Approximately two thirds of the watershed land is currently perceived as open space but little has been formally preserved.

The City should work with the water company to secure much of this land in perpetuity as open space/water supply land. Also, DEP must ensure that water will not be shifted from one watershed to another to protect downstream water levels in our natural rivers and streams.

**Watershed Planning**

All activities that occur within a watershed will somehow affect that watershed's natural resources and water quality.

New land development, runoff from already-developed areas, agricultural activities, and household activities such as gardening/lawn care, septic system use/ maintenance, water diversion and car maintenance all can affect the quality of the resources within a watershed."

www.ctdep.gov

**Stormwater Impacts**

Polluted stormwater runoff is a leading cause of impairment to the nearly 40 percent of surveyed water bodies which do not meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies.

When left uncontrolled, this water pollution can result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

www.epa.gov

**NPDES**

The NPDES (National Pollutant Discharge Elimination System Stormwater) program is a comprehensive approach to address the sources of stormwater discharges affecting water quality. Torrington is currently exempt from this program.

**Low Impact Development**

Low Impact Development (LID) involves the use of environmentally-friendly design elements (e.g. swale, infiltrators, rain gardens) as part of site design

www.lowimpactdevelopment.org

**Surface and Ground Water Quality on Water Resources Plan**

Areas with known water quality issues exist, where City efforts should be made to improve water quality.

## Improve Water Quality in the Stormwater Collection System

Torrington like most communities has installed storm drains and pipes as a way to manage stormwater. This system has developed over time, often with little data that depicts where the system is located or how it was built. While management of this system is an important infrastructure issue, there are conservation strategies that Torrington should consider, especially since stormwater runoff has been identified as one of the largest sources of water pollution (see sidebar).

The Federal government has developed a national program (NPDES – see sidebar) to address the impacts of stormwater. Although Torrington is exempt from the NPDES requirements, the City has been following the program guidelines to manage stormwater runoff. Updating the existing system using modern water quality restoration techniques, scrutinizing runoff from construction sites and educating the public about stormwater quality are NPDES strategies that Torrington should expand on.

Fishing at Stillwater Pond (above), River cleanup (below)

West Branch of the Naugatuck River

## Inland Wetlands and Inland Wetland Soils

Inland wetlands perform many functions that make them valuable to the community. They help control flooding, remove sediment and contaminants from our streams and rivers, and provide habitat for countless birds, fish and animals. The Natural Resources Plan shows inland wetlands as identified by the Connecticut Department of Environmental Protection.

The value of inland wetlands and their protection has been, and will be in the future, of paramount importance to the legislators on the local, State and national levels. The State of Connecticut recognized the importance of inland wetlands and watercourses and adopted standards and procedures for the protection of inland wetlands and their environs.

In Torrington, the Inland Wetlands Commission regulates any disturbance or potential impacts to inland wetlands within 75 feet of a wetland soils type or 100 feet of a watercourse. Through this regulation, inland wetlands and watercourses will be protected and preserved wherever possible throughout the City.

Impacts to these resources occur from existing developed sites and from new development. Torrington should continue to review proposals adjacent to inland wetlands and watercourses and integrate Low Impact Development (see sidebar) land-use techniques when possible into new development. Torrington should also assess whether stream restoration might be appropriate for watercourse located in the more heavily developed parts of the City.

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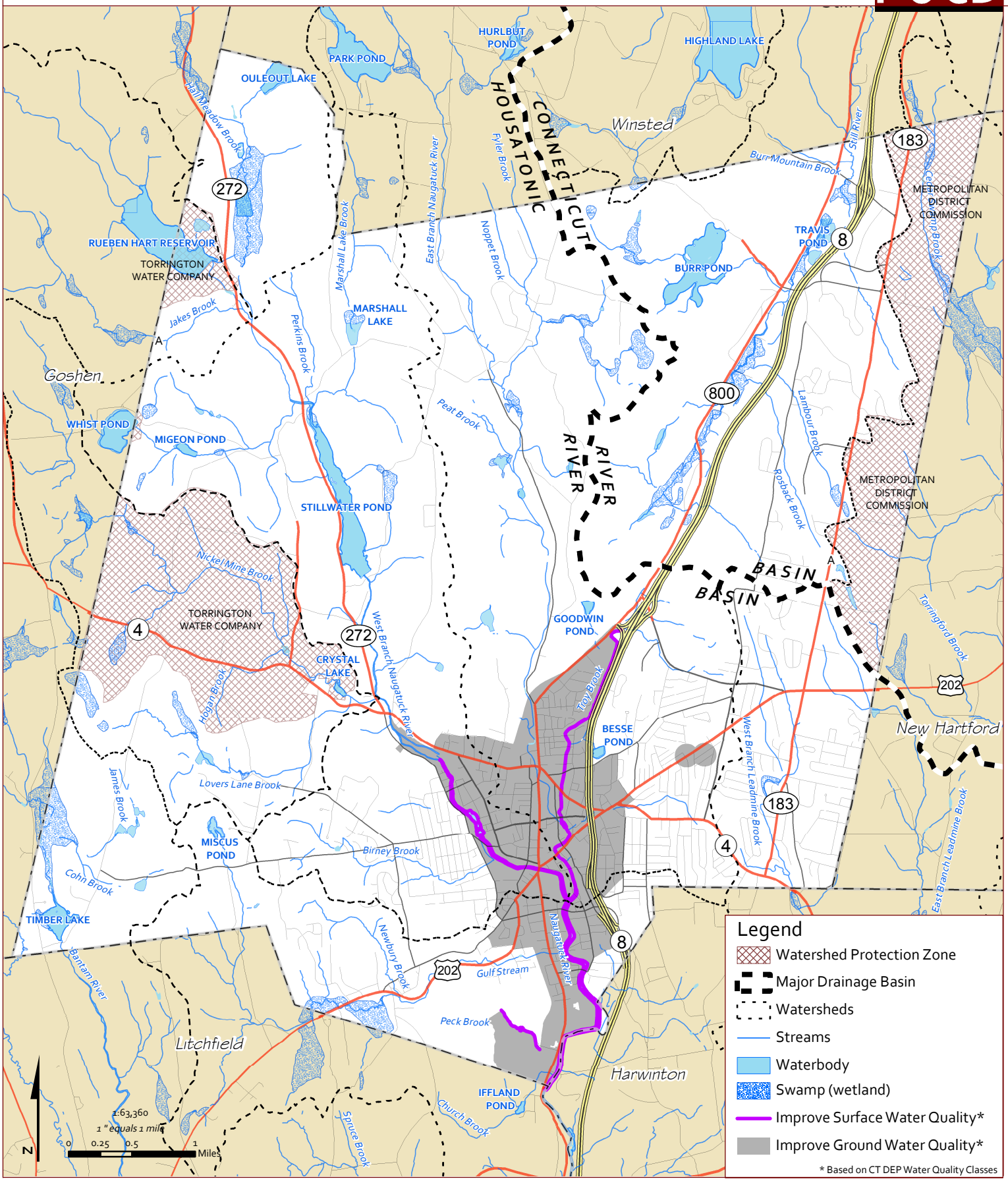
# WATER RESOURCES PLAN

## Watersheds, Waterbodies, and Streams



**Value of Forests**

Precipitation is absorbed and slowed by trees and the forest floor before it reaches local streams and flows to rivers.

This slow absorption reduces the potential for flooding and provides time to enhance water quality.

**Flood Control**

Construction of the flood control project in Torrington was authorized in July of 1956 along the Naugatuck River.

Other flood protection projects were in completed in 1957 and 1958.

**Community Rating System**

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements.

As a result, flood insurance premium rates can be discounted to reflect the reduced flood risk resulting from the community's actions.

fema.gov

floodsmart.gov

msc.fema.gov

## Waterways and Flooding

The *Natural Resources Plan* shows the current approved Federal Emergency Management Agency's (FEMA) floodplain boundaries applicable to existing Torrington development. Floodplains have historically borne a disproportionate share of development for commercial/industrial, transportation and agriculture for many reasons including access to water for power or transportation, flatness of land and ease of development.

In the United States the *National Flood Insurance Program* regulates development in mapped floodplains based on the 100-year flood (1 percent annual chance of a flood of this magnitude). The *Flood Insurance Rate Maps* typically depict both the 100-year floodplain [A zone] and the 500-year floodplains [B Zone].

Where a detailed study of a waterway has been done, the 100-year floodplain will also include the floodway, the critical portion of the floodplain which includes the stream's channel and any adjacent areas that must be kept free of encroachments that might block flood flows or restrict storage of flood waters.

Hall Meadow Reservoir (above); Naugatuck River (below)

April 16, 2007 Flooding at the Gulf Stream

A problem is that any alteration of the watershed upstream a point in question can potentially affect the ability of the watershed to handle water, and thus potentially affects the levels of the periodic floods.

Torrington will continue to manage development in and around our floodplains to ensure the safety of its people and security of their properties and will work with FEMA to update our local mapping as funding becomes available from the Federal Government. Torrington should also evaluate whether flood management incentive programs, such as the Community Rating System (see sidebar) are an appropriate tool for the community.

An issue facing Torrington right now is the fate of the local Flood Protection Project constructed in our Downtown following the 1955 flood. Over the years the Project was managed at a level of care that matched the City's ability to fund the maintenance and which met the minimum requirements of the Army Corps of Engineers. Torrington should also work to restore the riparian buffer along this corridor and remove invasive plants that have been introduced into this area and have thrived.

Following the devastation of the failed levee system in New Orleans, federal maintenance requirements were raised and an order to comply was placed on the Project in Torrington. At this time the Army Corps, City leaders, politicians, engineers and concerned citizens are working on a solution to address maintenance, flood control, aesthetics, environmental concerns, and public use/access of the river and the hopeful creation of a river walk in Downtown.

## Protect Steep Slopes

Torrington is constructed in a major river valley at the confluence of the East and West Branches of the Naugatuck River. A third river valley is present in the north-central region where the Still River flows north into the Mad River towards the Farmington River/Connecticut River Watershed. Protection of the water resources in Torrington is imperative as more and more impervious surface covers land in critical watersheds. Enforcement of regulations regarding water quality and imperviousness within watersheds should be high priority.

The steepest slopes in Torrington are along the west side of the Still River valley, Red Mountain and within the northwest corner of the city boundary. A significant amount of the steepest slopes are contained within the Paugnut State Forest along the Still River.

As more and more of the "easy" land is no longer available, increasing pressure will be placed on more marginal land that is sloping or on rock. Increased attention should be paid to the development of these sites to assure stabilized site drainage and water quality and to access downstream watershed impacts.

Views

View from Weigold Farm (above)
Hills around Stillwater (below)

From the higher elevations amazing views are available. Specific viewing sheds are identified on the *Community Character/Scenic Resource Map* that should be preserved or maintained for public appreciation and viewing

### Current Land Cover

The University of Connecticut *Center for Land Use Education & Research* (CLEAR) developed land cover maps for the years 1985, 1990, 1995 and 2002.

As the name implies, land cover shows the "covering" of the landscape, as opposed to land use, a term that refers to what is practiced, permitted or intended for a given area (such as zoning designations).

Land cover information was derived through analyses of satellite-based remote sensing images. The predominant land cover within Torrington (2002 CLEAR data) is deciduous forest at about 34 percent; followed closely by coniferous forest at about 24 percent and developed land at about 23 percent.

The 1985 and 2006 land cover images shows even further changes in land cover since 2002.

### Land Cover Statistics 1985-2006

| Land Use | Change in acres |
|---|---|
| Developed | +935.4 |
| Grass | +360.6 |
| Agricultural Field | -246.7 |
| Forests | -1,109 |
| Water and wetlands | -106.7 |
| Barren | +187.5 |

www.clear.uconn.edu

**Endangered Species**

Any native species documented by biological research and inventory to be in danger of extirpation throughout all or a significant portion of its range within the State and to have no more than five occurrences in the state, and any species determined to be an "endangered species" pursuant to the federal Endangered Species Act.

**Threatened Species**

Any native species documented by biological research and inventory to be likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within the State and to have no more than nine occurrences in the state, and any species determined to be a "threatened species" pursuant to the federal Endangered Species Act.

**Species of Special Concern**

Any native plant species or any native non-harvested wildlife species documented by scientific research and inventory to have a naturally restricted range or habitat in the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of its population or has been extirpated from the State.

www.ctdep.gov

## Protect Threatened or Endangered Species

*The Connecticut Endangered Species Act*, passed in 1989, recognizes the importance of our state's plant and animal populations and the need to protect them from threats that could lead to their extinction. The overall goal of the legislation is to conserve, protect, restore and enhance any endangered or threatened species and their essential habitat.

The *Connecticut Threatened or Endangered Species Map* is a map created and managed by the Department of Environmental Protection and requires annual updating to keep current on existing known species of interest within our City boundaries and is shown on the Natural Resources Plan as the Natural Diversity Database Area.

Biodiversity data is needed for Torrington, and relevant to planning as large sections of the City are untouched. The DEP and other natural resource organizations need to be encouraged to explore and document Torrington's resources in a more detailed manner so we have a better understanding of what is really present within the City. This will only aid the City's land use groups to make better more informed decisions.

Mile-a-Minute Vine (above); Phragmites (below)

Invasive plant species along Flood Control areas

Further, Torrington needs to assess the current impact of invasive plant species on its existing resources and create a plan of action, if needed, to eradicate or control the spread of these plants. Specific plants of concern in Torrington are: Japanese Knotweed, Phragmites, and Mile-a-Minute Vine. Other invasive species are found within the City boundaries and should be controlled on a site by site basis. The flood control project has become a significant seed source of invasive species found downstream.

## Improve Communication on Conservation Issues

The City should enhance communication with the public regarding various natural resources and accessibility to them. Torrington has many beautiful areas and special places to visit – but very few know they exist. We will design/develop new maps highlighting existing features, sites and trails for natural resources and consider providing expanded information on local farms and regional connections.

A new colorful network of informational signs will be developed to direct visitors to area places of interest. Expanding educational programming in schools and for the public is critical to educate the new generation on the need for conservation and to foster pride in the community.

# NATURAL RESOURCES PLAN

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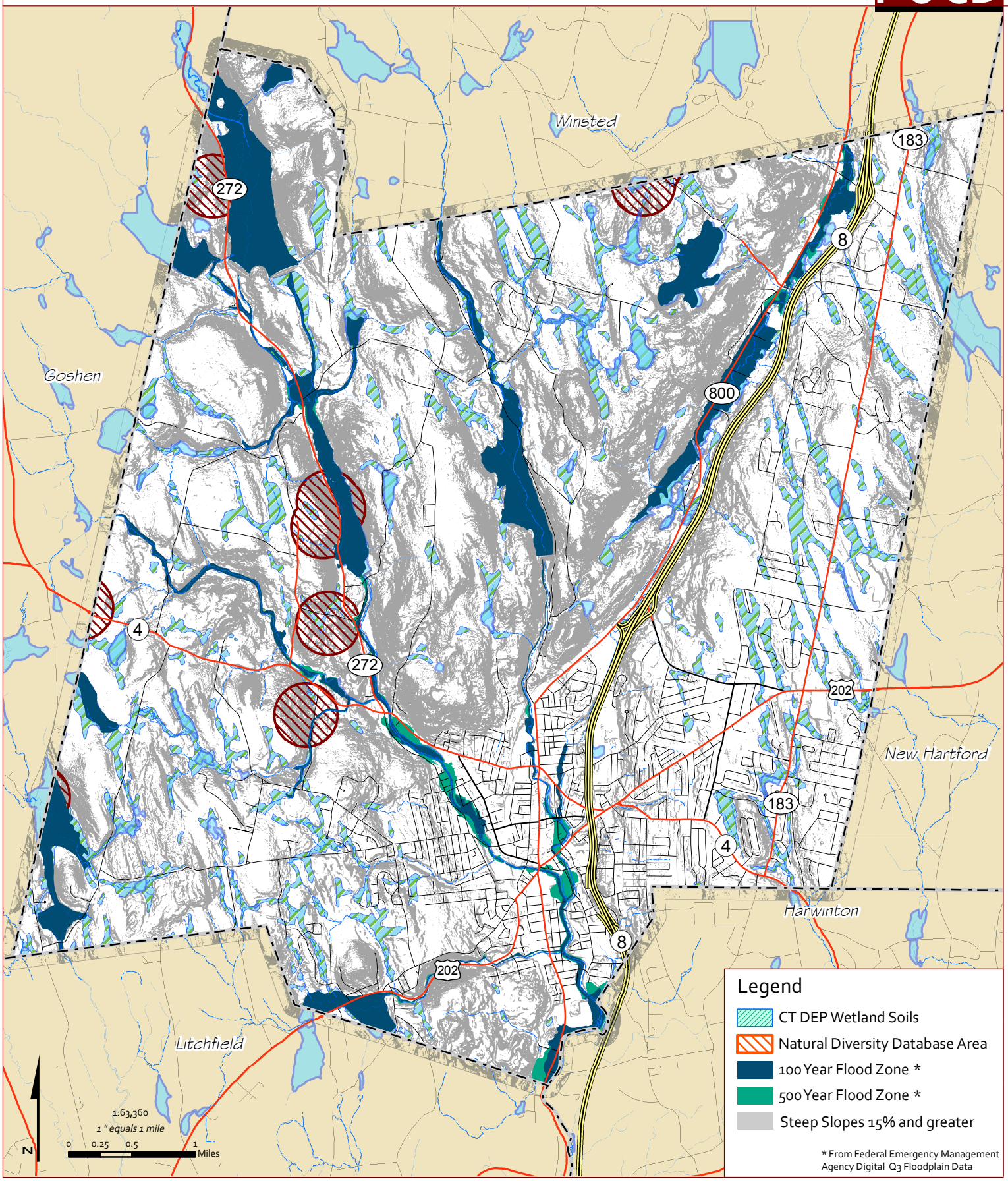

**Goals of Urban Forestry**

***Protect*** undeveloped forests from human encroachment and the impacts of land development by creating and applying various planning techniques, regulatory tools, and incentives.

***Enhance*** the health, condition, and function of urban forest fragments

***Reforest*** open land through active replanting or natural regeneration to regain some of the functions and benefits of a forest and to increase overall watershed forest cover and increase forest canopy.

www.cwp.org

### Manage the Urban Forest

There is greater recognition of how urban trees and forests improve air and water quality, reduce stormwater runoff, conserve energy, and protect public health. At the same time, the loss of trees and forests in developing watersheds continues, and urban tree canopy in developed areas deteriorates through removal or lack of replacement.

The benefits of urban trees are many. Urban trees:

- reduce stream erosion and stormwater runoff,
- improve water and air quality,
- provide habitat for wildlife,
- reduce summer air and water temperatures, and
- improve the quality of life for residents.

Torrington should evaluate the urban forest needs on a watershed basis and develop plans to:

- conduct stream restoration projects to improve riparian buffers,
- plant shade trees in areas where pedestrian activity is high,
- establish forestry goals for urban and rural parts of the community, and
- develop a plan to provide on-going maintenance of public trees.

### Natural Resource Strategies

| | TASK | DESCRIPTION |
|---|---|---|
| 4-1 | Protect water supply land as open space | Work with the water company to secure as much water supply watershed land as possible |
| 4-2 | Improve water quality in the stormwater collection system | Updating the existing system using modern water quality restoration techniques, continuing to scrutinize runoff from new development and educating the public about stormwater |
| 4-3 | Incorporate Low Impact Development techniques into land-use regulations | |
| 4-4 | Evaluate stream restoration opportunities along developed areas | As land development applications come in, look for ways to improve or restore stream buffers |
| 4-5 | Develop a solution to address maintenance flood control and other concerns related to the Flood Protection Project | Work closely with Federal, State and local authorities as well as public stakeholders to find sustainable solutions to the problem |
| 4-6 | Assess the current impact of invasive species. | Inventory and establish a management plan |
| 4-7 | Improve communication with the public regarding conservation issues | Set up a strategy of education, outreach and action to engage the community |
| 4-8 | Protect and preserve view sheds and scenic views when possible | |
| 4-9 | Evaluate urban forest needs on a watershed basis | Determine what watersheds have been significantly impacted and manage development within those watersheds accordingly |