

City of Danbury

**2023 Plan of Conservation and Development
Open Space and Environmental Resources Focus Group Meeting
1/27/22**



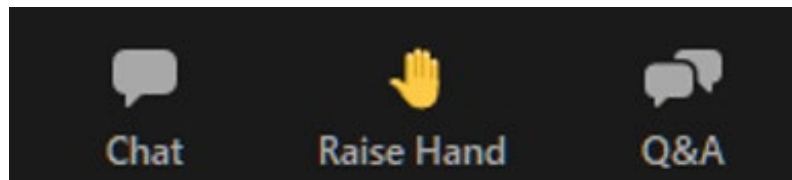
CITY OF DANBURY
Plan of Conservation and Development



Welcome to the Danbury POCD Focus Group Meeting!

- This is a Zoom webinar, so all members of the public that are attending but are not invited participants are automatically placed on mute and cameras are disabled.
- If you are an invited panelist, you will be able to unmute yourself and your camera will be operative.
- To preserve bandwidth for a smoother meeting experience, you may need to close other programs on your computer during this session

If you have a technical question, please click on the Q&A icon at the bottom of your screen to send it to us at anytime during the meeting



Agenda

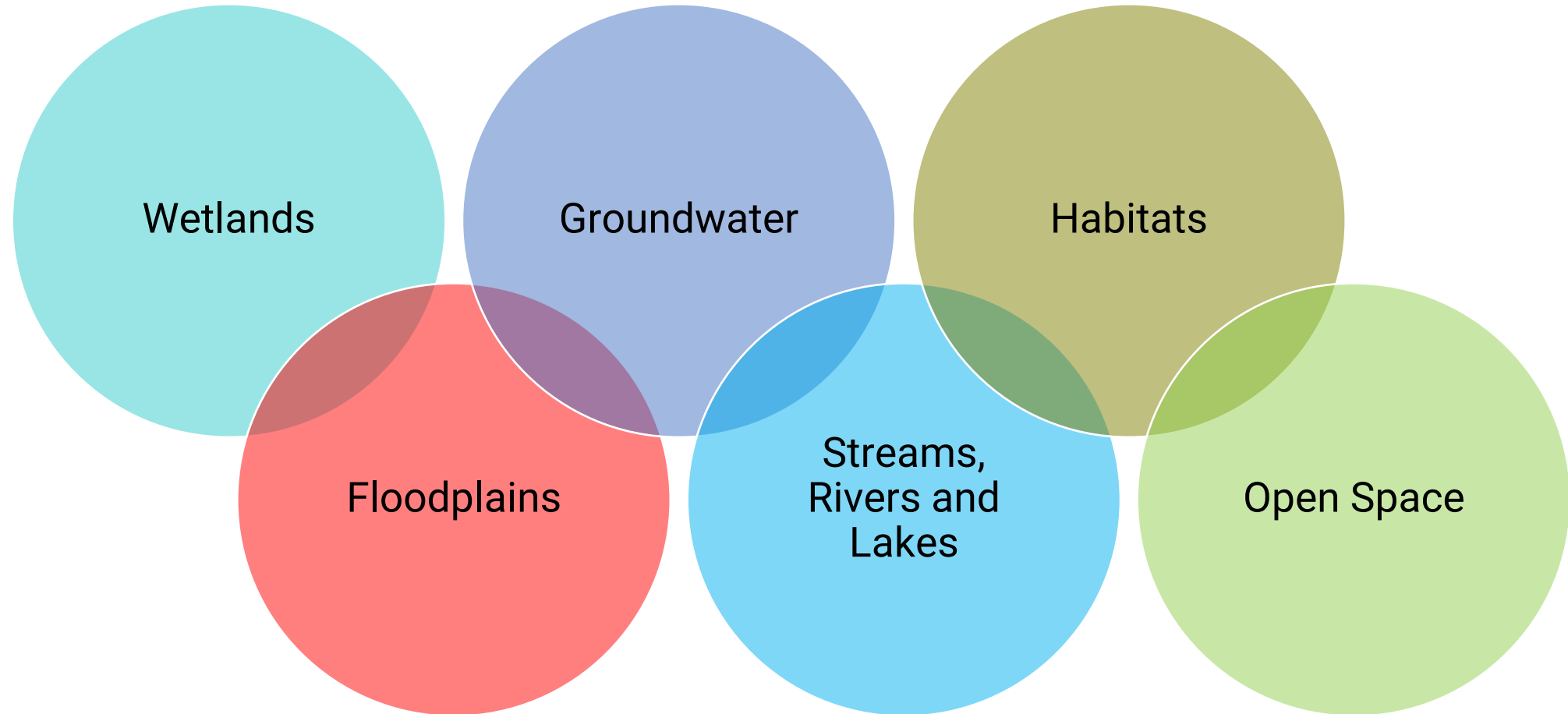
1. Introduction and overview of the planning process (5 min.)
2. Review of high-level findings from assessment of (20 min.)
3. Review of feedback received from the online survey (5 min.)
4. Review of feedback received from workshops (5 min.)
5. Discussion (45 min.)

Plan Development

- The State of Connecticut requires municipalities to update their POCD at least once every ten years.
- Danbury's plan was last updated in 2013
- The Plan is being guided by the Department of Planning and Zoning and an Oversight Committee comprised of 20 members.
- Oversight Committee meeting materials are available online at danburypocd.com.
- Danbury's Planning Commission is responsible for approving the POCD and the City Council will be engaged in this process.
- The plan will be completed and approved by the end of this year (2022).



Danbury's Environmental and Open Space Resources



How Open Space and Environmental Resources Factor into the POCD

- The State mandates that POCD's:
 - Be designed to promote, with the greatest efficiency and economy, the coordinated development of the municipality and the general welfare and prosperity of its people
 - Recommend the most desirable use of land within the municipality for conservation, recreation, residential and commercial uses.
 - Consider the need for protection of existing and potential drinking water supplies
 - Consider policies and recommendations set forth in the State and Regional Plans of Conservation and Development
- The Plan presents an opportunity to identify the environmental resources that are valuable and critical to Danbury's function, quality of life, and sustainability and to identify goals and strategies for protecting and conserving those resources.

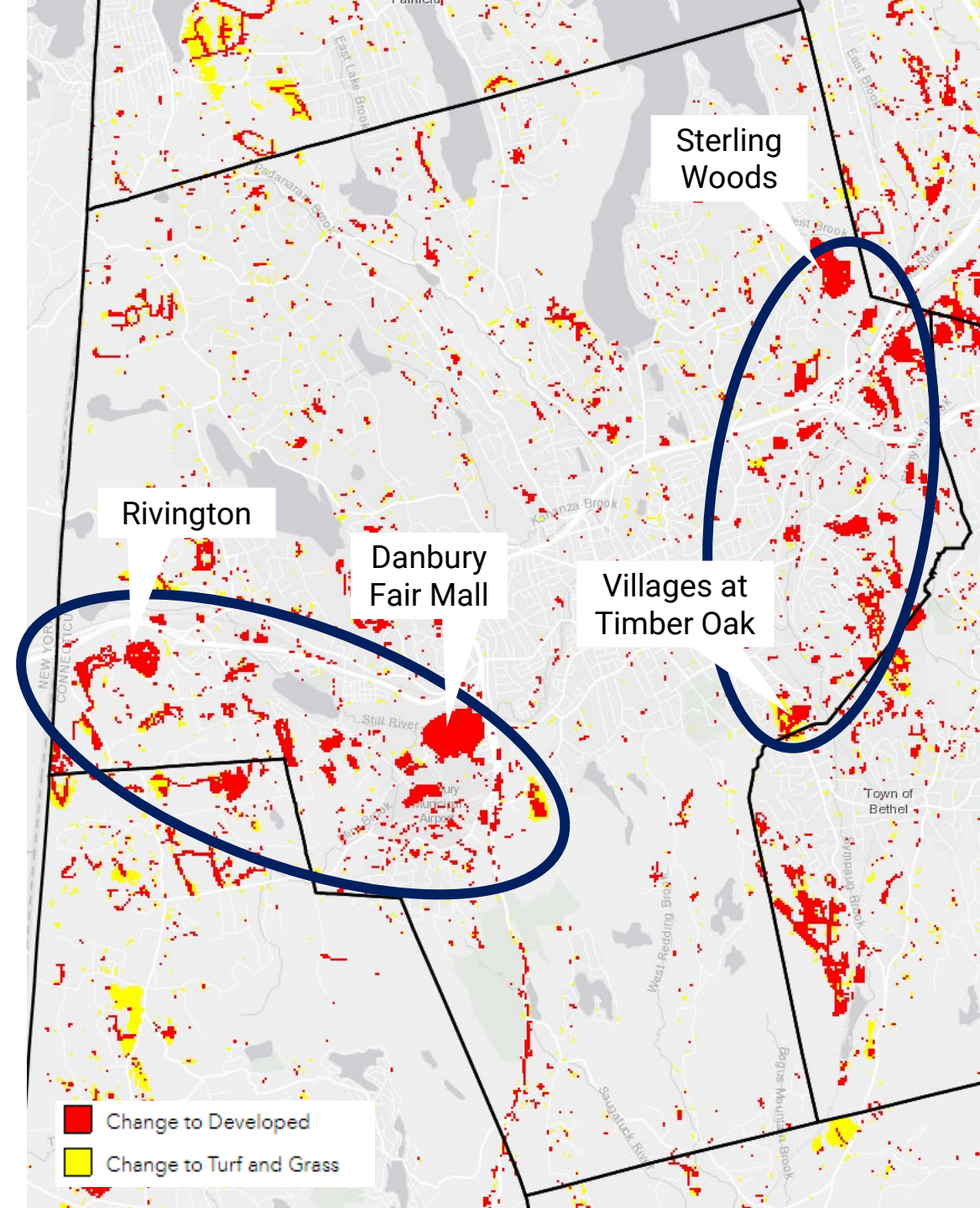
How Sustainability Factors into the POCD

- Sustainability will be an important theme of the POCD
- Sustainability is a broad concept. With respect to the POCD it is related to the City's ability to continue to:
 - Protect and maintain the quality of environmental resources and open space
 - Provide residents with services that are necessary for maintaining quality of life
 - Maintain City facilities and infrastructure while moving towards more environmentally friendly facilities and practices
 - Support economic development and population growth

Land Development 1985-2015

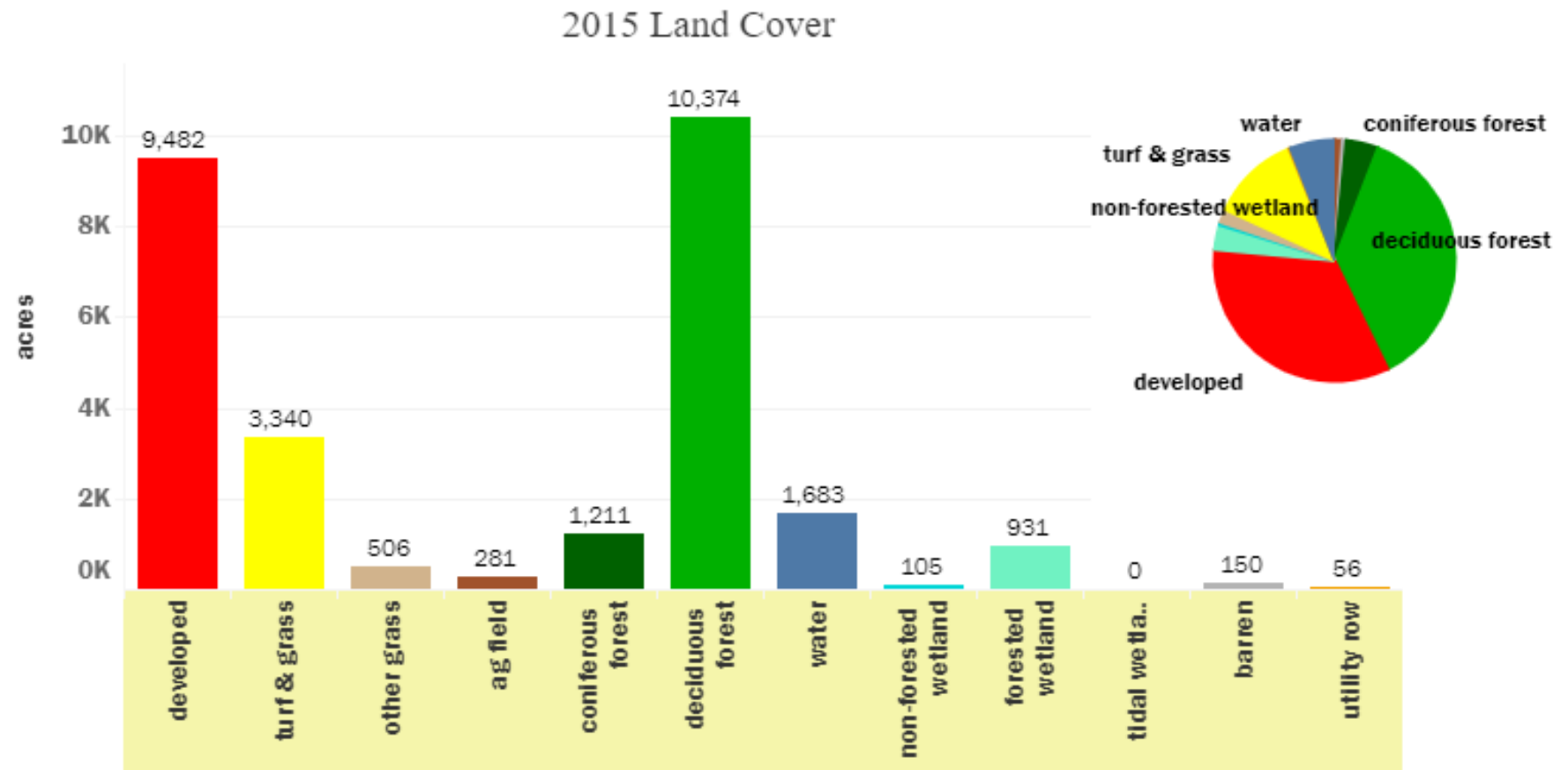
- Development over the 30-year period was concentrated on the eastern edge of the city and south of I-84 west of Route 7
- Most land use change was from forested areas to developed areas

SOURCE: UNIVERSITY OF CONNECTICUT
COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES
CENTER FOR LAND USE EDUCATION & RESEARCH
LAND COVER DATA 1985-2015



2015 Land Cover

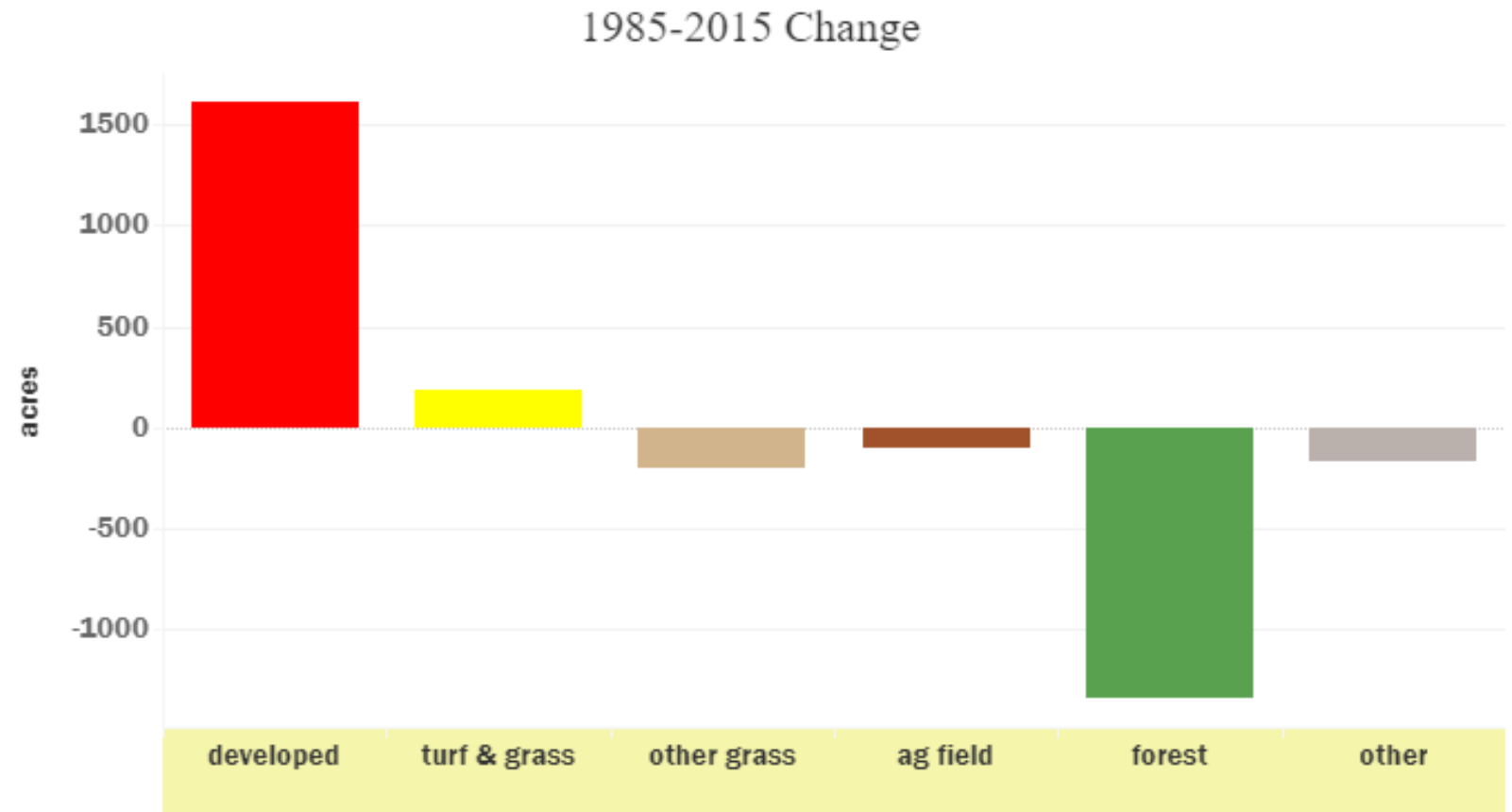
- *Danbury is 28,281 acres in total area*
- 33.7% of Danbury's land area is developed
- 50.2% is forest
- 13.7% is turf and grass
- 1.0% is agricultural fields
- 3.7% is wetlands
- 6.0% is water



SOURCE: UNIVERSITY OF CONNECTICUT
 COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES
 CENTER FOR LAND USE EDUCATION & RESEARCH
 LAND COVER DATA 1985-2015

1985-2015 Land Cover Change

- 1,609 acres (5.7% of Danbury) of land were developed between 1985 and 2015
- 1,334 acres of the developed land was forest area



SOURCE: UNIVERSITY OF CONNECTICUT
COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES
CENTER FOR LAND USE EDUCATION & RESEARCH
LAND COVER DATA 1985-2015

Forest Land Cover

The City's forest areas are concentrated in the north and south ends of the City.

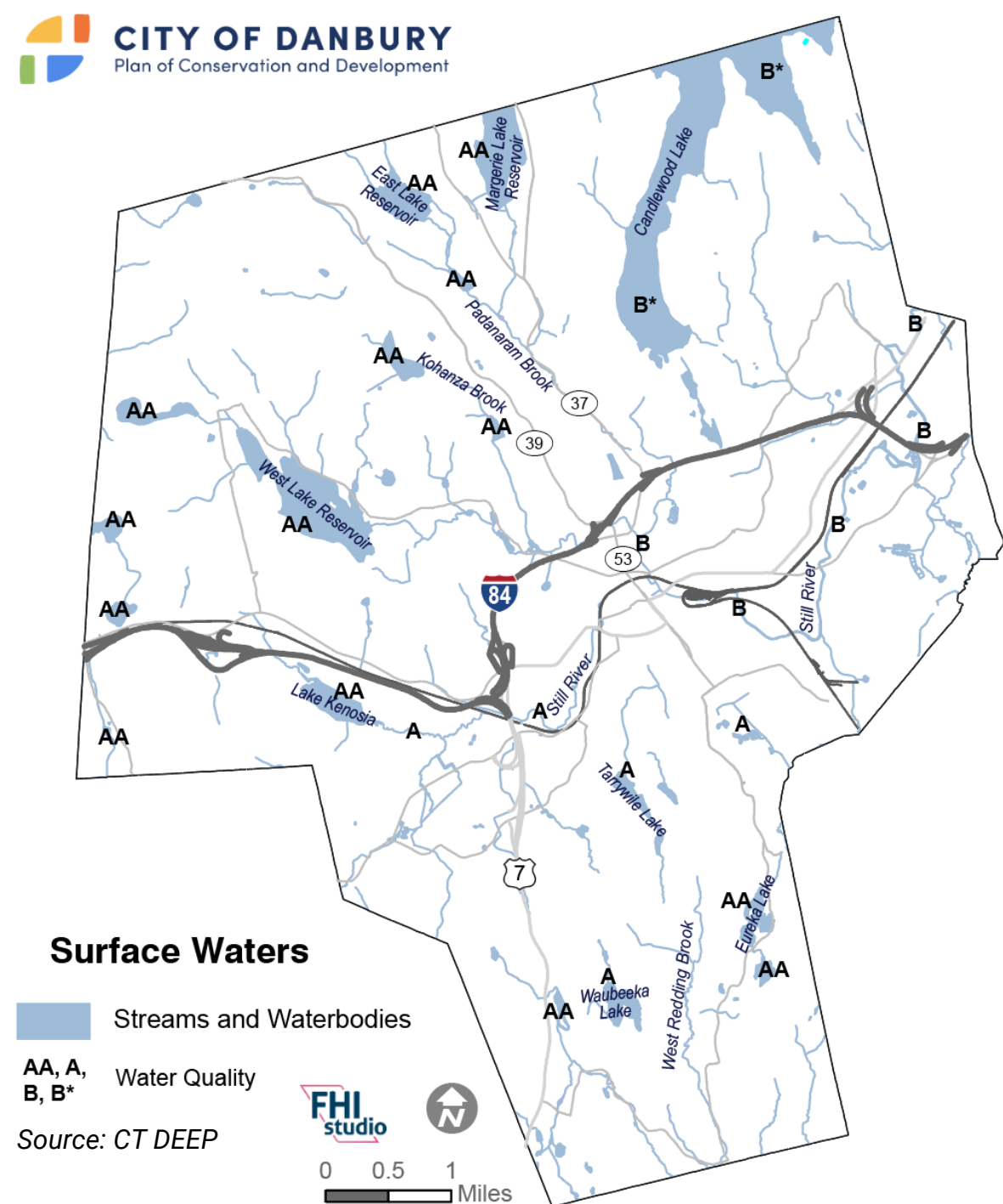
- 10,374 acres of deciduous forest
- 1,211 acres of coniferous forest
- 931 acres of forested wetland
- 56 acres of forest in utility right-of-way

SOURCE: UNIVERSITY OF CONNECTICUT
COLLEGE OF AGRICULTURE, HEALTH AND
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LAND COVER DATA 1985-2015



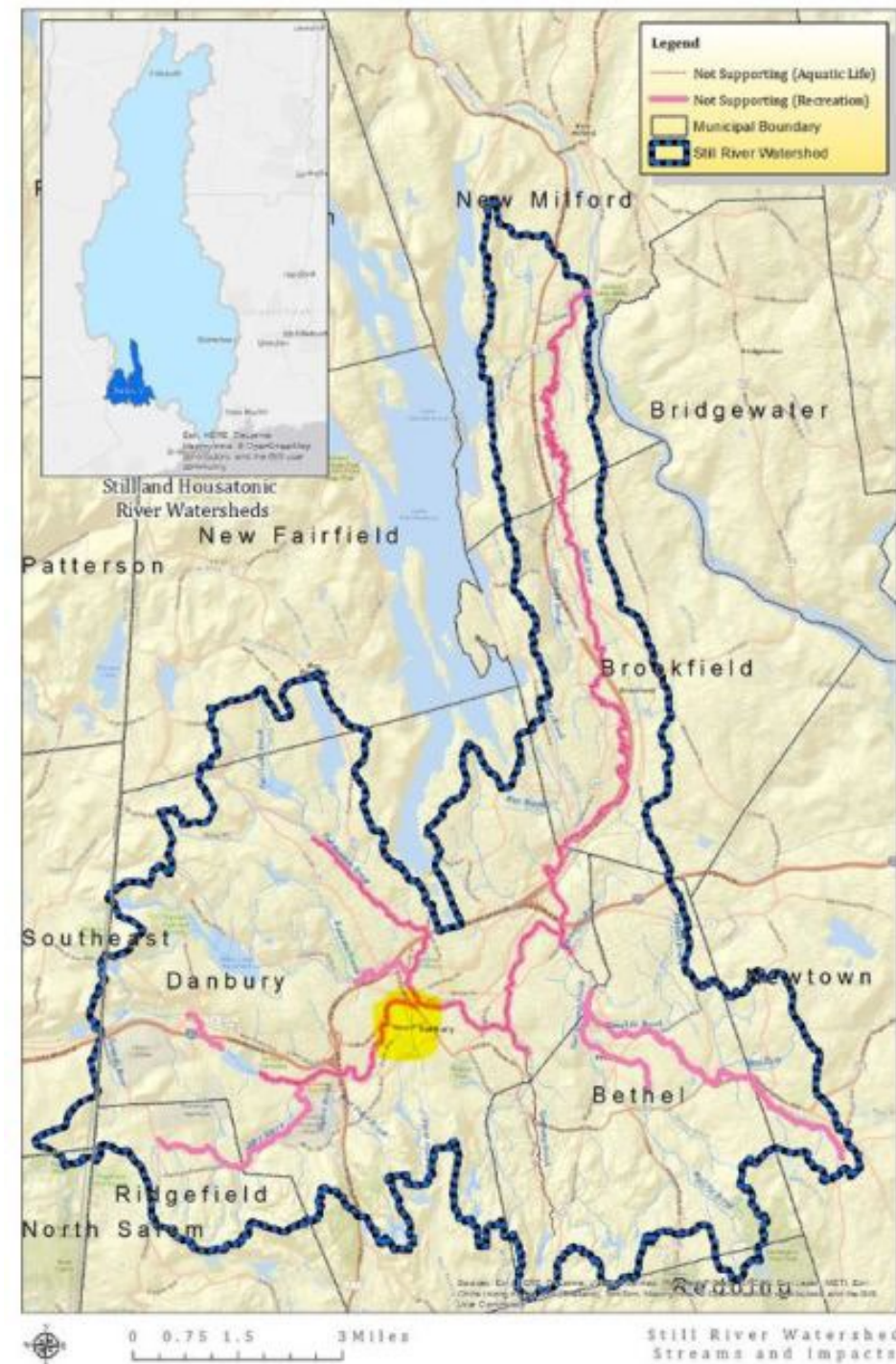
Surface Water Quality in Danbury

- Most surface waters are Class AA or A (higher quality/use)
- Class B waters are found on the east side of the City (lower quality/use)



The Still River

- 25.4 miles in length, Connecticut's tenth-longest watercourse
- A tributary of the Housatonic River
- Includes oxbows, four narrow gorges, and a broad floodplain a half-mile wide in its northern reaches.
- Begins near the Danbury/New York State border and flows east and then north to the Housatonic River in New Milford.



Still River Watershed Plan

The Plan recommends the following in Danbury:

- Establishment of vegetated buffers at Lake Kenosia
- A public campaign for litter reduction
- Encouraging best management practices of private properties within the watershed
- Continuing maintenance and improvements as required by the MS4 permit program
- Best Management Practices are recommended such as:
 - Reduction of impervious surface
 - Establishment of riparian buffers
 - Use of rain barrels
 - Establishment of rain gardens
 - Installation of filtration systems and hydrodynamic separation structures



Still River Watershed Management Plan

Prepared for

The Still River Partners and the Connecticut Department of Energy and Environmental Protection

In support of the

Still River Watershed Action Plan for Nonpoint Source Pollution Reduction
(CT DEEP Contract #14-03f)

Prepared by

Housatonic Valley Association with support from the Still River Partners
150 Kent Road South
Cornwall Bridge, CT 06754

September 2019

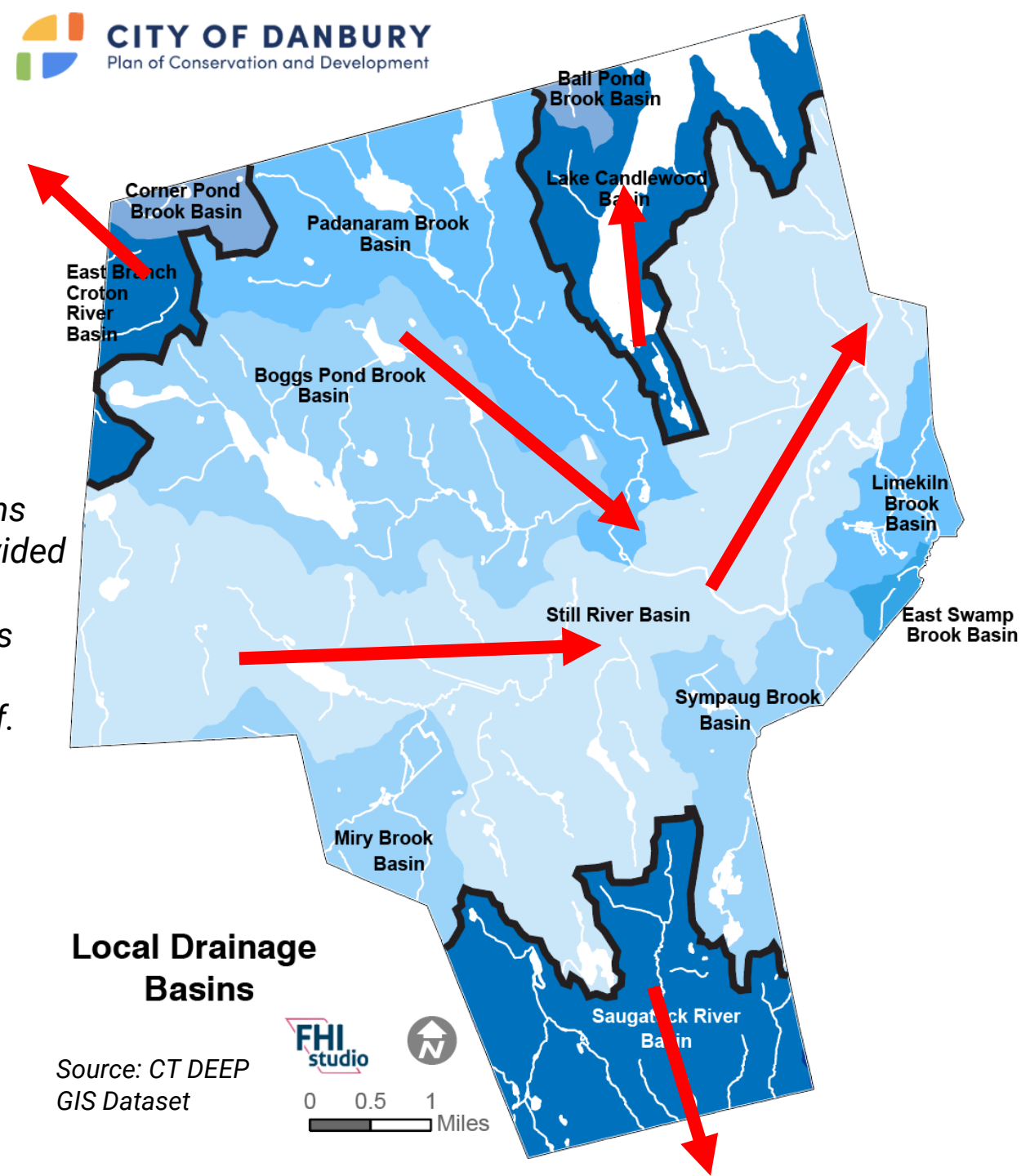


This plan was funded in part by the Connecticut Department of Energy & Environmental Protection through a United States Environmental Protection Agency Clean Water Act Section 319 Nonpoint Source Grant.

Drainage Basins

- Twelve subregional drainage basins in Danbury
- Still River Watershed basins:
 - Boggs Pond Brook Basin
 - East Swamp Brook Basin
 - Limekiln Brook Basin
 - Miry Brook Basin
 - Padanaram Brook Basin
 - Still River Basin
 - Sympaug Brook Basin
- Candlewood basins:
 - Ball Pond Brook Basin
 - Lake Candlewood Basin
- Saugatuck basins:
 - Saugatuck River Basin
- Croton basins:
 - Corner Pond Brook Basin
 - East Branch Croton River Basin

Subregional basins can be further divided into local basins, which the City has mapping and documentation of.






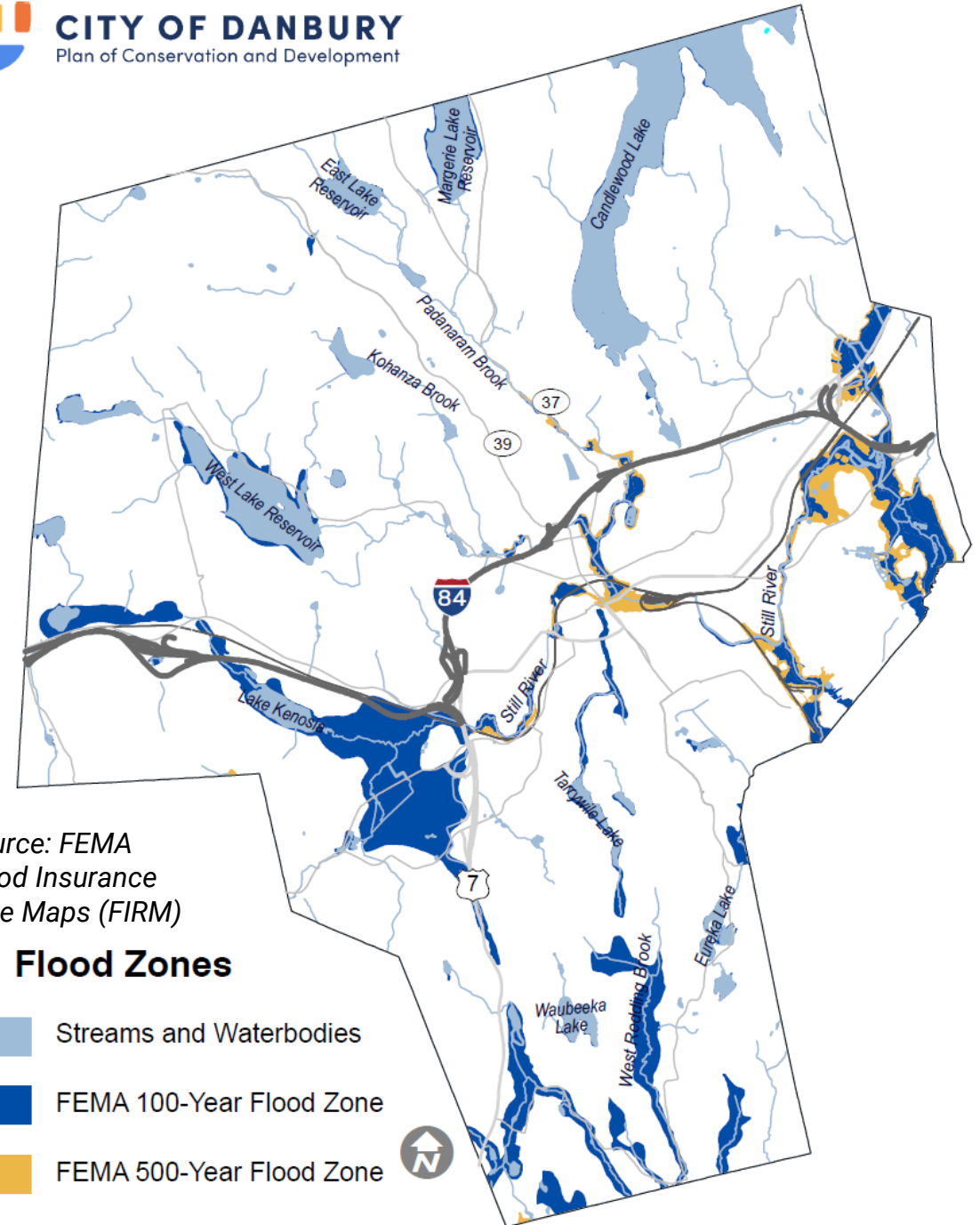
Flood Zones

- 12.9% of Danbury is covered by the 1% annual chance flood floodplain (100-year floodplain)
- 1.1% of Danbury is covered by the 0.2% annual chance floodplain (500-year floodplain)
- The most substantial flood zones are associated with the Still River, Miry Brook, Sympaug Brook, and Limekiln Brook
- Flood zones in the south of Danbury are associated with the Saugatuck River and West Redding Brook

Source: FEMA
Flood Insurance
Rate Maps (FIRM)

Flood Zones

-  Streams and Waterbodies
-  FEMA 100-Year Flood Zone
-  FEMA 500-Year Flood Zone



Flood Zones

- The City's floodplain regulations (Section 7A of the City's Zoning Regulations) restricts development and require preservation of the floodplain within flood hazard areas.
- The regulations have been successful in protecting properties and preserving the floodplain of developments to which they have been applied.
- There are multiple repetitive loss properties (more than one flood event impacting the property) within the City's flood zones. Many of these properties were constructed prior to the floodplain regulations.
- The 2021 Hazard Mitigation Plan provides detailed information about flood hazards



Stormwater Management

- The purpose of the MS4 General Permit is to protect waters of the state from urban stormwater runoff through municipal separate storm sewer systems.
- Elements of the Plan (minimum control measures):
 1. Public Education and Outreach
 2. Public Involvement/Participation
 3. Illicit Discharge Detection and Elimination
 4. Construction Site Stormwater Runoff Control
 5. Post-Construction Stormwater Management in New Development or Redevelopment
 6. Pollution Prevention/Good Housekeeping

Stormwater Management Plan

City of Danbury
Danbury, Connecticut

July 2017



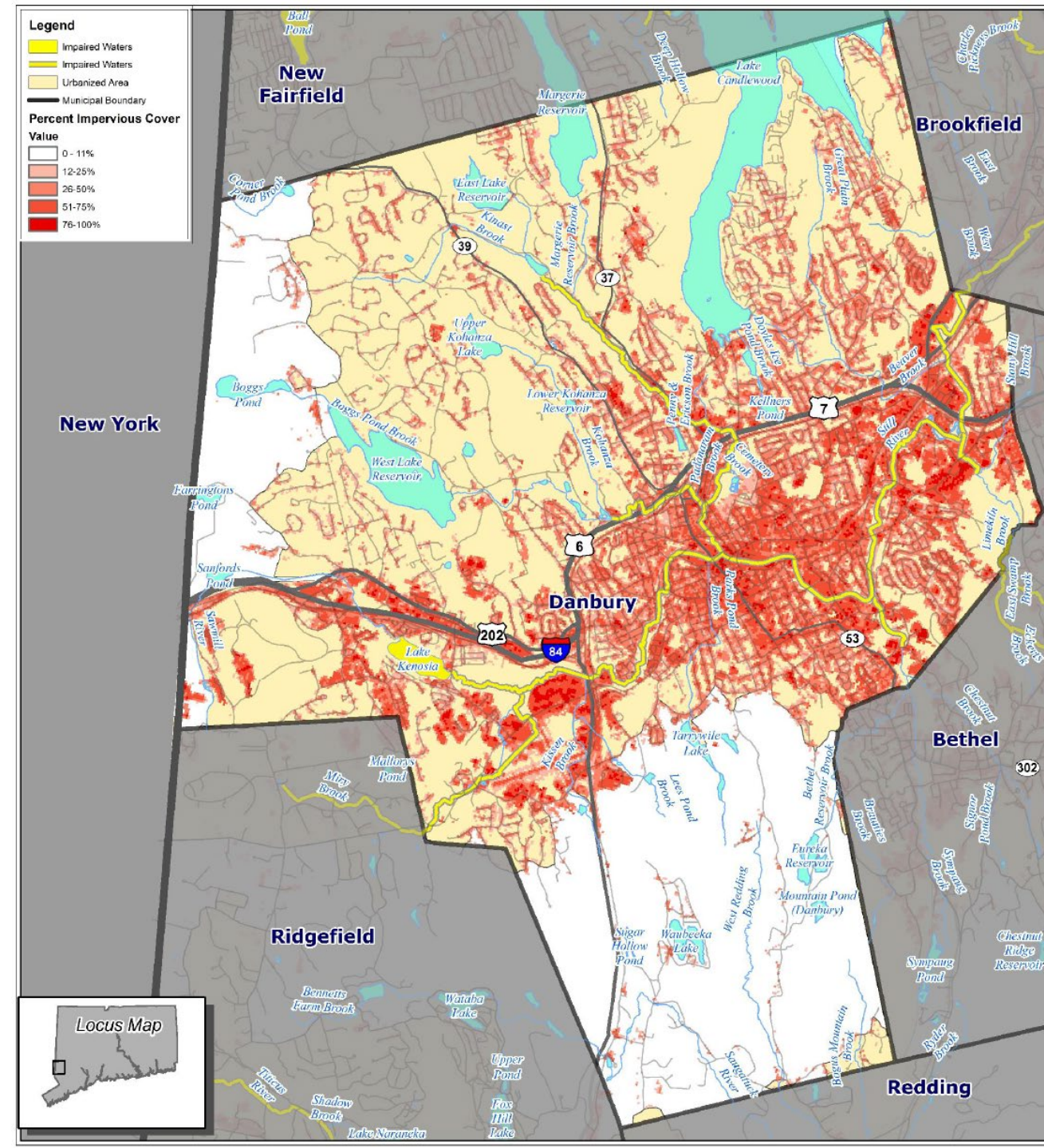
Prepared by:



146 Hartford Road
Manchester, CT 06040

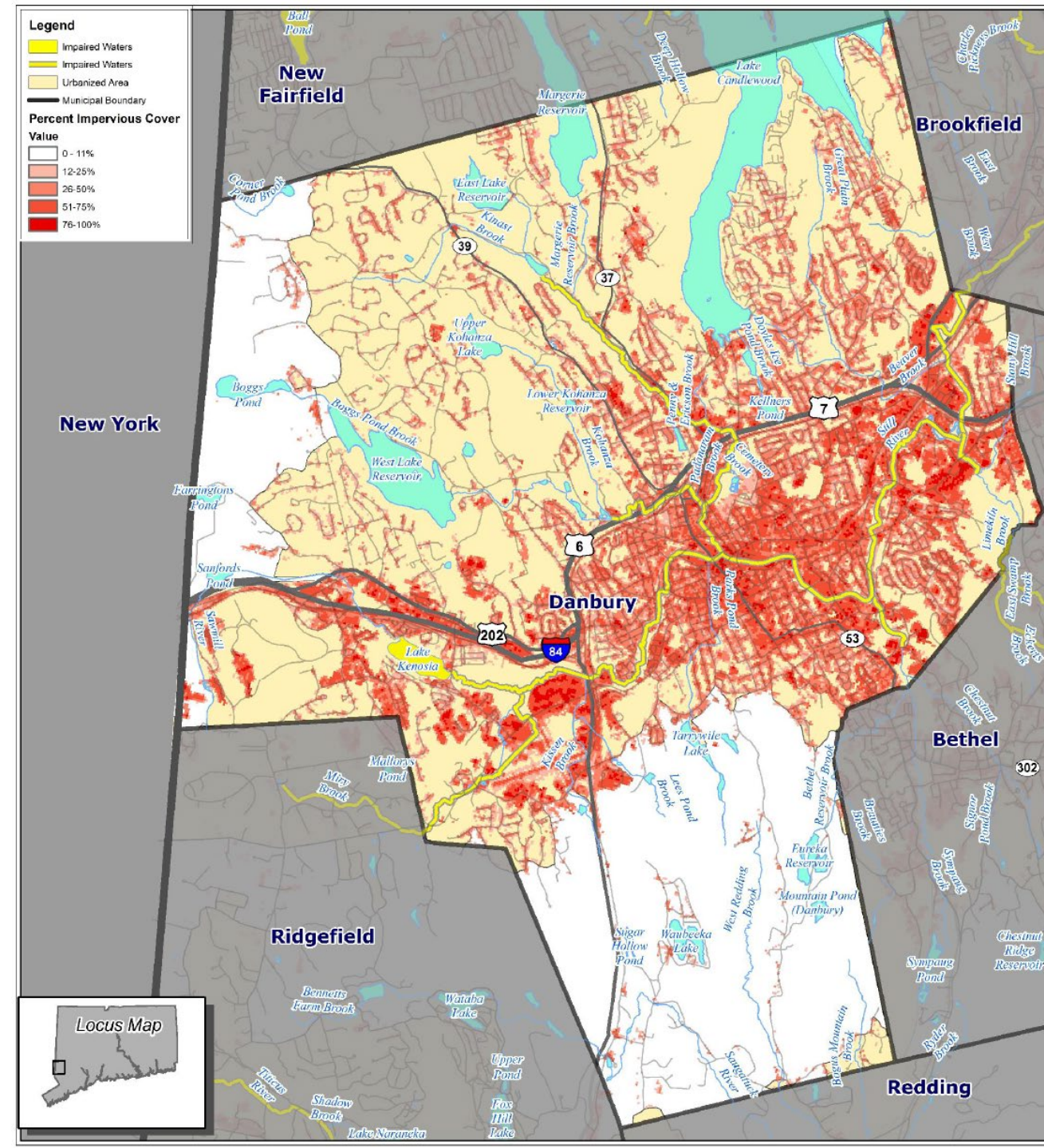
Stormwater Management

- The MS4 General Permit applies to all areas of Danbury within the Urbanized Area (UA) and certain portions of the City outside of the UA (shown in yellow).
- Many of the six Minimum Control Measures are required only within the UA and those areas outside the UA that:
 - Discharge to impaired waters or
 - From areas with Directly Connected Impervious Area exceeding 11% impervious land cover.
- The General Permit refers to these areas as “priority areas.”



Stormwater Management

- Approximately 75% of the City is designated as “Urbanized Area” as defined by the 2010 US Census
- Most, but not all, areas with total impervious area greater than 11% are located within the Urbanized Area.
- Impaired waters include:
 - Miry Brook
 - Lake Kenosia
 - Still River
 - Padanaram Brook
 - Kohanza Brook
 - Sympaug Brook
 - Limekiln Brook
- *Impaired waters are waterbodies that do not meet water quality standards for one or more designated use(s) such as recreation or aquatic habitat.*

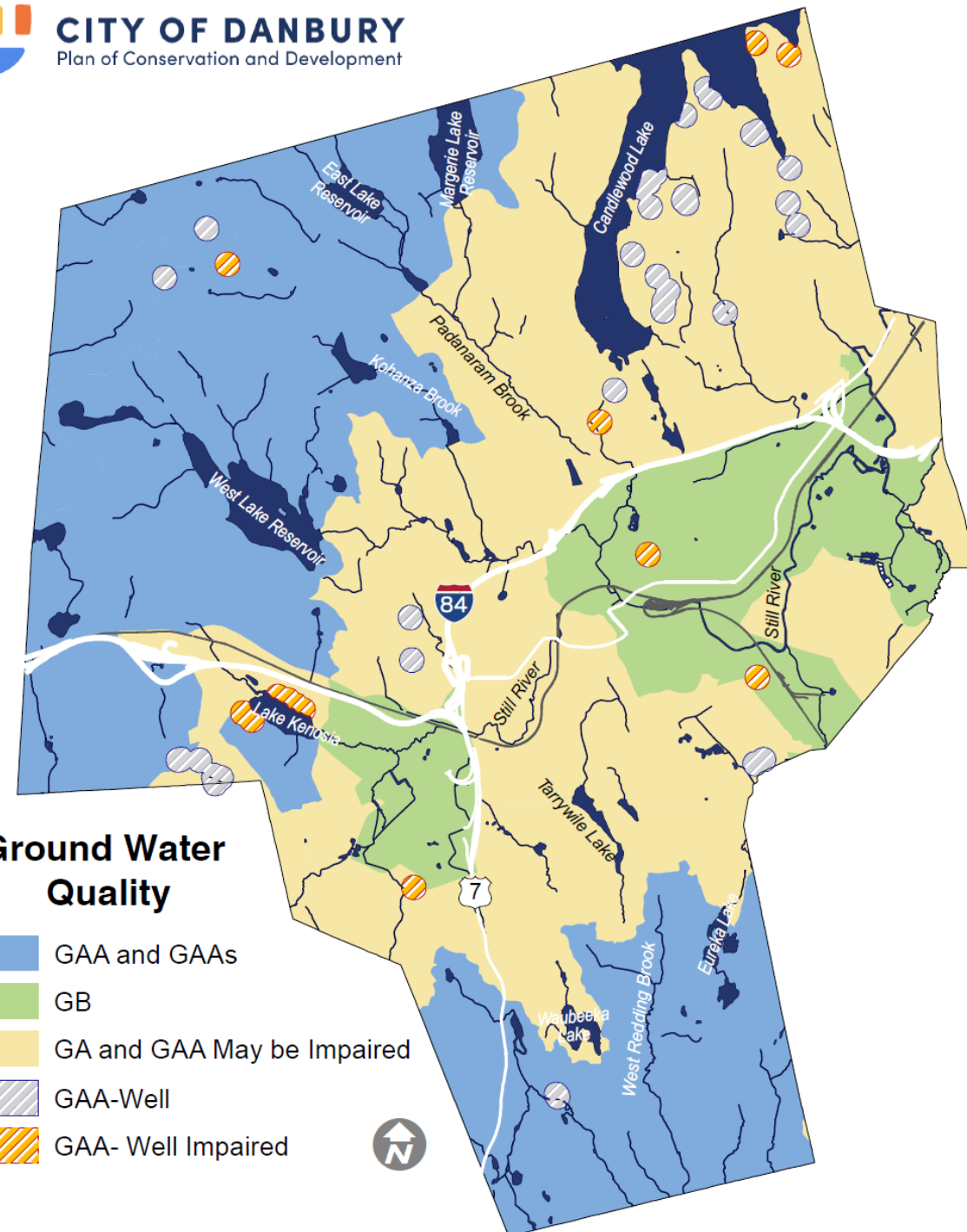
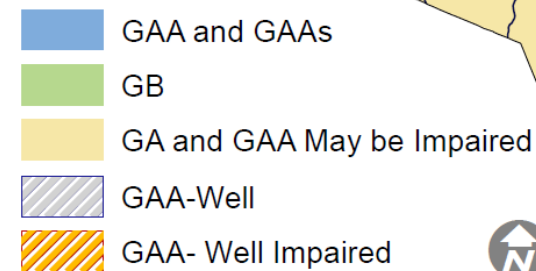


Ground Water Quality

- GAA and GAAs: Highest quality/use
- GB: Lower quality/expected use
- GA and GAA (May be Impaired): waters that may currently be impaired or are threatened
- The City is actively working towards resolving impairment issues at its public water supply wells, particularly those at Lake Kenosia.

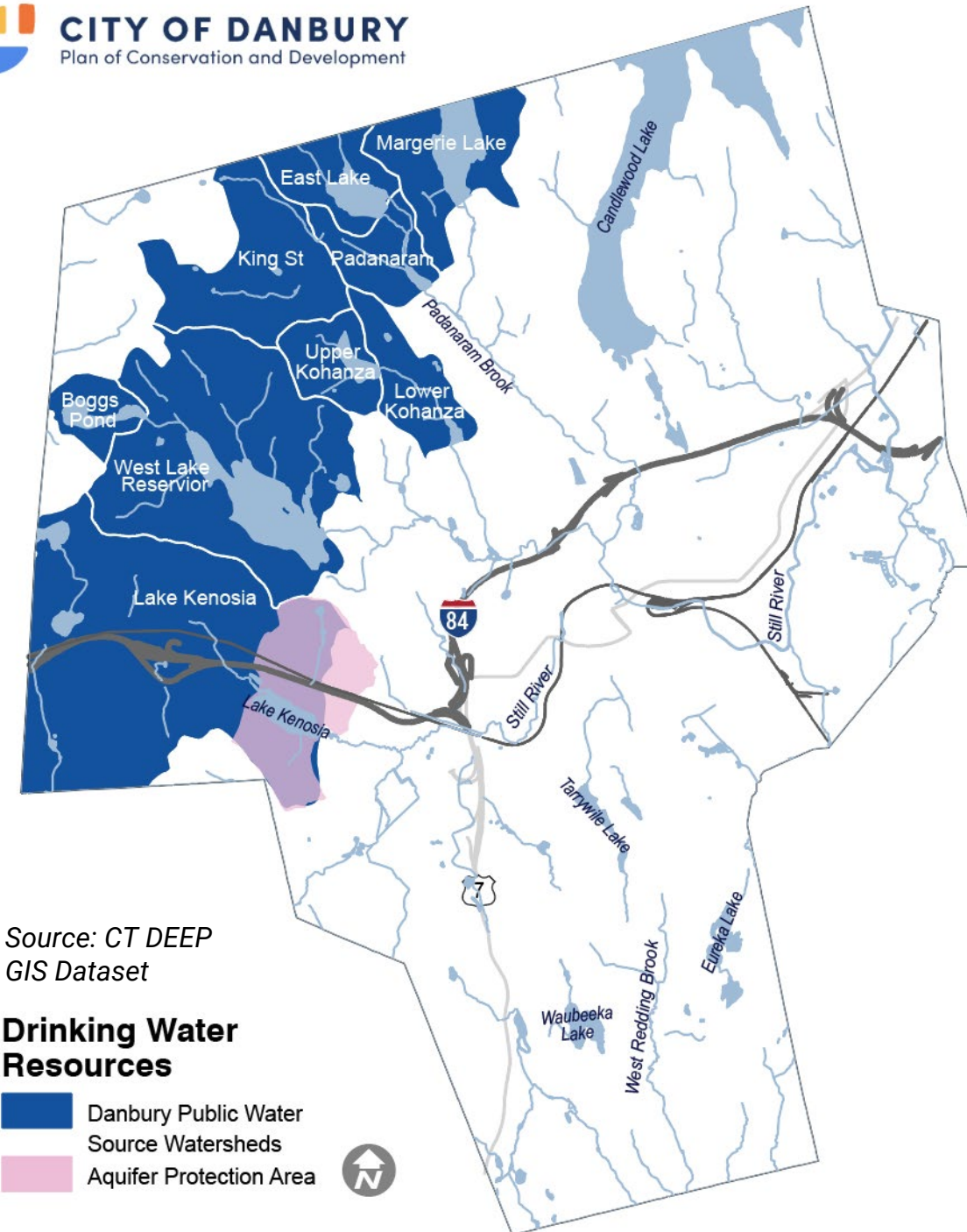
Source: CT DEEP

Ground Water Quality



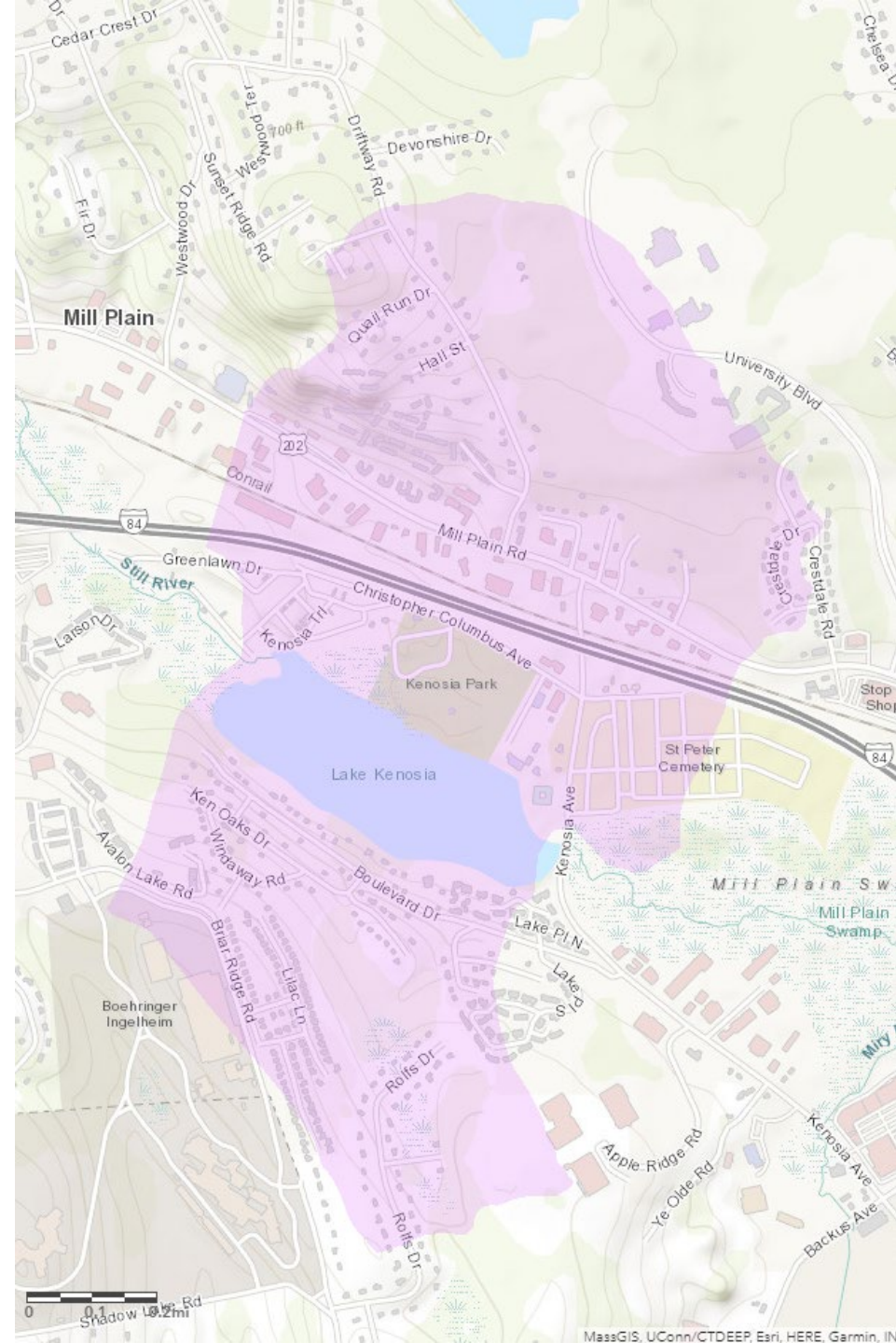
Drinking Water Resources

- Watershed areas are concentrated in the northwestern corner of the City and are associated with the West Lake, East Lake, and Margerie Lake Reservoirs.
- Additional sources of drinking water supply include Padanaram, Upper and Lower Kohanza, and Boggs Pond Reservoirs, as well as Lake Kenosia and the Kenosia Well Field.
- 8,581 acres of Danbury are located within a watershed area.
- Section 7C (Public Water Supply Watershed Protection Zones) of the City's Zoning Regulations restricts and regulates land use within the City's watershed areas.



Aquifer Protection Areas

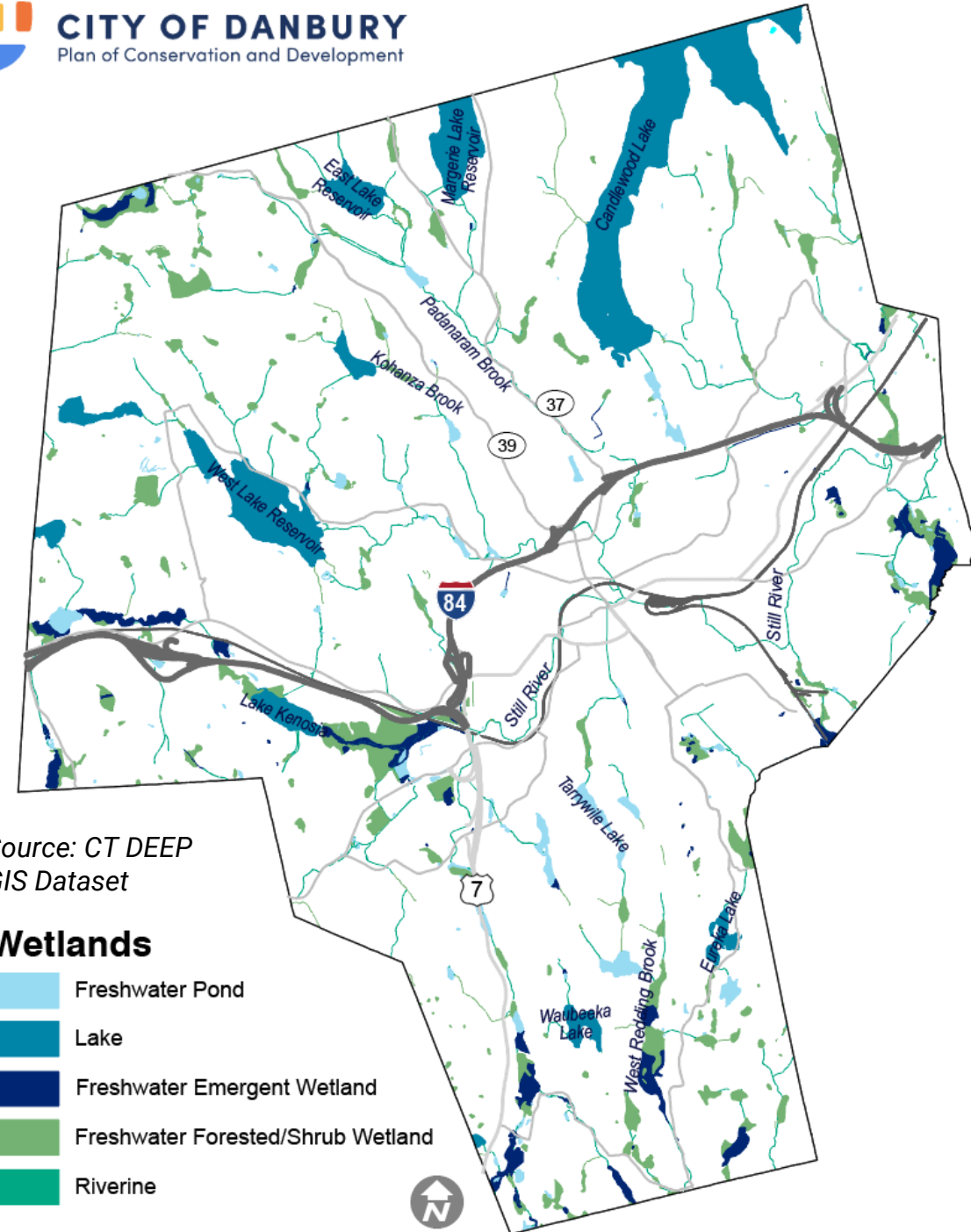
- Aquifer Protection Areas are areas designated around the State's active public drinking water well fields in sand and gravel aquifers that serve more than 1,000 people.
- The City maintains several drinking water supply wells near Lake Kenosia that can be used during prolonged dry periods to augment surface water supplies.
- The City regulates land use activities within the Lake Kenosia Aquifer Protection Area through Aquifer Protection Area regulations (Section 7D of the Zoning Regulations), which are administered by the City's Planning Commission.



Wetlands

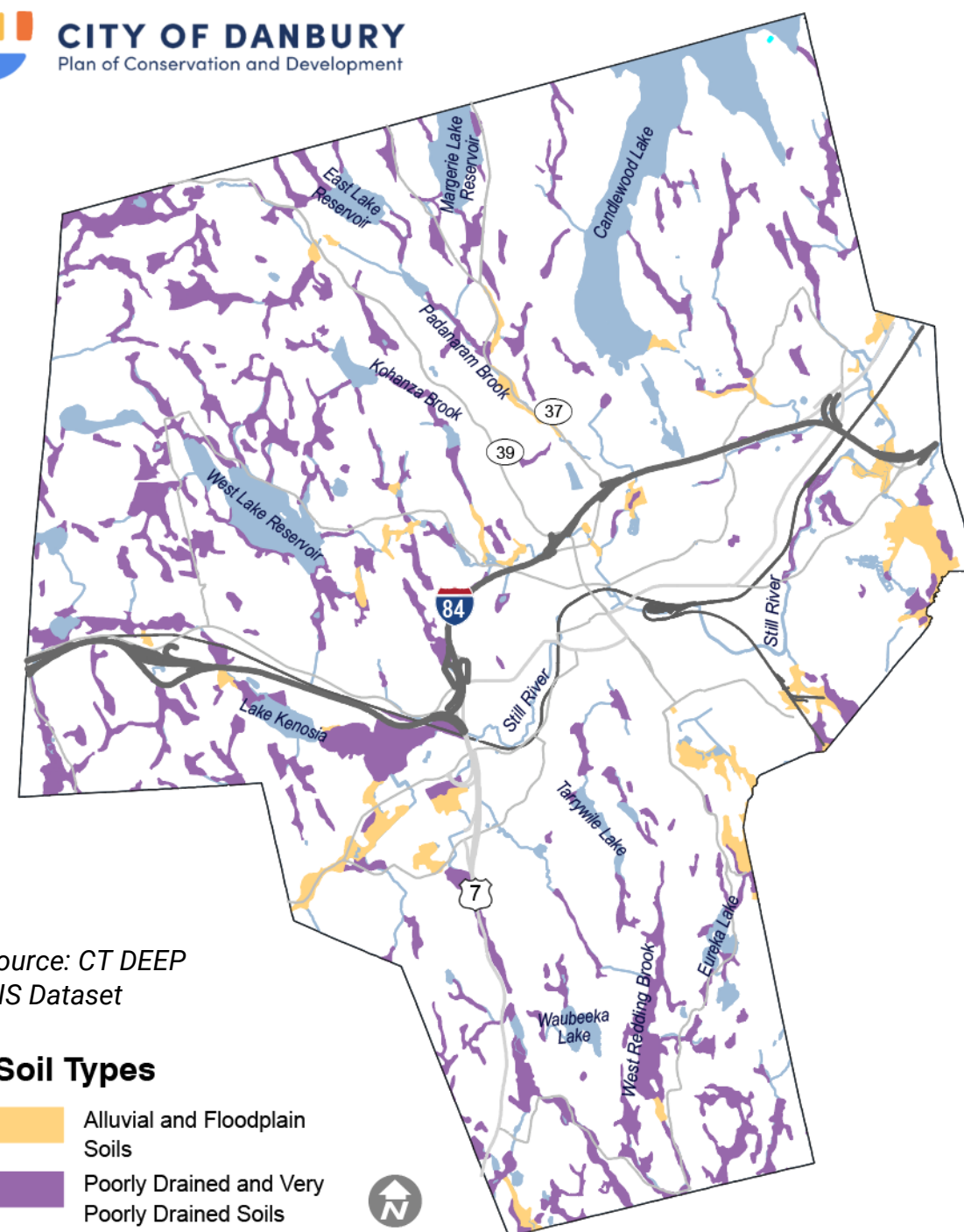
Wetlands and waterbodies cover 10.9% of Danbury

- Freshwater Emergent Wetlands cover 1.2% of Danbury
- Freshwater Forested/Shrub Wetlands cover 3.2% of Danbury
- Freshwater ponds, lakes, and rivers cover 6.6% of Danbury
- These resources are protected by the City's Inland Wetlands and Watercourses Regulations



Soil Types

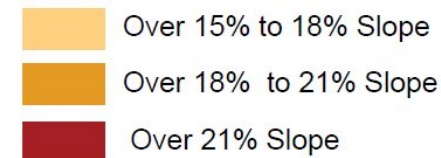
- 1.9% of Danbury is covered by alluvial and floodplain soils.
- 10.2% of Danbury is covered by poorly drained and very poorly drained soils.



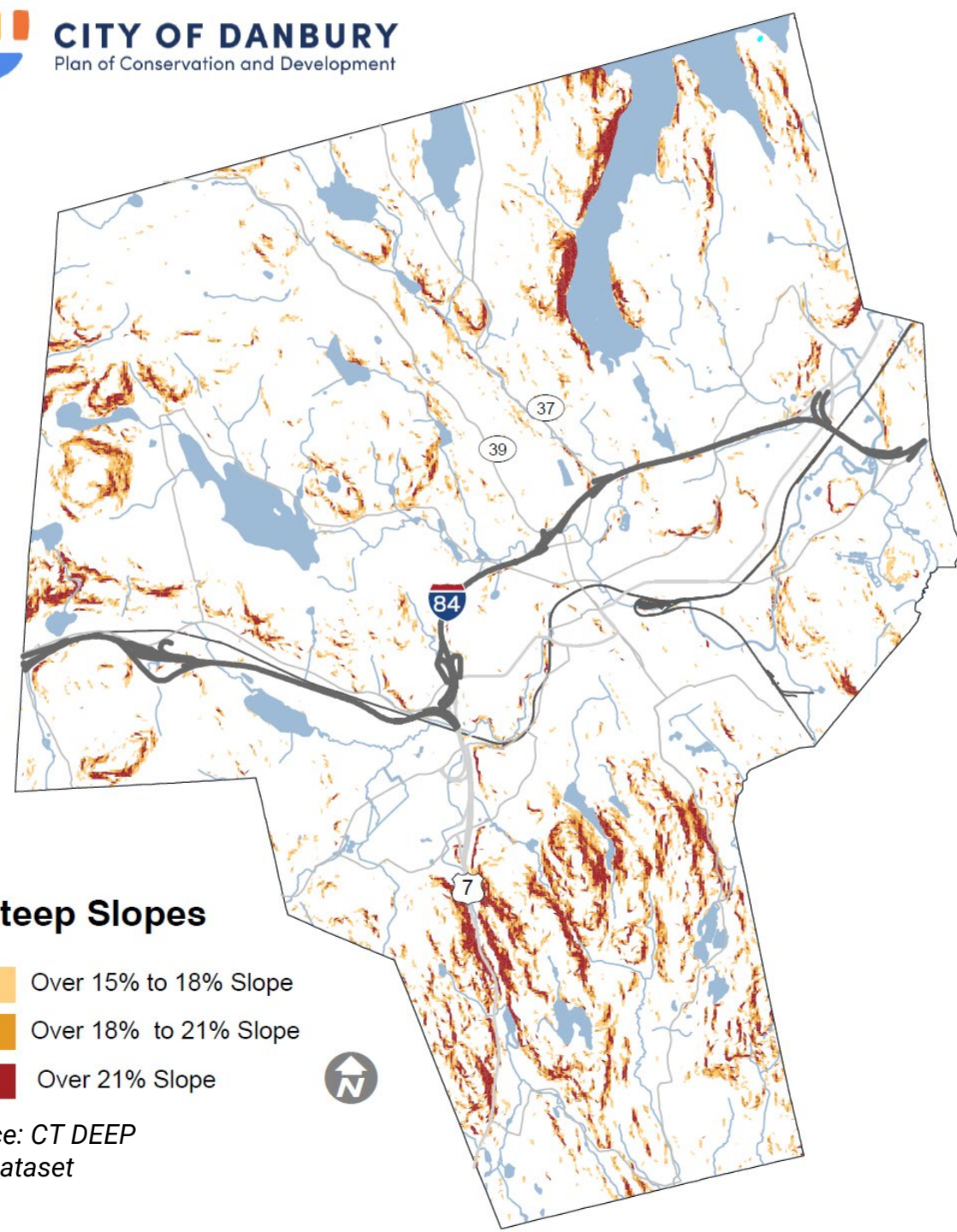
Danbury's Topography

- Danbury's steep slopes are concentrated in the southern part of the City.
- Steep slopes (those in excess of 15%) present significant challenges to development.
- Ridgetop summits and north facing slopes have a high potential for rare species.

Steep Slopes

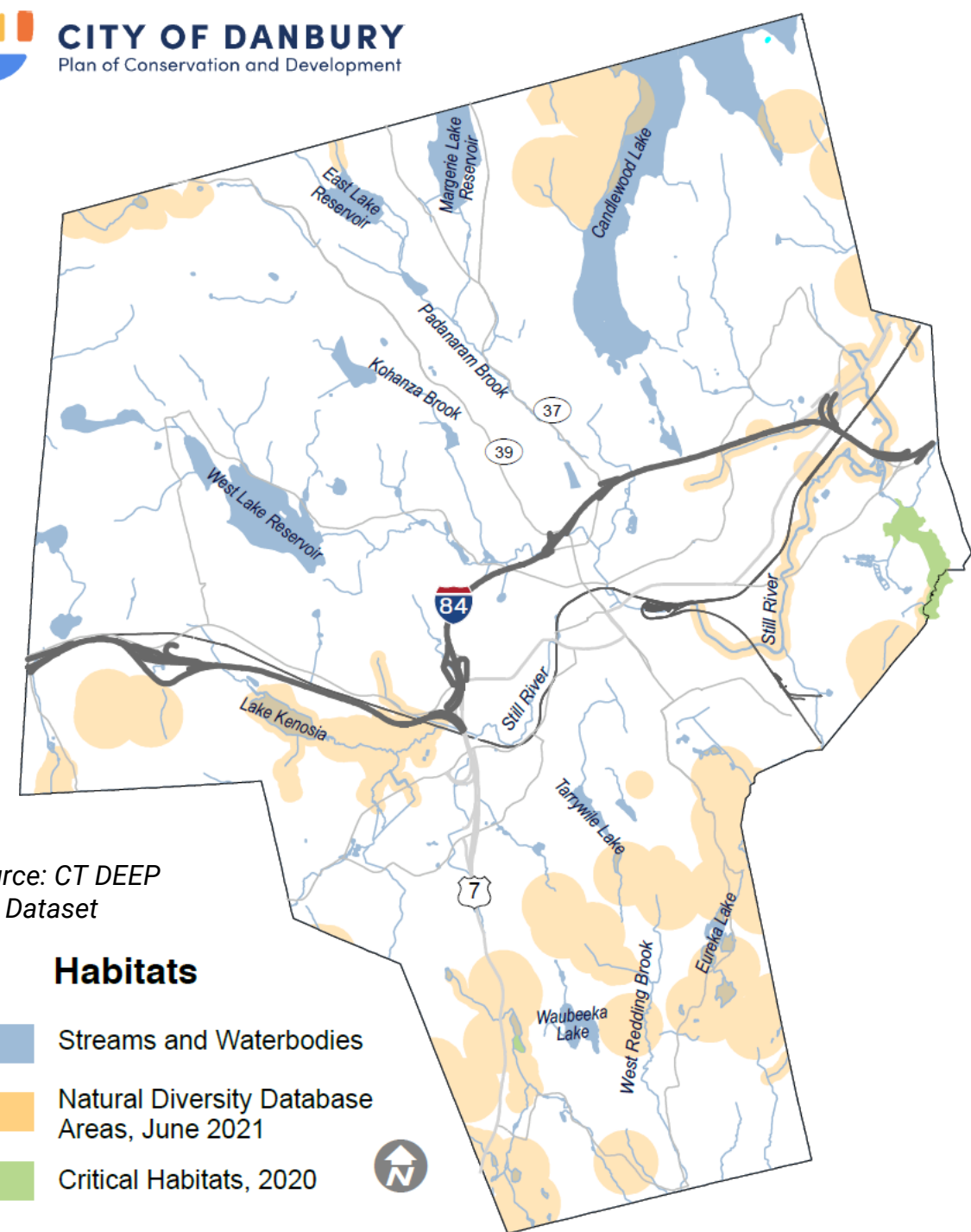


Source: CT DEEP
GIS Dataset



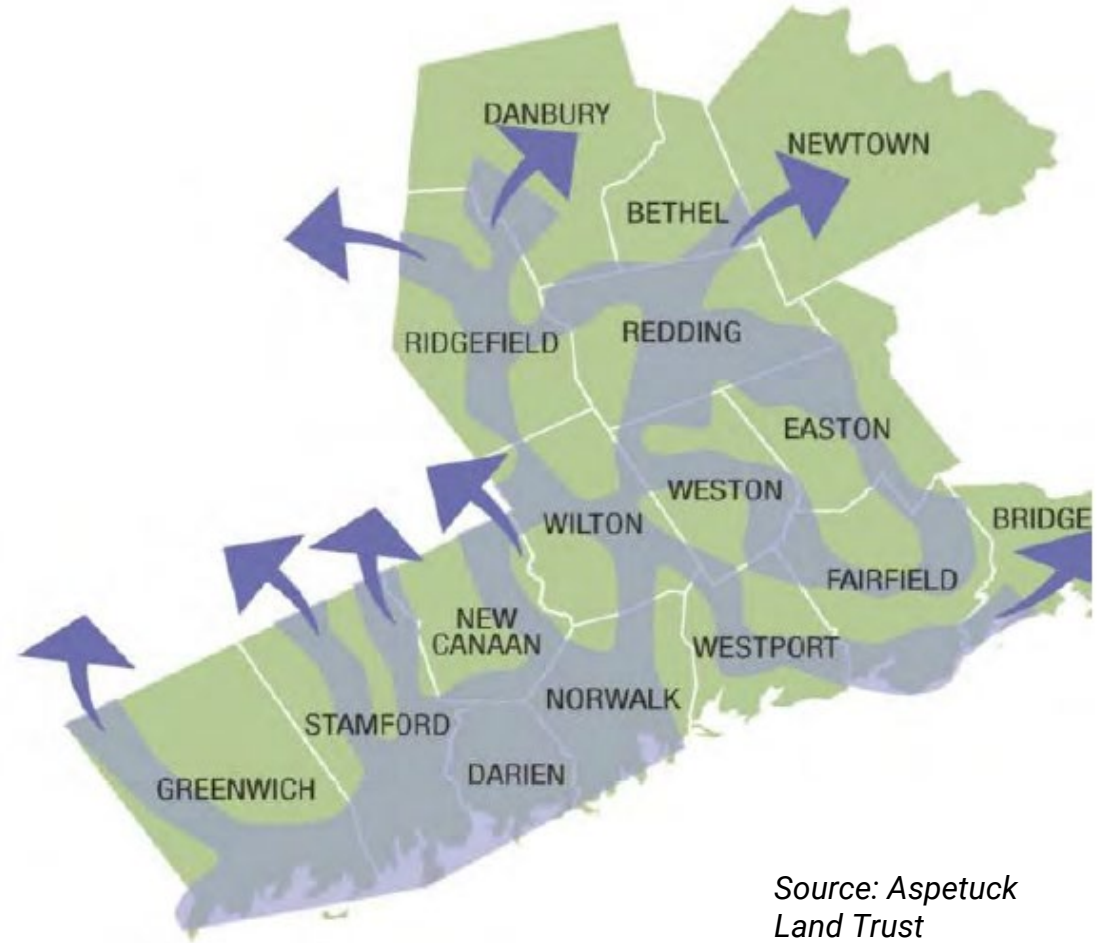
Habitats

- Natural Diversity Data Base areas represent approximate locations of endangered, threatened, and special concern species and significant natural communities in Connecticut.
- Exact locations are masked to protect sensitive species from collection and disturbance and to protect landowner's rights where species occur on private property.
- Critical Habitats depict the classification and distribution of twenty-five rare and specialized wildlife habitats in the State.



Pollinator Habitat

- Danbury is connected to the rest of Fairfield County via “pollinator pathways”
- The region relies on the European honey bee, 349 species of native CT bees, butterflies and other insect pollinators to fertilize the plants in its yards, parks, roadside gardens, and on farms.
- Pollinators are experiencing a continuing threat due to pesticide use, loss and fragmentation of habitat, and climate change.
- Pollinator pathways “de-fragment” the land by encouraging property owners to help form a pathway that connects protected open space, such as parks and land trust properties, which provide food and shelter to pollinators.



Source: Aspetuck
Land Trust

Endangered, Threatened, and Species of Concern in Fairfield County

- 6 Mammals
 - Silver-haired bat, Red bat, Hoary bat, Little brown bat, Northern long-eared bat, Tri-colored bat
- 42 Birds
 - Hawks, Sparrows, Owls, Herons, Falcons, Terns, etc.
- 14 Reptiles
 - Turtles, snakes, etc.
- 3 Fish
 - Shortnose sturgeon, Atlantic sturgeon, Blueback herring
- 4 Amphibians
 - Salamanders and Mudpuppy
- 29 Invertebrates
 - Beetles, Moths, Duskywings, Snails, etc.
- 8 Plants
 - Haws, Violets, etc.



Invasive Species in Fairfield County

- Herbs
 - Garlic Mustard, Mugwort, etc.
- Vines
 - Mile-a-minute vine, Porcelain Berry etc.
- Shrubs
 - Japanese Barberry, Honeysuckles, etc.
- Trees
 - Norway Maple, Tree of Heaven, White Poplar, etc.
- Aquatic:
 - Milfoils, Zebra Mussels, etc.
- Insects:
 - Emerald Ash Borer, Wooly Adelgid, etc.
- Others:
 - Ash disease, Armillaria Root Rot, White Nose Syndrom, etc.

Potential Threats:

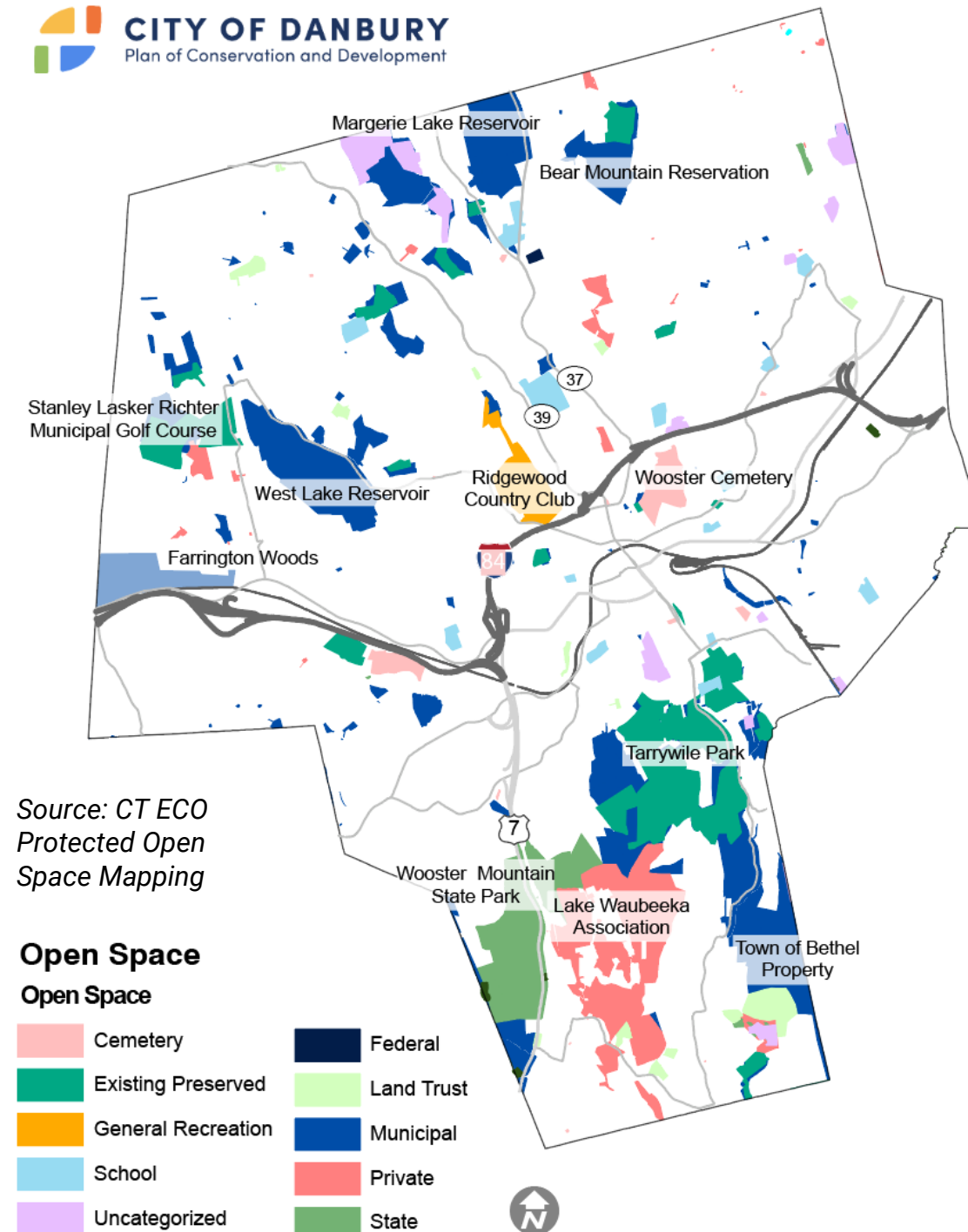
- Asian Longhorn Beetle
- Spotted Lantern Fly
- Beech Disease
- Lonestar tick and other ticks



Questions or comments about environmental resources in Danbury?

Open Space in Danbury

- 1,644 acres of municipal open space
- 21 City parks and playgrounds
- Wooster Mountain State Park (444 acres)
- Candlewood Valley Regional Trust (17 properties in Danbury)



Significant Open Space Properties and Environmental Resources Managed by the City of Danbury or Partner Authority

- Candlewood Lake
 - Lake Kenosia
 - Tarrywile Park
 - Bear Mountain Reservation
 - West Lake, East Lake, and Margerie Lake Reservoirs
 - Farrington Woods
 - *There are multiple additional parks and properties not listed above*
- Managed by City Authority or Regional Authorities

Candlewood Lake

- Managed by the Candlewood Lake Authority. The Authority is funded by equal appropriations from the five surrounding municipalities: Brookfield, Danbury, New Fairfield, New Milford and Sherman.
- Largest Lake in Connecticut: 65 miles of shoreline, Surface area of over 8.5 square miles, 5420 acres, 11 miles long, 2 miles wide at its widest point
- Property is owned by FirstLight.



Lake Kenosia

- Lake is approximately 70 acres in area.
- Oversight by the Lake Kenosia Commission. The mission of the Lake Kenosia Commission is to protect the lake's multiple functions as a water supply, a recreational resource, and an ecological habitat.
- Public water supply wells located along the lake's shoreline are used to maintain water supply levels of the City's reservoirs.
- Flood skimming (pumping of excess water levels) had been used in the past to supply the City's reservoirs but is no longer conducted (except on an emergency basis) due to water quality concerns at the lake.

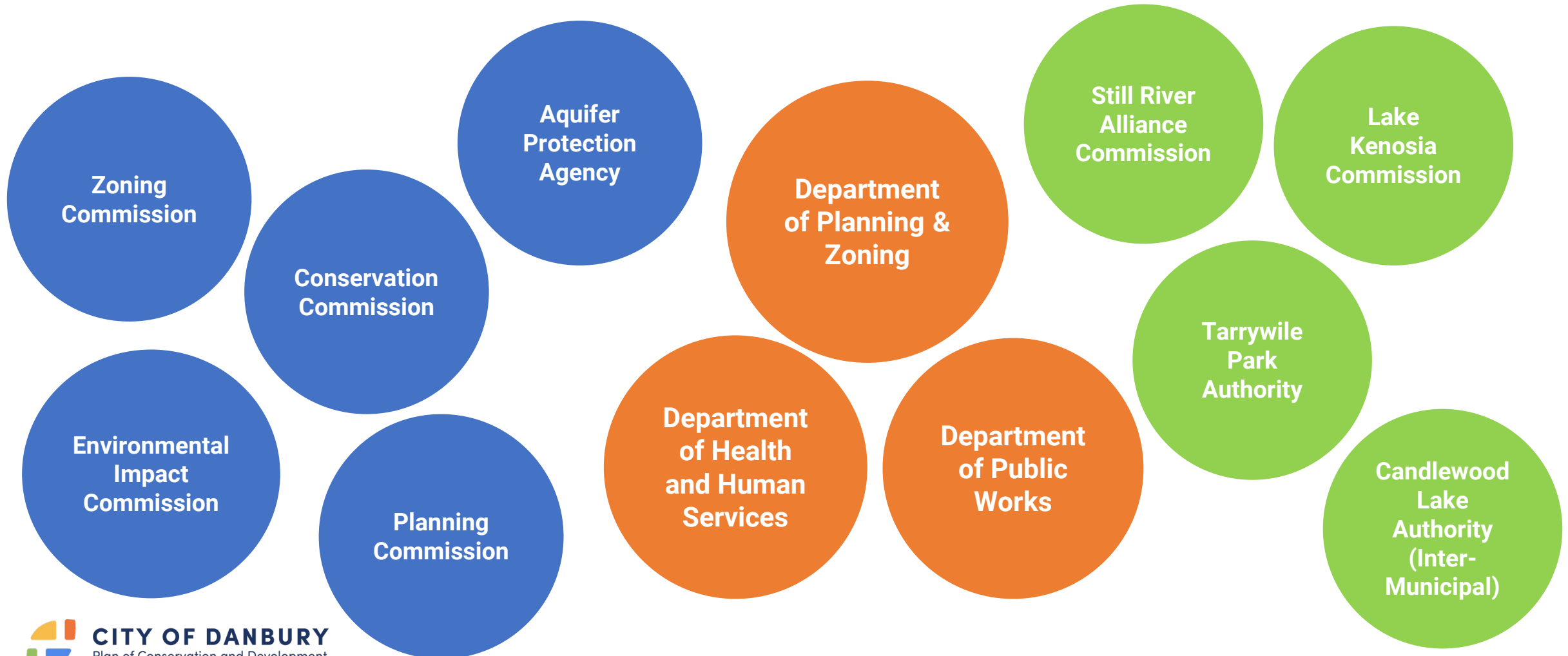


Tarrywile Park

- 722 acres in total
- 535 acres of meadows, forests, mountains, lakes and ponds
- Managed by the Tarrywile Park Authority
- The City purchased the parcel from the Charles D. Parks Estate in 1985, multiple additional parcels have been acquired since



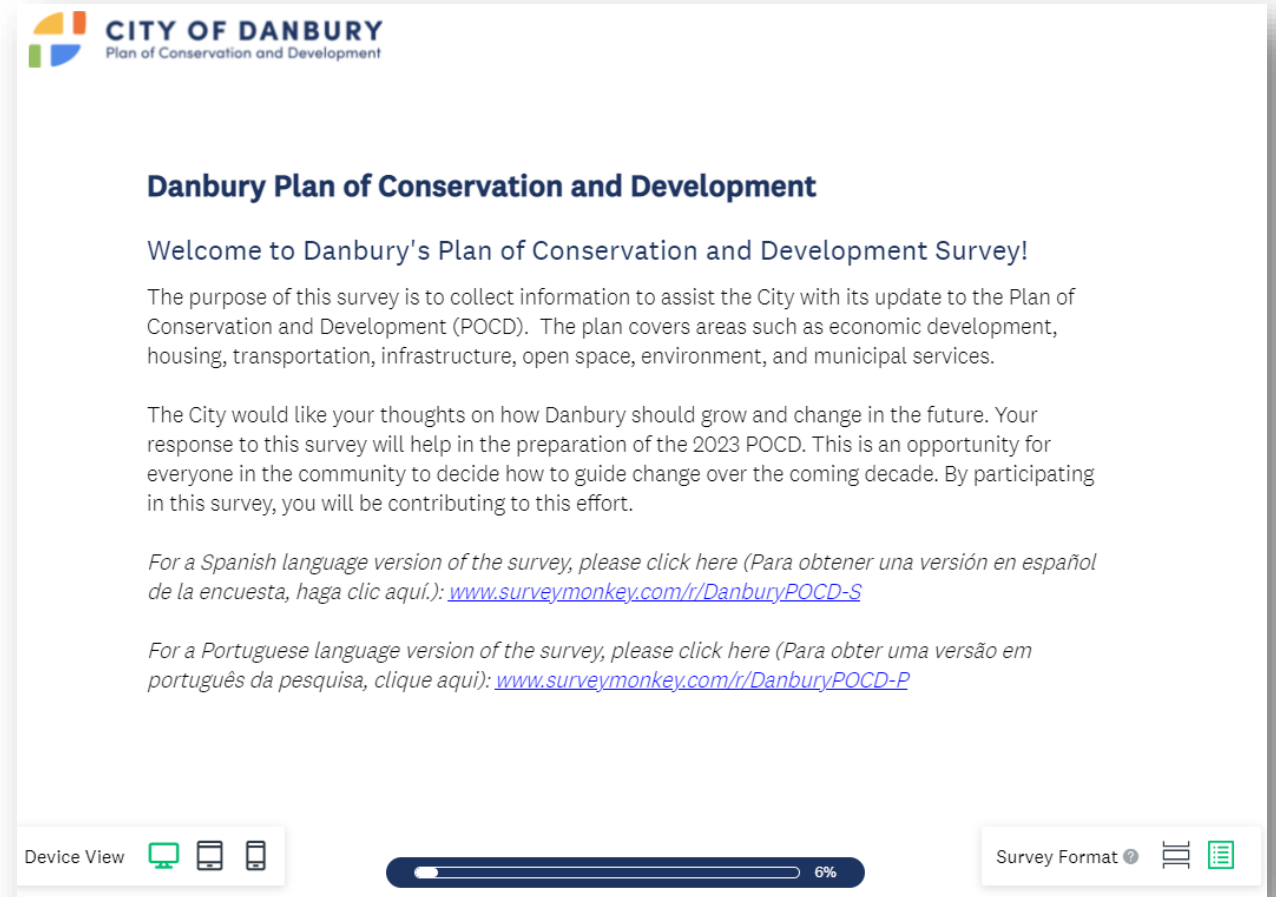
Management and Regulation of the City's Open Space and Environmental Resources



Questions or comments about the City's open space and management and oversight of the City's open space and environmental resources?

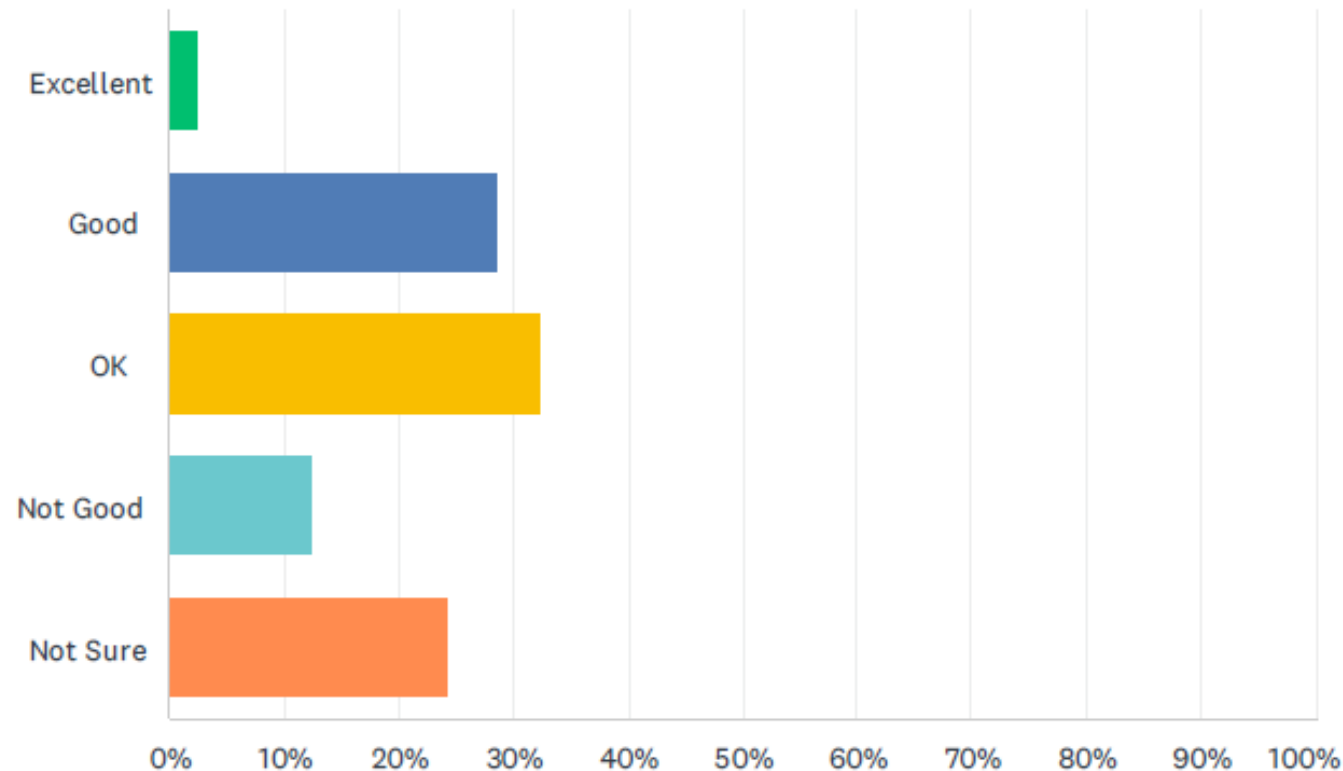
Online Survey

- Over 1,200 responses received
- Promotion via social media, POCD website, press releases, email blasts, and through Danbury Board of Education
- Spanish and Portuguese language surveys were provided.



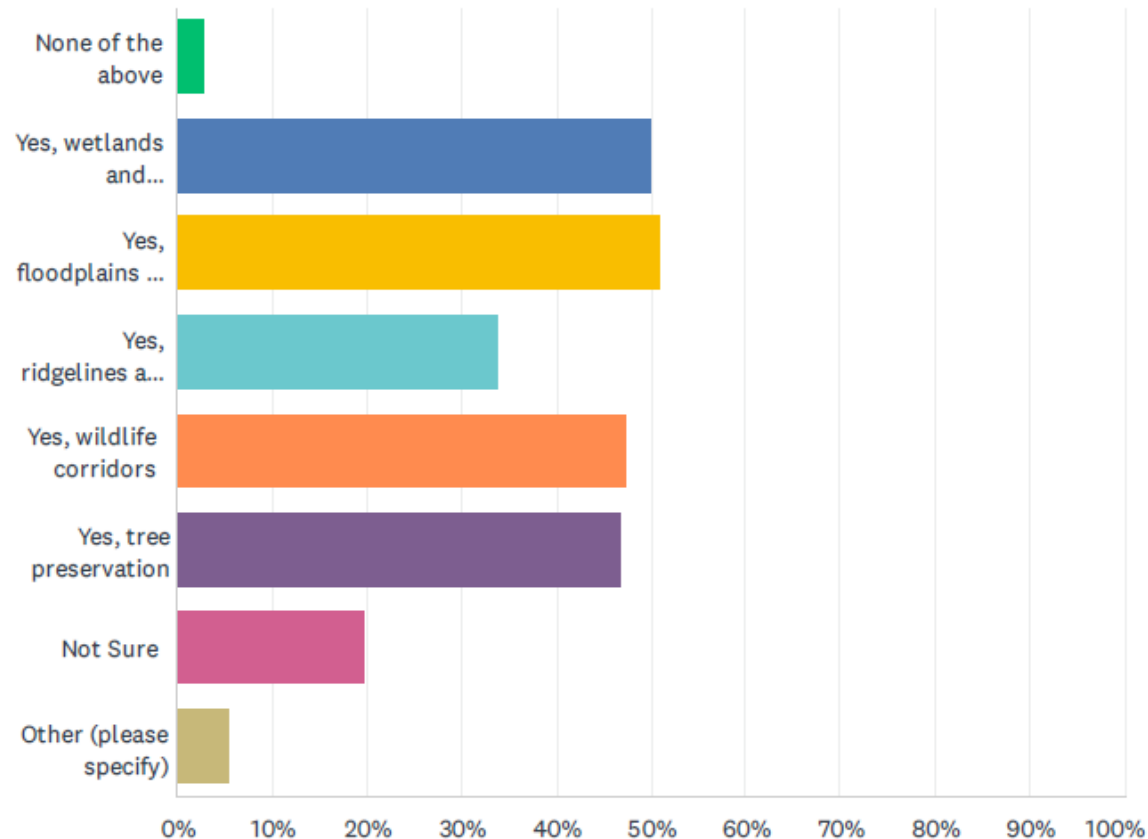
Online Survey

How well does the City support the protection its natural resources (including wetlands and waterbodies) and the environment (air, water)?



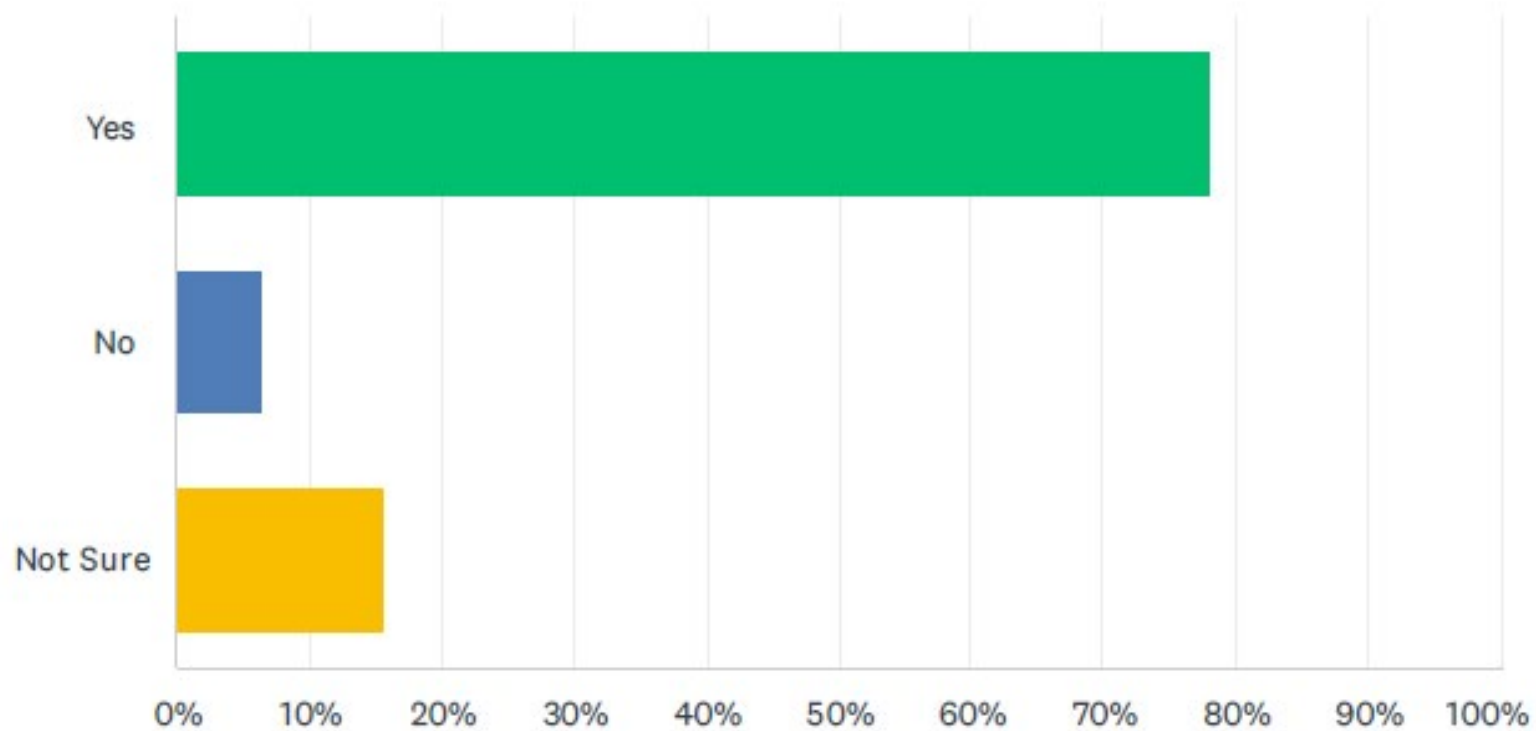
Online Survey

Should the City focus more on the protection of any of the following natural resources and the environment? (select all that apply)



Online Survey

Should the City continue to acquire property for open space conservation?



Questions or comments about the survey?

Public Workshop Break Out Session Findings

- An in-person public workshop was conducted on 12/2 at the Palace Theater.
- A virtual public workshop was conducted on 12/9.
- Participants of the workshops were asked to participate in topic-based discussions to identify issues and ideas relevant to each topic.



Issues



Ideas



Natural Resources: **Issues**

Issues identified by Break-Out Session Participants

- Various areas of the town are subject to flooding. The situation appears to be worsening in some areas.
- Development too close to rivers such as the Still River.
- Underutilized parks and open space and concern about the public not appreciating the value of these properties.
- Limited access to some parks and open spaces.
- Many trees lost or damaged by storms have not been replaced.
- Many street trees are in conflict with sidewalks and utility lines.
- Environmental impact of residential development of large land parcels is a concern.
- Invasive species (such as Japanese Knotweed or Zebra Mussels) are an issue of concern in the Still River and other water bodies in the City.

Natural Resources: Ideas

Ideas identified by Break-Out Session Participants

- Conduct a hydrologic/hydraulic study of the Still River basin to identify measure that should be taken to protect the river and reduce flooding.
- Improve and better maintain stormwater infrastructure.
- Develop a management plan for and manage beaver populations as a means of mitigating flood risk.
- Dredge portions of the Still River where there is chronic sediment buildup.
- Prevent future encroachment of development on the Still River.
- Reduce non-compatible uses in riparian zones (such as parking lots).
- Enhance the Still River so that it becomes an aesthetic resource/attraction in the Downtown, consider a river walk.
- Improve access to the Still River.
- Better balance or better communicate management approach to Lake Kenosia. Its use as a reserve water supply conflicts with desired recreational uses at the lake.

Natural Resources: Ideas

Ideas identified by Break-Out Session Participants

- Place more emphasis on saving old trees.
- Replace lost trees with resilient native species.
- Plant appropriate tree species in appropriate locations.
- Create a comprehensive forestry management plan for the City.
- Increase the City's forestry resources and staffing.
- Acquire additional open space to strategically link open space throughout the City to allow for wildlife movement, biodiversity conservation, and a well-connected trail network.
- Plan for the proactive control of invasive species.

Questions or comments about the workshop feedback?

Discussion

- What do you feel are the issues or challenges surrounding open space and environmental resources in Danbury?

Discussion

- What do you feel are the opportunities for improving open space and environmental resources in Danbury?

Discussion

- How can the POCD support maintaining, improving, or expanding open space and environmental resources in Danbury?
- What recommendations should be made?

Thank You for Participating!

- Visit www.danburypocd.com for meeting materials and updates regarding the plan.

