Protecting Drinking Water Sources in CT



Lilian Ruiz
Executive Director

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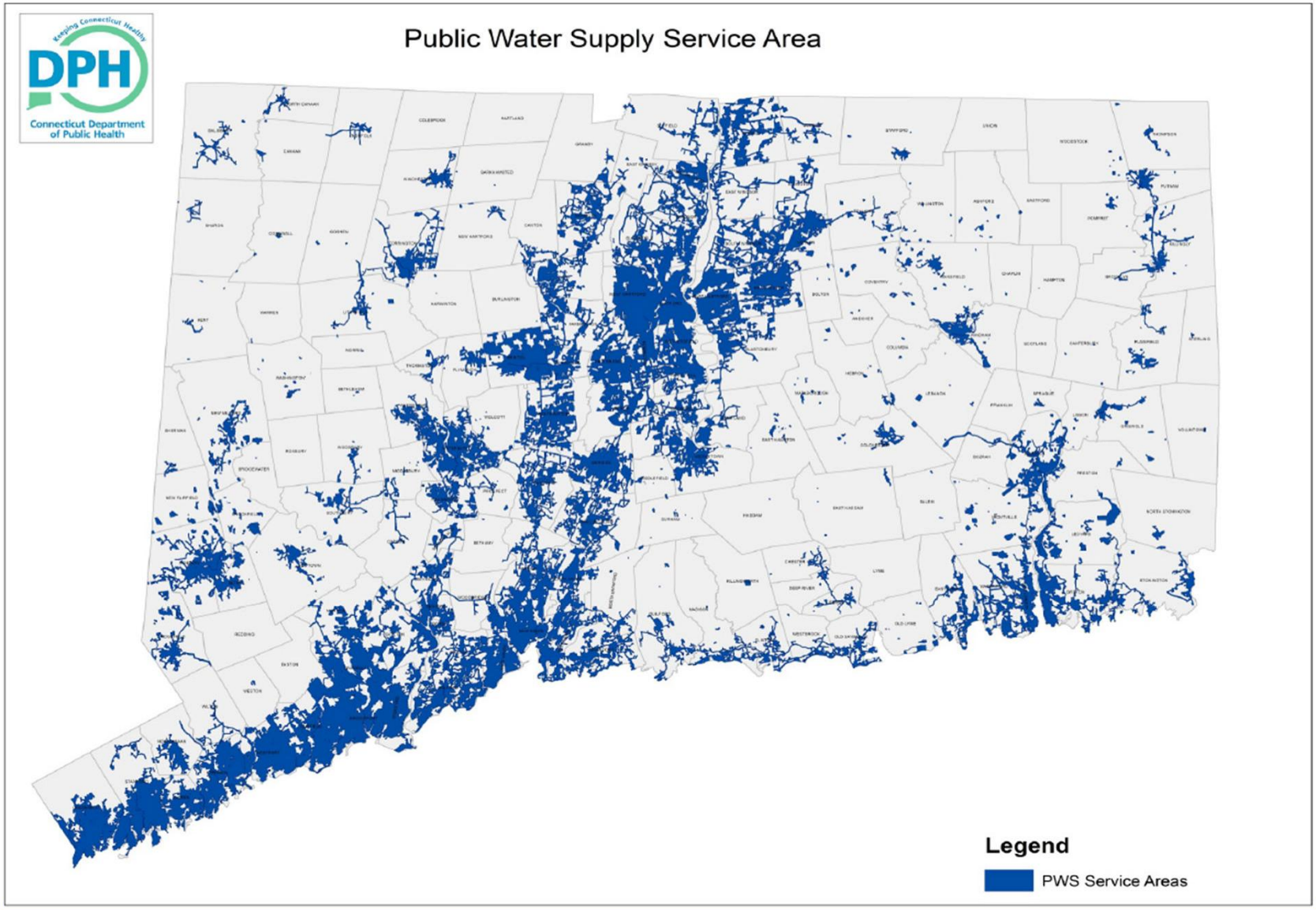
CT COUNCIL ON SOIL & WATER CONSERVATION

What is Source Water Protection??

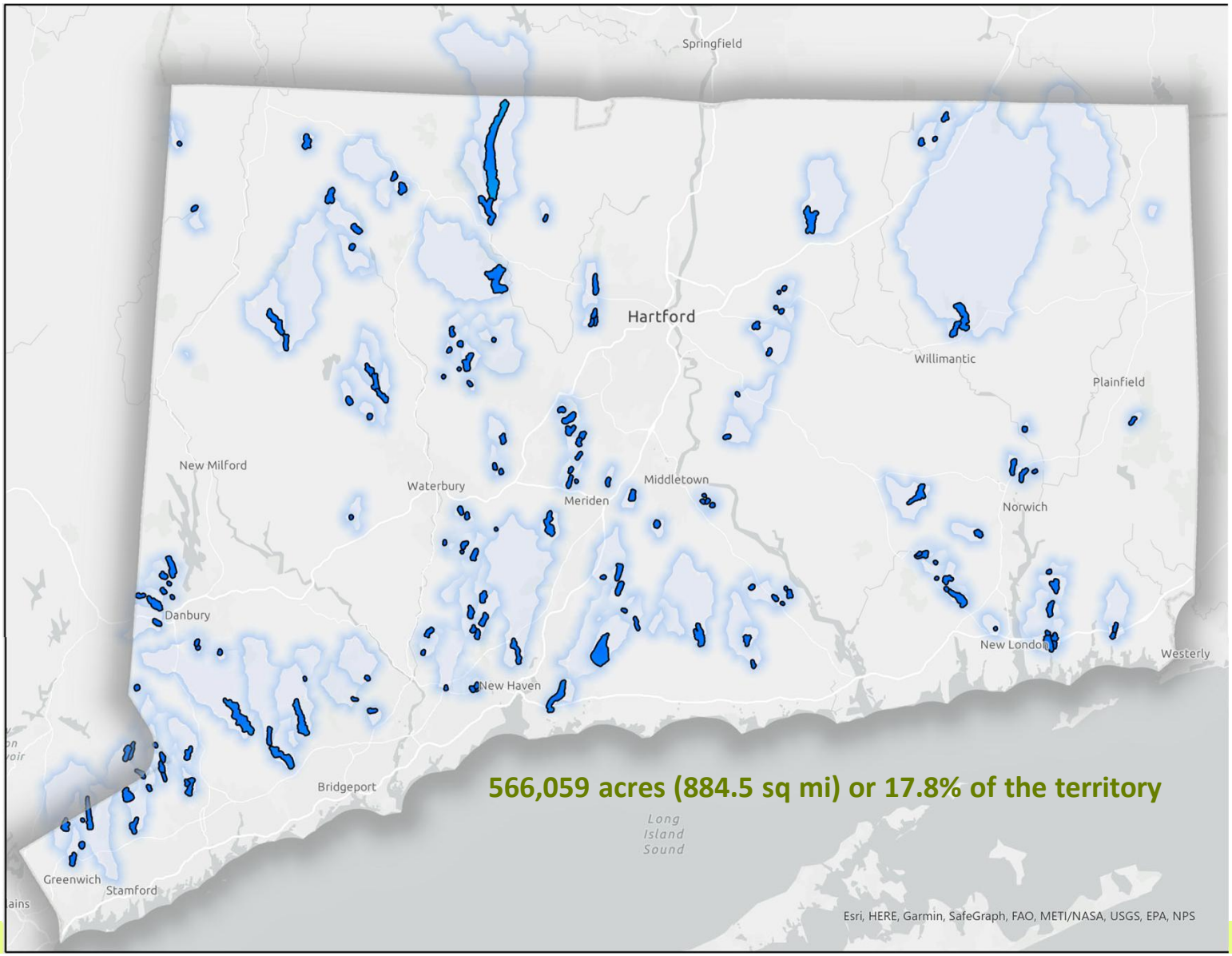


"Source water protection is a proactive approach to safeguard, maintain, or improve the quality and/or quantity of drinking water sources and their contributing areas." – *American Water Works Association (AWWA) Source Water Committee*

Public Drinking Water in Connecticut



Drinking Water Watersheds and Reservoirs in Connecticut



How can we protect drinking water supplies?

With limited resources, limited time, limited funding, how can smart decisions be made to protect drinking water sources?

1. In Connecticut, most land-use decisions are made at the town level (169). There is no county government.

2. Zoning may not identify/consider source protection areas

3. Lots of available data on land characteristics and land use…..in lots of different places

4. Decisions and Development are often done at the parcel level

USDA NRCS

Cooperative Conservation Agreement

Source Water Protection Project

Partners:

CT Council on Soil and Water Conservation

CT Dept. of Public Health – Water Supply Division (DPH)

Southwest Conservation District (SWCD)

Eastern Connecticuty Conservation District (ECCD)

1. Create a state-wide GIS inventory of land use in all source water protection areas.

    - Allows for the identification and prioritization of source water protection areas for both quality and quantity.

2. Expand knowledge of the watershed technical community about source water protection, main issues, etc.

3. Development of an outreach plan designed to increase participation in Farm Bill and other technical and financial assistance programs that address watershed needs.

4. Produce 2 watershed plans.

5. Conduct Local Work Groups!!!

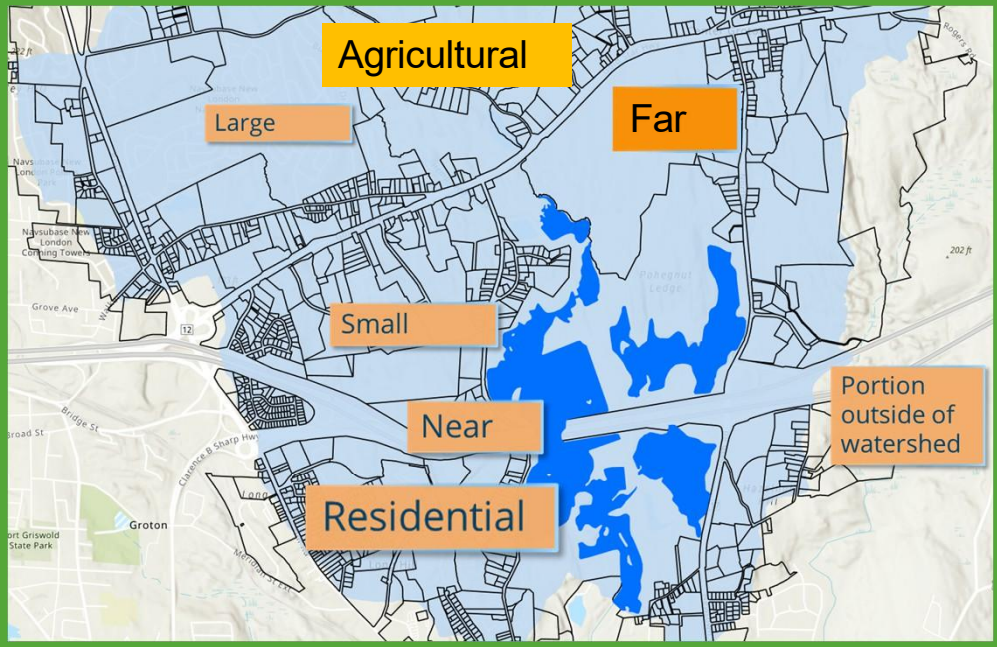
GIS Work

Contractor: UCONN CLEAR: https://clear.uconn.edu/projects/sourcewater/

- Collect parcels to cover public supply watersheds and aquifer protection areas
- Identify and define metrics for prioritization
- Collect input data layers to inform metrics
- Calculate metric values for each parcel
- Apply points to each metric for prioritization

Metrics

1. Distance to tributaries/reservoirs
2. Contains stream bank/riparian land
3. Distance to wetland
4. Distance to treatment plant intake
5. Soil Type (drainage/depth)
6. Slope
7. Parcel Size
8. Agricultural land
9. Commercial/industrial land
10. Forest land
11. Residential land



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Prioritizing Parcels for Drinking Water Source Protection

The purpose of the project is to develop a GIS layer for the Connecticut Department of Public Health to aid public water systems, conservation groups and municipalities in determining what parcels within drinking water watersheds or source areas are most critical for protecting Connecticut's drinking water supply sources and should be prioritized for acquisition, protection, or remediation.

Methods

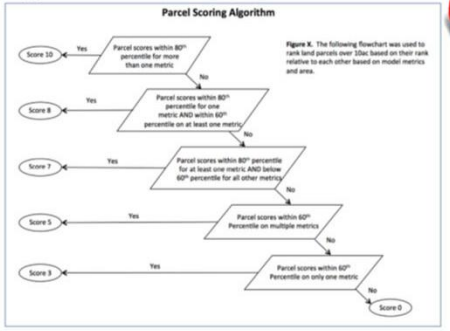
Unprotected parcels over 10 acres in size within public water supply watersheds were analyzed for various attributes such as percent forested, distance to wetlands, soil type distance to rivers and streams, and the percent slope of the parcels (Figure 1).

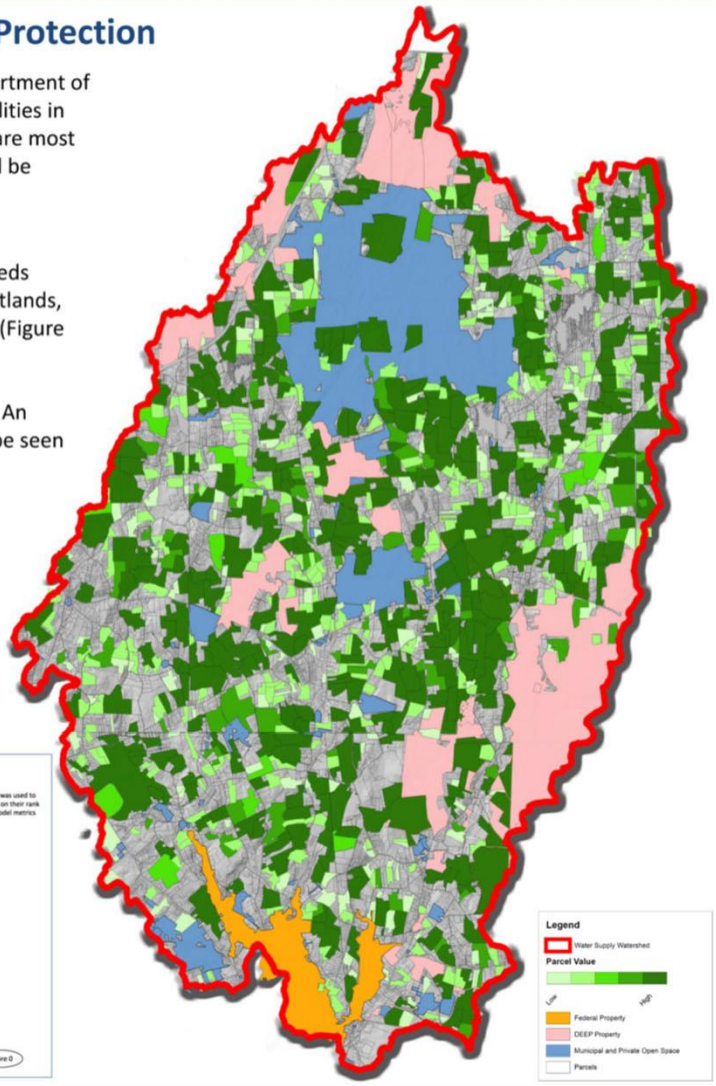
Parcel scores were are tabulated using a Parcel Scoring Algorithm (Figure 2). An example of the results for one drinking water watershed in Connecticut can be seen on the right.

Figure 1

Parcel Attributes
Forest
Distance from Wetlands
Soil Type
Distance to Rivers & Streams
Slope Percent

Figure 2





Keeping Connecticut Healthy
DPH
Connecticut Department of Public Health

CT source water COLLABORATIVE

Contact:

Lilian Ruiz, Executive Director
CT Council on Soil and Water Conservation
ctcouncilswc@gmail.com