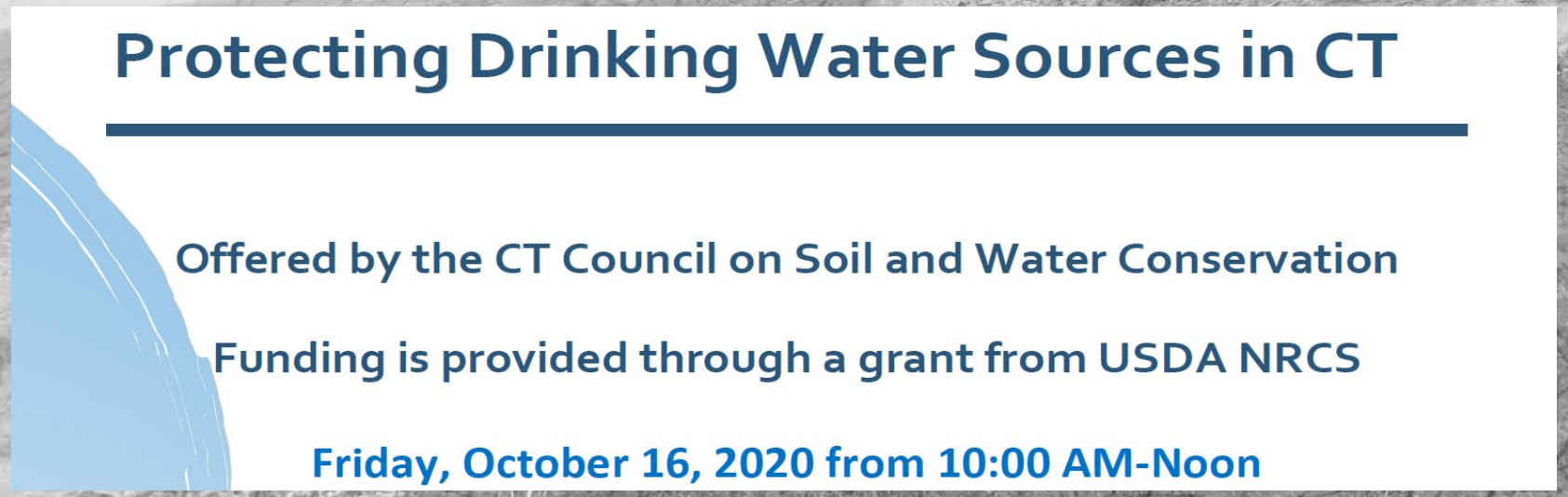
CONNECTICUT DEPARTMENT *of* PUBLIC HEALTH
DRINKING WATER SECTION

Source Water Protection in Connecticut

Eric McPhee
Supervising Environmental Analyst
Connecticut Dept. of Public Health
Drinking Water Section



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Drinking Water Section

CT DPH Drinking Water Section Responsibilities

- Responsible for Implementation & Enforcement of the **Safe Drinking Water Act** and related state drinking water laws
- Regulate 2,550 Public Water Systems (PWS)
- 2.8 million CT residents served – 3.5 million total population
- 150 reservoir systems, over 4,000 ground water sources

CT Department of Public Health: Drinking Water Section

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- Primacy agency for the administration of state and federal drinking water regulations and is dedicated to assuring the quality and adequacy of our State's public drinking water sources.
- Technical assistance, education and regulatory enforcement
- Review water quality, conduct inspections, regulate/protect water company land, permitting, education, approve new sources/infrastructure, low interest loan program

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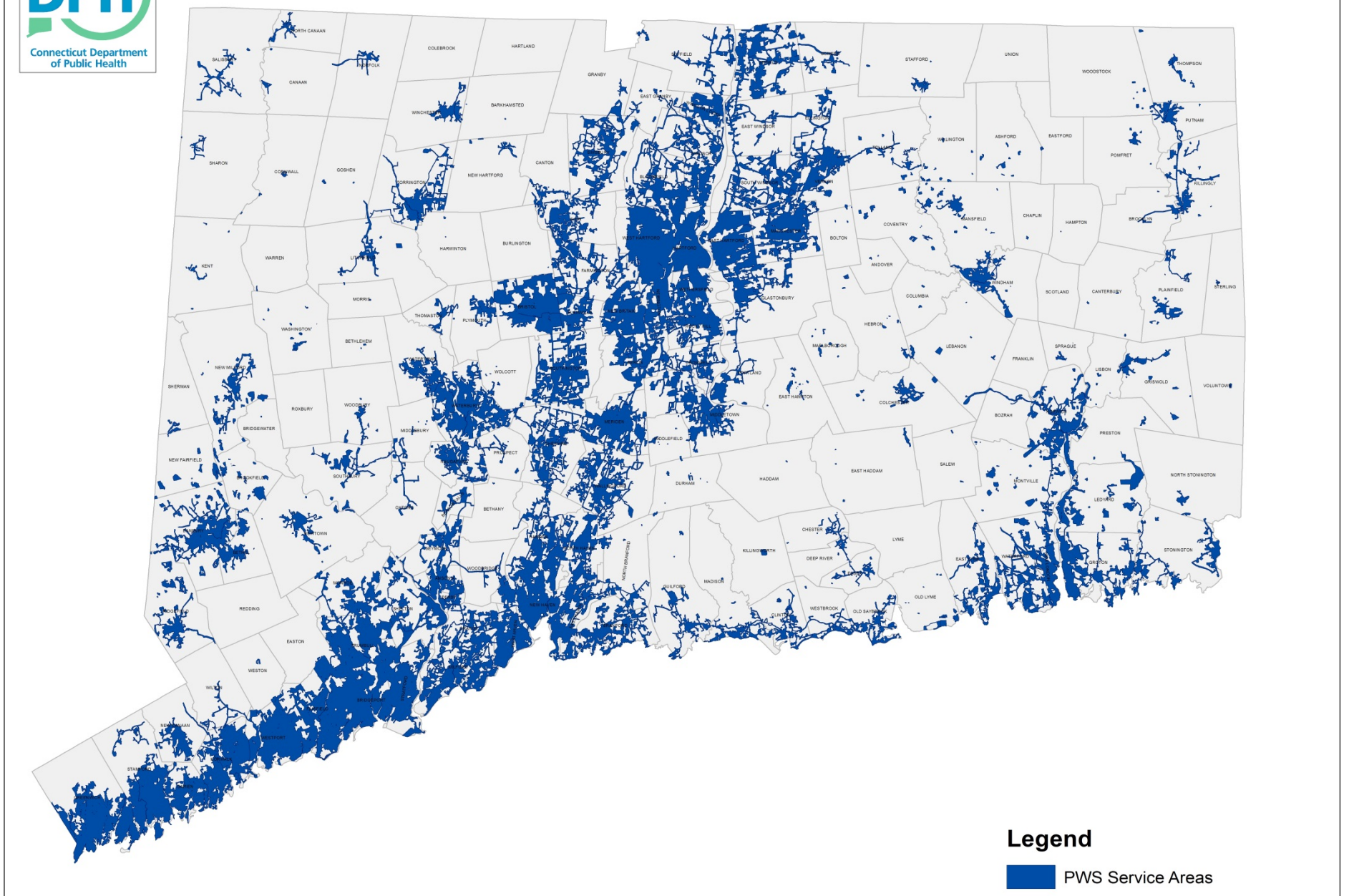
Public Water Supply Service Area



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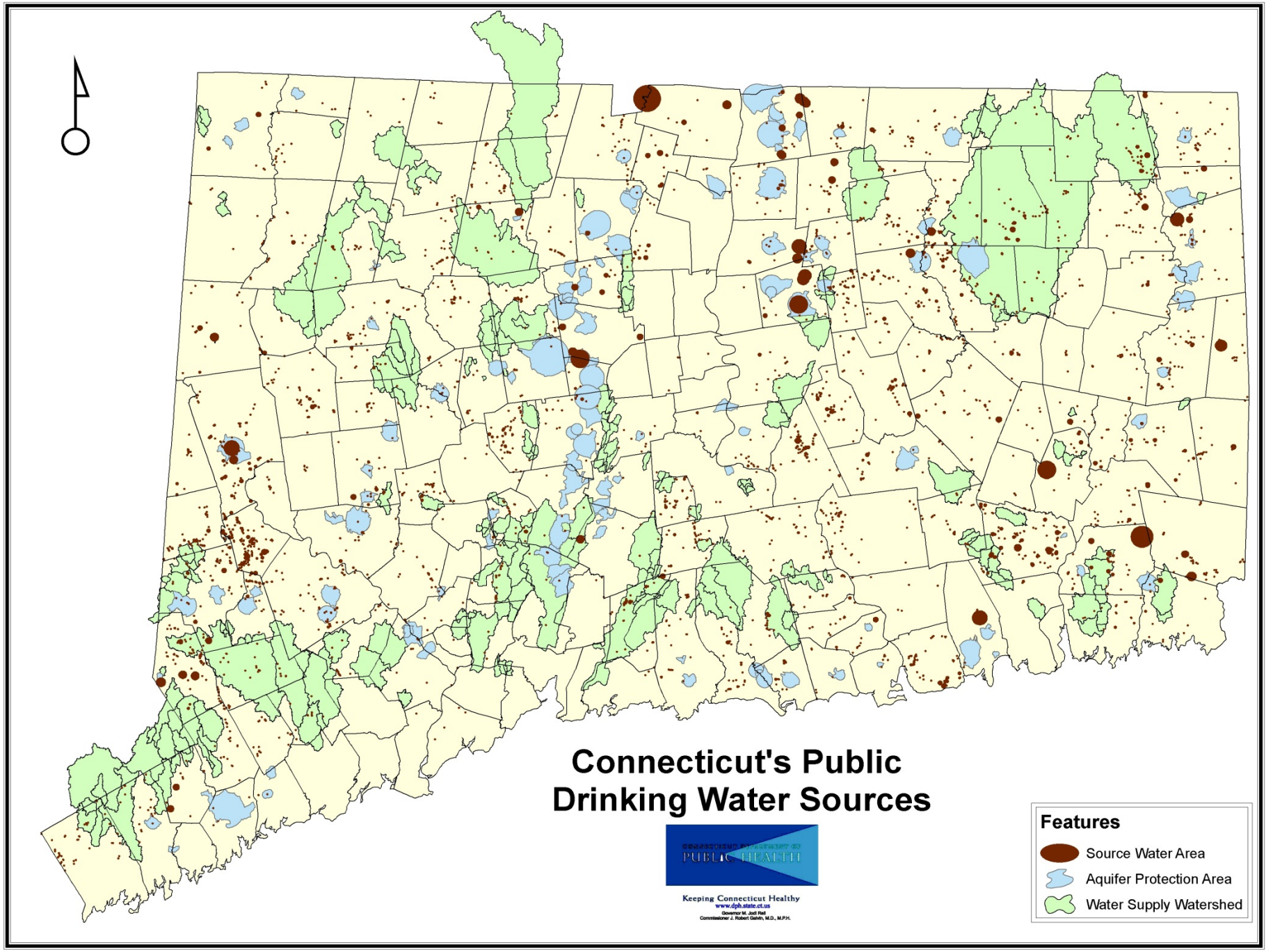

Drinking Water Source Protection

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A group of practices to prevent the contamination of surface and groundwater sources that are used as a public drinking water source of supply.

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From Source to Tap: A Multi-Barrier Approach to Safe Drinking Water

- Selecting the best available drinking water source;
- Protecting the drinking water source from contamination;
- Using effective water treatment; and
- Preventing water quality deterioration in the water distribution system.

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Drinking Water Source Protection

- Protect and preserve drinking water sources
- Can not rely on treatment technology alone
- Minimize risk to public health
- Limit human exposure, new emerging contaminants
- Minimize treatment, infrastructure and O&M costs, saving $$

Connecticut Department of Public Health

SUMMARY OF LAWS

Name and Citation	Description
Water Company Lands: P.H.C. Sections 25-37c-1 et esq. and 25-37d-1 et seq.	Regulates the sale and/or change of use of water company owned lands, along with defining watershed land classifications, and through Connecticut General Statute 25-32(b) controls the sale of watershed lands and changes in its present use through permit processes.
Source Abandonment: CGS Sections 25-33k, 25-33l, & 25-33m	Regulates the sale and abandonment of public water supply sources.
Location of Cemeteries: CGS Section 25-41	Prohibits the location of cemeteries within one-half mile of a public water supply reservoir.
Prohibition of Sewage Discharge: CGS Section 22a-417	Prohibits sewage discharge within a public water supply watershed area.
Sanitation of Watersheds: P.H.C. Section 19-13-B32 et. seq.	Mandates various separating distances from potential sources of pollution to the edge of an established watercourse within a public water supply watershed area or aquifer recharge area and requires that special protections be taken during construction to protect stream quality.
Watershed Survey: P.H.C. Section 19-13-B102(b)	Requires a water company having an active water source of supply under its control to conduct a sanitary survey of the watershed at least annually and report the results of this survey to the Department of Public Health by March 1st each year.
Sanitary Survey Of A System Using Groundwater	In conducting a sanitary survey of a system using groundwater pursuant to P.H.C. Section 19-13-B102(e)(7)(E)(iii), information on sources of contamination within the delineated wellhead protection area shall be considered.
Watershed, Fishing, Passive Recreation & Penalties For Polluting A Reservoir: CGS Sections 25-43, 25-43c and 43(a)	Prohibits (i.e., bathing, aircraft, and general pollution) and regulates specific activities (i.e., fishing from boats with electric motors, fishing from shoreline) on public water supply reservoirs and associated watershed. Allows passive recreation for both surface and groundwater source areas through a permitting process. Any person who causes or allows any pollutant or harmful substance to enter any public water supply reservoir is subject to a fine of not less than one hundred dollars or imprisonment for not more than thirty days, or both.
Threat of Pollution: CGS Section 25-34 (a)	The Department of Public Health may make orders as it deems necessary to protect public drinking water sources or ice supplies for any pollution or threatened pollution, which, in its judgment is prejudicial to public health.
Orders To Correct Pollution: CGS Section 25-32g	Allows, after investigation, the issuance of orders in writing to any person to discontinue, abate, alleviate or correct conditions or activities that constitute an immediate threat to public water supplies.
Monitoring Waivers	The department may grant a public water system a waiver from the monitoring requirement for certain chemicals pursuant to P.H.C. Section 19-13-B102(e)(7)(C)(xii) – (xvi) if the watershed or zone of influence is not subject to certain types of land uses, and for certain chemicals, where previous analytical results showed no detectable limit of the contaminant to be waived.
Review of Projects In A Watershed By DPH: CGS Section 25-32f	Allows the State Department of Public Health to review and comment on proposed development projects and zoning changes within public water supply source water areas.
Water Company Review of Projects In A Source Water Area: CGS Sections 8-3i and 22a-42f	Requires an applicant to either the municipal planning and zoning commission, zoning board of appeals or the inland wetlands commission to notify the water company of the proposed development if this proposal is within the water company's public water supply watershed area (8-3i also includes aquifer protection areas). The water company therefore has the opportunity to provide comments to the municipality concerning the development proposal.
Individual Water Supply Plans: CGS Sections 25-32d and 25-32d-1 et seq.	Requires water companies which serve over 1,000 people to produce long-term water supply plans in which the water company must plan for adequate supply to meet projected demand for the next 50 years, which includes an evaluation of source water protection measures.
Regional Water Supply Plans: CGS Section 25-33d through 25-33j	Mandates water supply planning on a regional basis. Regulations detail the creation of the regional water supply plan. Individual water supply plans are a part of this regional process.
Local Governmental Consideration of Public Drinking Water Sources: CGS Section 8-2 & 8-23	Requires that a municipal plan of conservation & development and zoning regulations shall be made with consideration for the protection of existing and potential public surface and ground drinking water supplies.

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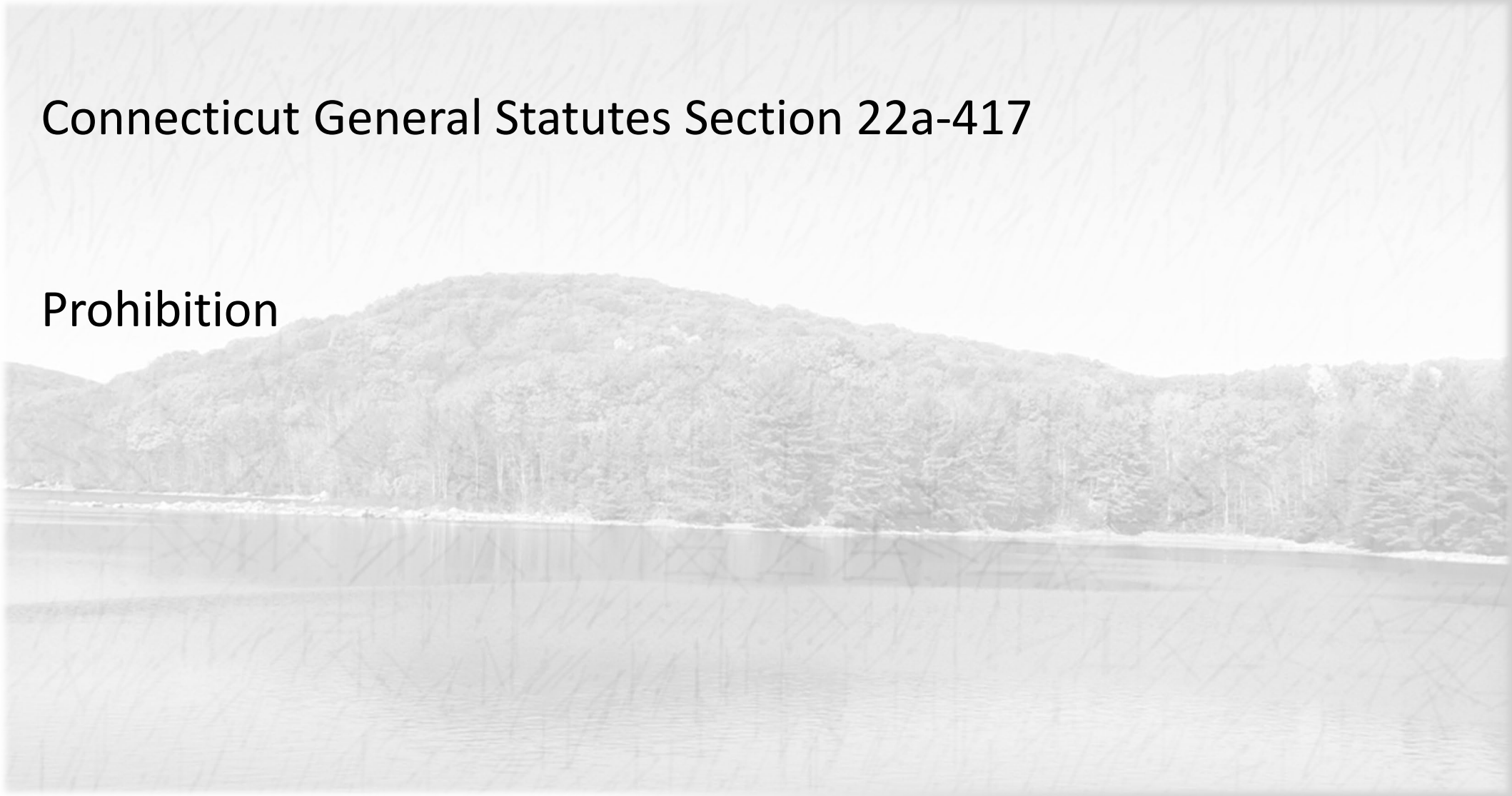
Critical Regulatory Component of Source Water Protection

Connecticut General Statutes Section 22a-417

Prohibition



Critical Regulatory Component of Source Water Protection

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RCSA Sec. 19-13-B102 (b) Watershed survey.

A public water system using surface water as an active source of supply shall make a sanitary survey of the watershed to the intake at least annually. A report on the survey shall be submitted to the Department by March 1 each year covering the preceding calendar year.

Planning Support for Protecting Drinking Water Sources

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- CT State Water Plan
  https://portal.ct.gov/Water/Water-Planning-Council/State-Water-Plan
- Water Utility Coordinating Committee Coordinated Water System Plans
  https://portal.ct.gov/DPH/Drinking-Water/WUCC/Water-Utility-Coordinating-Committee
- DPH/CIRCA Drinking Water Resiliency Study
  https://portal.ct.gov/DPH/Drinking-Water/DWS/Drinking-Water-Vulnerability-Assessment-and-Resilience-Plan-DWVAR-Plan

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STATE WATER PLAN

Authority

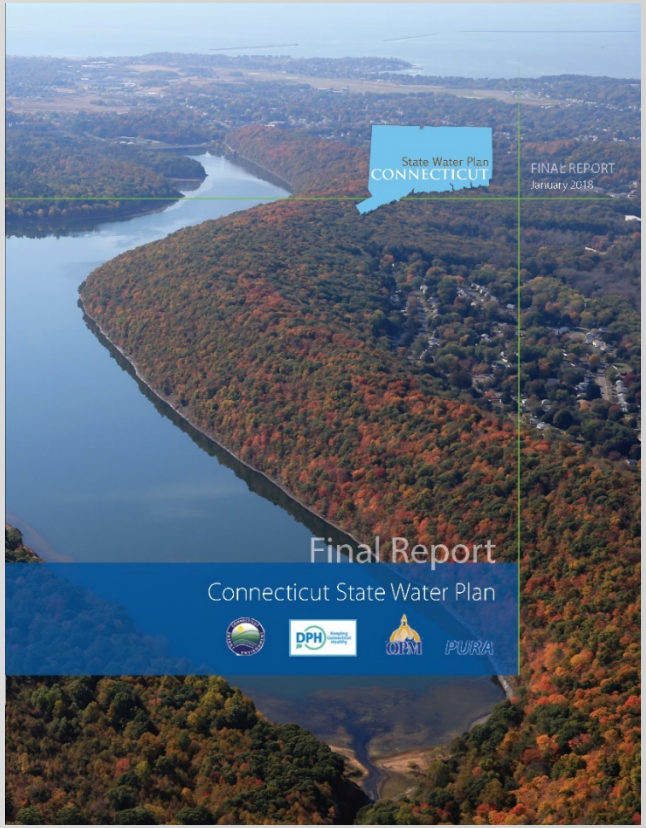
- Public Act 14-163 (CGS Section 22a-352)

Where is Source Water Protection Addressed?

- White Papers
- Policy Recommendations
- Pathway Forward Recommendations
- “Top Ten Consensus-Based Policy Priorities”
- “Five Most Important Messages in the Plan”

Is Source Water Protection a Major Highlight?

- Yes!



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STATE WATER PLAN

"Top Ten Consensus-Based Policy Priorities"

- Water management should follow scientific examples.
- As possible, remove obsolete water registrations.
- Encourage innovation in agricultural water
- Water data (or access to it) should be centralized in a single database and/or portal to other sources.
- Consider Class B Water for individual non-potable uses if environmentally prudent and cost-effective, using guidelines to be developed by the WPC using the Triple Bottom Line metrics (environmental, social, economic).
- Develop an education and outreach strategy focusing on water conservation topics.
- The WPC should provide ongoing review of other Connecticut state plans in order to identify and address inconsistencies.
- Encourage regional water solutions where they are practical and beneficial.
- Reaffirm support for the protection of Class I and II land contributing to water supply. Expand protections to other watershed lands and land that feed aquifers used for public water supply or by private wells.
- Create a data-based water education program aimed at the general public and municipal officials.

DPH Connecticut Department of Public Health

PHAB Accredited Health Department

STATE WATER PLAN

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“Five Most Important Messages in the Plan”

- Function: The Plan is not an answer, but a platform for consistent, informed decision making.
- Maintain the Highest Quality Drinking Water: The Plan reaffirms the state’s dedication to the highest standard of drinking water quality in the nation (Class A).
- Balance: Many river basins cannot satisfy all instream and out-of-stream needs all the time. The Plan offers ideas for understanding and improving this balance.
- Conservation: While Connecticut leads the nation in protections of drinking water quality, the State lags in its water conservation ethic. Outreach that builds on utility initiatives is one of the most important recommendations in this Plan.
- Maintain Scientific Data: The plan advocates for the collection and use of scientific data, as well as centralized access to it.

COORDINATED WATER SYSTEM PLAN (CWSP)

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Authority for the Water Utility Coordinating Committees (WUCCs)

- Public Act 85-535, CGS Section 25-33c-h and RCSA Section 25-33h-1

Where is Source Water Protection Addressed by the CWSP?

- Water Supply Assessment, 2.2 “Assessment of Water Quality and Source Protection Concerns”
- Water Supply Assessment, 6.3 “Land Use Planning and Coordination for Source Protection”
- Water Supply Assessment, 7.0 “Issues, Needs, Deficiencies”
- Integrated Report, 2.1.4 “Source Water Protection”
- Executive Summary
- Table of Recommendations

Is Source Water Protection a Highlight? Yes!

COORDINATED WATER SYSTEM PLAN

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Drinking Water Section

Water Supply Assessment, 6.3 "Land Use Planning and Coordination for Source Protection"

- 6.3.1 Community Water System Source Protection Efforts – explains what each water utility is doing
- 6.3.2 Source Water Assessment Program – SWAP summary
- 6.3.3 Regional Source Water Protection Efforts – mainly about the DWQMP
- 6.3.4 Connecticut Source Water Collaborative – brief explanation
- 6.3.5 Aquifer Protection Area Program – summary
- 6.3.6 Other Organizations – watershed associations, land trusts

CT Drinking Water Quality Management Plans

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- SWP and WUCC CWSPs note the importance of developing DWQMPs in Connecticut:
  - Connecticut State Water Plan – Public Act 14-163 (https://www.ct.gov/water/)

    "The DWQMP is a *locally based, comprehensive planning mechanism* to define and implement quality management mechanisms for public source water. The DWQMP approach is meant to highlight and spotlight drinking water quality and public health protection."

  - Connecticut Coordinated Water Supply Plans – Public Act 85-535 (https://portal.ct.gov/DPH/Drinking-Water/WUCC/Water-Utility-Coordinating-Committee)

    "It is recognized that source water protection goals may be counter to a community's economic goals, particularly when development is desired within a reservoir watershed. Moving forward, the Water Utility Coordinating Committee should encourage this type of planning…DPH has promoted a program to assess systems that cross town boundaries (DWQMP) and address protection of drinking water supplies on a regional scale."

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Drinking Water Section

WP1.6.3. Drinking Water Quality Management Plan[16]

Despite having some of the oldest source protection laws on the books, Connecticut has strived to make advances in source protection. The programs described above have accomplished significant source protection, but DPH has recognized the need for additional tools.

The phrase "Drinking Water Quality Management Plan" was first developed by the DPH in 2005. The DWQMP concept is similar to traditional source protection, but it emphasizes and focuses on the public health aspects of maintaining high-quality potable water supplies through the first barrier of the multi-barrier approach. The DWQMP approach is meant to highlight and spotlight drinking water quality and public health protection. The guidelines and recommendations for the DWQMP as set by the DPH were first articulated in a presentation entitled "*Drinking Water Quality Management Planning*," given in May 2006. In general, the DWQMP is *locally based, comprehensive planning mechanism* to define and implement quality manageme mechanisms for public source water.

Drinking water source protection serves as the initial barrier to contaminants entering drinking water supplies, increasing the efficiency and cost effectiveness of available treatment while maintaining the relatively low cost of water delivery to the public consumer.

A regional DWQMP was completed in southeastern Connecticut in 2009. This DWQMP w developed to become a model for other collaborative DWQMPs to be developed in Conn However, to date, few have been developed, and those that have been developed are si rather than communitywide.

WP1-6.4. Source Water Collaborative

Source protection has gained traction again recently with establishment of the "Connecti

Coordinated Water System Plan
Part III: Final Integrated Report

Western Public Water Supply Management Area
May 22, 2018

Keeping Connecticut Healthy
DPH
Connecticut Department of Public Health

2.1.4 Source Water Protection

The WUCC promotes the adoption of best management practices for the use of green infrastructure in stormwater management design by local communities, particularly when stormwater could affect a source of supply. Utilities should continue outreach to local officials, staff, and commissions regarding this topic.

Many environmental groups have urged the WUCC to protect Connecticut's environment and maintain pure drinking water supplies. Protection of the environment and protection of water supply sources in many ways are mutually beneficial. Source protection and environmental conservation, for instance, are harmonious throughout many drinking water supply watersheds and aquifers used for water supply. Wellhead and watershed protection for both existing and future supply sources has made significant progress in the past 15 to 20 years with completion of the Source Water Assessment Program (SWAP), completion of the majority of the Level A mapping, and full implementation of the Aquifer Protection Area (APA) regulations.

Nevertheless, continued land development and the need to address issues that cross-jurisdictional boundaries are of particular interest regarding watershed lands, especially for systems with contributing watershed areas that span more than one community. In particular, the WUCC is concerned with the potential impact of development on stormwater quality in reservoir watersheds. While DPH has promoted a program to assess systems that cross town boundaries (known as the Drinking Water Quality Management Plan [DWQMP] process) and address protection of drinking water supplies on a regional scale, there has been little traction for using this unique collaborative approach in the state with only one such plan completed to date.

The protection of watersheds is critical for source protection but is challenging when land is not owned by the utility or held by others for conservation purposes. Encouraging low amounts of development and conservation of existing large protected water-sheds is a regional goal, with the DWQMP process as a potential solution.

In some areas, it is recognized that source water protection goals may be counter to a community's economic goals, particularly when development is desired within a reservoir watershed. Moving forward, the WUCC should encourage this type of planning for

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PHA Public Health Accredit

Connecticut Source Water Collaborative

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- Protect Drinking Water
- Shared duty/roles
- Partnerships/Networks
- Benefit works both ways

- The Collaborative is meant to be a means for organizations with a stake in drinking water source protection to interact and initiate/support efforts to provide long-term protection. The hope is that the Collaborative would also be a source of support to the organizations and help them in their efforts.

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CT source water COLLABORATIVE

Statement of Purpose:

The Connecticut Source Water Collaborative develops and supports strategies to preserve, protect and maximize the conservation of the lakes, streams, rivers and aquifers used for drinking water and the land that protects and recharges these sources of water. Ensuring the high quality and sufficient quantity of our state's current and future drinking water resources not only serves public health but is essential for a vibrant economy and supports recreation, the environment and the complex, natural ecosystem with which they are interconnected.

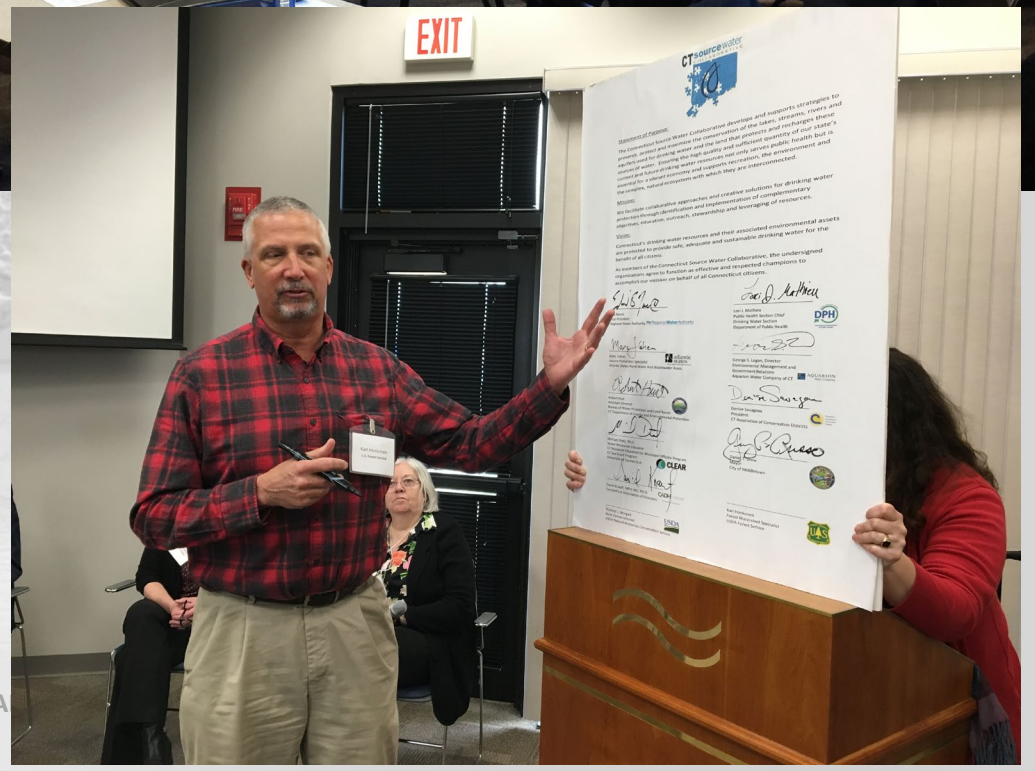
Mission:

We facilitate collaborative approaches and creative solutions for drinking water protection through identification and implementation of complementary objectives, education, outreach, stewardship and leveraging of resources.

Vision:

Connecticut's drinking water resources and their associated environmental assets are protected to provide safe, adequate and sustainable drinking water for the benefit of all citizens.

As members of the Connecticut Source Water Collaborative, the undersigned organizations agree to function as effective and respected champions to accomplish our mission on behalf of all Connecticut citizens.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National Source Water Collaborative

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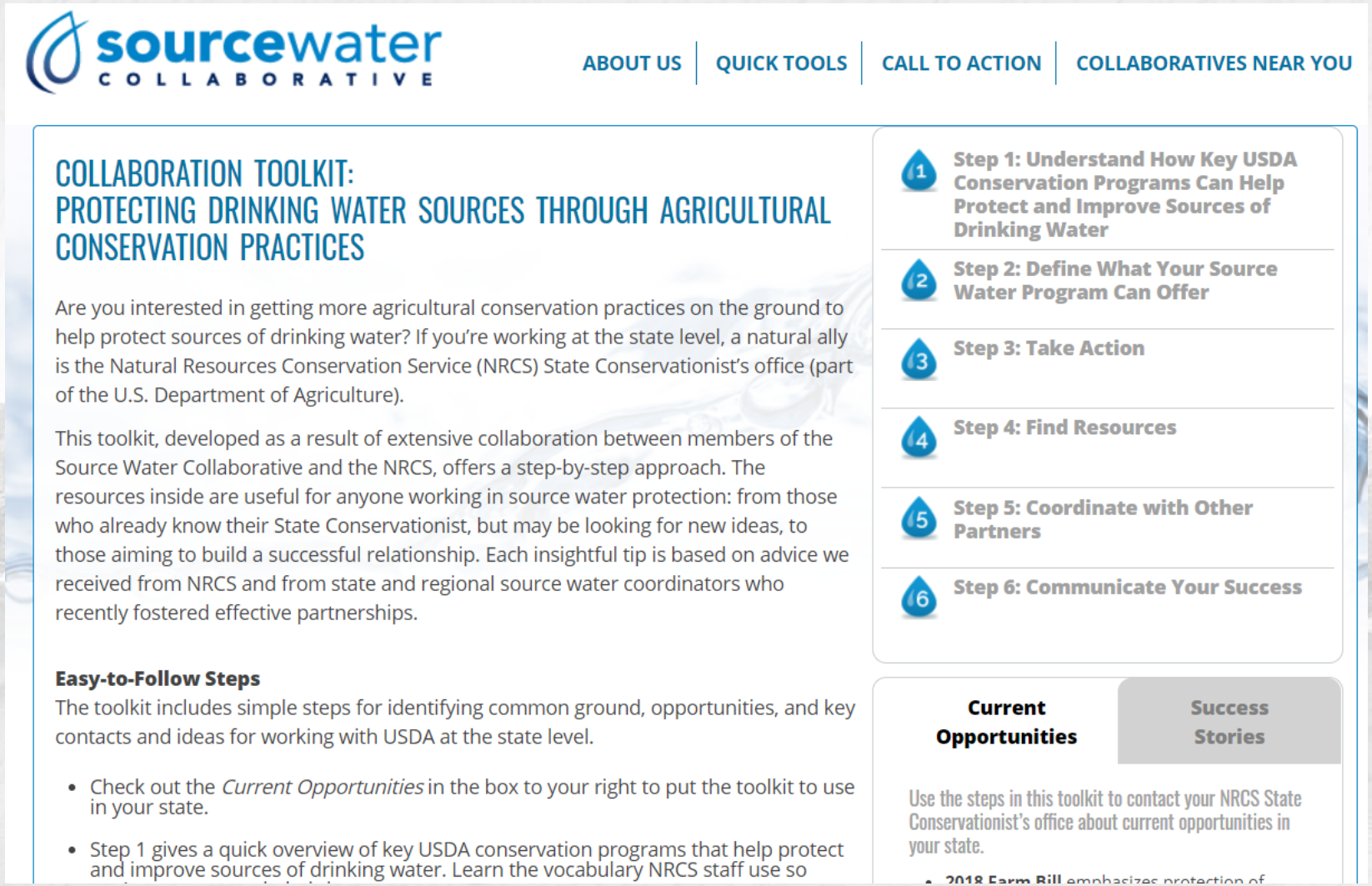

sourcewater COLLABORATIVE

ABOUT US | QUICK TOOLS | CALL TO ACTION | COLLABORATIVES NEAR YOU

COLLABORATION TOOLKIT: PROTECTING DRINKING WATER SOURCES THROUGH AGRICULTURAL CONSERVATION PRACTICES

Are you interested in getting more agricultural conservation practices on the ground to help protect sources of drinking water? If you're working at the state level, a natural ally is the Natural Resources Conservation Service (NRCS) State Conservationist's office (part of the U.S. Department of Agriculture).

This toolkit, developed as a result of extensive collaboration between members of the Source Water Collaborative and the NRCS, offers a step-by-step approach. The resources inside are useful for anyone working in source water protection: from those who already know their State Conservationist, but may be looking for new ideas, to those aiming to build a successful relationship. Each insightful tip is based on advice we received from NRCS and from state and regional source water coordinators who recently fostered effective partnerships.

Easy-to-Follow Steps

The toolkit includes simple steps for identifying common ground, opportunities, and key contacts and ideas for working with USDA at the state level.

- Check out the *Current Opportunities* in the box to your right to put the toolkit to use in your state.
- Step 1 gives a quick overview of key USDA conservation programs that help protect and improve sources of drinking water. Learn the vocabulary NRCS staff use so

1 **Step 1: Understand How Key USDA Conservation Programs Can Help Protect and Improve Sources of Drinking Water**

2 **Step 2: Define What Your Source Water Program Can Offer**

3 **Step 3: Take Action**

4 **Step 4: Find Resources**

5 **Step 5: Coordinate with Other Partners**

6 **Step 6: Communicate Your Success**

Current Opportunities | **Success Stories**

Use the steps in this toolkit to contact your NRCS State Conservationist's office about current opportunities in your state.

- **2018 Farm Bill** emphasizes protection of

Source Water Protection

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- Source Water Protection is evolving and maintaining our drinking water sources will require multiple efforts and partners
- Recent stresses reinforce the need to remain vigilant, active
- Source protection linked to preparedness, resiliency and long-term financial viability
- Encourage utilities to consider rethinking/broadening the parameters of their source water protection programs and consider new tools, concepts and partners

Risks

- Climate-related changes are compounding risks to drinking water sources
  - Increased storm strength/frequency + increased impervious area + drought stress
  - Variable water temperature + increased nutrient loading + drought

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Guidance to Water Utilities on Expanding SWP Plan

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- Broaden scope of watershed surveys to include nutrients (education/partnership)
- Initiate/expand a forestry program
- Consider deer hunting and other recreational activities
- Be aware of, and ideally stay ahead of invasives
- Work with your partners. Communicate.
- Opportunities for partnerships

Harmful Algal Blooms (Cyanobacteria) and Drinking Water

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- Is an issue in Connecticut for both recreation and drinking water
- Land use (nutrients, temperature) contributes to the problem
- Climate variability (temperature, storm intensity, drought) can increase likelihood

- Are water utilities prepared? Is there also a quantity concern?

- Source protection efforts can mitigate risk of cyanobacteria blooms

2020

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More 2020

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Drinking Water Section

Harmful Algal Blooms (HABs) and Drinking Water

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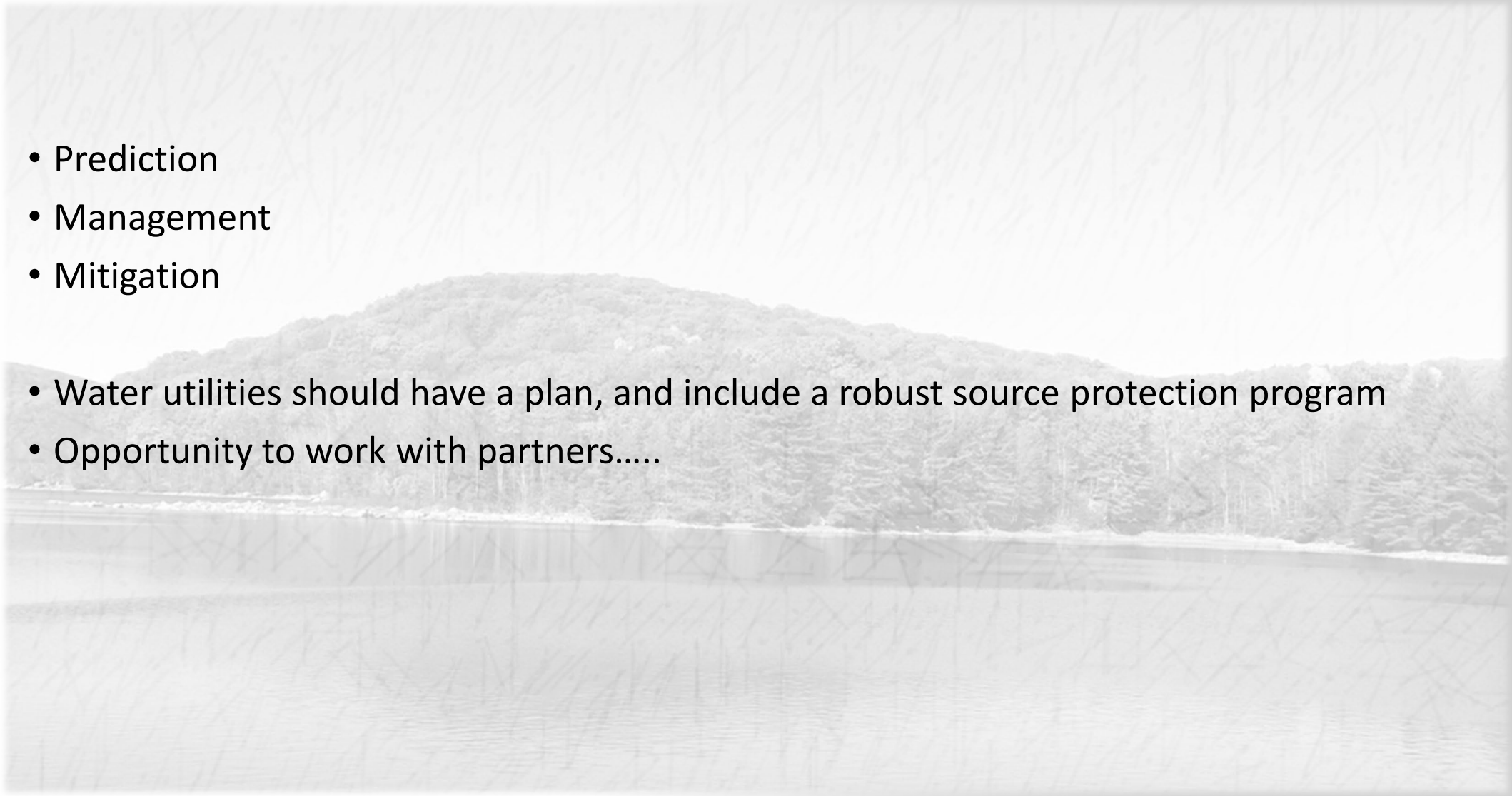
- Prediction
- Management
- Mitigation

- Water utilities should have a plan, and include a robust source protection program
- Opportunity to work with partners…..



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Source Water Protection Summary

- There is not just one specific risk to a public water supply source
- There is not just one source protection solution
- Unique problems for each public water system
- Storms, septic failures, stormwater, agriculture, urbanization, deforestation, invasive plants and insects, spills, lawn chemicals, etc. may all contribute to varying degrees to a decrease in source water quality
- Risks increase incrementally

Partner Efforts

USDA NRCS National Water Quality Initiative Source Water Protection Pilot

Starting in FY19, NRCS will initiate a National Water Quality Initiative (NWQI) pilot for source water protection, providing special consideration for proposed NWQI watershed areas that address surface and/or ground water sources of drinking water. Under this "Readiness Phase" pilot, NRCS will work with state water programs (including drinking water programs), drinking water utilities, and other partners in developing or enhancing watershed and/or aquifer protection assessments or plans to address agricultural-related impacts to source water quality.

Action: States interested in working with NRCS and other partners to plan in FY '19 for implementation of source water quality conservation in FY '20 (assessments will be done during FY '19 and implementation with financial assistance in FY20) are strongly encouraged to reach out to NRCS and state clean water programs to discuss partnering in the NWQI Readiness—Source Water Protection Pilot.

Background: Through the NWQI, NRCS invests in targeted assistance to help agricultural producers institute practices that improve water quality in high-priority waterbodies across the country. NWQI provides an opportunity for partners to work with NRCS on a shared vision for water quality priorities. Since 2012, NRCS has partnered with state water quality agencies and EPA to identify and address nutrient, sediment and/or pathogen impaired waterbodies through voluntary agricultural conservation.

NWQI Readiness--Source Water Protection (SWP) Pilot Details:

- NRCS will be expanding NWQI to provide planning resources in new selected source water protection areas (i.e. delineated watershed or aquifer areas) in FY19.
- NRCS state offices will receive resources to work with state water quality and drinking water agencies and other partners (e.g. drinking water utilities) in 1) developing and enhancing a source water protection area-level assessment and outreach plan, and 2) to begin developing conservation plans with interested landowners in these areas.
- NWQI SWP pilot areas can be selected independently and in addition to NWQI Readiness watersheds identified for surface water assessment or implementation, i.e. pilot areas do not have to coincide with impaired, threatened, or critical waterbodies as determined by the state.
- Accelerated financial assistance to implement these source water assessments and conservation plans will be provided in some protection areas the following year (FY20) when successful pilot areas will enter into Implementation Phase.

NRCS Technical Assistance and Guidance for Source Water Assessments:

- NRCS may provide technical resources which could be used for partner agreements with NRCS for partners to lead/perform the watershed assessments and outreach. Or partners can contribute/lead with their own resources. NRCS can also provide Conservation Technical Assistance (CTA) to states to assist with staff time and/or partner agreements for these assessment and outreach activities.
- For Source Water Protection projects to be approved for NWQI, the affected drinking water utilities must have an existing source water protection plan or assessment already developed by the state or utility that delineates the area or areas of protection.
- NRCS will support NRCS offices with GIS and other analysis tools and products, as well as training and guidance for area wide planning where state NRCS offices lack staff with expertise.

State Agency and Partner Roles:

EASTERN CONNECTICUT CONSERVATION DISTRICT, INC.

238 West Town Street
Norwich, CT 06360-2111
860-319-8806

139 Wolf Den Road
Brooklyn, CT 06234
860-774-9600 ex 24

www.ConserveCT.org/eastern

August 5, 2019

What Do You Value in the Upper Natchaug River Watershed?

Thank you in advance for committing your time, knowledge and expertise to our Upper Natchaug River Healthy Watershed Implementation Plan project. We at the Eastern Connecticut Conservation District are grateful for your participation.

At Mansfield Hollow Lake in Mansfield, three river join together; the Natchaug, Mount Hope and Fenton Rivers. The Connecticut DEEP has determined the upper Natchaug River basin to be an example of a healthy watershed due to the limited impacts from development in most of the land drainage areas associated with these rivers. This project, the first of its kind in Connecticut, will result in the development of a plan to maintain and protect existing water quality from unnecessary pollution. The plan will provide managemen guidance for the growing upstream communities of Ashford, Chaplin, Eastford, Hampton, Mansfield, Unio Willington and Woodstock. Good water quality found in the streams, ponds and lakes of these towns contributes to their residents' quality of life. Healthy streams are also related to the quality of the groun water resources that most of the residents get their drinking water from. The customers of Windham W Works also benefit, as the Natchaug River is the source of their drinking water.

Benefits of Healthy Watersheds

Why identify and protect healthy watersheds? In many ways, healthy watersheds substanti affect the quality of life for people and the environment overall – often by performing 'free work' that communities do not have to do, or pay for, themselves. The beneficial roles of watersheds in healthy condition can be surprisingly far-reaching and include ecosystem services, economic benefits and physical and mental health benefits. (US EPA)

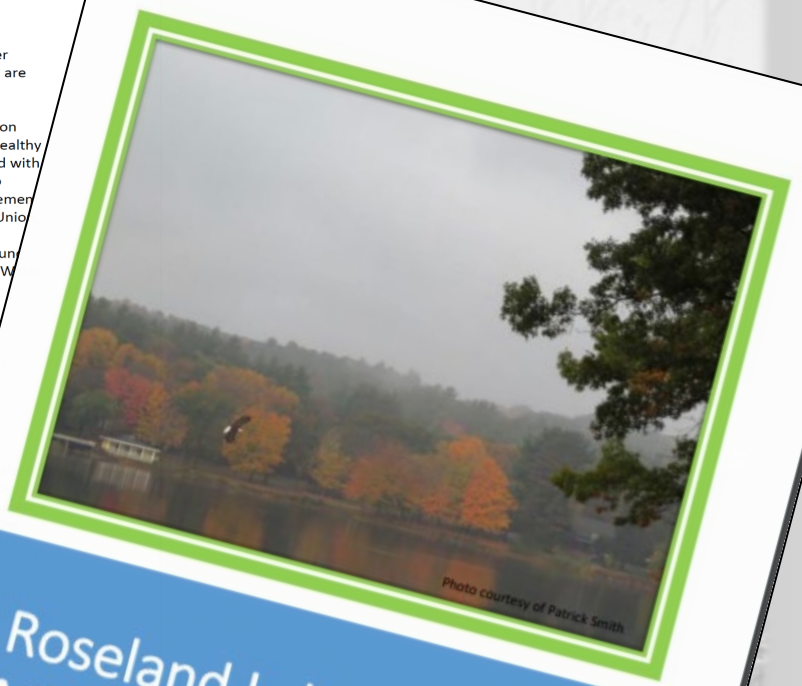
In order to focus our thoughts on how to frame and develop the Upper Natchaug River Healthy Implementation Plan, we've developed the attached survey. We want to know what is importa about the Natchaug, Mount Hope and Fenton Rivers and Mansfield Hollow Lake. Please bring t survey and join us on Thursday, August 29, 2019 from 8 – 10 AM at Camp Woodstock YMCA C Director's office conference room, located at 42 Camp Road, Woodstock, CT. A light continen will be available. At this meeting, we will recap the Natchaug River Conservation Action Plan when the CEO's of the eight communities signed the attached Natchaug Basin Conservation This project is the next step to preserving good water quality and its many associated value the Natchaug River watershed basin. At this meeting we will review the survey results, and the watershed plan is developed over the next year.

I am looking forward to working together with you to protect these great resources in N Connecticut. Please RSVP using the contact information below.

Sincerely,

Jean M. Pillo

Jean Pillo, Watershed Conservation Project Manager
Eastern Connecticut Conservation District
Jean.Pillo@Comcast.net
860-928-4948 extension 605



Roseland Lake Management Plan

Woodstock, Connecticut

Eastern Connecticut Conservation District

3/14/18

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 and the Town of Putnam Water Pollution Control Agency.

Grant # 13-01e, Task 1j

SWPP: Connecticut Source Water Protection Project

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Identified Problems

- An increasing number of drinking water supply sources in Connecticut, including the Farm River, are experiencing algal blooms raising serious public health concerns. There is a potential benefit in bringing the expertise and resources of those traditionally involved in Farm Bill, EPA 319, and LISS watershed management programs into the source water protection effort. Stakeholders can embrace a One Water concept to better leverage technical and financial resources
- Water utilities and other partners involved in source water protection are not as familiar with USDA-NRCS and DEEP watershed programs. There is a need to increase their understanding and participation in USDA-NRCS programs and the opportunities for source water protection in the new Farm Bill and with EPA 319 and LISS programs.
- Incomplete GIS data resulting in inability to prioritize conservation work in drinking water supply watersheds.

SWPP: Goals

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Drinking Water Section

- Increase stakeholder knowledge of source water protection and the increasing algal bloom problem in CT.
- Provide stakeholder outreach/training on source water protection and the One Water concept (✓).
- Expand capacity for source water protection in Connecticut by increasing stakeholder access to technical information and GIS.
- Provide access to federal technical and financial assistance in the Farm River Watershed as part of the readiness source water pilot for the NWQI program.

SWPP GIS

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Drinking Water Section

- Coordination of a statewide GIS inventory of land use in all source water protection areas building on work already started by the Department of Public Health
- Identification and prioritization of source water protection areas for both quality and quantity

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Drinking Water Section

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

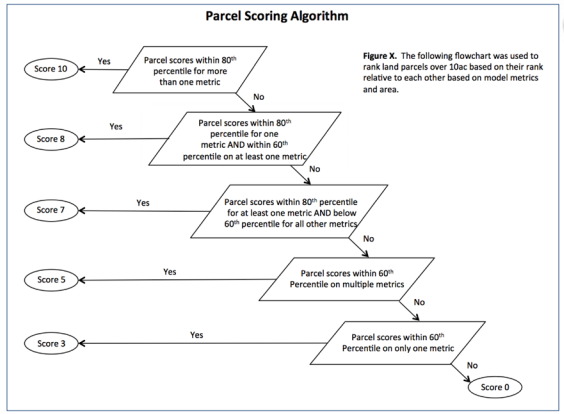
Unprotected parcels over 10 acres in size within public water supply watersheds were analyzed for various attributes such as percent forested, distance to wetlands, soil type distance to rivers and streams, and the percent slope of the parcels (Figure 1).

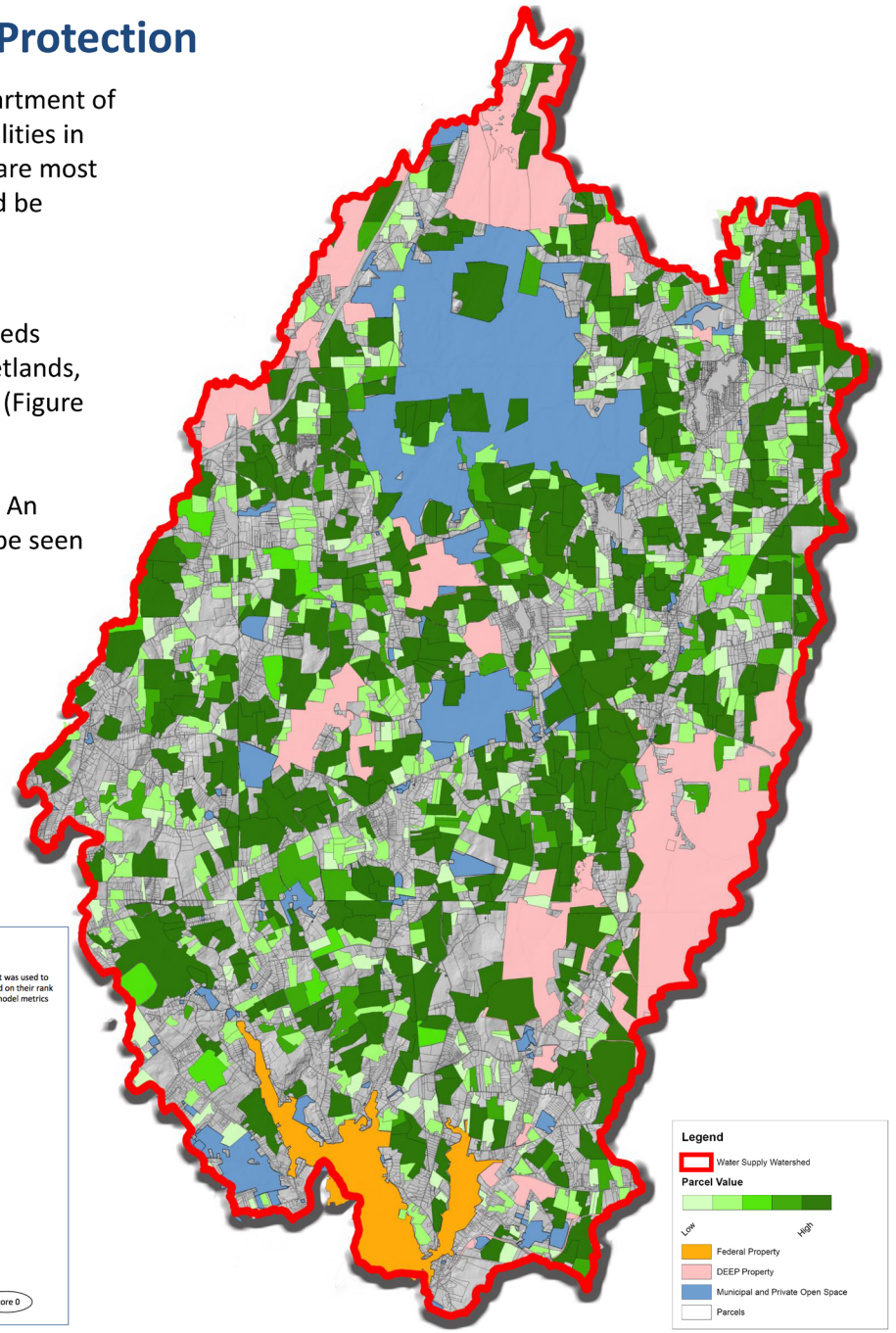
Parcel scores were are tabulated using a Parcel Scoring Algorithm (Figure 2). An example of the results for one drinking water watershed in Connecticut can be seen on the right.

Figure 1

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

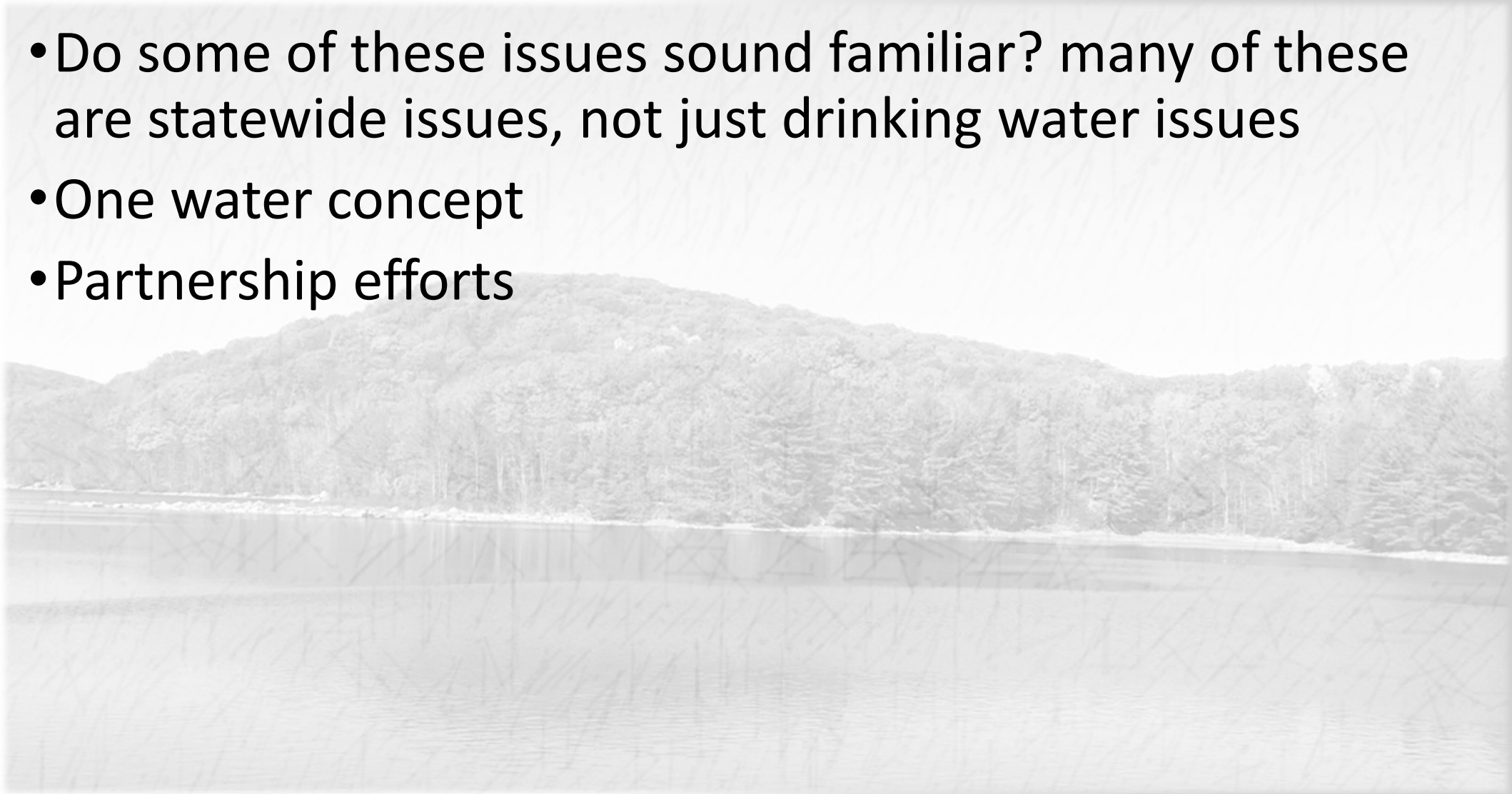
Figure 2





Summary

- Do some of these issues sound familiar? many of these are statewide issues, not just drinking water issues
- One water concept
- Partnership efforts



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