ATTACHMENT G

2010 – 2015 Strategic Plan for the Implementation of Drinking Water Source Protection In Connecticut

State of Connecticut
Department of Public Health

Drinking Water Section

Source Water Protection Unit

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Introduction

The Department of Public Health Drinking Water Section's (DWS) Source Water Protection (SWP) Unit is responsible for the protection of Connecticut's 4,000 drinking water sources. The draft Strategic Plan recognizes this responsibility, and highlights elements that will minimize the risk to public health. The program elements coordinate, manage, and regulate source protection through enhancement and oversight of existing source protection laws and regulations, integration with water supply planning, education of local land use officials, and involvement with stakeholders on a continuous basis. This unit works to meet the goals and objectives listed below by enacting the actions items as identified within this Strategic Plan.

Mission Statement: Promote, enhance, and protect public health through the active protection of all existing and future public drinking water sources of supply in Connecticut.

Objective 1: Implement the comprehensive drinking water source protection strategic work plan by the DPH's Source Water Protection Unit, reframing, reformatting and revising existing public health law, with a emphasis on education and training, involvement of stakeholders and creation of linkages to all relevant programs.

Objective 2: By 2012, 100 percent of source water areas for community water systems (both surface and ground water) will achieve minimized risk to public health by substantial implementation of the source water protection actions as identified in this Strategic Plan. This is consistent with a source water protection sub-objective 2.1.1 under Goal 2: Clean and Safe Water within EPA Office of Water's National Water Program Guidance.

The plan's action items place an emphasis in five main areas: regulatory, management planning, education and training, cross program linkages, and stakeholder involvement. The program elements are to coordinate, manage, and regulate source protection through utilization of assessment report information to:

- Enhance, oversee, and enforce existing public health source protection laws and regulations,
- Integrate drinking water source protection with water supply management planning,
- Initiate the development of drinking water quality management plans,
- Educate and train local land use officials,
- Link to related programs to emphasize proactive public health protection through source water protection, and
- Involve stakeholders on a continuous basis.

The five areas emphasized have been identified by the Department of Public Health as critical to drinking water source protection, and achieving minimized risk to public health. Implementation of action items within this strategic plan is critical towards achieving substantial implementation for all sources of community public water supply sources.

Strategic Work Plan Outline

In order to fulfill the above mission and two objectives, the following action items are listed for implementation.

Statutes/Regulations

Continued development, enhancement and adaptation of source water protection laws are critical to ensure public health is maintained at the highest possible level through source water protection.

- Hire a consultant with extensive source water protection, statutory, and regulatory knowledge for investigation and redevelopment of source protection regulations, including:
    - Incorporation of PA 08-137 (CGS 25-33(b)) into regulation (Plan required for construction or expansion of a water supply system or a proposed new source of water supply) and determine the appropriateness of incorporation into RCSA Section 19-13-B51 and/or B102.
    - Update, revise and reformat statutes and regulations concerning water company lands.
    - Evaluate disconnect between the permitting of a sale of a water supply source and the permitting of the sale of the land surrounding the source, and provide regulatory and/or permitting solutions.
    - Develop statutes and/or regulations pertaining to the sale of a water company.
    - Develop regulations for CGS Section 25-33l (Sale of source, potential source or abandoned source of water supply).
    - Provide guidance on the redevelopment of RSCA 19-13-B51 concerning the siting and protection of public water supply wells.
    - Conduct an evaluation of transferring well siting and protection regulations to RCSA Section 19-13-B102 for consistency with the newly adopted Ground Water Rule.
    - Review and provide advice for an update to the Department's authority under RCSA 19-13-B32 including permitting requirements, and enforcement mechanisms for non-compliance.
    - Provide guidance and analysis concerning the original intent of statutes and regulations for at least the following: minimum stream flow, well siting, and source protection. Provide guidance and analysis of minimum streamflow regulation revision.

Permitting/Approvals

Source water protection has been documented in public health department records at least back to 1937. Water companies purchased land for sanitary control and watershed inspections of on-site sewage disposal systems were made to prevent source contamination. A legislative act in 1967, gave health department jurisdiction over the adequacy of water. This was further developed by a 1974 public act in the disposition or change in use of any watershed land. Consistent statutory changes from interested stakeholders over the last thirty years has proven permitting is dynamic. Regulations establishing criteria and performance standards for classification of water company land and the departments review of disposition and use of those lands were promulgated from a 1977 statute. Departmental review determined sufficiency and whether the proposed action will have a significant adverse impact upon the drinking water sources. In an effort to meet current needs and streamline the continued administration of water company lands the Source Water Protection Unit will stay abreast of globally embraced technological changes and remove antiquated process formats by:

- Review and approval of proposed sources of supply, including verification that the water system has ownership or control of the sanitary radius for proposed groundwater sources.
- Review of water company lands permits applications to meet statutory review deadline.
- Initiation of development of drinking water source protection management plans,
- Development of a permitting/site approval section on the DWS website to include links to relevant regulations and statutes, as well as provides application and technical assistance data sheets.
- Revise, update and develop all permit application forms, prioritizing water company land permit applications.
- Review of recreational activity permit proposals and renewals.

Source Water Area Inspections

The SWP Unit plans to enhance the process of conducting annual watershed inspections by public water systems to ensure the highest level of water quality and to ensure utility consistency with the requirements of *RCSA Section 19-13-B102b and 19-13-B32. Actions include the following:*

- Review and respond to annual public water system inspection reports.
- Conduct investigatory site visits in response to spill or contamination events.
- Accompany utility and local health officials on watershed inspections.
- Promote active communication between utilities and local health deparments.
- Provide training to utilities and local health departments.
- Develop and disseminate information on watershed protection best management practices to utility management, inspectors, local health departments, and property owners.
- Work with CT Section AWWA Source Water Protection Committee to develop guidance to determine and target high/medium rated sources for more frequent/detailed inspections.
- Review past information reported, and start database of this information. Incorporate this information into DWS GIS system. Review present violations report and update.
- Review past violations and potential sources of contamination, and take follow-up actions, including site visits and initiation of investigations and/or orders per CGS 25-34.

- Promote consistent reporting among public water systems required to submit reports.
- Develop a strategy to integrate site inspections, SWAP assessments, water supply plans, and the CWA 305b reporting requirements. Information collected in the field by the public water systems should:
    - Concentrate on the more highly susceptible sources,
    - Verify SWAP SPCS information, and
    - Incorporate into updated assessment type information in water supply plans and regional plans.
- Hire a consultant with extensive source water protection, statutory, and regulatory knowledge to update, revise and reformat RCSA Section 19-13-B102(b) to reflect the above initiatives.
- Work with local health directors, towns and DEP to review and eliminate regulatory violations.

Geographic Information System

The maintenance of source water data is critical to the monitoring of land uses near sources, as well as the implementation of Source Water Protection strategies. In addition to Source Water Protection, GIS plays an important role in Water Supply Planning, Monitoring, and other compliance needs.

Highly accurate data is essential for adequate source assessment and protection. As the role of GIS continues to grow, the Source Water Protection Unit is committed improving the DWS's GIS application and DWS GIS data layers. In order to ensure data integrity, system longevity and effectiveness; the SWP Unit will:

- Redevelop the Drinking Water Sections's GIS system, utilizing external consultants as needed.
- Develop a detailed implementation plan for the continuous update and maintenance of the DWS's GIS data layers. Review how other sources of data could be utilized to assist with the updates of these layers.
- Develop a real-time SWAP report module, utilizing a redeveloped GIS system, SDWIS/State, and other maintained data sources.
- Develop a new data layer working with Planning for tracking future potential sources of supply as identified within individual water supply plans. This is consistent with the initiative of the Water Planning Council.
- Develop an Operations and Maintenance plan for the new GIS system. This includes ongoing system upgrades, data layer updates, and routine system maintenance.
- Continue to represent the DWS at statewide GIS committees.
- Bridge with other units to incorporate field collected and verified data in order to improve data integrity.
- Develop an ongoing training program for staff of the DWS to ensure understanding and promote consistent use of the GIS system.
- Evaluate the value of GIS to other units, and develop new datasets as necessary.
- Continue to use GIS to support the analytical needs of the Drinking Water Section.

Assessments

Connecticut has more than 150 surface water reservoirs and more than 3,800 ground water supply wells that are used to supply approximately 80% of the state's population with public drinking water. In April of 2003, the DPH Drinking Water Section, following its EPA-approved Source Water Assessment Workplan, completed an initial susceptibility determination of these sources to significant potential sources of contamination. Information developed by the assessments for each delineated source water area includes land use/land coverages, the location of significant potential contaminant sources, and places where spills or chemical releases occurred historically. The assessment reports are being used by public water systems, regional planners, local government and public health officials to plan and direct drinking water source protection initiatives. Connecticut's residents that rely on public sources of drinking water also have access to the assessment data on the Department of Public Health Drinking Water Section Website: http://www.ct.gov/dph/publicdrinkingwater.

The Drinking Water Section is also integrating the assessment data into other Section programs including the coordination of statewide source protection efforts, new source approvals, watershed inspections, and the public water system water supply planning process. DWS is committed to maintaining and updating the initial assessments reports to ensure their continued accuracy and usefulness.

- Develop a real-time SWAP report module, utilizing the existing SWAP reports, a redeveloped GIS system, SDWIS/State, and other maintained data sources.
- Provide technical assistance and require source water monitoring and/or corrective actions of water systems that have sources that are deemed at an elevated risk due to real-time SWAP reports, utilizing the provisions of the Ground Water Rule, where appropriate.
- Continue to update assessment information through linkages with individual and regional water supply plans, watershed inspection reports, outreach and partnerships with various groups, updated GIS data from the DEP, and with Consumer Confidence Reports (CCR).
- Integrate SWAPs, HSAs (hydrogeological sensitivity assessments), and significant deficiencies to determine assessment monitoring strategies for potentially impaired sources.
- Develop a method to measure progress of the strategic plan's implementation. This new tool will provide the ability to produce timely activity reports on a periodic basis, fulfill EPA reporting and tracking requirements under the DWSRF and track progress of performance measures under the PPA.
- Review PWS submissions pertaining to CCR-SWAP, source water protection methods, and water conservation information for compliance with RCSA Section 19-13-B102(i)10(J) and CGS 25-32k.

Local, Regional, and State Partnerships - Environmental Impact Review

Work with state agencies and Regional Planning Organizations to promote the usage, and understanding of SWP concepts and best management practices to enhance drinking water source protection. Work with communities concerning drinking water source protection. Continue to review local development projects, regulations and/or local plans of Conservation & Development under a series of public health laws that allow the DPH to provide guidance concerning drinking water protection. Continue to review projects for other state agencies. Reviews would utilize and incorporate SWAP assessment information and follow statewide drinking water source protection policy.

- Review and evaluate potential impacts of proposed projects in public water system watersheds and aquifer protection areas, received as a result of statutory notification requirements of CGS Sections 8-3i and 22a 42-f.
- Provide comments to local land use boards under the authority of CGS Section 25-32f.
- Work with DEP concerning implementation of the aquifer protection area land use regulations.
- Work with the DEP to gain access to and maintain critical information concerning known spills, contamination events, UIC wells, and UST's.
- Develop DWQMPs. Hire a consultant with extensive source water protection, statutory, and regulatory knowledge to develop DWQMP statutes and regulations.
- Develop an ongoing outreach component that is geared towards local municipal planners and land-use boards that educates land use commissioners concerning local responsibilities under CGS Sections 8-2, 8-23, 8-3i and 22a-42f.
- Continue to work cooperatively with the Regional Planning Organizations concerning drinking water protection.
- Continue to review project applications, submitted to other state agencies, for potential impact to public water supply sources, and recommend source water protection measures.
- Review local development projects, regulations and/or local plans of C&D under a series of public health laws that allow the DPH to provide guidance concerning drinking water protection.
- Develop a series of BMP/BAT Fact sheets (standard comments for groundwater and surface water sources, concerns and recommendations for various types of development projects addressing drinking water protection) that will facilitate a quick turn-around on reviews.
- Develop a section of the DWS website that includes Source Water Protection Fact Sheet information.
- Maintain a connection to the Environmental Review Team (ERT) to assist in the review of local development projects.

Planning

Integrate source water assessment information into individual and regional water supply plans.

- Draft regulations for both the individual and regional water supply plans in order to strengthen drinking water source protection in long-term planning per PA 02-102.
- Track and assess future sources of public drinking water as identified within water supply plans (individual and regional).
- Work with the DEP to ensure that future sources of public drinking water are protected under the CWA water quality classification system.
- Develop assessments for future sources of supply identified in the individual water supply plans.
- Review individual and regional water supply plans for adherence to the source water protection evaluation requirements.

Outreach

Work with relevant groups to enhance drinking water source protection and provide useful educational materials.

- Continue to work proactively with public water systems, CWWA, and the CT Section Source Water Protection and Water Conservation Committees, including attending meetings and presenting at training events.
- Redevelop website with an emphasis on public health and drinking water source protection.
- Develop source water protection outreach materials for use of the DWS website.
- Continue to proactively work with the States of New York, Rhode Island, and Massachusetts concerning source water protection for border sources of supply.
- Work with Tribal Nations concerning source water protection.

Climate Change Adaptation

Climate change occurring in the northeastern portion of the United States is predicted to cause higher intensity but less frequent precipitation events, more frequent short term droughts, sea level rise and higher temperatures. The water quality of PWS surface water resources can be anticipated to be adversely affected by increased erosion and sedimentation and increased nutrient loads. PWS ground water resources may be adversely affected by reduced infiltration for aquifer recharge and flooding of low lying wells and salt water intrusion to coastal systems. Due to potential shortfalls in streamflow and increases in temperature of Class A and AA sources, increased pressure has been applied to allow use of Class B water for public drinking water supplies. The DPH will focus on the following areas to address Climate Change Adaptation:

- Continue to review and comment on site plans of projects which are proposed to be located in PWS drinking water supply source areas to encourage the implementation of stormwater detention and treatment best management practices.
- Educate local land use officials of towns that are located in public water supply source water areas on the various development strategies including low impact development and green infrastructure which will allow economic viability while protecting the public drinking water sources.
- In conjunction with DEP, revise the permitting program for application of aquatic pesticide/herbicides in public drinking water source areas especially considering that rule which is the basis of the program currently in place has been vacated.
- Participate in coordinated efforts with existing workgroups and organizations that have already, or plan to undertake efforts to address climate change adaptation needs.
- Continue to advocate for the use of only Class A or AA water for public drinking water by participation in stakeholder groups.
- Evaluate what effects increased flooding potential will have on the implementation of, and compliance with, RCSA 19-13-B102(d) (location of well above the 100-year flood elevation).

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Pesticides/Herbicides

Develop and utilize consistent policies for the use pesticides and herbicides in public drinking water sources of supply (use in water and on land).

- Review MOA with DEP and revise/update as necessary.
- Develop a consistent policy for use of herbicides for land application.
- Share policies and MOA with CTAWWA, specific public water systems, and the Invasive Species Council.
- Continue to work with CTAWWA concerning invasive species issues for both aquatic and terrestrial applications.

Enforcement

Develop an enforcement strategy utilizing existing laws to investigate potential pollution of drinking water supplies.

- Develop a procedure to investigate and issue appropriate orders against polluters of drinking water supplies.
- Review and potentially revise existing laws CGS 25-34, 25-32g, and 25-43 to strengthen public drinking water enforcement powers, using the SWP consultant mentioned above.
- Develop an on-site notice of violation and follow-up procedure.

Security

Distribution of locational information for sources of supply poses a security and public health threat. The SWP Unit will develop policies to protect sensitive information, including:

- Working with other state agencies, develop a process to disseminate, in a secure manner, drinking water source information for legitimate purposes.
- Develop standard operating procedures for the dissemination of information, incorporating necessary elements of the Freedom of Information Act.
- Continue to work with the public water systems concerning security of sensitive GIS information.

The SWP unit can provide technical assistance and analysis of security threats to reservoirs, watershed areas, wells and aquifer protection areas:

- Conduct site assessments when security incidents occur within watersheds and aquifer protection areas. Provide technical assistance.
- Work with first responders and other agencies to assure that appropriate corrective action is taken after security incidents, including remediation and security improvements.