

## **Developing a Drinking Water Quality Management Plan for Groton Utilities**

A Workshop Series Sponsored by the U.S. Environmental Protection Agency and  
Incorporation with the Connecticut State Department of Public Health and Groton  
Utilities

Draft Consolidated Summary

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A series of workshop on the development of a Drinking Water Quality Management Plan for Groton Utilities was sponsored by the U.S. Environmental Protection Agency (EPA) through Contract Number 68-C-02-069 in 2006. The Cadmus Group, Inc. was tasked to provide a meeting facilitator to work with various Connecticut state agencies, Groton Utilities, local municipal officials and planners, environmental interest groups, and other interested parties.

The workshops were held on April 19, May 18, June 22, and July 20, 2006 at various locations within the watershed that drains into Groton Utilities' reservoirs. The purposes of the workshops are to (1) determine the vision, mission, goals, and objectives of the Drinking Water Quality Management Plan, and (2) set up a process for the development of the Plan starting 2007.

The first workshop, held on April 19, 2006, provided an overview of the intent of Drinking Water Quality Management Planning, as envisioned by the Connecticut Department of Public Health (CDPH). In general, Drinking Water Quality Management Plan should be developed locally to allow the local communities and partners to set their course of action for protecting their drinking water supply source (or source water). The development of the Plan requires a collaborative process to ensure a successful implementation of the Plan. CDPH believes it is pertinent to protect the state's drinking water supplies by maintaining the high water quality in many parts of the state and restoring water quality in other parts of the state. [Note: The latter is not the focus of the current workshop series.] By learning from the development of Groton Utilities' Drinking Water Quality Management Plan, CDPH hopes to gain valuable information that can be transferred to other parts of the state where development pressure may adversely affect the water quality.

During the first workshop, Groton Utilities pointed out that collaborative effort is crucial for the protection of source water. An example was used to illustrate the effort by state agencies, developers, and other stakeholders in the construction of the Marriott Hotel and the Pequot Health Center in Groton in achieving win-win situations. With the understanding that some levels of development are inevitable in the watershed, it would be more effective in protecting the drinking water through proactive planning and smart development techniques.

The workshop participants, in response to a number of questions, provided valuable inputs on the various concepts related to the vision and mission of the Plan.

A sample of the questions includes:

- What is the effort needed to keep the water quality high?
- What might be the vision and mission of the Plan?
- What are the goals and objectives that will help make the Plan understandable to everyone?

Sample inputs from the workgroup participants on concepts for the development of the vision and mission statements of the Drinking Water Quality Management Plan include:

- Sustainability
- Partnership
- Proactive/Preventative
- Model plan for other communities
- Consensus building
- No one ruler
- Compromise
- Preserve/Protect the drinking water sources
- Revise negative or counter-productive public policy
- Manage/Balance development pressure
- Be open minded
- Scientific basis
- Public involvement
- Economic and financial viable

In addition, a number of local city and town planners further elaborated on the keys to make a plan successful:

- Commitment of communities
- Commitment of ordinances
- Effective public education
- Recognition of economic development that may be in conflict with protection
- Identification and assignment of responsible parties to manage systems put in place to protect water quality from developments
- Involvement of all stakeholders in a fair and open manner
- Generation of a user-friendly plan that is acceptable to the communities and the partners

During the second workshop, the participants focused their discussions on the development of the Vision and Mission Statements of the Drinking Water Quality Management Plan. It was agreed that the Vision Statement should show where the participants want the Plan to go and the Mission Statement(s) should outline how the Vision will be realized. In order to allow for free thinking, the participants were asked to share their notions of the Vision and Mission Statements. A large number of ideas were generated by the participants and recorded for use in the preparation of Vision and Mission Statements and Goals and Objectives of the Plan, which were presented in the third workshop.

The third workshop was held on June 22, 2006. Groton Utilities provided a brief discussion of the development of an informational Website to disseminate the materials associated with the Drinking Water Quality Management Plan, meeting summaries, and references. CDPH then presented a timeline for the development of the Drinking Water Quality Management Plan (including the Plan for Groton Utilities). It is anticipated that the Plan for Groton Utilities will start in the beginning of 2007 and complete by the end of 2008.

Using the ideas from the participants, Cadmus provided a straw-man version of the Vision, Mission, Goals, and Objectives.

- Vision:
  - To achieve long-term preservation of safe and sustainable drinking water supplies through proactive watershed protection in Connecticut
- Mission:
  - To develop innovative and comprehensive approaches to protect the purity of drinking water through land and water management;
  - To strengthen and expand partnerships to balance the need for economic development and public health protection. Develop a plan established through the will of the individual communities.
- Goals:
  - (1) Preserve drinking water quality and protect public health
  - (2) Proactively protect critical watershed areas through land management
  - (3) Develop partnership for watershed protection
  - (4) Implement an open and efficient planning process
  - (5) Effectively inform and involve stakeholders and citizens
  - (6) Develop a plan for Groton Utilities Watershed
  - (7) Develop a model plan for the state
- Goal (1) - Preserve drinking water quality and protect public health
  - Objectives:
    - (a) Develop and maintain baseline source water quality data
    - (b) Establish current status and baseline conditions for drinking water quality
    - (c) Identify areas that contribute to the degradation of drinking water quality
    - (d) Assess impacts from permitted facilities and activities on drinking water quality
- Goal (2) - Proactively protect critical watershed areas through land management
  - Objectives:
    - (a) Identify areas that are critical to the preservation of drinking water quality

- (b) Evaluate and recommend effective methods for protecting these critical areas
  - (c) Develop useable tools for land use decision makers to evaluate protective approaches
- Goal (3) - Develop partnership for watershed protection
  - Objectives:
    - (a) Identify areas for higher density development and establish agreements to facilitate effective protection of drinking water quality (e.g., transfer of development right and development of cost-effective and protective infrastructure for water and sewer)
    - (b) Promote the use of low impact development techniques for new development (e.g., through the development of agreements and local ordinance)
    - (c) Develop tools and programs to reduce contamination threats (e.g., using pollutant trading incentive and “outside” funding)
    - (d) Develop standards of basic enforcement ordinances
    - (e) Work with developments, when appropriate to develop innovative treatment techniques
    - (f) Evaluate stormwater utility management (including feasibility)
- Goal (4) - Implement an open and efficient planning process
  - Objectives:
    - (a) Use a responsible and open practice to keep the planning process transparent and equitable
    - (b) Implement a high quality standard for efficient plan development and fiscal accountability
    - (c) Be responsive to emerging issues and established priorities
- Goal (5) - Effectively inform and involve stakeholders and citizens
  - Objectives:
    - (a) Involve citizens and stakeholders as critical partners in public forums to achieve the vision, mission, and goals
    - (b) Provide analyses and implications of the Drinking Water Quality Management Plan
    - (c) Offer easy access to information about the Drinking Water Quality Management Plan and citizens’ role in protecting drinking water quality
    - (d) Develop a plan for public education
- Goal (6) - Develop plan for Groton Utilities Watershed
- Goal (7) – Develop a model plan for the state
  - Objectives:
    - (a) Identify and articulate a process for other parts of the state to develop their Drinking Water Quality Management Plans
    - (b) Create a long-term vision for developing and implementing a holistic approach for the development of Drinking Water Quality

Management Plan to protect and preserve drinking water quality (i.e., using science and common sense focusing on minimizing and eliminating risk to public health)

- (c) Provide an atmosphere or culture of using trust, teamwork, collaboration, and equity to achieve results
- (d) Encourage innovative and continuous improvement to the implementation of the Drinking Water Quality Management Plan
- (e) Provide opportunities to ensure the Drinking Water Quality Management Plan is maintained as a living document

Using the straw-man version of the Vision, Mission, Goal, and Objectives, workshop participants provided inputs and suggestions to refine the various items. A revised version of the Vision, Mission, Goal, and Objectives, with many of the suggestions from the participants incorporated, was presented at the fourth workshop (held on July 20, 2006).

During the fourth workshop, CDPH reiterated the expectations of the workshop are to:

- Continue working on the scope of the program
- Complete goals and objectives of the Plan
- Form subcommittees of the workshop participants
- Plan to select consultant to work on the Plan in the beginning of 2007
- Add action items to each objective to further refine the process

The workshop participants reviewed the Goals and Objectives, along with the added Action Items and provided clarification and consolidation of the Goals and Objectives to make them more streamlined and easy to understand.

- Goal (1) - Preserve drinking water quality and protect public health
  - Objectives:
    - (a) Develop and maintain baseline source water quality data
      - 1. Define water quality parameters
      - 2. Gather raw water quality data at present (e.g., tracking rural water quality and perform data queries)
      - 3. Sharing data across communities and conduct data survey
    - (b) Establish current status and baseline conditions for drinking water quality
      - 1. Generate graphic for baseline data (for presentation)
      - 2. Determine data gaps (for further data collection)
    - (c) Identify areas that contribute to the degradation of drinking water quality
      - 1. Locate point sources
      - 2. Identify non-point sources (using land use maps)
    - (d) Assess impacts from permitted facilities and activities on drinking water quality
      - 1. Obtain information from Source Water Assessment Plan

2. Obtain information from additional information source (i.e., beyond Source Water Assessment Plan)
- Goal (2) - Proactively protect critical watershed areas through land management
    - Objectives:
      - (a) Identify areas that are critical to the preservation of drinking water quality
        1. Define critical areas (incorporate concepts of degree of criticalness; strategic identification – e.g., transportation and development potentials)
        2. Critical land analysis (lands that is off limits for development)
      - (b) Evaluate and recommend effective methods for protecting these critical areas
        1. Define best management practices (BMPs)
        2. Identify and select appropriate methods and analyses, at local and state level, involvement of Council of Government (COG)
        3. Identify different regulations (e.g., Clean Water Act regulations)
        4. Formulate and propose new regulations (e.g., allowing for new and proven technologies)
      - (c) Develop useable tools for land use decision makers to evaluate protective approaches
        1. Development and maintenance of Memoranda of Understanding (MOUs)
        2. Development and maintenance of town ordinances (for both pre- and post-development)
        3. Identify and recommend toolbox to assist land use decision makers and planners
        4. Formulate and propose new regulations
      - (d) Identify areas for higher density development and establish agreements to facilitate effective protection of drinking water quality (e.g., transfer of development right and development of cost-effective and protective infrastructure for water and sewer)
        1. Define levels of development (e.g., using infrastructure and density)
        2. Define BMPs (could be different for each town)
        3. Define appropriate development within critical areas established (for preservation versus development)
        4. Options regarding sewer avoidance provision
      - (e) Promote the use of low impact development techniques for new development (e.g., through the development of agreements and local ordinance)
        1. Define low impact development (LID) – e.g., using Stormwater Manual
        2. Identify LID toolbox

- 3. Use of Website of LID
    - 4. Recognize the unique aspects of drinking water supplies
    - 5. Identify various models for developers
  - (f) Develop tools and programs to reduce contamination threats (e.g., using pollutant trading incentive and “outside” funding)
    - 1. Evaluate requirements and assess if this type of program make sense in Connecticut
    - 2. If applicable, prioritize these tools and programs
  - (g) Develop standards of basic enforcement ordinances
    - 1. Review existing ordinances
    - 2. Build model ordinances
  - (h) Evaluate stormwater utility management (including feasibility)
    - 1. Recap regulations
    - 2. Provide examples of successes and failures for review
    - 3. Evaluate impacts
- Goal (3) - Implement an open and efficient planning process
    - Objectives:
      - (a) Use a responsible and open practice to keep the planning process transparent and equitable
        - 1. Define the process (e.g., involve citizens and stakeholders)
        - 2. Provide examples and models
      - (b) Implement a high quality standard for efficient plan development and fiscal accountability
        - 1. Define quality standards
        - 2. Evaluate efficiency and costs
      - (c) Be responsive to emerging issues and established priorities
        - 1. Develop a chain of command or ladder of responsibility
        - 2. Develop a model for prompt response
  - Goal (4) - Effectively inform and involve stakeholders and citizens
    - Objectives:
      - (a) Involve citizens and stakeholders as critical partners in public forums to achieve the vision, mission, and goals
        - 1. Use Web postings
        - 2. Involve all stakeholders (direct involvement)
        - 3. Public relation work
      - (b) Provide analyses and implications of the Drinking Water Quality Management Plan
        - 1. Perform analyses on a community basis and watershed basis
        - 2. Provide lessons learned
      - (c) Offer easy access to information about the Drinking Water Quality Management Plan
        - 1. Provide Web-based access
        - 2. Provide local town postings and meetings
      - (d) Specify citizens’ role in protecting drinking water quality
        - 1. Define roles for the citizens

- (e) Develop a plan for public education
    1. Develop needs analysis
    2. Conduct trial program; evaluate results and the move to larger scale program
  - (f) Work with developments, when appropriate to develop innovative treatment techniques
    1. Categorize treatment techniques
- Goal (5) - Develop a plan for Groton Utilities Watershed
  - Goal (6) – Develop a model plan for the state
    - Objectives:
      - (a) Identify and articulate a process for other parts of the state to develop their Drinking Water Quality Management Plans
      - (b) Create a long-term vision for developing and implementing a holistic approach for the development of Drinking Water Quality Management Plan to protect and preserve drinking water quality (i.e., using science and common sense focusing on minimizing and eliminating risk to public health)
      - (c) Provide an atmosphere or culture of using trust, teamwork, collaboration, and equity to achieve results
      - (d) Encourage innovative and continuous improvement to the implementation of the Drinking Water Quality Management Plan
      - (e) Provide opportunities to ensure the Drinking Water Quality Management Plan is maintained as a living document

Goals 5 and 6 (i.e., developing a plan for Groton Utilities and a model plan for the state) were not further discussed by the workshop participants. They are more global in nature and will depend heavily on the preceding goals, objectives, and action items. On the other hand, a number of parking lot items would be revisited in future workshops to enhance the current lists of goals, objectives, and action items.

It is anticipated that the workshop series will continue in September 2006. The goals, objectives, and action items will be further refined and clarified to serve as a guideline to establish a working outline of the Drinking Water Quality Management Plan for Groton Utilities. This work outline will also form the basis for developing a Request for Qualification (RFQ) and evaluation criteria for selecting a consultant who will work with the Technical and Advisory Groups in the development of the Drinking Water Quality Management Plan.