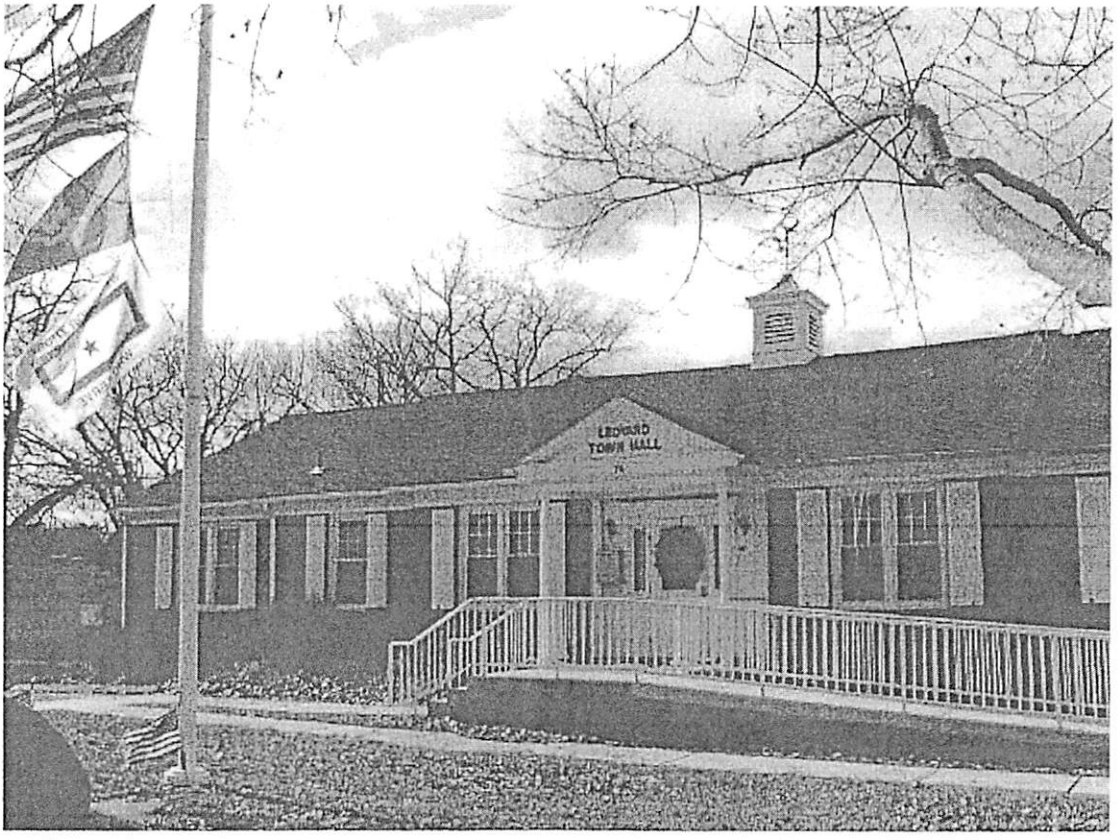
Ledyard, Connecticut
Sourcewater Protection Plan



Developed by: The Ledyard Sourcewater Protection Team
Prepared by: Atlantic States Rural Water and Wastewater Association
March 2008

SOURCEWATER PROTECTION PLAN

for the

Town of Ledyard
Public Drinking Water Supplies

March 2008

Prepared by:

Ledyard Sourcewater Protection Team

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Review and Update Annually

Date Reviewed	Reviewer	Changes or Comments

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1 Introduction and Executive Summary

The ideal drinking water supply would have excellent natural sourcewater quality and no potential contaminant sources (PCSs). There would be no development in the watershed or recharge areas. We are fortunate to have good natural sourcewater quality in most of Connecticut's drinking water supplies, however PCSs exist for every water supply and development continues to increase the possible threats.

Atlantic States Rural Water & Wastewater Association (ASRWWA) believes that threats from many PCSs can be mitigated by proper construction, applying best management practices (BMPs) and the responsible use of water resources. Therefore education, outreach and the ability to develop and maintain working relationships in the community are important factors in sourcewater protection.

The purpose of the Ledyard Sourcewater Protection Plan is to reduce, mitigate, or eliminate potential and existing risks to public water system wells in Town and the Groton Utilities reservoir system. The management plan included here outlines specific strategies and actions available to the community to protect the reservoir watershed and wellhead protection areas (WHPA),while promoting passive recreational use of watershed areas and development by means of additional risk mitigation.

The plan is prepared by the ASRWWA in cooperation with the National Rural Water Association. Program funding is provided by the United States Department of Agriculture's (USDA) Sourcewater Protection Program. The purpose of the program is to provide technical assistance to rural and small communities for the development of Sourcewater Protection Plans (SWPPs).

The plans build on the Sourcewater Assessment Program of the Connecticut Department of Public Health (DPH). This program determined the susceptibility of the public water systems in Connecticut to PCSs. The SWPP process is community based and the main tasks are:

- Form a Local Sourcewater Protection Team
- Assess threats to the drinking water sources
- Develop management strategies for these threats
- Form a Steering Committee to oversee implementation and periodically update the plan

In Summary, this Plan recommends the following activities:

- Educate the agricultural community on best management practices that can be used to prevent erosion and sedimentation into sensitive water resources

- Introduce a centralized means of waste water treatment and collection in Ledyard Center to mitigate the impact of pollution while enabling the implementation of higher density housing and commercial development in the town center.
- Explore a cost sharing pilot project with Groton Utilities for backfitting Sandy Hollow Road with stormwater filtration and retention measures
- Incorporate quality management standards in the Town's Stormwater Management Ordinance
- Raise public awareness for the need to protect sensitive water resources through educational initiatives like school programs and mailed informational brochures
- Vigorously pursue passive recreational use of the Groton Reservoir watershed system as a means of enhancing public buy to the concept of stewardship of this public water supply. Additional passive recreational use will enhance the security of this water supply.
- Avoid zoning and development conflicts in areas that are served by well head systems
- Work with partners such as land trusts and the utilities to purchase privately owned land around the reservoir system as open space
- Evaluate progress on this Plan on an annual basis.

2 Local Sourcewater Protection Team

The Ledyard Sourcewater Protection Team is a diverse group. The goal is to represent a cross-section of stakeholders in the watershed, including Town officials and board members, water system operators, business and agriculture. Below is a list of Ledyard Team members and who they represent:

George Calkins, Senior Sanitarian, Ledge Light Health District
Kristin Havrilla Clarke, Assistant Planner, Town of Ledyard
Marc Cohen, SW Protection Specialist, Atlantic States Rural Water Association
R. Scott Duffus, Zoning Official, Town of Ledyard
John R. Gardner, Water Operations Supervisor, Ledyard WPCA
Peter Gardner, Licensed Surveyor and Developer
Steve Masalin, Director of Public Works, Town of Ledyard
Richard Morgan, Farmer
Dave Schroeder, Conservation Commission, Town of Ledyard
Steve Steadman, Director, Ledyard WPCA

3 Ledyard, Connecticut

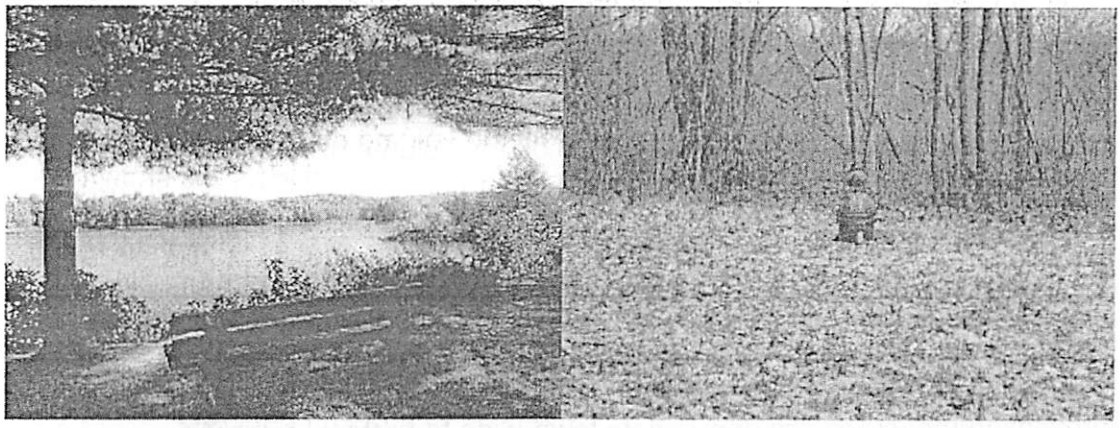
3.1 Description

Ledyard is located in southeastern Connecticut and was incorporated in 1836. It was founded in 1653 by settlers John Gager and Robert Allyn, who received land grants to settle along the eastern banks of the Thames River – an area that

includes the present towns of Groton and Ledyard. Before European settlement, the area was the home of the Pequot Indians.

Ledyard has a land area of 40.0 square miles and a population of 14,687 (2000 census). With a relatively low population density (367 people/square mile), much open space including active farmland, many small waterways and the GU reservoir system, it retains its rural character outside of the more built-up Gales Ferry section. Overall, 13.6% of the land in town is developed.

3.2 Sourcewater Inventory



Drinking water sources include the Groton Reservoir and wells in gravel aquifers.

In addition to the GU Reservoir watershed, there are thirty-two active public drinking water systems in the town of Ledyard (Exhibit I). Also, the Aquarion Mystic System's Aquifer Protection Area extends into the Town of Ledyard. There are four (4) large systems whose sources are gravel aquifers. These are the Ledyard Highlands System, SCWA Tower Division System, Mashantucket Pequot System, and the Aquarion Mystic System. The sources for most other, smaller systems are bedrock wells. There are fifteen (15) community water systems (CWS), two (2) non-transient, non-community systems (NTNC) and fifteen (15) transient non-community systems (TNCs). In addition, single family residences not served by the above CWS have private wells that draw from groundwater. The Ledyard Sourcewater Protection Team has considered protection measures that will achieve the greatest public health protection regardless of the source.

3.3 Groton Utilities Reservoir Sourcewater Protection Area

The Groton Utilities Sourcewater Protection area is the watershed for the reservoir and its feeder streams. The watershed is 15.56 square miles, of which approximately half lies within the Town of Ledyard. A map of the watershed is included as Exhibit II. This map is filed in the Ledyard Land Records. Proposed development projects filed with the Planning commission, Zoning Commission, Zoning Board of Appeals, or Inland Wetlands & Watercourses Commission which

lie within the watershed boundary must be sent to Groton Utilities within 7 days of application. Groton Utilities should review and update the watershed boundaries on file based on the more accurate topographic data available in the Ledyard Assessor's Maps.

3.4 Ledyard Public Water System Sourcewater Protection Areas

Wellhead Protection Areas (WHPAs) are the land areas from which groundwater and surface water will flow to the well under pumping conditions. As such, these land areas are the critical ones for sourcewater protection. The WHPAs for the Ledyard Highlands System, SCWA Tower Division System, and the Aquarion Mystic System systems were delineated under the State of Connecticut Department of Environmental Protection (DEP) Aquifer Protection Area (APA) program. These areas were developed by hydrologic modeling. WHPAs for the remaining, mostly bedrock, well systems have been delineated by the State of Connecticut Department Public Health (DPH). These are calculated fixed-radius circles, the radius of which is determined by the volume of withdrawal of the source. Most are circular areas with 500-foot radii. The WHPAs are shown in Exhibit III.

Due to the number of public drinking water systems in Ledyard and the likelihood that additional public water sources will be needed in the future, the Ledyard Sourcewater Protection Team determined that while certain protection measures are necessary within the public water sources' WHPAs, other contaminant prevention measures are appropriate town-wide to protect Ledyard's groundwater resources for future drinking water needs. The prevention measures also directly benefit private wells and thus all the citizens throughout the Town of Ledyard.

3.5 Other Protection Areas

The Ledyard Sourcewater Protection Team has developed a comprehensive water resources map of environmentally sensitive areas (Exhibit IV). In addition to the GU Reservoir watershed and public water supply WHPAs, we have included wetlands and waterbodies that are important to sport fishing and recreation. Of particular interest are Highlands Lake, Long Pond and Poquetanuck Cove. Implementation of the Management Plan (Section 7) to protect drinking water sources will also protect these areas.

This plan will help protect drinking water sources and other water resources.

4 Existing/Current Sourcewater Protection Measures

Following is a sampling of sourcewater protection initiatives that were already in place, or ongoing during the 2007 & 2008. These are in addition to active and effective Conservation and Inland Wetland and Watercourses Commissions.

4.1 Ledyard Plan of Conservation and Development

Ledyard recently completed an update of the Plan of Conservation and Development. That plan expressly states the importance of protecting drinking water supplies to sustain current needs and enable future development in town.

4.2 Ledyard Stormwater Management Regulations

Ledyard implemented a comprehensive *Ordinance Regulating the Management of Stormwater Runoff* (Ordinance #44) on February 22, 1995. These regulations have been effective in managing the quantity of stormwater runoff. This Sourcewater Protection, will in part, make recommendations to improve the quality of that runoff.

4.3 Ledyard Aquifer Protection

Ledyard implemented *Aquifer Protection Regulations of the Town of Ledyard* on May 1, 2007. These regulate activity in the Town's three mapped Aquifer Protection Areas. These areas are associated with the Ledyard Highlands System, SCWA Tower Division System, and the Aquarion Mystic System. Future regulation of the Southeastern Connecticut Water Authority Tower Division is anticipated.

4.4 Ledyard Inland Wetlands and Watercourse Regulations

Ledyard issued new *Inland Wetlands and Watercourses Regulations* on January 15, 2008.

4.5 Ledyard Open Space Plan

The Open Space Committee was established by Town Council in September of 2004 with the goal of developing an Open Space Plan for the Town of Ledyard. Goal #2 of that plan is to "Protect public drinking water (aquifers and reservoirs)." After researching and reviewing existing regulations, the Committee presented a proposed plan in August of 2006. In 2008, the proposed plan was adopted with a relevant linkage to this Plan recommending the establishment of a greenway corridor running north to south in Ledyard. The southern portion of the greenway would comprise the watershed lands of the Groton Reservoir System.

4.6 Drinking Water Quality Management Plan (DWQMP)

A larger scale Sourcewater Protection Plan effort, focused on Ledyard, the Groton Utilities Drinking Water Quality Management Plan, is being developed to protect current and future sourcewater areas for the GU Reservoir and other watershed areas where Groton Utilities would like to develop water supplies in the future. A consultant has recently been hired to bring together data developed by stakeholders and complete a draft management plan. That effort will be completed in the fall of 2008. It is not clear how this plan will be used locally, in the region, or statewide.

Ledyard town staff, commissioners and citizens attend DWQMP open meeting.

5 CT DPH Sourcewater Assessments

In 2003, the Connecticut Department of Public Health Drinking Water Section completed a state-wide survey of drinking water supplies under the Sourcewater Assessment (SWA) Program. This program was mandated with the 1996 reauthorization of the Safe Drinking Water Act. The purpose of the program was

to evaluate the susceptibility to contamination of each public drinking water source in Connecticut and communicate the results to the public.

The following information was used to assess vulnerability under the Sourcewater Assessment Program:

- Sanitary conditions in the sourcewater area
- The presence of potential or historic sources of contamination
- Existing land use coverages
- The need for additional source protection measures within the sourcewater area

A table summarizing the Sourcewater Assessments for the thirty-three (33) Public Water Supplies with WHPAs within the Town of Ledyard is included as Exhibit I. Of those systems, four (4) were designated with **high** susceptibility to potential contaminate sources, four (4) with **moderate** susceptibility, and nineteen (19) with **low** susceptibility. Information was not available for six (6) systems. The complete Sourcewater Assessment for the Groton Reservoir is included as Exhibit V. A discussion of potential contaminate sources follows in Section 6.

6 Assessment of Threats

6.1 Confirmed Contaminant Detects of Concern in Sourcewater

Each DPH Sourcewater Assessment reported on contaminants detected in the sourcewater of each system. While this data is somewhat dated (2003), it provides an idea of the scope of contamination within the Town. This data is included in Exhibit I.

Nitrates where found to be present in the sources for sixteen (16) systems (six community water systems (CWS), two Non-Transient Non-Community systems (NTNC) and eight Transient Non-Community systems (TNC). Total Coliforms or e. Coli were a problem in three TNC systems. MTBE and Trichloroethylene was detected in at one CWS system. Detection of these contaminants indicates that they have been released to surface and ground waters and are a threat to drinking water sources in Ledyard.

6.2 Roadways

Roadways present a significant threat to drinking water sources. The possibility of an accident involving a truck transporting bulk shipments of hazardous materials poses a risk. Roadways are also a potential source of contamination due to potential petroleum leaks from vehicles; the application of road salts; which could cause elevated levels of sodium and chlorides; and maintenance activity which may include herbicide and pesticide applications.

Sandy Hollow Road is of special concern because it runs across Morgan Pond, which is part of the Groton Reservoir system, on a narrow causeway with no mitigating drainage facilities or structures.

Sandy Hollow Road drainage should be upgraded to protect the reservoir.

6.3 On-Site Septic Systems

On-site septic systems represent potential sources of nitrates, chlorides, bacteria and viruses. In addition, if improperly used, such as for disposal of paints, solvents, petroleum products and other hazardous waste, they could be a source of organic compounds.

6.4 Land Use

6.4.1 Industrial

Industrial operations commonly use toxic substances as part of manufacturing, warehousing, and/or distribution. Chemicals, petroleum, cleaning supplies, machinery, metals, electronic products, asphalt, and others pose a potential threat to the water supply and must be managed.

The potential contamination inventory for Ledyard identified two industrial sites in Ledyard: the Dow Chemical facilities and Lorenz Industrial Park. Dow Chemical's location on the Thames River does not appear to threaten drinking water sources. Lorenz Industrial Park is within the Groton Reservoir watershed and in proximity to private wells.

6.4.2 Commercial

Many commercial operations use toxic and hazardous materials in their processes. Examples include:

- Auto repair shops, gas stations, car washes, paint shops
- Road maintenance depots, de-icing operations
- Construction areas
- Dry cleaners, Laundromats
- Medical institutions, research laboratories, photography establishments, printing facilities
- Restaurants, bakeries
- Woodworking and finishing facilities

The storage, use, and disposal of chemicals required by these operations can pose a potential threat to water since even small amounts of the hazardous materials can contaminate large amounts of surface or ground water. Storing quantities of the material can also create a serious problem if they are not contained and stored properly. Leaks and spills from storage tanks and pipes can contaminate water, rendering the water unfit for consumption.

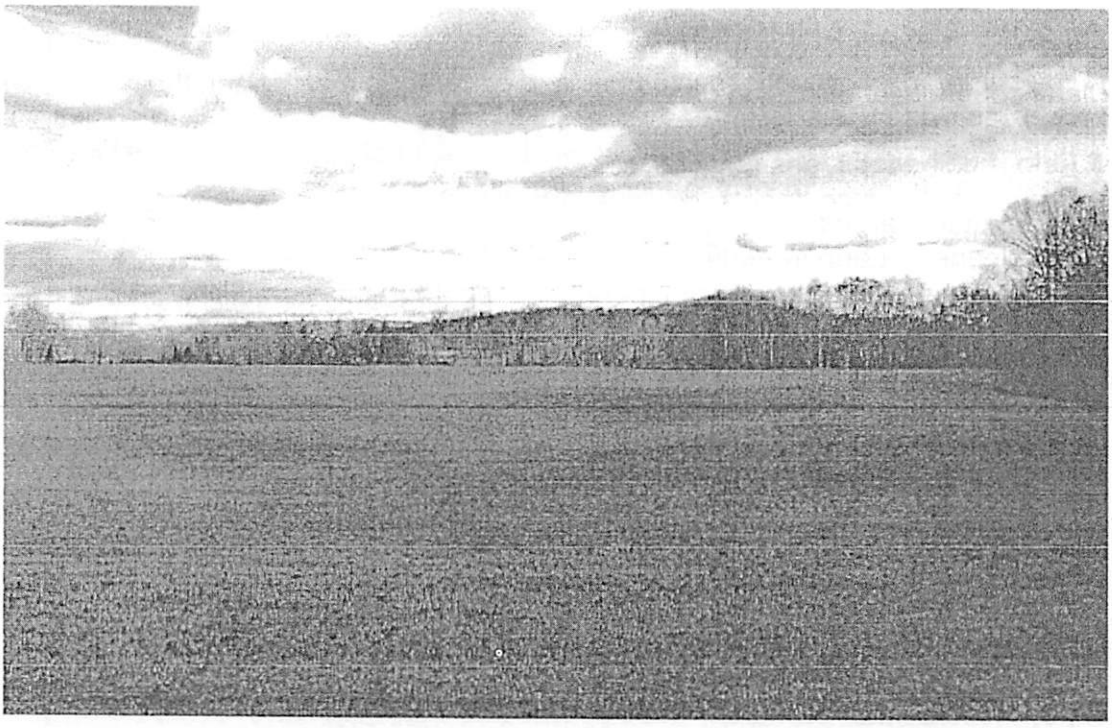
6.4.3 Residential

Residential contamination threats to surface or groundwater, if taken on a case-by-case basis, are normally less than other land use contamination, but in the aggregate, form a significant source of contamination. Most citizens are unaware of the effects of numerous potential contaminants stored, used, and disposed of from residential homes. The potential contaminants include:

- Household chemicals
- Automotive products
- Paint/solvents
- Fuel storage systems
- On-site septic/sand mound systems
- Lawn/garden chemicals
- Abandoned wells

6.4.4 Agricultural and Livestock Properties

Improperly applied chemicals such as pesticides, fungicides and fertilizers can leach through the soil into the groundwater or run off into streams and can present a contamination threat to drinking water supplies. When stored in containers, there is the potential of leaks from the storage area into the ground. Manure storage facilities and manure/septage sludge spreading can also lead to high levels of E-Coli and nitrate levels within surface and groundwater due to runoff. Open agricultural and land is also attractive to geese which have become an increasing problem in Connecticut due to the run-off of nutrients and bacteria from their waste. This type of threat is difficult to manage. There are substantial agricultural areas within Ledyard and, as a whole, the water source is vulnerable to contamination from them.



Agricultural land adds to Ledyard's rural character and requires proper management.

6.5 Anthropogenic (Man Made) Potential Contaminant Sources

6.5.1 Hazardous Waste Sites

The primary concern with facilities that generate or use hazardous materials is that leaks, spills, or improper disposal could allow contaminants to be discharged into the ground. Three facilities within the Town of Ledyard use or generate hazardous waste: Dow Chemical, Gottman Franklin DDS PC, and U S Silica Co.

6.5.2 Underground Storage Tanks (UST)

Fuel oil tanks represent a potential source of petroleum products, as well as chemical additives that may be present in the fuel. The potential threat of contamination from this source would be from a leak, overfill, or spill. There have been leaks from underground storage tanks within Ledyard in the past and remaining underground storage tanks are potential sources of petroleum contamination. Ledyard relies on the State UST program to manage this risk.

6.6 Point Sources of Pollution

Point sources refer to discharges that enter surface waters through a pipe, ditch, or other well-defined point of discharge. The term applies to wastewater and storm water discharges from a variety of sources. Wastewater point source discharges include municipal and industrial wastewater treatment plants and small domestic wastewater treatment systems that may serve schools, commercial offices, residential subdivisions and individual homes. The primary

pollutants associated with point source discharges are oxygen-demanding waste, nutrients, sediment, color and toxic substances including chlorine, ammonia, and metals.

Point source dischargers in Connecticut must apply for and obtain a National Pollutant Discharge Elimination System (NPDES) permit from the CT DEP. Two permits had been issued previously and have expired. There are two active NPDES permits in Ledyard: Dow Chemical and Ledyard WPCA. Dow Chemical discharges to the Thames River and does not threaten drinking water sources. The WPCA sewage treatment plant discharges to infiltration beds or to Seth Williams Brook during high flows. This facility has consistently discharged high quality effluent and does not appear to be a threat to drinking water sources.

6.7 Non-Point Sources of Pollution

Non-point sources are described as dispersed contamination from many sources such as soil erosion, on-lot septic systems, storm water discharges, agricultural activities, geese, and pollution associated with resource extraction and silviculture. The most significant contamination associated with non-point sources is nitrates associated with the use of manure, fertilizer, and pesticides which drain into streams and infiltrate into ground water. Household hazardous and commercial/industrial waste (e.g., ammonia, chlorides, paint, paint thinners, waste oil, antifreeze, solvents, etc.), which are sometimes discharged into on-lot septic systems, are also sources of non-point pollution. The potential risk from non-point sources makes Ledyard water systems vulnerable to contamination.

6.8 Stormwater Management/Road Ordinance

The need to manage stormwater is created by increased land development since impervious surfaces prevent rain from soaking into the soil and allow pollutants to accumulate. Stormwater management focuses on controlling the volume and peak discharge rate which increase dramatically when impervious surfaces cover an area. Ledyard has effective stormwater management regulations in place. As part of this Sourcewater Protection effort, the local team is working with the Town to review and update those regulations. Specific suggestions include: 1) looking at the Stormwater Management Ordinance to ensure that quality measures are taken into account and balanced with the need to evaluate wetlands natural capacity to filter stormwater; 2) integrating opportunities into the Road Ordinance to construct less intensive infrastructure.

6.9 Potential Future Sources

Undeveloped land areas represent the potential for future contamination sources. There are significant undeveloped land areas within the SWPA (see Exhibit VI for Land Use map). These include areas zoned for Industrial and Commercial land-uses. Based on the amount of undeveloped land, there exists the possibility for future contamination. The Ledyard Zoning Commission should be avoid introducing new uses into existing commercial/industrial zoned areas that could create stormwater discharge or untreated waste into the reservoir system or

other into the groundwater recharge area of a wellhead. To facilitate development in Ledyard Center as called for in the Plans of Conservation & Development, the Town through its Water Pollution Control Authority extend the sewer service area to encompass the parcels in the town center.

7 Management Plan

7.1 Include Drinking Water Protection in Town Planning and Ordinances

The team encourages the Town of Ledyard to continue to keep sourcewater protection in the forefront when considering regulations and ordinances.

The Team recommends that road, stormwater, zoning, subdivision, and other regulations be reviewed to insure consistency with regard to protecting water resources.

As part of this Sourcewater Protection effort, the local team will work with the Town to review and update Stormwater Management regulations. A map of sensitive areas targeted for protection is included as Exhibit IV. The work will include the review of existing stormwater release points to identify those that should be upgraded or studied further to determine their impact on sensitive areas. A map of stormwater release points is included in Exhibit VII.

A major concern is that Sandy Hollow Road drainage goes directly into the reservoir without any treatment. The Team recommends that GU provide the resources to design and construct a new drainage system that intercepts and removes pollutants from vehicles.

In addition, The Town is encouraged to use the provisions of Connecticut statutes and regulations governing activities in public water supply watersheds, where appropriate, to protect the GU Reservoir system. Summaries of these are included as Exhibit VIII.

7.2 Purchase or otherwise Protect Groton Reservoir Watershed Lands

The Sourcewater Protection Team recommends that Groton Utilities increase its efforts to purchase priority areas within the reservoir to protect it in perpetuity.

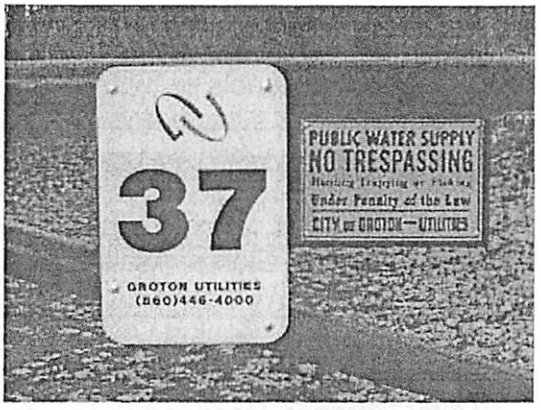
The Team recommends that GU and Ledyard Town Officials/Commissions work together with land trusts, private landowners, and the state of Connecticut to protect land in the watershed from development by purchasing land or development rights and by seeking donations of land.

GU and Ledyard should work together to pursue greenway designations, bikeway right-of-ways and other wildlife and recreation corridors that both protect land and raise awareness of the importance of the reservoir as a current and future resource for the region.

7.3 Livestock Property and Agricultural Best Practices

There are several livestock properties and agricultural sites in the Town of Ledyard. The control of nutrient runoff from manure handling and cropland fertilizing operations is one of the keys to decreasing the level of nitrogen compounds in groundwater, streams and ponds. The team supports the right to farm in Ledyard and encourages the farming community to continue to work with the Conservation District, FSA, NRCS, CT Farm Bureau and UConn Extension to implement best management practices for handling manure, chemical fertilizers and pesticides. Examples of outreach information is included as Exhibit IX.

7.4 Open Watershed Land to Recreation



Active recreation on drinking water reservoir lands has been a very effective way to build stakeholder ownership of protecting these important resource areas. Two excellent examples of this are the extensive recreational programs of the South Central Connecticut Regional Water Authority serving the greater New Haven area and the Quabbin Reservoir, a source for the greater Boston area. Ledyard has advocated for recreational access to GU reservoir lands and will continue to work with the DWQMP consultants and its stakeholders to implement a reasonable recreation management plan. Examples of effective recreation management plans are included as Exhibit X.

7.5 Conduct Education and Outreach Campaign

Public education and awareness is a key part of this Sourcewater Protection Plan because everyone poses a risk to groundwater. Most homeowners and business owners will work try to protect their local groundwater if they know how to minimize contamination risks. The Ledyard education and outreach campaign may include, but will not necessarily be limited to the following:

- Send a tax bill stuffer with educational information to residences and small businesses. This may include information on how to care for septic systems, disposal of household hazardous wastes and/or livestock manure management.
- Incorporate groundwater activities into school curricula.
- Reach out to the public through the media and/or public meetings to increase local awareness of the link between land use and drinking water quality and involve the public in Source Water Protection activities.

7.6 Form Sourcewater Protection Steering Committee

The following persons comprise the Ledyard Sourcewater Protection Steering Committee. They are members of the team that developed this drinking water protection plan for their community, and are committed to implementing the prevention measures outlined above. Furthermore, this committee will meet at a

minimum of once a year to review and update the plan and to assess its progress.

7.7 Introduce Waste Water Treatment and Collections Systems/Avoid Development Conflicts

The Town's Plan of Conservation & Development has always called for higher density housing development and commercial uses in the town center as a means of improving the character of the town and creating a critical mass of activity. In order to align this goal with the need to protect source water, a means of collecting waste water will be needed for Ledyard Center. The Town's Water Pollution Control Authority should include Ledyard Center in its sewer service area map. The town should not approve developments that may introduce hazardous materials or high concentrations of waste in the vicinity of wellheads or the reservoir system and should avoid decreasing lot sizes around these sensitive areas when sewers are not available.

George Calkins, Senior Sanitarian, Ledge Light Health District
Kristin Havrilla Clarke, Assistant Planner, Town of Ledyard
Marc Cohen, SW Protection Specialist, Atlantic States Rural Water Association
R. Scott Duffus, Zoning Official, Town of Ledyard
John R. Gardner, Water Operations Supervisor, Ledyard WPCA
Peter Gardner, Licensed Surveyor and Developer
Steve Masalin, Director of Public Works, Town of Ledyard
Richard Morgan, Farmer
Dave Schroeder, Conservation Commission, Town of Ledyard
Steve Steadman, Director, Ledyard WPCA

8 Contingency Plan

Emergency Response Plans have been developed by the individual Community Water Supplies and are on file in their offices. They typically contain security related information so are not available to the public.

Exhibit I

Public Water Systems with WHPAs in Ledyard

PWSID	System Name	Pop. Served	Susceptibility	Contaminants Detected	Well Condition
	Community Systems				
CT1370011	AQUARION WATER CO - MYSTIC (Note 1)	11520	Low	None	Good
CT0720101	ASH WATER COMPANY, LLC (Heritage Apts)	108	Low	Nitrates	Good
CT0720061	AVERY HILL WATER ASSOCIATION	117	Low	Nitrates	Good
CT0721041	CHRISTY HILL CONDOMINIUMS	47	Low	None	Good
CT0721011	GRANDVIEW TRAILER PARK - SYSTEM #1	48	Moderate	Nitrates, MTBE, TCE	Needs Improve.
CT0727041	GRANDVIEW TRAILER PARK - SYSTEM #2	50	n/a	n/a	n/a
CT0720051	LEDYARD VILLAGE HOMEOWNERS ASSN	184	Low	Nitrates	Needs Improve.
CT0727051	LEDYARD WPCA, GALES FERRY SYSTEM	2054	n/a	n/a	n/a
CT0720031	LEDYARD WPCA, HIGHLANDS SYSTEM	2400	Low	None	Good
CT0727061	LEDYARD WPCA, SABLEWOODS SYSTEM	220	Low	None	Good
CT0723011	MASHANTUCKET PEQUOT WATER SYSTEM	41000	n/a	n/a	n/a
CT0720041	SCWA TOWER-FERRY VIEW DIVISION	2555	Low	Nitrates	Good
CT0720011	SCWA, BARRETT DIVISION (BAR)	300	Low	Nitrates	Good
CT0727031	SCWA, CHRISWOOD DIVISION (CWD)	164	Low	None	Good
CT0720081	SCWA, GRAY FARMS DIVISION (GRF)	460	Low	None	Good
CT0720313	SCWA-LEDYARD CENTER DIVISION	196	n/a	n/a	n/a
	Non-Transient/Non-Community Systems				
CT0720104	HOLDRIDGE FARM NURSERY-BAKE SHOP	50	High	Nitrates	Unknown
CT0720034	HOLDRIDGE FARM NURSERY-MAIN SYS	75	High	Nitrates	Unknown
	Transient/Non-Community Systems				
CT0720194	ANCHOR BAPTIST CHURCH	25	Low	Total Coliforms	Needs Improve.
CT0720024	BILL LIBRARY	25	Low	E. coli	Good
CT0720044	KARTWAY	27	Low	None	Needs Improve.
CT0720214	LEDYARD ASSEMBLY OF GOD	25	Low	Nitrates	Needs Improve.
CT0720324	LEDYARD CENTER PROPERTIES	25	High	Nitrates	Unknown
CT0720054	LEDYARD COMMUNITY STORE	25	n/a	n/a	n/a
CT0720224	LEDYARD/GALES FERRY BAPTIST	25	Low	Nitrates	Unknown
CT0720134	MING MOON	25	Moderate	None	Needs Improve.
CT0720244	NEW LIFE CHURCH	25	Low	Nitrates	Needs Improve.
CT0720234	OUR LADY OF LOURDES CHURCH/HALL	25	Moderate	Nitrates	Needs Improve.
CT0720304	SENIOR CENTER	25	Low	None	Needs Improve.
CT0720174	SPIROS RESTAURANT (BOQ INV.)	25	Moderate	Nitrates	Unknown
CT0720144	STONECROFT COUNTRY INN	25	Low	Nitrates, Total Coliforms	Good
CT0720344	SUBWAY - WBMW - WHJM	25	n/a	n/a	n/a
CT0720084	VALENTINOS REST./TOWN GREEN TAVERN	25	High	Nitrates	Needs Improve.

n/a - information not available
Note 1 - Serves Stonington, WHPA extends into Ledyard

Exhibit II

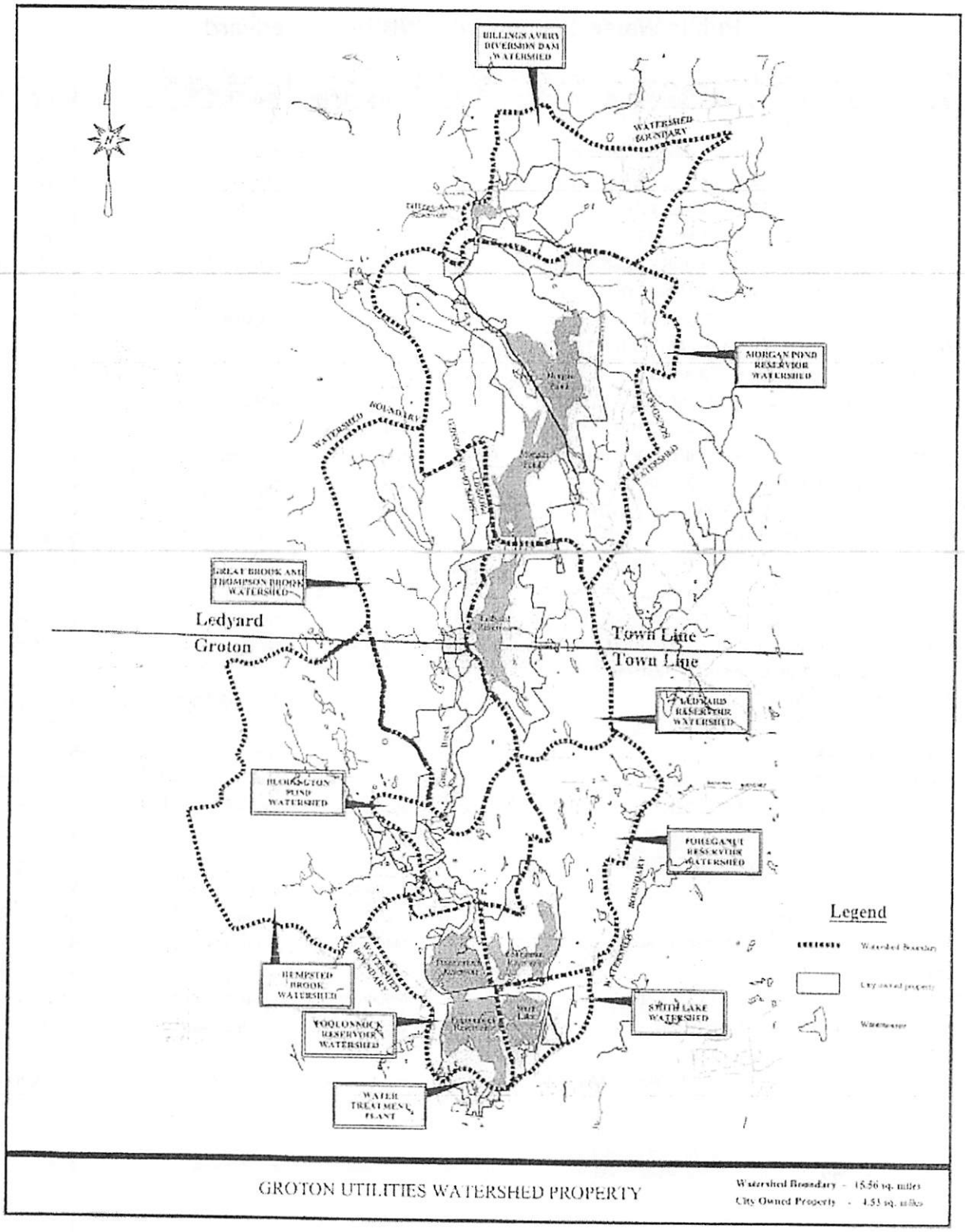

BILLINGS AVERY DIVERSION DAM WATERSHED
WATERSHED BOUNDARY
MORGAN POND RESERVOIR WATERSHED
GREAT BROOK AND THOMPSON BROOK WATERSHED
Ledyard
Groton
Town Line
Town Line
LUDLOWVILLE RESERVOIR WATERSHED
HUNTINGTON POND WATERSHED
POQUONNOCK RESERVOIR WATERSHED
HEMPSTED BROOK WATERSHED
POQUONNOCK RESERVOIR WATERSHED
SMITH LAKE WATERSHED
WATER TREATMENT PLANT
Legend
Watershed Boundary
City owned property
Waterways
GROTON UTILITIES WATERSHED PROPERTY
Watershed Boundary - 15.56 sq. miles
City Owned Property - 4.53 sq. miles

Exhibit III

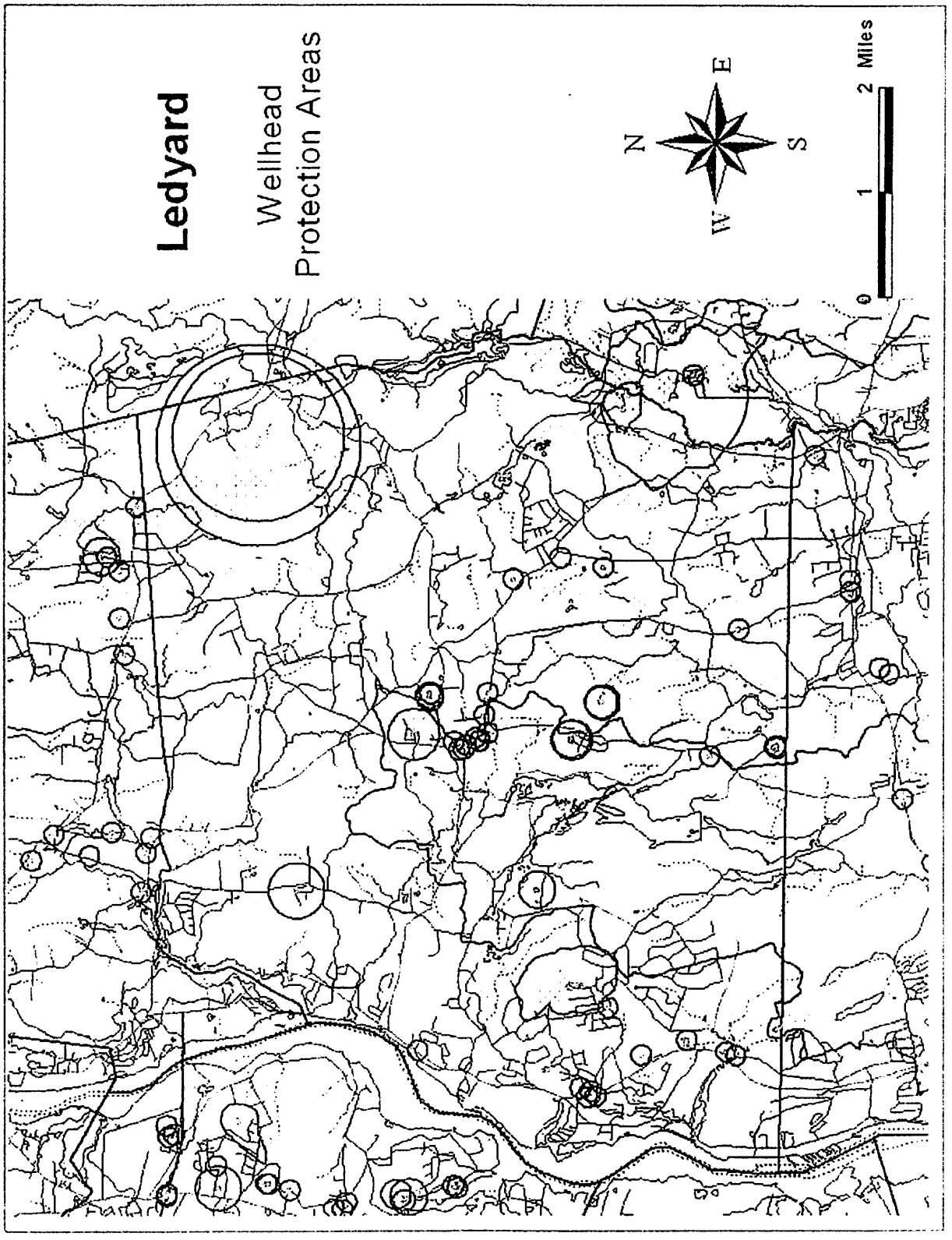


Exhibit IV

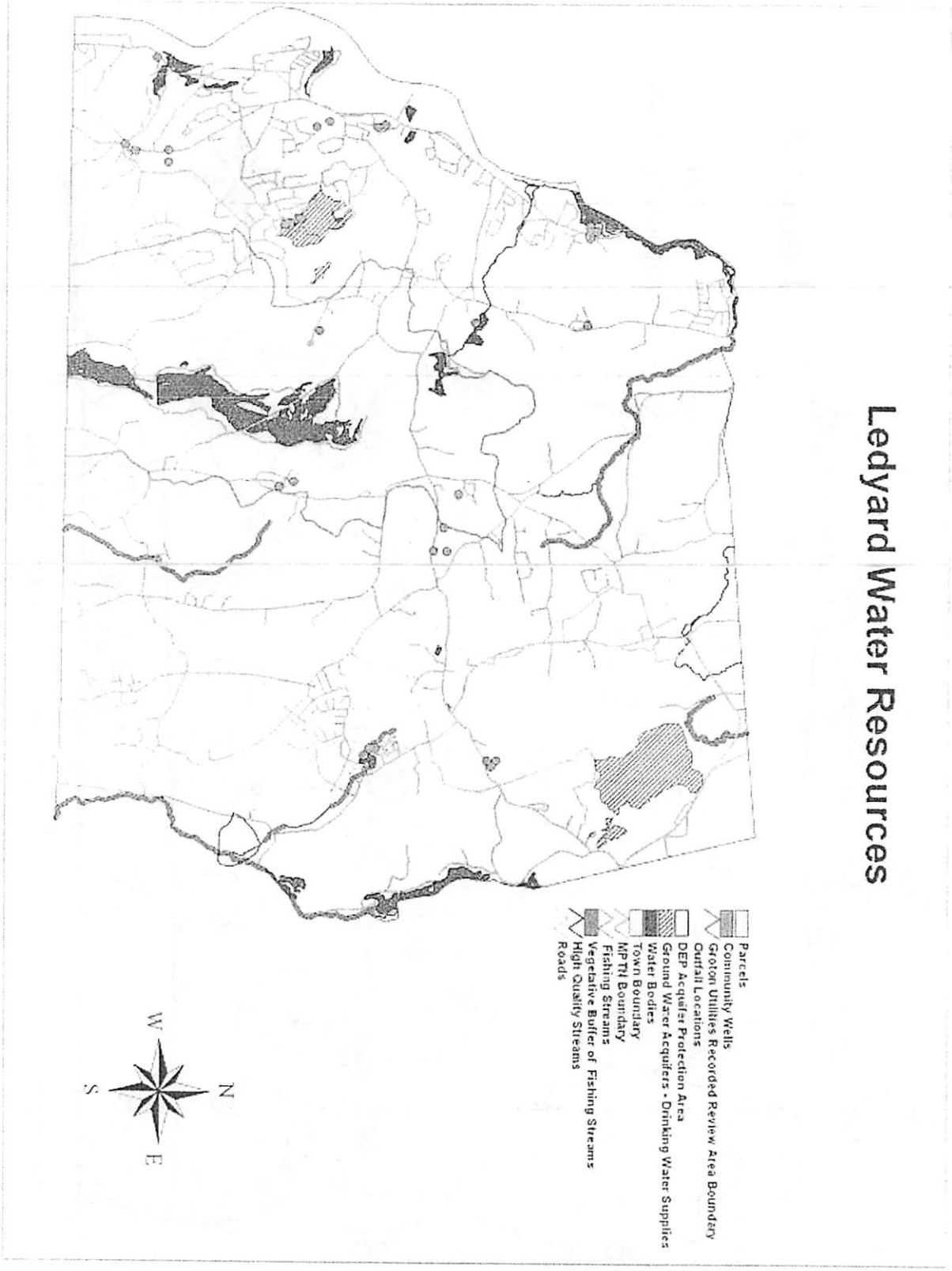

Ledyard Water Resources
Parcels
Community Wells
Groton Utilities Recorded Review Area Boundary
Outfall Locations
DEP Aquifer Protection Area
Ground Water Acquifers - Drinking Water Supplies
Water Bodies
Town Boundary
MPTN Boundary
Fishing Streams
Vegetative Buffer of Fishing Streams
High Quality Streams
Roads
W
S
N
E

Exhibit V

SOURCE WATER ASSESSMENT REPORT

AN EVALUATION OF THE SUSCEPTIBILITY OF PUBLIC DRINKING WATER SOURCES TO POTENTIAL CONTAMINATION

CT0590011

Groton Utilities
Groton Reservoir System

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Environmental Protection (DEP) recently completed an initial assessment of the Groton Reservoir System, which is a source of public drinking water that is maintained and operated by the Groton Utilities. This one-time assessment is part of a nationwide effort mandated by Congress under the Safe Drinking Water Act Amendments of 1996 to evaluate the susceptibility of all public drinking water sources in Connecticut to potential sources of contamination. DPH began working in partnership with the DEP in 1997 to develop Connecticut's Source Water Assessment Program, which was approved by the U.S. Environmental Protection Agency in 1999. Sources of potential contamination that are of concern to public drinking water supplies here in Connecticut are generally associated with historic waste disposal or commercial, industrial, agricultural and residential properties that store or use hazardous materials like petroleum products, solvents or agricultural chemicals.

The assessment is intended to provide Groton Utilities consumers with information about where their public drinking water comes from, sources of potential contamination that could impact it, and what can be done to help protect it. This initial assessment complete will also assist the public water supply system, regional planners, local government, public health officials and state agencies in evaluating the degree to which the Groton Reservoir System may be at risk from potential sources of contamination. The assessment can be used to target and implement enhanced source water protection measures such as routine inspections, protective land use regulations, acquisition of critical land, proper septic system maintenance, and public education. General sources of contamination with the potential to impact the Groton Reservoir System include properties with underground fuel storage tanks, improperly maintained on-site septic systems, improper waste disposal, or commercial/industrial sites that store or use chemicals or generate hazardous wastes.

Groton Reservoir System Source Water Assessment Summary

STRENGTHS

Point source pollution discharge points not present in this watershed area

20 to 30 percent of watershed area is owned by public water system

More than 30% of the land in the watershed area exists as preserved open space

Public water system has a comprehensive source protection program.

POTENTIAL RISK FACTORS

Potential contaminant sources present in the watershed

Susceptibility Rating

Rating	Environmental Sensitivity	Potential Risk Factors	Source Protection Needs
Low	X		X
Moderate		X	
High			

Overall Susceptibility Rating: Low

This rating indicates susceptibility to potential sources of contamination that may be in the source water area and does not necessarily imply poor water quality.

Detailed information about the specific factors and information used in establishing this rating can be found in Table 2. Information about opportunities to improve protection in the Groton Reservoir System is also presented in Table 2.

State of Connecticut Department of Public Health
Drinking Water Division
410 Capitol Avenue – MS# 51WAT
P.O. Box 340308 Hartford, CT 06134
(860) 509-7333

Produced With Funding Provided By The United States Environmental Protection Agency - May 2003

Exhibit V (Cont'd)

OVERVIEW - The Groton Reservoir System watershed encompasses some 10,574 acres of land in Groton and Ledyard Approximately 24.4% of this watershed is owned by the Groton Utilities Public drinking water sources in this system include Billings Avery Brook Diversion, Buddington Pond, Morgan Pond, and the Ledyard, Poheganut, Poquonnock, and Smith Lake reservoirs. State-wide satellite imagery developed by the University of Connecticut indicates that undeveloped land and residential properties presently account for approximately 83.0% percent of the land cover in the Groton Reservoir System. Commercial development at 9.5% and agricultural land use at 7.5% account for the remainder of the land coverage in the source water area. Approximately 31.3% of the land in the watershed area is preserved including all watershed land owned by the Groton Utilities, state forest and parklands, and municipally or privately held land designated as open space Information about drinking water quality and treatment is available in the Groton Utilities's annual Consumer Confidence Report.

ASSESSMENT METHODS.

The drinking water source assessment methods used by the Department of Public Health Drinking Water Division to evaluate the susceptibility of public drinking water sources to contamination are based on criteria individually tailored to surface water and groundwater sources. The criteria are keyed to sanitary conditions in the source water area, the presence of potential or historic sources of contamination, existing land use coverage's, and the need for additional source protection measures within the source water area. Source-specific data for community and non-community systems were used to determine whether a particular criterion should be rated as low, moderate or high, relative to the risk of potential contamination at the drinking water source. Further, a ranking system was used to compute an average rank for each community drinking water source based on its environmental sensitivity, potential risk of contamination and source protection needs. Watersheds and reservoirs rated as having a low, moderate or high susceptibility to potential sources of contamination generally exhibit the characteristics summarized in Table 1.

Table 1 – General Watershed Area Characteristics and Susceptibility Ratings

Susceptibility Rating	General Characteristics of the Watershed Area*
Low	Low density of potential contaminant sources Lower intensity of land development
Moderate	Low to moderate density of potential contaminant sources Moderate intensity of land development
High	Moderate to high density of potential contaminant sources Higher intensity of land development No local watershed protection regulations Detectable nitrates and/or volatile organic chemicals in the untreated source water during the past three years that are below the maximum contaminant levels allowed by state and federal drinking water regulations

* *Note: Not all characteristics may be present for a given susceptibility rating*

Readers of this assessment are encouraged to use the attached glossary to assist in the understanding of the terms and concepts used throughout this report.

Maps representing the location and features of the Groton Reservoir System source water area have not been included with this assessment report because of homeland security concerns.

GROTON RESERVOIR SYSTEM ASSESSMENT RESULTS.

Based on a combination of current reservoir and watershed area conditions, existing potential contaminant sources, and the level of source protection measures currently in place, the source water assessment for this watershed system indicates that it has an overall Low risk of contamination from any identified potential sources of contamination. The assessment findings for the Groton Reservoir System are summarized in Table 2, which lists current conditions in the source water area and recommendations or opportunities to enhance protection of this public drinking water source. A listing of potential contaminant source types in the area, if present, can be found in Table 3. A summary of source water area features is shown in Table 4

The assessment of this and other comparable watershed areas throughout Connecticut generally finds that adopting recommendations similar to those presented in Table 2 could reduce the susceptibility of most surface water sources to potential sources of contamination

Exhibit V (Cont'd)

Table 2 Source Water Assessment Findings and Source Protection Opportunities For the Groton Reservoir System

Assessment Category	Conditions as of June 2002	Recommendations and Source Protection Opportunities
Environmental Sensitivity Factors	Predominant watershed topography characterized by gentle slopes	Monitor runoff during heavy precipitation events
	Reservoirs have low or unknown capacity to support excessive growths of algae and plankton	Monitor reservoir nutrient levels in eutrophic or mesotrophic sources and determine trophic status of source waters listed as unknown
Contaminants Detected in Untreated Source Water	None	
	Click here to review EPA's current drinking water standards	Encourage homeowners to adopt residential best management practices that minimize the use of hazardous materials or generation of hazardous waste in the watershed
Potential Risk Factors	Potential contaminant sources present in the watershed	Periodically inspect these sites and maintain a water quality monitoring program consistent with the level of potential risk
	More than 50% of land for this source water area is undeveloped, which could present a risk if developed inappropriately.	Proactively work with local officials and developers to insure that only low risk development occurs within the watershed area
	Major state or interstate roadways present in the watershed	Monitor road salt and herbicide usage along these roadways and address potential for hazardous material spills resulting from vehicular accidents
	Known contaminant release points not present in the watershed	
		Encourage residential property owners to inspect and regularly clean or create septic systems and replace underground fuel storage tanks with above ground tanks
Source Protection Needs Factors	Over 80 percent of watershed area is owned by public water system	
	Point source pollution discharge points not present in this watershed area	
		Support environmental awareness and education within the community

Inventoried significant potential contaminant sources present in the Groton Reservoir System source water area are listed in Table 3. While these facilities, if present, have the potential to cause surface water contamination, there is no indication that they are doing so at this time.

Exhibit V (Cont'd)

Table 3 – Summary of Significant Potential Contaminant Types in the Groton Reservoir System Source Water Area

Category	Subcategory	Number of SPCS Types
Waste Storage, Handling, Disposal	Hazardous Waste Facilities	2
	Solid Waste Facilities	0
	Miscellaneous	0
Bulk Chemical, Petroleum Storage	Underground Storage Tanks	21
	Tank Farms	0
	Warehouses	1
Industrial Manufacturing / Processing	Chemical & Allied Production	0
	Chemical Use Processing	0
	Miscellaneous	0
Commercial Trades and Services	Automotive and Related Services	7
	Chemical Use Services	0
	Miscellaneous	0
Miscellaneous	No Identifiable SPCS Type	0
Agricultural Operations	Animal or Livestock Waste Handling	0
	Pesticide Storage or Application	0
Total Number of Contaminant Types		31

Prominent features of the Groton Reservoir System source water area are summarized in Table 4.

Table 4 - Features of the Groton Reservoir System

Location of Watershed Area	Groton and Ledyard
Name of Reservoir(s) and Diversion(s)	Billings Avery Brook Diversion, Bucklington Pond, Morgan Pond, and the Ledyard, Pohegamut, Pequannock, and Smith Lake reservoirs
Number and Type of Public Drinking Water Reservoirs or Diversions in the Watershed	1 Distribution, 4 Storage, and 2 Transfer
Trophic Status of Reservoir(s)	1 Unknown and 6 Oligotrophic
DEP Surface Water Classification	AA
Watershed Area (total acreage)	10,574 acres
Preserved Land in the Watershed [a]	3,314 acres
Predominant Watershed Topography	gentle slopes
General Land Use and Land Cover in the Watershed [b]	
-Urban - Commercial or Industrial	9.5%
-Urban - Residential	8.9%
-Agricultural	7.5%
-Undeveloped Land	74.1%
Significant Potential Contamination Sources	
-Number of inventoried facilities in source water area [c]	26
-Count of inventoried facilities per square mile	1.57 per sq mile
-Number of contaminant types within inventoried facilities	31
Number of Contaminant Release Points Inventoried by CTDEP [d]	0

[a] Preserved land includes any combination of land owned by the public water supply, state forest and parklands, and municipally or privately held land designated as open space

[b] Based on statewide data layer of land use and land cover developed by UCONN Dept of Natural Resource Management Engineering and Connecticut DEP satellite imagery averaged across the entire watershed.

[c] Inventoried facilities reflect the actual number of SPCS sites present in the source water area, which may have more than 1 type of contaminant present at the facility.

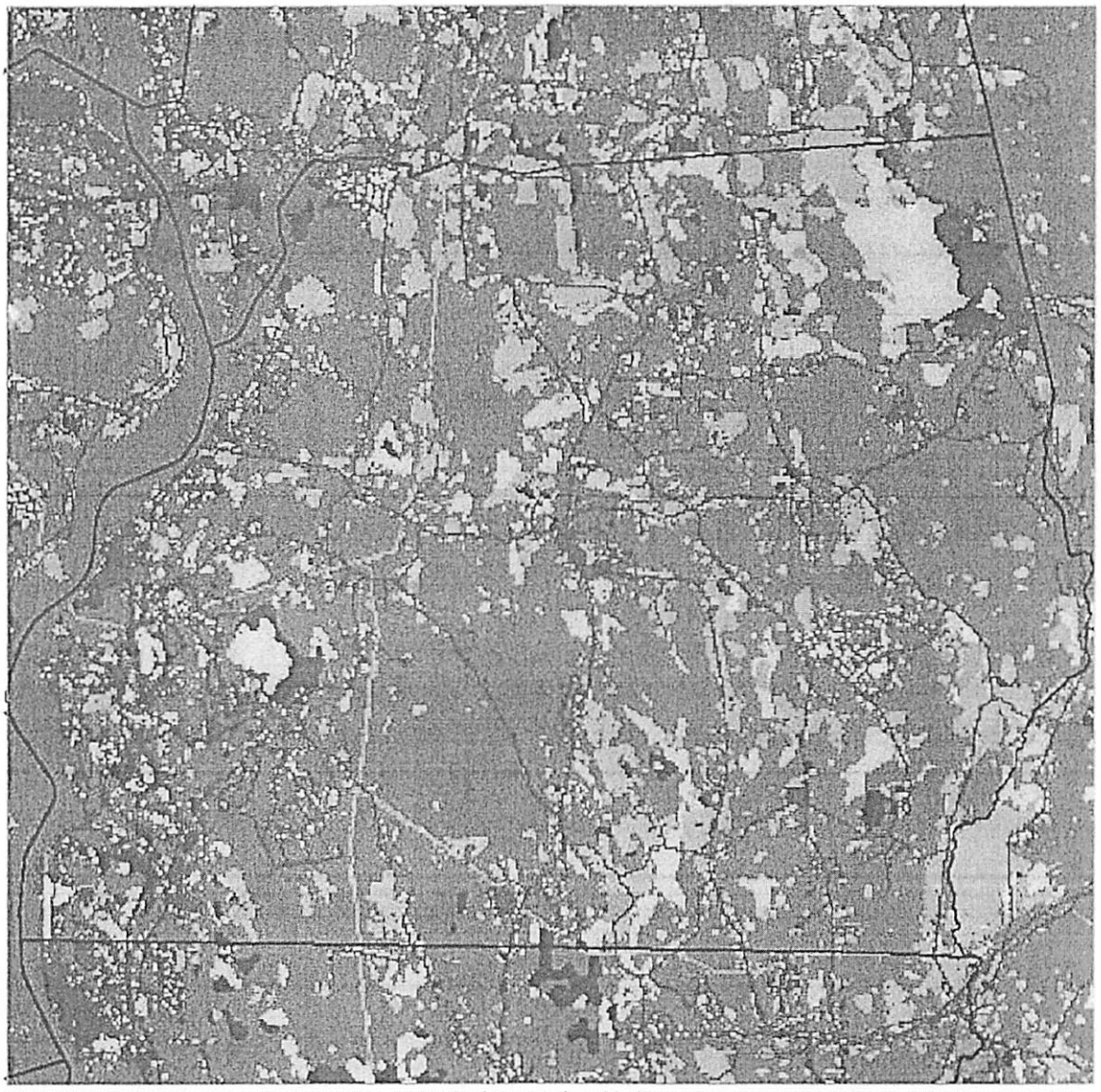
[d] Sites or locations with documented accidental spills, leaks or discharges. While these sources, which are cataloged and tracked by the Connecticut DEP, may fall within a public drinking water supply source water area, they may or may not presently be discharging to the environment or causing contamination of a public drinking water source.

Exhibit VI

2002 Connecticut Land Cover

Ledyard

This map is a product of the Center for Land use Education And Research (CLEAR) at the University of Connecticut. For more information on CLEAR or this map, visit http://clear.uconn.edu.



This map is intended for planning and educational purposes only. It is based on the interpretation and classification of remotely sensed satellite imagery, and the accuracy at any given location cannot be guaranteed (see CLEAR website for more information).

Exhibit VII

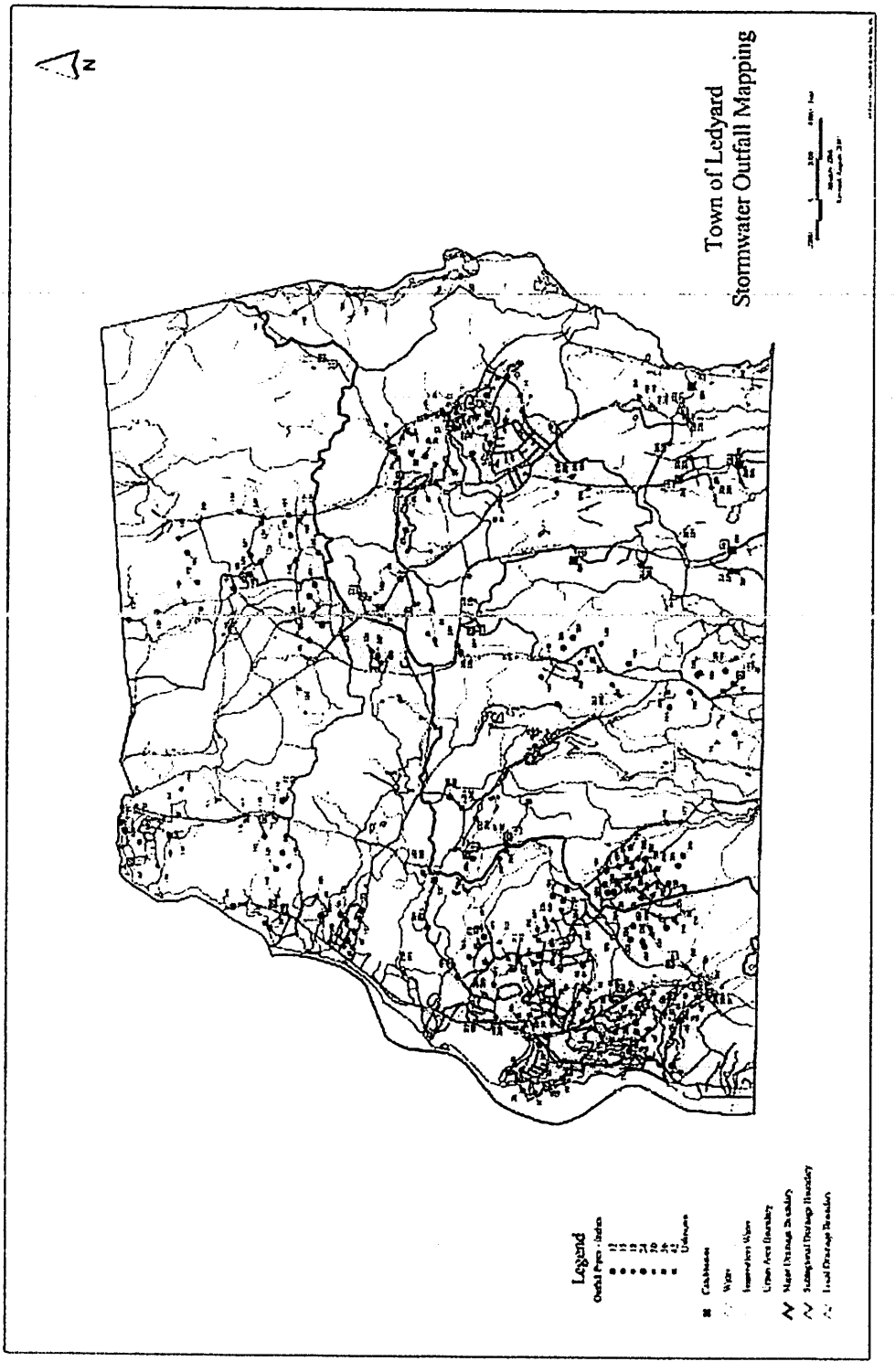


Exhibit VIII

STATE OF CONNECTICUT

Department of Public Health

Drinking Water Division

Connecticut Statutes and Regulations For The Protection Of Public Drinking Water Sources

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), prohibits the sale of the most critical watershed lands (i.e. Class I land). Less critical water company owned watershed lands, defined as Class II land, is allowed to be sold or have its present use changed through a permit process.

Source Abandonment: C.G.S. Sections 25-33k, 25-33l, & 25-33m regulates the sale and abandonment of public water supply sources.

Location of Cemeteries: C.G.S. Section 25-41 prohibits the location of cemeteries within one-half mile of a public water supply reservoir.

Prohibition of Sewage Discharge: C.G.S 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 1 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(c)(7)(E)(iii), information on sources of contamination within the delineated wellhead protection area shall be considered.

Watershed Prohibitions, Fishing, Passive Recreation & Penalties For Polluting A Reservoir: C.G.S. 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 ground water 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: C.G.S. 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: C.G.S. 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 constitutes an immediate threat to public water supplies

Abbreviations: C.G.S. - Connecticut General Statute P.H.C. - Public Health Code Regulation

Exhibit VIII (Cont'd)

Connecticut Statutes and Regulations For The Protection Of Public Drinking Water Sources

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, previous analytical results showed no detectable limit of the contaminant to be waived.

Review of Projects In A Watershed By The Department of Public Health: C.G.S 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: C.G.S. 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: C.G.S. Sections 25-32d and 25-32d-1 et seq. requires water companies which serve over 1000 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 fifty years, which includes an evaluation of source water protection measures.

Regional Water Supply Plans: C.G.S. 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: C.G.S. 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.

Suggested Reading: The State's *Conservation and Development Policies Plan for Connecticut 1998-2003* sets-forth specific goals and policies for the State of Connecticut and local communities. Sections concerning potable water supplies are located on pages 59-68, 120-123. This document is revised and updated every five years by the Office of Policy and Management.

Drinking Water Section
860.509.7333 (business hours)
860.509.8000 (after hours)
www.dph.state.ct.us/BRS/Water/DWD.htm

For More Information Contact The Source Water Protection Unit

Abbreviations: C.G.S. - Connecticut General Statute P.H.C. - Public Health Code Regulation

Exhibit VIII (Cont'd)

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Drinking Water Section

RCSA 19-13-B32. Sanitation of Watersheds

Unless specifically limited, the following regulations apply to land and watercourses tributary to a public water supply including both surface and ground water sources.

(a) As used in this section, "sewage" shall have the meaning found in section 19-13-B20 (a) of the public health code: "Toxic metals" shall be arsenic, barium, cadmium, chromium, lead, mercury and silver and the salts thereof: "high water mark" shall be the upper limit of any land area which water may cover, either standing or flowing, at any time during the year and "watershed" shall mean land which drains by natural or man-made causes to a public drinking water supply intake.

(b) No sewage disposal system, cesspool, privy or other place for the deposit or storage of sewage shall be located within one hundred feet of the high water mark of any reservoir or within fifty feet of the high water mark of any stream, brook, or watercourse, flowing into any reservoir used for drinking purposes.

(c) No sewage disposal system, cesspool, privy or other place for the deposit or storage of sewage shall be located on any watershed, unless such facility is so constructed that no portion of the contents can escape or be washed into the stream or reservoir.

(d) No sewage shall be discharged on the surface of the ground on any watershed.

(e) No stable, pigpen, chicken house or other structure where the excrement of animals or fowls is allowed to accumulate shall be located within one hundred feet of the high water mark of a reservoir or within fifty feet of the high water mark of any watercourse as above mentioned, and no such structure shall be located on any watershed unless provision is made in a manner acceptable to the commissioner of health for preventing manure or other polluting materials from flowing or being washed into such waters.

(f) No toxic metals, gasoline, oil or any pesticide shall be disposed of as a waste into any watercourse tributary to a public drinking water supply or to any ground water identified as supplying a public water supply well.

(g) Where fertilizer is identified as a significant contributing factor to nitrate nitrogen occurring in excess of 8 mg/l in a public water supply, fertilizer application shall be made only under current guidelines established by the commissioner of health in cooperation with the state commissioner of agriculture, the college of agriculture of the University of Connecticut and the Connecticut agricultural experiment station in order to prevent exceeding the maximum allowable limit in public drinking water of 10.0 mg/l for nitrite plus nitrate nitrogen.

(h) Where sodium occurs in excess of 15 mg/l in a public drinking water supply, no sodium chlorine shall be used for maintenance of roads, driveways, or parking areas draining to that water supply except under application rates approved by the commissioner of health, designed to prevent the sodium content of the public drinking water from exceeding 20 mg/l.

(i) The design of storm water drainage facilities shall be such as to minimize soil erosion and maximize absorption of pollutants by the soil. Storm water drain pipes, except for crossing culverts, shall terminate at least one hundred feet from the established watercourse unless such termination is impractical, the discharge arrangement is so constructed as to dissipate the flow energy in a way that will minimize the possibility of soil erosion, and the commissioner of health finds that a discharge at a lesser distance is advantageous to stream quality. Special protections shall be taken to protect stream quality during construction.

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Exhibit VIII (Cont'd)

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Drinking Water Section

CGS Sec. 8-3i. Notice to water company re projects within aquifer protection area or watershed of water company

(a) As used in this section "water company" means a water company as defined in section 25-32a and "petition" includes a petition or proposal to change the regulations, boundaries or classifications of zoning districts.

(b) When an application, petition, request or plan is filed with the zoning commission, planning and zoning commission or zoning board of appeals of any municipality concerning any project on any site which is within the aquifer protection area delineated pursuant to section 22a-354c or the watershed of a water company, the applicant or the person making the filing shall provide written notice of the application, petition, request or plan to the water company, provided such water company has filed a map showing the boundaries of the watershed on the land records of the municipality in which the application, petition, request or plan is made and with the zoning commission, planning and zoning commission or zoning board of appeals of such municipality or the aquifer protection area has been delineated in accordance with section 22a-354c, as the case may be. Such notice shall be made by certified mail, return receipt requested, and shall be mailed within seven days of the date of the application. Such water company may, through a representative, appear and be heard at any hearing on any such application, petition, request or plan.

(c) Notwithstanding the provisions of subsection (b) of this section, when an agent of the zoning commission, planning and zoning commission or zoning board of appeals is authorized to approve an application, petition, request or plan concerning any site which is within the aquifer protection area delineated pursuant to section 22a-354c or the watershed of a water company without the approval of the zoning commission, planning and zoning commission or zoning board of appeals, and such agent determines that the proposed activity will not adversely affect the public water supply, the applicant or person making the filing shall not be required to notify the water company.

Sec. 22a-42f. Notice of application to water company re conduct of regulated activities within watershed of water company. When an application is filed to conduct or cause to be conducted a regulated activity upon an inland wetland or watercourse, any portion of which is within the watershed of a water company as defined in section 25-32a, the applicant shall provide written notice of the application to the water company provided such water company has filed a map showing the boundaries of the watershed on the land records of the municipality in which the application is made and with the inland wetlands agency of such municipality. Such notice shall be made by certified mail, return receipt requested, and shall be mailed within seven days of the date of the application. The water company, through a representative, may appear and be heard at any hearing on the application.

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Exhibit VIII (Cont'd)

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Drinking Water Section

CGS Sec. 25-43. Bathing in and pollution of reservoirs. Aircraft on reservoirs

(a) Any person who bathes or swims in any reservoir from which the inhabitants of any town, city or borough are supplied with water, or in any lake, pond or stream tributary to any distribution reservoir, or in any part of any lake, pond or stream tributary to any storage reservoir, which part is distant less than two miles measured along the flow of water from any part of such storage reservoir, and any person who causes or allows any pollutant or harmful substance to enter any such public water supply reservoir, whether distribution or storage, or any of its tributaries, or commits any nuisance in any public water supply reservoir or its watershed, shall be fined not less than one hundred dollars or imprisoned not more than thirty days, or both. For the purposes of this section, "storage reservoir" means an artificial impoundment of substantial amounts of water, used or designed for the storage of a public water supply and the release thereof to a distribution reservoir, and "distribution reservoir" means a reservoir from which water is directly released into pipes or pipelines leading to treatment or purification facilities or connected directly with distribution mains of a public water system.

(b) No person, after having received notice or after notice has been posted that any reservoir, lake or pond, or any stream tributary thereto, is used for supplying the inhabitants of a town, city or borough with water, shall wash any animal or clothing or other article or allow any animal to enter therein. No person shall cause or allow any pollutant or harmful substance to enter such reservoir, lake, pond or stream, nor shall any person, after receipt of written notice from the municipality, water company, as defined in section 25-32a, or the local director of health having jurisdiction, or their agents, that the same is detrimental to such water supply, permit any such substance to be placed upon land owned, occupied or controlled by such person, so that the same may be carried by rains or freshets or otherwise flow into the water of such reservoir, lake, pond or stream, or allow to be drained any sewage from such land into such water. Any person who violates any provision of this subsection shall be fined not less than one hundred dollars or imprisoned not more than thirty days or both.

(c) No person shall cause or permit an aircraft, as defined in subdivision (5) of section 15-34, to land upon, take off from or be operated, kept, parked, garaged, stored or otherwise maintained on any distribution or storage reservoir or on any watercourse tributary to any such reservoir.

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Exhibit VIII (Cont'd)

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

Drinking Water Section

General Construction Best Management Practices
For Sites Within A Public Drinking Water Supply Area

- **Emergency Response Plan.** A response plan should be written for actions to be taken for the containment of accidental fuel or chemical spills that may occur during construction. Spill response equipment should be available on-site at all times along with personnel trained in the proper use of such equipment. A person or persons should be designated by the contractor for emergency response coordination on a 24/7 basis.
- **Vehicles and Machinery.** Designate one area for auto parking, vehicle refueling and routine equipment maintenance. The designated area should be well away from exposed surfaces or storm drains. Methods and locations of refueling, servicing, and storage of vehicles and machinery should be addressed and included as notes on the final site plans. Minor servicing and refueling of machinery should be completed on a fueling pad with containment. All major equipment repairs must be made off site. Onsite fuel storage should be discouraged.
- **General Site Conditions.** Keep pollutants off exposed surfaces. The burying of stumps or construction debris must not be allowed on the job site. Sediment fences and hay bales must be strategically placed, inspected and maintained to prevent sedimentation and erosion. Temporary storm water ponds and basins must be routinely inspected and maintained. If unexpected conditions occur, additional fences and hay bales should be available for use as needed to prevent runoff. Protect exposed stockpiles of soil to prevent runoff. Use as little water as possible for dust control. Clean up leaks, drips and other spills immediately to prevent or minimize soil contamination. Never hose down "dirty" pavement or surfaces where materials have spilled. Use dry cleanup methods whenever possible.
- **Hazardous Materials Storage.** Paints, paint products and other hazardous materials should be removed from the site during non-work hours or otherwise stored in a secure area to prevent vandalism. Place covered trashcans and recycling receptacles around the site. Cover and maintain dumpsters, check frequently for leaks, and never clean a dumpster by hosing it down on site.
- **Sanitation.** Make sure portable toilets are in good working order. Check frequently for leaks.
- **Notification.** Notification of the project start date should be sent to the Public Water System as soon as it has been determined. Public Water System personnel should be granted daily site access to review compliance with site best management practices. The Public Water System *and this office must be notified immediately of any chemical/fuel spill at the construction site, along with the Department of Environmental Protection's Oil and Chemical Spill Response Unit.* Emergency telephone numbers and a statement identifying the construction site as a sensitive public water supply area should be posted where they are readily visible to contractors and other on-site personnel. A note should be added to the construction documents stating the sensitivity of the area.

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Exhibit VIII (Cont'd)

Both surface and groundwater sources are vulnerable to potential contamination from non-point source pollution (NPS), which unlike pollution from industrial and sewage treatment plants, comes from widely distributed sources such as highways, large parking areas or land that is prone to erosion. Non-point pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff travels through a drinking water source area, it picks up and carries away natural and human-made pollutants, which are deposited into lakes, rivers, wetlands, coastal waters, and underground sources of drinking water. Non-point source pollutant categories include:

- **Sediment** from improperly managed construction sites, crop and forestlands, eroding streambanks and urban runoff;
- **Fertilizers, herbicides, and insecticides** from their use on agricultural lands and residential areas;
- **Bacteria and nutrients** from livestock, pet wastes, faulty septic systems and urban runoff;
- **Oil, grease, and toxic chemicals** from spills, releases, urban runoff and impervious surfaces and;
- **Airborne pollutants** from industrial and urban fallout.

Potential sources of non-point pollutants include agriculture and forestry operations, grazing, septic systems, recreational boating, urban and residential runoff, construction, physical changes to stream channels, and habitat degradation. Careless or uninformed household and yard management also contributes to non-point pollution problems. Non-point pollution is widespread because it can occur any time activities disturb the land or water.

The most common non-point pollutants are sediment and nutrients that wash into water bodies from agricultural land, construction sites, small and medium-sized animal feeding operations, and other areas of disturbance, including your backyard. Other common non-point pollutants include pesticides, pathogens (bacteria and viruses), salts, oil, grease, toxic chemicals, and heavy metals. Unsafe drinking water, destroyed habitat, fish kills, and many other severe environmental and human health problems can result from non-point pollutants. When non-point pollution occurs in the watershed of a public drinking water supply it may give rise to a number of conditions that can threaten the quality and quantity of drinking water and impact public health. Proactive pollution prevention of drinking water sources is Connecticut's first line of defense in providing safe drinking water.

The Department of Public Health Drinking Water Division (DWD) recently completed an assessment of all public drinking water sources to identify and inventory potential sources of contamination that could adversely impact drinking water quality and safety. To view assessment reports and learn more about Connecticut's source water assessment program, visit our website at: http://www.dph.state.ct.us/BRS/Water/SWAP/swap.htm or contact the Source Water Protection Program in Hartford at (860) 509-7333.

Public drinking water systems, local government and public health officials will be able to use the assessment reports to plan and direct drinking water source protection activities including: protective zoning regulations, land acquisition in critical source water areas, and the implementation of best management practices for the control of non-point pollution and the safe handling, storage and disposal of hazardous materials. **If you live on or near a watershed of a public drinking water supply reservoir you should know where the watershed boundaries are located and follow the watershed protection guidelines listed below.** Sensible backyard housekeeping and maintenance will help protect the watershed and your family's well from unnecessary pollution.

Exhibit VIII (Cont'd)

How To Protect The Watershed and Your Family's Well

Control Stormwater Runoff

- Keep litter, pet wastes, leaves, and debris out of the road and away from storm drains--these outlets drain directly to lake, streams, rivers, wetlands, and Long Island Sound.
- Apply lawn and garden chemicals sparingly and according to directions.
- Dispose of used oil, antifreeze, paints, and other household chemicals properly, not in storm drains or behind the stonewall. Support your Town's efforts to establish a program for collecting household hazardous wastes.
- Clean up spilled brake fluid, oil, grease, antifreeze, and fuel. Do not hose them into the street where they can eventually reach local streams and lakes or contaminate groundwater.
- Control soil erosion on your property by planting ground cover and stabilizing erosion-prone areas.

If You Have a Septic System

- Pump out and inspect your septic system regularly. (Pumping out every three to five years is recommended for a three-bedroom house with a 1,000-gallon tank; smaller tanks should be pumped more often.)
- Do not use septic system additives. There is no scientific evidence that biological or chemical additives aid decomposition in septic tanks; some additives may in fact be detrimental to the septic system or contaminate ground water.
- Do not divert gutters, storm drains or basement pumps into septic systems.
- Avoid or reduce the use of your garbage disposal because they add unnecessary solids to your septic system and can also increase the frequency your tank needs to be pumped.
- Don't use your toilet as a trash can! Excess solids may clog your drainfield and necessitate more frequent pumping or costly repairs.

When You Landscape Or Garden

- Select plants that have low requirements for water, fertilizers, and pesticides.
- Cultivate plants that discourage pests. Minimize grassed areas that require high maintenance.
- Preserve existing trees, and plant trees and shrubs to help prevent erosion and promote infiltration of water into the soil.
- Use landscaping techniques such as grass swales (low areas in the lawn) or porous walkways to increase infiltration and decrease runoff.
- Leave lawn clippings on your lawn so that nutrients in the clippings are recycled and less yard waste goes to landfills.
- If you use a professional lawn care service, select a company that employs trained technicians and follows practices designed to minimize the use of fertilizers and pesticides.
- Compost your yard trimmings. Compost is a valuable soil conditioner that gradually releases nutrients to your lawn and garden. Compost retains moisture in the soil and helps conserve water.
- Spread mulch on bare ground to help prevent erosion and runoff.
- Do not apply pesticides or fertilizers before or during rain due to the strong likelihood of runoff.

If You Have a Farm, Garden or Horses in Your Back Yard

- Manage animal waste to minimize contamination of surface water and ground water.
- Reduce soil erosion by using best management practices to eliminate runoff around the barn and pasture or in your garden.
- Protect drinking water by using less pesticides and fertilizers.
- Dispose of pesticides, containers, and tank wastes in an approved manner.

If You Have Your Property Logged

- Make certain that proper logging and erosion control practices are used by ensuring proper construction, maintenance, and closure of logging roads and skid trails.

CONNECTICUT DEPARTMENT OF PUBLIC HEALTH

Keeping Connecticut Healthy

Connecticut Department of Public Health
Drinking Water Division
410 Capitol Avenue – MS# 51WAT
P.O. Box 340308 Hartford, CT 06134
(860) 509-7333
http://www.dph.state.ct.us/BRS/Water/DWD.htm

Exhibit IX

Horse Environmental Awareness Program

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CONNECTICUT

Horses -- A Common Sense Approach

The Horse Manager's Benefit

By managing horse pastures more effectively and incorporating the benefits of a sound waste management system, horse managers can increase forage production, lower production costs, improve aesthetics, and promote a healthier environment.

Health and Safety

A well-managed grass pasture should meet the nutritional requirements of most horses. Mature horses will eat around 2% of their body weight in forage feed (dry matter basis) every day. Based on a Kentucky Blue grass/white clover pasture (medium production), this demand could be satisfied with 0.5 to 3 acres of pasture per animal (according to season, soil, and management). If supplementing with grain, horses should consume at least 1% of their body weight in hay or pasture. Horses benefit from grazing high quality pastures. Grazing the plants at their vegetative stage (before going to seed) will provide higher nutritional value forage: see table below. For cool season grasses, this stage could be maintained by grazing when the plants reach between 8-10 inches of height. Resting the pastures during the grazing season will allow the re-growth needed to graze them again. Moving the horses out of the field when the grass is 3-4 inches high will allow faster re-growth and will also help increase the life span of the stand and reduce overgrazing.

Average Composition of Pastures

Green Pasture	Spring	Summer	Fall	Early Head	Full Head
Dry Matter, %	20.0	20.0	20.0	20.0	20.0
Crude Protein, %	19.0	19.0	20.0	14.9	11.0
Digestible Energy, Mcal/lb	1.19	1.16	1.27	1.06	.90
Calcium, %	.70	.70	.80	.66	.50
Phosphorus, %	.41	.31	.33	.27	.20

Source: Equine Feeding Management, Dept. Dairy and Animal Science, Penn State University

Grazing plants too short will interfere with the dry matter intake of the horse. It may also cause horses to ingest soil and become sickly. Having shorter plants will allow more weeds to invade the pastures, increasing the chance for consumption of toxic plants and may be engaging in a more costly, less environment friendly weed control program.

Consider Water Quality

Poorly managed, overgrazed pastures or exercise areas can also affect the horse's drinking water quality. Soil sediments, manure, fertilizers, and pesticides can all be moved during a heavy rainfall into surface and groundwater sources. Not only can these pollutants poison the horses, they also may affect the people who live downstream from the horse pasture.

Well managed pastures can provide a healthy diet and safe exercise areas for your horses. These benefits can be even greater by using a rotational grazing system. This system will consider the land capabilities, animal requirements, suitable grasses, and owner availability -- among other factors -- to accomplish your goals. This type of pasture management system will greatly increase forage quality and quantity, while improving the pasture's appearance and producing a healthier environment for horses and people.

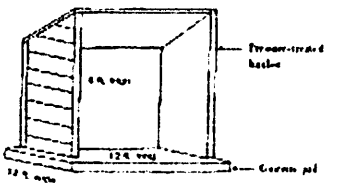
CTD Your Horse Manure

What does CTD mean? Contain, Treat, Dispose your horse manure with a common sense and responsible approach. What's in it for you? Healthier horses, cleaner stables, productive pastures, and cooperative neighbors.

Other benefits include protection of surface and ground water, including drinking water sources, avoiding lawsuits, and possibly earning some income.

Exhibit IX (Cont'd)

Contain
Two cubic feet per day, or 8-10 tons of manure and bedding annually; that's an estimate of what a 1,000 lb. horse can generate. Manure harbors more than 297 million fecal coliforms per day. A storage facility is the most efficient way to contain this large amount of manure and bedding.



Example Manure Composting Facility

A facility 12 ft. wide by 12 ft. long by 6 ft. high can treat a year's worth of manure. Place your facility at least 100 feet away from all water sources. Constructing a concrete floor will keep nutrients from leaking underneath and out the sides. A cover over the facility will allow you to control the moisture content and will aid in reducing runoff. Ideally, a sediment basin or grass filter strip will clean runoff so nutrients and sediments do not pollute surface and ground water sources.

Treat
Composted manure is clean, odorless, and has the consistence of potting soil. To get to this desirable state, the manure must be piled properly, kept moist (*not* wet), and aerated regularly. Stacking manure 3 ft. to 5 ft. high provides enough bulk to generate the heat necessary to compost the material. An internal temperature maintained between 135o and 160o will kill most pathogens, parasites, and weed seeds. High temperatures also eliminate insect and rodent infestations. Moisture should be maintained between 50% and 70%.

Thoroughly mix the manure three times per month to prevent mold, mildew, and odor.

Dispose
Disposing in *the back forty* is convenient, but it may be illegal. Unmanaged manure can cause water quality degradation by spreading bacteria and leaching nutrients into nearby water sources.

Look for customers such as neighbors, lawn care companies, landscapers, farmers, gardeners, nurseries, and greenhouses. Find out if there are any restrictions -- for instance, mushroom growers will accept manure with straw bedding, but not with wood bedding (chips, sawdust). Compost can be used on your own pastures only if you practice good management techniques. Poor management may result in spreading infection and diseases.

If you plan to apply compost to cropland, pastures, gardens, nurseries, lawns, or greenhouses, test if for nutrient content before spreading. The nutrient content of manure is roughly equal to a 50 lb. bag of 12-4-8 commercial fertilizer, but actual content varies widely. Compost is very clean to handle, provides an excellent source of organic matter and supplemental nutrients, and significantly increases moisture holding capacity of soils. The productivity of sandy soils improves dramatically with composted manure applications.

CTD Benefits Everyone
Responsibly managing your manure with the CTD approach promotes horse and human health, and improves your stable's image with customers and neighbors. But don't overlook the benefits of protecting drinking water sources, maintaining good neighbor relations, and securing a source of income.

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Funded in part by the
USDA Natural Resources Conservation Service

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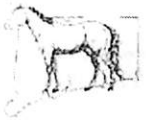
This fact sheet was sponsored by the Mid-Atlantic Interdisciplinary Resource Team -- written by Noel Soto, Grazing Specialist, Harrisburg, Pennsylvania (717) 782-4403, and Virginia A. Kopp, Resource Conservationist, Richmond, Virginia (804) 287-1655

Exhibit IX (Cont'd)

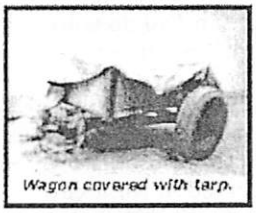


Horse Environmental Awareness Program

www.ct.nrcs.usda.gov/programs/heap/default.html

CONNECTICUT

Manure Storage: Containing the HEAP

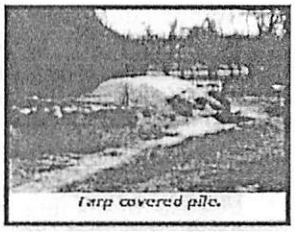


Wagon covered with tarp.

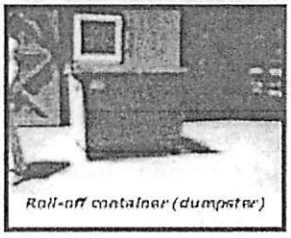
Assuming you have figured out your disposal strategy (or at least you are working on it), what do you do with your horse waste between disposal events? A manure storage structure or area serves as a temporary holding area until materials are removed for utilization on or off the farm.

During the storage period, storm water can come into contact with your manure pile either as precipitation on top, or as a concentrated flow of runoff moving across the landscape. It may be absorbed by the pile if conditions are very dry. Under more moist conditions, water will pass through, picking up and carrying nutrients, pathogens, and organic particles to areas where they have potential to enter surface and ground water supplies.

How Do You Keep that HEAP from Becoming an Environmental Detriment?



Tarp covered pile.



Roll-off container (dumpster)

- *Location* – Consider proximity to property lines, wells, surface water, and ground water table when choosing a manure storage site. Locate your manure storage as far from property lines and water sources as possible. Some towns may have regulations that require minimum setbacks.
- *Keep Rain and Storm Water Runoff Out* – Utilize an appropriate combination of containers, walls, diversions, and covers (tarp, roof, lid) whenever possible. Smaller piles may be adequately protected by locating them away from places where surface water flows over the ground during storm events, and by covering the pile with a tarp.
- *Size* – Design an appropriate facility for the storage time period. Measure your average daily waste (manure and bedding) and multiply that volume by the number of days between planned removal for disposal, composting, or utilization. *(Example: The average horse waste production (including bedding) is 2 cubic yards/month per horse. For 6 months worth of storage for one horse, you will need 12 cubic yards of storage space. One cubic yard = 27 cubic feet, so you will need 324 cubic feet, or an area roughly 9' long x 9' wide x 4' deep.)*

Remember to consider the type and size of equipment that will be used to remove the manure, and make the necessary accommodations in the planning/design process.

Roofed manure storage structure.

Storage Options to Consider

- covered dumpsters
- three-walled structure with roof or tarp cover
- covered compost piles
- covered or enclosed truck bed or manure spreader
- trash cans with lids (only for facilities that produce very small quantities of waste)

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Exhibit IX (Cont'd)

Horse Environmental Awareness Program

www.nrcs.usda.gov/programs/Stable_Keep_program.html

CONNECTICUT

Manure Utilization: Conquering the HEAP

Isn't it amazing how fast your manure heap becomes a mountain? What can you do with it? First, stop and realize that your manure is a valuable resource for someone, if not for you. Treat it as such, and find a way to put it to good use -- use it, sell it, or give it away. Horse waste generally contains some type of bedding material along with the manure. Bedding type and quantity may vary greatly from farm to farm. In Connecticut, the most common bedding used is wood shavings or sawdust. Wood products can take months or years to break down. When applied to plants or crops in a raw, uncomposted form, it can actually do more harm than good. Consider composting your waste before utilizing it. *(See Composting fact sheet)*

When utilizing uncomposted waste on crops and hay fields, keep in mind:

- Nitrogen depletion of the soil may occur as bedding materials are broken down by microorganisms. Nitrogen fertilizer may need to be added to counteract this effect.
- Smothering of grasses may occur if waste is applied too thickly.
- Parasite eggs in uncomposted manure may cause an infestation problem on pastures. Maintain a good deworming program for your animals.
- One 1,000 pound horse will excrete 9 tons of manure per year, which will provide 102 lbs. of nitrogen, 18 lbs. of phosphorus, and 69 lbs. of potassium for crop growth. Disposal of manure may be necessary if you do not have fields on which to spread it. Remember that composting the manure will make it a more attractive commodity to potential takers. Some may be willing to pay for it.

Consider the following disposal options:

- Rent a dumpster and have it hauled away on a regular basis by a sanitation company.
- Arrange to have a local farmer or landscaper remove it on a regular schedule, or bring it to them. (If bringing it to them, consider using some type of truck or dump trailer as your portable manure storage container.)
- Friends, family, and neighbors may be willing to take it for use in gardens or landscaping.
- Form a manure cooperative in your area. Is there a compost facility in your area that would welcome horse waste? Is there an entrepreneur who might want to start one? Are there others who may be interested in doing the hauling to the facility? Talk to other horse owners. You are not the only one with this need.

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USDA Natural Resources Conservation Service

Exhibit X

dcr
Massachusetts

Department of Conservation and Recreation
Division of Water Supply Protection
Office of Watershed Management

Quabbin Reservoir Watershed System
2006 Public Access Management Plan Update

The Department of Conservation and Recreation, Division of Water Supply Protection, Office of Watershed Management (DCR/DWSP/OWM) is responsible for the active and reserve water supply sources contained within the Quabbin Reservoir, Ware River, Wachusett Reservoir and Sudbury Reservoir watersheds. DCR/DWSP/OWM and its predecessors have a long tenure of providing high quality drinking water to the citizens of Massachusetts. There are a variety of federal and state laws that OWM must work under as a drinking water manager. OWM is also responsible for implementing its own regulations in its efforts to protect the source drinking water for approximately one third of the Commonwealth.

The Quabbin Reservoir is the primary drinking water supply in this watershed system. DCR/DWSP/OWM owns over 82,000 acres of land and water in the Quabbin Reservoir watershed. While DCR manages this watershed primarily for water quality protection, drinking water supply, and environmental resource protection purposes, these vast areas are also used by the public for recreation.

The first Public Access Plan for the Quabbin Reservoir watershed was published in 1988. This plan outlined control policies and monitoring mechanisms used to mitigate possible negative impacts from public access to Watershed Management property in Barre, Belchertown, Hardwick, New Salem, Orange, Pelham, Petersham, Shutesbury, Ware, and Wendell. An update was completed ten years later in 1998. This most recent update was initiated in 2005, completed in spring 2006, and officially adopted in July 2006.

DCR and its predecessor have continuously involved stakeholders in its public access policy development, review, and modification. The planning process for this latest update included two public meetings, a visitor survey, an abutter's survey, and a public hearing. DCR continuously receives pressure to allow new recreational opportunities and increase the availability of currently allowed activities. The input received while updating the Quabbin Access Management Plan demonstrated, however, that local residents, land abutters, visitors, and environmental organizations are supportive of DCR's policies to protect the public water supply while allowing controlled access to these resources.

The following map and table provide a summary of the policies described in the 2006 *Public Access Management Plan Update: Quabbin Reservoir Watershed System*. The complete document, which integrates current regulations and legislation into updated policies, is available on-line at www.mass.gov/dcr/waterSupply/watershed/dwmplans.htm and click on Quabbin Reservoir Watershed Public Access Plan Update. Copies are also available at the Quabbin Visitors Center or town libraries in the watershed. The public access policies for the entire DCR water supply watershed system are available on-line at www.mass.gov/dcr/waterSupply/watershed/pacc.htm. For further information, please contact the Quabbin Visitor's Center at (413) 323-7221.

Exhibit X (Cont'd)

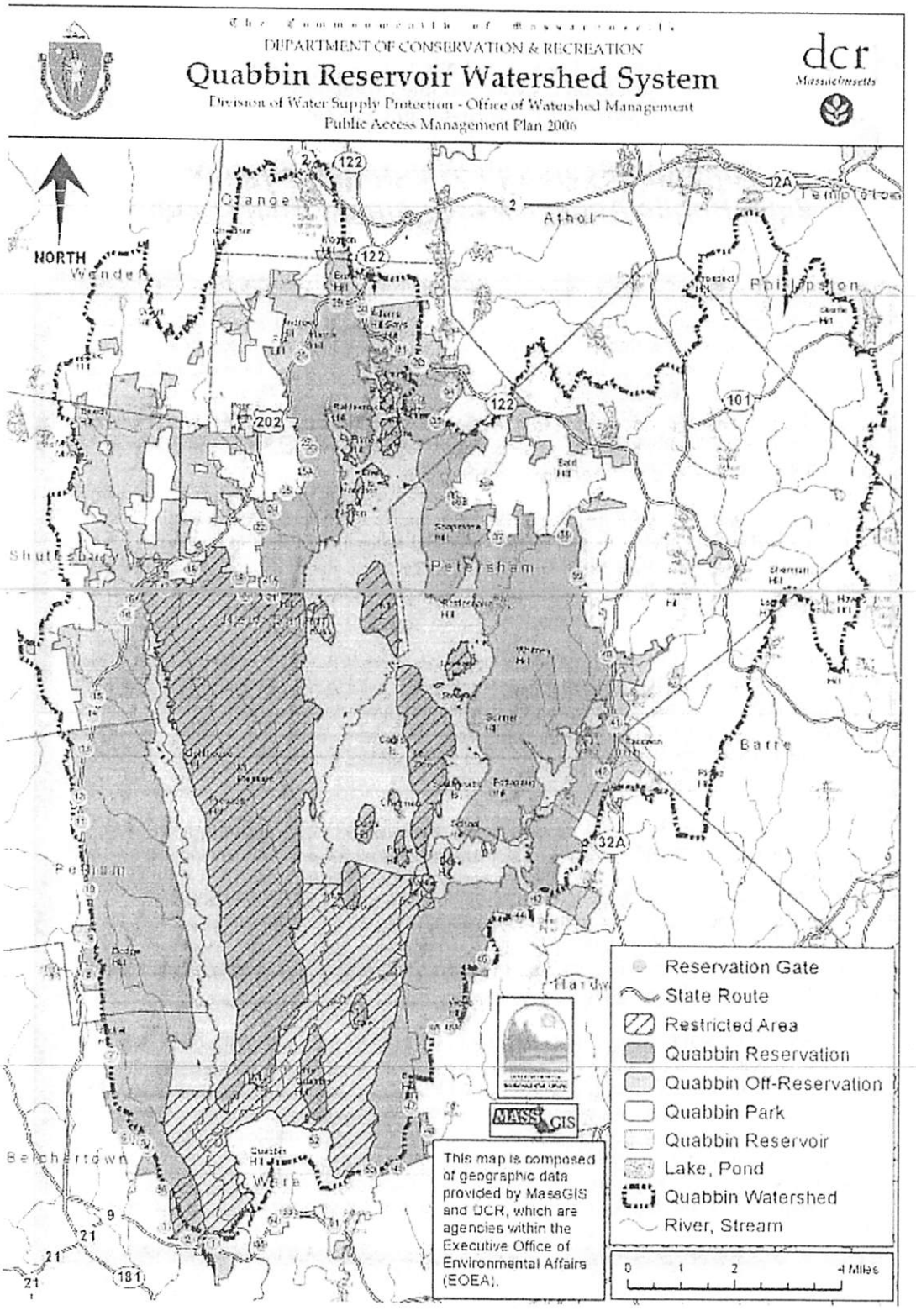

Exhibit X (Cont'd)

dcr
Massachusetts

Quabbin Reservoir Watershed System

2006 Public Access Summary

Activity	Quabbin Park	Quabbin Reservation	Off-Reservation	Quabbin Reservoir	Regulating Ponds[1]	Off-Watershed Ponds[2]
VEHICLE ACCESS						
Driving for Sightseeing	❙❙ [1]	⊘	⊘	⊘	⊘	⊘
Snowmobiling	⊘	⊘	□ [2]	⊘	⊘	⊘
ATV Riding	⊘	⊘	⊘	⊘	⊘	⊘
Bicycling -Designated Roads	□ [3]	⌐ [4]	□ [5]	⊘	⊘	⊘
Off-road Bicycling	⊘	⊘	⊘	⊘	⊘	⊘
Sledding	⊓ [6]	⊓	⊓	⊘	⊘	❙
FOOT ACCESS						
Walking/Hiking/Snowshoeing	⊓ [7]	⌐ [7]	⊓	⊘	⊘	⊓
Cross-country Skiing	⊘	⊘	□	⊘	⊘	⊘
Hunting/Trapping	⊘ [8]	⊘ [8]	⊓	⊘	⊘	⊘
Ice Fishing/Ice Skating	⊘	⊘	□	⊘	⊘	□ [9]
Shore Fishing	⊘ [10]	❙ [11]	❙❙ [12]	❙ [11]	❙ [11]	❙❙ [12]
WATER ACCESS						
Boat Fishing	⊘	⊘	❙❙ [13]	❙ [14]	❙ [14]	❙❙ [13]
Canoeing/Kayaking/Boating	⊘	⊘	⊘	⊘	⌐ [14]	□ [15]
Wading (fishing, launching)	⊘ [16]	⌐ [17]	□ [17]	⊘ [18]	⌐ [18]	□ [16]
Swimming	⊘	⊘	⊘	⊘	⊘	⊘
OTHER ACCESS						
Group Activities (e.g., weddings)	⊓ [19]	⌐ [19]	⊓ [19]	⊘	⊘	⊘
Geocaching/Questing	□ [20]	⊏ [20]	□ [20]	⊘	⊘	⊘
Wildlife/Bird Watching	□ [7]	⊏ [7]	□ [7]	⊐ [7]	⊏ [7]	□ [7]
Night Access	⊘ [21]	❙ [22]	❙❙ [22]	⊘	⊘	❙❙ [21]
Organized Sports	⊘ [24]	⊘ [24]	⊘ [24]	⊘	⊘	⊘
Dogs/ Other Animals	⊘	⊘	⊘	⊘	⊘	⊘
Horseback Riding	⊘	⊘	⊘	⊘	⊘	⊘
Collecting/Metal Detecting	⊘	⊘	⊘	⊘	⊘	⊘
Camping	⊘	⊘	⊘	⊘	⊘	⊘
Fishing Derbies	⊘	⊘	⊘	⊘	⊘	⊘
Target Shooting	⊘	⊘	⊘	⊘	⊘	⊘
Advertising	⊘	⊘	⊘	⊘	⊘	⊘
Marking – Trail/Roads (unauthorized)	⊘	⊘	⊘	⊘	⊘	⊘
Alcohol (possession of)	⊘	⊘	⊘	⊘	⊘	⊘
Other	Please call the Quabbin Visitor Center 413-323-7221 or Watershed Ranger Station 413-323-0192					

LEGEND: Prohibited – ⊘ Allowed - general restrictions – ❙ Specific Conditions – □ #

[1] The area on the reservoir above the horseshoe dam at Gates 31 and 43 [2] South Spectacle Pond, Russell Pond and Pepper Mill Pond

Exhibit X (Cont'd)

General Restrictions:

General public access within the Quabbin Reservoir Watershed System is restricted to one hour before sunrise and one hour after sunset through gates or designated (posted) areas only. Any activity which injures or defaces the property of the Commonwealth is strictly prohibited. This chart is based on the Watershed Protection Regulations 350 CMR 11.00, copies of which are available at the Quabbin Visitor Center. Littering is strictly prohibited. Carry in/Carry out. Don't feed wildlife.

Specific Restrictions:

[1] The Winsor Dam and Goodnough Dike have restricted vehicle access for security reasons.

[2] Snowmobiling is allowed only on the DCR designated trail located on Off-Reservation land. 304 CMR 12.29 applies.

Bicycling is only allowed on designated roads in Quabbin Park. See DCR Bicycling maps. Helmets and protective gear are required by MA law for children under 16 years of age and recommended for others

[3] Bicycling is allowed only on designated roads through DCR gates 29, 30, 31, 35, 40, 43A & B, and 44. Bicycling is only allowed on designated roads through Gate 8 during fishing season. See DCR Bicycling map for designated roads.

[4] Bicycling is allowed on main forest roads only within Off-Reservation lands with seasonal restrictions (e.g., mud season).

[5] Sledding or any other kind of sliding activity is prohibited on the reservoir, the dams and other structures.

[6] Walking, hiking, or snowshoeing access is allowed within the Quabbin Reservoir Watershed system, except in restricted areas (e.g., Prescott Peninsula, posted Administration Areas, Reservoir islands and along the baffle dams-November 15 – June 15).

[7] Hunting and Trapping are prohibited except by special permit during the Quabbin Controlled Deer Hunt and associated Paraplegic Hunt. Contact the Quabbin Visitor Center for more information.

[8] Ice fishing, ice skating, and carry-in boat access allowed on three Off-watershed ponds: South Spectacle, Bassett and Peppers Mill Ponds only. Please call Watershed Rangers, if accessing, as a courtesy at 413-323-0192.

[9] No fishing in Quabbin Park except catch-and-release fly-fishing (allowed all year) below the Winsor Dam in the Swift River, unless posted.

[10] Shore fishing along the Reservoir and along streams is permitted between Gates 8-West Branch Swift River, and 22-44 (except on baffle dams), by foot, during the designated Quabbin Fishing Season only. See the current Quabbin Fishing Guide and Map available at the Quabbin Visitor Center.

[11] Shore fishing within off-reservation lands and along off-watershed ponds is allowed year round according to State Fishing regulations.

[12] Carry-in boat access is allowed on off-watershed ponds. See Night Access Policy, if applicable.

[13] Boat access on designated areas of reservoir or regulating ponds requires valid MA Fishing License and size/motor restrictions. Wearing boots is mandatory if wading while launching or removing boats at designated areas from the Reservoir. Fishing access using canoes, kayaks, or jon boats is allowed only through Gate 31 above regulating dam and through Gate 43 on Pottapaug Pond with restrictions. Contact the Quabbin Visitor Center at 413-323-7221 for more information regarding current Fishing Guide.

[14] Allowed subject to MA Boating regulations. Please call Watershed Rangers, if accessing, as a courtesy at 413-323-0192

[15] Wading is allowed Off-watershed below the Winsor Dam Power Station on the Swift River

[16] Wading with boots is allowed between Gate 8-West Branch Swift River, and Gate 22-44, except in restricted areas, and in Off-Reservation tributaries.

[17] Wading is prohibited except while launching or removing boats while wearing boots, at designated boat launch areas.

[18] Allowed without a permit for groups of less than 25 individuals and/or less than 10 cars and/or 10 motorcycles. Permit required for group of 25 through 100 individuals and/or 10-40 cars/motorcycles or 1 bus. Permit and Ranger required for larger groups or other combinations.

[19] Special permit from Visitor Center required for any cache placement.

[20] Night access within Quabbin Park is prohibited with two exceptions. It is allowed without a permit on Swift River below Y pool, if access is from Route 9, and on Peppers Mill Pond.

[21] Night access within Quabbin Reservation is allowed by permit for pedestrians only through Gates 16, 31, 35, 41, and 43 only during the designated Quabbin Fishing season. Night access directly from 122 is allowed without a permit on South Spectacle Pond (off-watershed). Night access is allowed on Off-Reservation lands with special permit. Contact Quabbin Visitor Center for permit information.

[22] South Spectacle, Bassett, and Peppers Mill Ponds.

[23] Prohibited except with written permission from the Commissioner.

12.0 KEY FINDINGS AND RECOMMENDATIONS

12.1 Key Findings

The following findings are central to the southeastern Connecticut water supply region.

1. The regional municipalities of Groton, Ledyard, Preston, North Stonington, Waterford, Montville, and Norwich have demonstrated a common goal and a commitment to effectively managing drinking water quality, both now and into the future for existing and future potential water supplies.

2. In southeastern Connecticut, Groton Utilities, the watershed communities, and the water consumers span multiple municipal boundaries and dozens of planning and regulatory bodies. Multiple barriers are created by the disjointed and sometimes incongruent manner in which land uses and resource protection are managed in Connecticut by virtue of municipal divides, inconsistent policies and regulatory requirements, and the absence of a functional system with which to communicate and coordinate efforts among drinking water supply stakeholders.

3. The composition of land uses in the water supply watersheds widely varies, from low density and undeveloped areas to densely populated and developed areas. A number of unusual land uses occur within the active drinking water supply watersheds, including a large block of Navy housing, Interstate 95, and the Mashantucket Pequot Tribal Nation resort and casino.

4. Development in Ledyard Center is a critical issue to the town of Ledyard due to the role of this area in the future economic health of the town. Likewise, redevelopment in Center Groton is desired. Water quality protection and the provision of public sewers in identified higher density development areas are not at odds with each other. With proper planning and application, the two can be mutually pursued.

5. Various mechanisms are currently in place for the management of drinking water quality in southeastern, Connecticut, including ongoing source water protection measures, stormwater management, local development and stormwater regulations, and drinking water treatment facilities.

6. Through the process of developing the subject Drinking Water Quality Management Plan (DWQMP), a number of improvements and enhancements to existing measures have been identified for implementation under Phase III of this program. The intent is to utilize this DWQMP as a means of maintaining excellent water quality in the region's water supply without creating additional regulatory mandates on the water utility or the watershed communities.

7. The concept of discouraging water and sewer utility service in certain land use designations in the State Plan is at odds with existing land uses, local zoning, and

local plans of conservation and development. Implementation of the subject DWQMP will provide the protection sought by the State Plan without taking away a municipality's authority to develop within its own borders. The DWQMP offers an alternative to strict interpretation of the State Plan.

8. This DWQMP is not intended to establish an antidevelopment policy within the drinking water supply watershed or to supersede local zoning regulations. Rather, the plan is intended to manage the watershed and the water supply resource such that water quality is protected while still meeting the needs of the community and the region, including appropriate growth and development.

12.2 Recommendations

Recommendations have been made throughout this document and should be consulted as the individual management strategies are implemented. The following overarching recommendations are central to the future management and protection of drinking water quality in the southeastern Connecticut drinking water supply region.

1. Implement the DWQMP with full participation of the water supply stakeholders, including the water utility, the existing and future watershed communities, and the existing and future consumer communities.

2. Reach out to the leadership, commissions, and planning bodies in Groton, Ledyard, Preston, and North Stonington to formally engage these organizations in their role as watershed stewards. Equip these individuals and organizations with mapping and information to adequately identify sensitive resource areas such that the appropriate planning and review can take place and appropriate protective standards can be justified and applied while balancing economic development and public health protection. Review and modify local land use regulations as appropriate to be congruent with the goals and objectives enumerated in this DWQMP.

3. Work with state agencies through the Water Planning Council to coordinate efforts in these respective organizations relative to the implementation of the DWQMP, sharing information, data, and planning efforts, exploring possible technical assistance opportunities, collaborating on water resource planning management objectives, and identifying potential conflicts as well as working towards their resolution.

4. Effect specific changes in regional and municipal plans of conservation and development, local policies, and land use and resource regulations consistent with the principles of sound drinking water quality management. These include low impact development and state-of-the-art best management practices for land development.

5. Seek multiple and concurrent approaches to stormwater management. Require new development to utilize modern methods of stormwater management that provide for water quantity control and water quality protection. Implement centralized or

regionalized approaches to stormwater management in areas that have been previously developed without the benefit of best management practices. Amend local regulations as necessary to accommodate the application of low impact development by developers. Finally, strive for consistency in local stormwater regulations in the member watershed towns.

6. Institute changes in the manner in which streets are maintained within the existing and future water supply watersheds, including state-owned streets and highways.

7. Explore alternate and equitable sources of revenue relative to funding stormwater management initiatives. Evaluate fair and effective means of placing the burden of post construction stormwater management system maintenance such that it is properly funded and executed.

8. Work with the Mashantucket Pequot Tribal Nation in Ledyard, the U.S. Navy in Groton, and the Connecticut Department of Transportation, with the goal of incorporating the principles and recommendations of this DWQMP in these operations.

9. Seek changes in legislation to place greater emphasis on source water protection in state grants and aid funding considerations.

10. Seek changes to modify the manner in which the State Conservation and Development Policies Plan is applied such that it is consistent with local plans of conservation and development and the subject DWQMP. Become involved in the next State Plan update, scheduled to take place in 2010 and 2011. Bring clarity to how the State Plan affects Connecticut communities and educate the legislature and state agencies on how the DWQMP can effect changes in the State Plan and its application.

11. Take proactive measures to secure critical lands within the watershed such that they are protected in perpetuity.

12. Adopt a balanced approach to harnessing the recreational benefit of the large land holdings within the drinking water supply watersheds while maintaining an appropriate level of security of these resources.

13. Educate watershed stakeholders relative to the importance of the regional drinking water resource, its protection, and proper household spill response and waste management.

14. Expand the existing water quality monitoring program within the drinking water supply watershed to properly identify and track trends.

15. Maintain, upgrade as necessary, and properly manage the water treatment facilities within the region.

EXECUTIVE SUMMARY

The subject Drinking Water Quality Management Plan (DWQMP) has been developed as the first one of its kind in Connecticut as a mechanism to manage drinking water quality in a coordinated effort among the supplier, the watershed communities, and the end users. The intent is to integrate planning at every level, inclusive of the water utility, community leaders, local land use planning processes, local regulatory bodies, conservation commissions, state and federal agencies, watershed organizations, land trust organizations, the watershed population, and drinking water consumers. The goal is to develop a common understanding of the resource and then implement strategies to adequately manage and protect it. This DWQMP is intended to serve as a guide for a dynamic and fluid process moving forward. The plan will be a living document, subject to change and refinement through the implementation phase.

Implementation of the DWQMP in southeastern Connecticut will provide a vehicle to overcome the barriers that are created by the disjointed and sometimes incongruent manner in which land uses and resource protection are managed in Connecticut by virtue of municipal divides, inconsistent policies and regulatory requirements, and the absence of a functional system with which to communicate and coordinate efforts among drinking water supply stakeholders. This is highlighted in southeastern Connecticut, wherein the water supplier, the watershed communities, and the water consumers span multiple municipal boundaries and dozens of planning and regulatory bodies.

The subject DWQMP is not an antidevelopment policy, nor is it intended to supersede local zoning regulations. Rather, it is a blueprint from which drinking water supply stakeholders in southeastern Connecticut can effectively manage the watershed and the drinking water supply resources while still meeting the needs of the community and the region, including growth and development. The plan and its implementation will serve as a model for water utilities and communities throughout the state of Connecticut for maintaining excellent drinking water quality without creating additional mandated regulations. The process capitalizes on the existing systems and frameworks that are already in place, through increased education, coordination, and refinement of existing plans, policies, and local regulations to adequately manage and protect the quality of our drinking water supplies.

This DWQMP incorporates innovative and comprehensive approaches to protect the purity of drinking water. It was established through the will of the individual communities, with direct participation by community leaders in the city of Groton and the towns of Groton, Ledyard, Preston, and North Stonington, with stakeholder participation by community representatives in the towns of Waterford and Montville and the city of Norwich. This core group, along with representatives of the State Departments of Public Health, Environmental Protection, Public Utility Control, and Office of Policy and Management; the Mashantucket Pequot Tribal Nation; other water utilities in the region; the Southeast Connecticut Council of Governments; area health districts; open space, conservation, and environmental advocates; developers and land owners; land use attorneys; and the business community have met on a monthly basis since January 2008 in an intensive and collaborative process.

Development of this DWQMP concludes Phase II, with Phase I laying the groundwork for the planning process and Phase III proceeding to implementation. Moving forward, the measure of the success of this plan will be that it accomplishes the following:

1. Community leaders, along with local planning and regulatory bodies in Groton, Ledyard, Preston, and North Stonington, will be formally engaged in their roles as watershed stewards. These individuals and organizations will be equipped with mapping and information to adequately identify sensitive drinking water resource areas such that more appropriate planning and review can take place and appropriate protective standards can be developed and applied.

2. State agencies, including the Department of Public Health, Department of Environmental Protection, Office of Policy and Management, and Department of Public Utility Control will coordinate efforts in their respective organizations relative to the implementation of the DWQMP, sharing information, data, and planning efforts, exploring possible technical assistance opportunities, collaborating on water resource planning management objectives, and identifying potential conflicts as well as working toward their resolution.

3. Specific changes will be effected in regional and municipal plans of conservation and development, local policies, and land use and resource regulations consistent with the principles of sound drinking water quality management. These include low impact development and state-of-the-art best management practices for land development and stormwater management.

4. Centralized or regionalized stormwater management systems will be constructed in areas that have been previously developed without the benefit of best management practices.

5. Changes will be effected in the manner in which streets are maintained within the existing and future drinking water supply watersheds, including state-owned streets and highways, to improve the quality of stormwater runoff.

6. Additional land rights will be acquired within the existing and future drinking water supply watersheds for the protection and preservation of water quality.

7. A balanced approach will be adopted to harness the recreational benefit of large land holdings within the drinking water supply watersheds while maintaining an appropriate level of security of these resources.

8. Changes in legislation will be sought to place greater emphasis on source water protection in state grants and aid funding considerations.

9. Changes will be sought to modify the manner in which the State Conservation and Development Policies Plan is applied such that it is consistent with local plans of conservation and development as well as the subject DWQMP. Members of the DWQMP community will become involved in the next plan update, scheduled to take place in 2010

and 2011, the goal being to bring clarity to how the State Plan affects Connecticut communities and to educate the legislature and State agencies on how the DWQMP can effect changes in the State Plan and its application.

10. Watershed stakeholders will be educated relative to the importance of the regional drinking water resource, its protection, and proper household spill response and waste management. This will be accomplished through public outreach and education in the form of cable television, press releases, brochure materials, and web page communication. These efforts will be coordinated through Groton Utilities, the watershed member municipalities, the Council of Governments, and the Southeastern Connecticut Water Authority.

11. The existing water quality monitoring program within the drinking water supply watershed will be expanded and tracked to properly identify and track trends.

12. Water treatment plant upgrades will be completed such that the regional supply continues to meet all state and federal requirements for a high quality, safe drinking water supply.

The DWQMP will be implemented with full participation of the water supply stakeholders, including the water utility, the existing and future watershed communities, and the existing and future consumer communities. The plan will be revisited on an annual basis, with a status summary issued in January of each year.

Drinking Water Quality Management Plan

Southeastern Connecticut Drinking Water Quality Management Plan
Groton, Ledyard, Montville, North Stonington,
Norwich, Preston, and Waterford, Connecticut

www.dwqmp.com and www.dwqmp.org

MMI #3448-01

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13.0 PLAN IMPLEMENTATION

13.1 Phase III Framework

The third phase of the Drinking Water Quality Management Plan (DWQMP) process will involve implementation of the subject plan. Implementation will be a multi-tiered process involving Groton Utilities; the watershed communities of Groton, Ledyard, Preston, and North Stonington; the support communities of Waterford, Montville, and Norwich; community stakeholders; the Southeast Connecticut Council of Governments; and a host of state agencies including the Department of Public Health, Department of Environmental Protection, Office of Policy and Management, the Department of Public Utility Control, and the Department of Transportation. The DWQMP Administration Group will remain intact throughout implementation and into the foreseeable future to ensure that implementation occurs. The overall implementation process is outlined below:

- Implementation of this DWQMP will occur as Phase III and will commence in January 2009 with the first meeting of the DWQMP Administration Group.

- The Administration Group meetings will be co-chaired by an official from Groton Utilities and one other member of the Administration Group that is not affiliated with Groton Utilities.

- The Administration Group will meet on a monthly basis in the first year and then quarterly thereafter in the months of January, April, July, and October.

- Members of the Administration Group will be designated as liaisons to the Water Planning Council (WPC) and the Southeastern Connecticut Water Utility Coordinating Committee (WUCC), and these members will attend the WPC and WUCC meetings at least twice each year.

- DWQMP subcommittees will draw upon representatives from Groton Utilities; the municipalities of Groton (town), Ledyard, Preston, North Stonington, Waterford, Montville, and Norwich; community stakeholders; the Southeast Connecticut Council of Governments; and state agencies such as DPH, DEP, OPM, DPUC, and DOT. Subcommittees may include the following:

  - Local Commissions Outreach
  - Public Education and Outreach
  - Water Quality Monitoring
  - Security and Recreation
  - Land Acquisition and Conservation
  - Stormwater Management Policies and Regulations
  - Local and State Plan Coordination
  - DWQMP Website Upkeep

- Subcommittees may meet as frequently as they so desire but not less than four times per year.

- Each subcommittee will report to the Administration Group and will present a summary of accomplishments and action items at each Administration Group meeting.

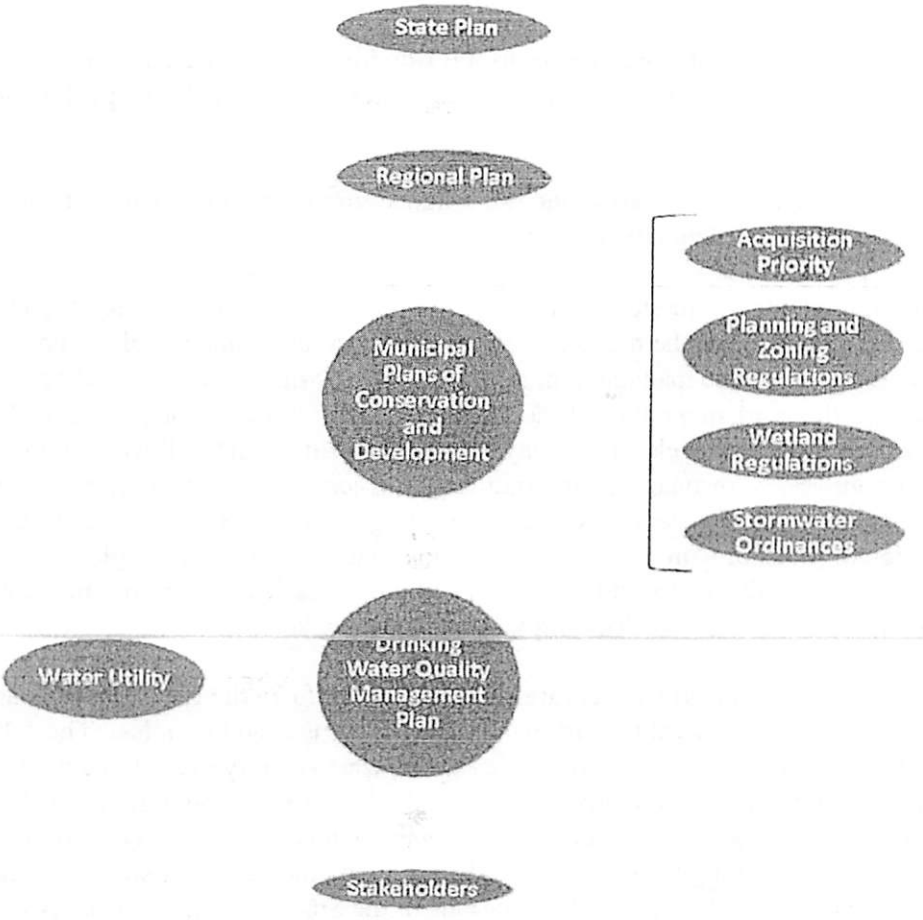
- The "Local Commissions Outreach" subcommittee will be formed during the first year of the implementation phase.

The implementation model is presented in Figure 13-1. In this model, the DWQMP will work in concert with the municipal plans of conservation and development to develop consistency with the management strategies and recommendations outlined herein. Through the implementation of the DWQMP action items, the local Plans of Conservation and Development may require refinement and will work iteratively with local regulations, ordinances, and municipal projects. Local regulation amendments will be appropriate in the member communities to gain consistency between the DWQMP, the municipal Plans of Conservation and Development, and with the region at large. This process will be driven by and self-regulated by the individual communities, with the ultimate goal of effective drinking water quality management.

The municipal Plans of Conservation should then inform the Regional Plan and State Policies Plan with regard to land management practices and policies. The fully implemented DWQMP will embrace drinking water quality management strategies that today are undocumented in any one plan and which are not integral or consistent with local plans and regulations. As such, the implemented DWQMP will provide for protection of drinking water quality and sound land management strategies that will go beyond the hard-and-fast land designations in the State Plan and justifiably enable a relaxation of the rigidity within the State Plan. Otherwise, the State Plan becomes a de facto state zoning map for state funding projects, which was never its intent.

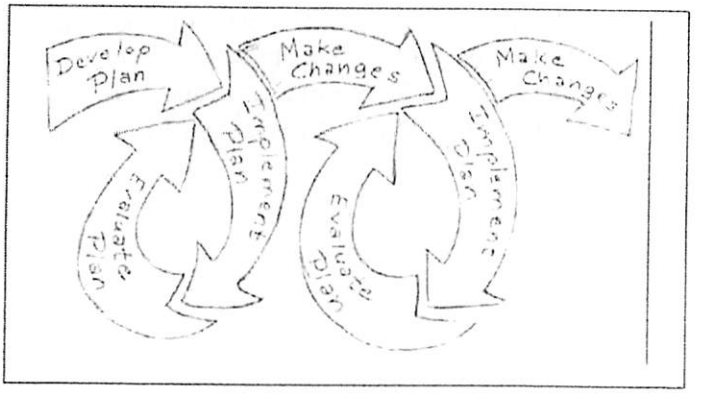
This implementation model and its bearing on the interpretation and policy practices at the state level will need to be the focus of future interactions with state agencies, including the Office of Policy and Management, the Department of Environmental Protection, and the Department of Public Health.

FIGURE 13-1
DWQMP Implementation Model



13.2 Progress Benchmarks and Monitoring

EPA recognizes that the processes involved in watershed assessment, planning, and management are iterative and that targeted actions might not result in complete success during the first or second cycle. Therefore, progress monitoring is necessary to document how and where drinking water quality management strategies are working or not working to reach desired goals.



For the subject DWQMP, some of the things that need to be monitored include changes in the watershed's development patterns, changes in water quality, changes in open space patterns, and progress toward meeting the goals of different drinking water quality management strategies. A database should be created to document the results of the monitoring.

The DWQMP Administration Group will work with a number of DWQMP subcommittees that will be charged with implementing certain tasks and conducting progress monitoring. This is best accomplished by charging individual DWQMP subcommittees with monitoring the interests that are linked to their missions. For example, the water quality subcommittee would compile water quality data collected to date and recommend changes to the monitoring program.

13.3 Year One Implementation Plan

During the first year of implementation, the Administration Group will develop a detailed five-year implementation plan, establishing specific goals and benchmarks, realistically prioritizing recommendations and schedules, and assigning responsibilities and action items among the Administration Group members. The following benchmarks have been developed to gauge the progress and success during the first year of implementation:

1. Hold initial meetings in the communities of Groton, Ledyard, Preston, and North Stonington to present the DWQMP and formally engage them in the process. Seek endorsement of the subject DWQMP by each member community.

2. Maintain involvement of the state agencies through the Water Planning Council such that efforts can be coordinated with the respective organizations relative to the implementation of the DWQMP.

3. Initiate contact with the Mashantucket Pequot Tribal Nation in Ledyard, the U.S. Navy in Groton, and the Connecticut Department of Transportation to share the principles and recommendations of this DWQMP and to better understand how their existing policies and practices fit into the DWQMP philosophy, goals, and objectives.

4. Develop informational tools (mapping, brochures, presentations, etc.) to share with the watershed community members and their constituents to advance their understanding of the drinking water supply resources and their role in managing and protecting them.

5. Review and evaluate possible modifications of local land use regulations relative to their congruence with the goals and objectives enumerated in this DWQMP.

6. Attempt to secure funding for the implementation phase of the DWQMP.

7. Begin to explore alternate and equitable sources of revenue relative to funding stormwater management initiatives. Evaluate means of placing the burden of post construction stormwater management system maintenance such that it is properly funded and executed.

8. Begin to evaluate a recreational program for the large land holdings within the drinking water supply watersheds.

9. Initiate a dialogue with state agencies and legislators regarding the manner in which the State Conservation and Development Policies Plan is applied such that it is consistent with local plans of conservation and development and the subject DWQMP. The goal will be to set the stage for the next State Plan update, scheduled to take place in 2010 and 2011.

10. Meet with municipal representatives, open space advocates, and private land trust organizations in each of the watershed member towns to coordinate efforts to secure critical lands within the watershed.

13.4 Economic Considerations

The current phase of the DWQMP has been funded through Special Act 06-6. Implementation of the DWQMP will generate several levels of funding need. Some of this can be provided through the in kind contributions of municipal staff, commissions, and public officials. Some of the on-the-ground best management practices related to private development will be borne by developers and land owners. Still other need will be filled through the ongoing work of Groton Utilities related to treatment plant upgrades and water quality monitoring.

However, significant additional funding will be needed for legal services associated with modifying regulations; planning studies by consultants; land acquisition; design, construction and maintenance of regional stormwater systems; education; recreational facilities; administrative costs; and so on. Additional legislative funding, drinking water funding, revenue from water customers, and local funding will be pursued.

13.5 Plan Updates

At each January meeting, the Administration Group will accomplish the following:

- DWQMP subcommittees will report on their ongoing efforts and work completed in the previous 12 months.

- The implementation table will be reviewed, and timetables will be adjusted as needed.

- Progress monitoring reports developed by the DWQMP subcommittees will be discussed to recommend changes to the DWQMP. For example, the water quality

subcommittee would have compiled water quality monitoring data as mentioned above. This information will be discussed with the Administration Group to reprioritize drinking water quality management strategies based on water quality trends.

- Potential amendments to the DWQMP action items, process, and implementation plan will be discussed.

- The Administration Group will authorize the requested changes, and such changes will be incorporated before the next meeting and will be posted to the DWQMP website.

- An annual status report will be developed each January, summarizing the prior year's accomplishments and any changes moving forward.

13.6 Training

As stated in Section 2.6, education of local commission members will be important to the success of this DWQMP. Different opportunities are available for outreach to local commissions. Although a Land Use Leadership Alliance (LULA) seminar would likely be too predetermined in scope to include a presentation of the DWQMP, a DWQMP training session could be held in connection with a LULA seminar in southeastern Connecticut.

Similarly, the Center for Land Use Education and Research (CLEAR) Land Use Academy training sessions offered by the University of Connecticut could host a DWQMP training session.

Training of local officials and commission members should be coordinated by the DWQMP subcommittee that handles education and outreach. The services and facilities of Southeastern Connecticut Council of Governments (SCCOG) should be utilized, if available, to provide this training outside the confines of Groton Utilities facilities.

The University of Connecticut Center for Land Use Education & Research
(www.clear.uconn.edu)

The Connecticut Land Use Academy is an educational series for land use commissions. The series includes educational sessions on roles and responsibilities, legal requirements, and map reading for site plan review. The sessions are coordinated by the University of Connecticut Center for Land Use Education & Research (CLEAR).

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