Massachusetts Department of Environmental Protection
Source Water Assessment and Protection (SWAP) Report
for

East Chelmsford Water District

What is SWAP?

The Source Water Assessment Program (SWAP), established under the federal Safe Drinking Water Act, requires every state to:

- inventory land uses within the recharge areas of all public water supply sources;
- assess the susceptibility of drinking water sources to contamination from these land uses; and
- publicize the results to provide support for improved protection.

Susceptibility and Water Quality

Susceptibility is a measure of a water supply's potential to become contaminated due to land uses and activities within its recharge area.

A source's susceptibility to contamination does *not* imply poor water quality.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, disinfecting, filtering, or treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Actual water quality is best reflected by the results of regular water tests. To learn more about your water quality, refer to your water supplier's annual Consumer Confidence Reports.

Table 1: Public Water System Information

PWS Name	East Chelmsford Water District
PWS Address	75 Canal Street
City/Town	East Chelmsford, Massachusetts
PWS ID Number	3056001
Local Contact	Robert Conroy - Water Superintendent
Phone Number	978-453-0121

Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential contaminant sources, including storm runoff, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:
This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures.

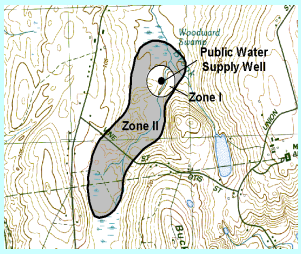
Refer to Table 3 for Recommendations to address potential sources of contamination. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes the following sections:

1. Description of the Water System
2. Land Uses within Protection Areas
3. Source Water Protection
4. Appendices

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and a Zone II protection area.



Glossary

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material (i.e. clay) that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. This area should be owned or controlled by the water supplier and limited to water supply activities.

Zone II: The primary recharge area for the aquifer. This area is defined by hydrogeologic studies that must be approved by DEP. Refer to the attached map to determine the land within your Zone II.

Section 1: Description of the Water System

Table 2: Water Supply Protection Areas

Zone II #: 283 ***Susceptibility:*** High

Well Names	***Source IDs***
Canal Street G.P. Well #1	3056001-01G
Canal Street G.P. Well #2	3056001-02G

The wells for the East Chelmsford Water District are located at the southeasterly end of Canal Street, to the east of the Route 3 interchange to the Lowell Connector and Route 495, and to the east of Hales Brook. Both wells have a Zone I radius of 400 feet. The wells are located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers (i.e. clay) that can prevent contaminant migration. Please refer to the attached map of the Zone II.

Both Canal Street Well #1 and Canal Street Well #2 receive the following treatment: greensand filtration for iron removal; potassium permanganate added for manganese removal, potassium hydroxide added for corrosion control; orthophosphate added for corrosion control; and, sodium hypochlorite added as a disinfectant.

For current information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1 for a copy of the most recent Consumer Confidence Report. Drinking water monitoring reporting data is also available on the web at http://www.epa.gov/safewater/ccr1.html

Section 2: Land Uses in the Protection Areas

The Zone II for East Chelmsford is a mixture of forested, residential, open land, commercial, and light industrial land uses (refer to attached map for details). Land uses and activities that are potential sources of contamination are listed in Table 2, with further detail provided in the Table of Regulated Facilities and Table of Underground Storage Tanks in Appendix B.

Key issues include:

1. Transportation Corridor
2. Local Businesses
3. Stormwater Catch Basins
4. Oil or Hazardous Material Contamination Sites
5. Comprehensive Wellhead Protection Planning

The overall ranking of susceptibility to contamination for East Chelmsford is high, based on the presence of at least one high threat land use within the Zone II, as seen in Table 2.

1. Transportation Corridor - Route 3 runs through the Zone II just south of East Chelmsford's two (2) Canal Street Wells. Roadway construction, maintenance, and typical highway use can all be potential sources of contamination. Accidents can lead to spills of gasoline and other potentially dangerous transported chemicals. De-icing salt washes off into storm drains or onto adjacent ground. In addition, roadways are frequent sites for illegal dumping of hazardous or other potentially harmful wastes.

Transportation Corridor - Recommendations:

- ✓ **Low Salt Areas** - Join efforts with the other Chelmsford water districts to submit a formal request to MA Highway Department and the Town of Chelmsford in establishing Low Salt Areas along Route 3 and local roads. Encourage both organizations to educate employees and private contractors of the restrictions in designated Low Salt Areas.
- ✓ **Design and Best Management Practices** – Continue working with Massachusetts Highway Department and its contractors to design a stormwater drainage system along Route 3, north and south bound lanes that would discharge storm water outside of the Zone II. Design catch basins and develop best management practices (BMPs) to prevent runoff from becoming polluted, and where it is polluted, to reduce the amount that reaches surface waters.
- ✓ **Planning and Developing** - Notify town officials of EPA's Intermodal Surface Transportation Efficiency Act. The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 contains provision for the planning and developing of highway systems and transportation enhancement activities, including the mitigation of water pollution due to highway runoff. Through ISTEA, states are able to use a portion of their federal funding allotment for runoff pollution control devices and other BMPs to prevent polluted runoff from reaching lakes, rivers, and bays.

2. Local Businesses – Because many small businesses and industries use hazardous materials, produce hazardous waste products, and often store large quantities of petroleum products, there is the potential for degrading water quality. Educating the business community about drinking water protection, and encouraging partnerships between businesses, water suppliers, and communities will enhance successful public drinking water protection practices.

Local Businesses - Recommendations:

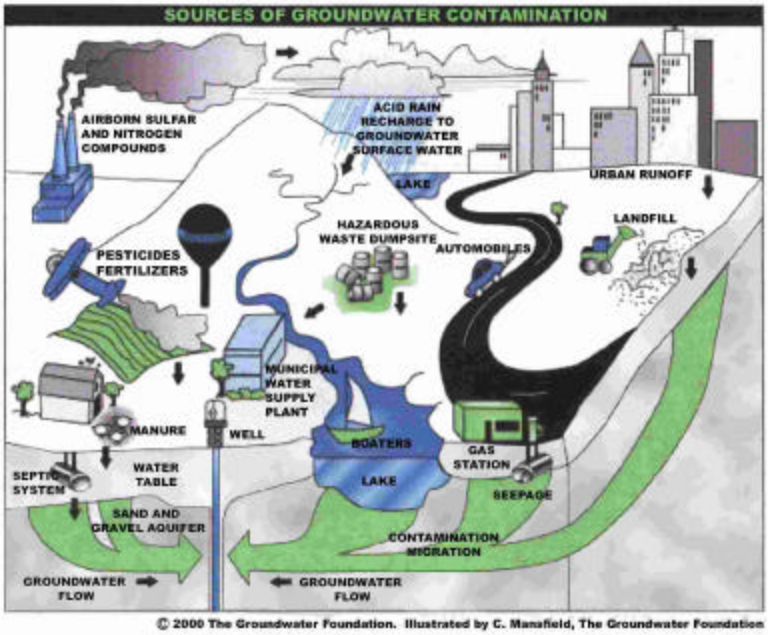
- ✓ **Hazardous Materials Program** - Support the development and implementation of a hazardous materials program that includes a Bylaw or Health Regulation. Such a program educates businesses on hazardous material management requirements, explicitly informs the business community what is expected of them, and decreases the potential future liability businesses may be unknowingly creating for themselves. A local program lets the town serve as a consultant, helping businesses protect themselves. See DEP's website for additional information on developing a program for hazardous materials management at http://www.state.ma.us/dep/brp/dws/files/hazmat.doc
- ✓ **Inspection Program** – Coordinate efforts with local officials and the other water districts in the development and implementation of an Inspection Program which is usually conducted by the local Board of Health to prevent hazardous substances from entering water supplies. Inspections target facilities that generate, use, store, or disposal of hazardous/toxic materials. Programs can also include floor drain inspections and underground storage tanks. Local inspection programs often provide educational material and technical assistance on Best Management Practices. Building Inspectors are often involved in local inspection programs.

Benefits of Source Protection

Source Protection helps protect public health and is also good for fiscal fitness:

- Protects drinking water quality at the source
- Reduces monitoring costs through the DEP Waiver Program
- Treatment can be reduced or avoided entirely, saving treatment costs
- Prevents costly contamination clean-up
- Preventing contamination saves costs on water purchases, and expensive new source development

Contact your regional DEP office for more information on Source Protection and the Waiver Program.



- ✓ **Hazardous Materials Best Management Practices** - Work with local businesses to encourage training on proper hazardous material use, disposal, and emergency response. Refer to the attached list of resources for more information on hazardous material BMPs.
- ✓ **Storage Tanks** - Support your local fire department in upgrading all above and below ground oil/hazardous material storage tanks in order to meet current construction standards. Funding for replacing underground storage tanks is available through the MA Department of Revenue. For more information, refer to http://www.dor.state.ma.us/ust/ust_home.htm
- ✓ **Register Hazardous Waste Generators** - Work with local businesses to register those facilities that are unregistered generators of hazardous waste or waste oil.

- ✓ **Monitor Land Uses** - Work with the Selectmen, Board of Health and Planning Board to monitor land uses within and proximal to the Zone II. Refer to the Wellhead Protection Plan guidance and model bylaws at http://www.state.ma.us/dep/brp/dws/files/whplan.doc for types of activities that should be prohibited and managed in the vicinity of public or private water supplies.
- ✓ **Lawn care and Landscaping** - Encourage local businesses to incorporate Best Management Practices (BMPs) for the use of fertilizer, herbicides and pesticides. For more information, see http://www.massdfa.org/pesticides/publications/IPM_kit_for_bldg_mgrs.pdf
- ✓ **Office of Technical Assistance** - For additional help regarding environmental requirements and toxic use reduction approaches to compliance contact the Office of Technical Assistance (OTA) for Toxic Use Reduction. The OTA is a nonregulatory agency within the Commonwealth's Executive Office of Environmental Affairs. OTA provides free, confidential assistance on toxic use reduction opportunities. http://www.state.ma.us/ota/

3. Stormwater Catch Basins – Catch basins transport stormwater from roadways and adjacent properties to the ground. As flowing stormwater travels, it picks up debris and contaminants from streets, parking areas and lawns. Common potential contaminants include lawn chemicals, pet waste, leakage from dumpsters, household hazardous waste, and contaminants from vehicle leaks, maintenance, washing or accidents.

Stormwater Catch Basins - Recommendations

- ✓ **Inspect, Maintain, and Clean** - Work with the Town and State to have catch basins inspected, maintained, and cleaned on a regular schedule. Additionally, street and parking lot sweeping reduces the amount of potential contaminants in runoff. Note: Catch basin cleanings are classified as solid waste by DEP and must be handled and disposed in accordance with all regulations, policies, and guidance. In the absence of written approval from DEP, catch basin cleanings must be taken to a facility permitted by DEP to accept solid waste. For information on DEP's Nonpoint Competitive Grants Program Upcoming Funding Opportunity refer to: http://www.state.ma.us/dep/brp/mf/mfpubs.htm#wpa.
- ✓ **Best Management Practices** - Work with the Town to develop Best Management Practices that are the most effective, practical means of preventing or reducing pollution from nonpoint sources. Information is available at http://www.epa.gov/OWOW/NPS/roads.html.
- ✓ **Local Controls** - Encourage local officials to develop a local stormwater ordinance. For more information see http://www.epa.gov/owow/nps/ordinance/stormwater.htm.
- ✓ **Storm Drain Stenciling Program** - Work with local watershed groups to institute a Storm Drain Stenciling Program. For more information on how to develop a storm drain stenciling program go to http://www.earthwater-stencils.com

What are "BMPs?"

Best Management Practices are structural (i.e. oil & grease trap catch basins), nonstructural (i.e. hazardous waste collection days) or managerial measures that are used to protect and improve surface water and groundwater quality.

- ✓ **Stormwater Planning** - Encourage local officials to become familiar with and begin to implement a stormwater management program to meet DEP's Phase II Storm Water Regulations. For additional information, refer to the Stormwater Management Information at http://www.state.ma.us/dep/brp/ww/wwpubs.htm#storm.

4. Presence of Oil or Hazardous Material Contamination Sites – The Zone II contains DEP Tier Classified Oil and/or Hazardous Material Release Sites indicated on the map as Release Tracking Numbers 3-0001205, 3-0004757, 3-0000834, 3-0014625, 3-0012751, 3-0000565, 3-0001582, 3-0002739, 3-0002747, 3-0012928, 3-0000290, 3-0013453, 3-0016586, 3-0016587, 3-0014545, and 3-0016588. Refer to the attached map and Appendix 3 for more information.

Potential Source of Contamination vs. Actual Contamination

The activities listed in Table 2 are those that typically use, produce, or store contaminants of concern, which, if managed improperly, are potential sources of contamination (PSC).

It is important to understand that a release may never occur from the potential source of contamination provided facilities are using best management practices (BMPs). If BMPs are in place, the actual risk may be lower than the threat ranking identified in Table 2. Many potential sources of contamination are regulated at the federal, state and/or local levels, to further reduce the risk.

Table 2: Land Use in the Protection Areas (Zones I and II)

For more information, refer to Appendix 2: Regulated Facilities within the Water Supply Protection Area

Activities	Zone II #283	Threat*	Potential Source of Contamination
Agricultural			
Fertilizer Storage or Use	1	M	Fertilizers: leaks, spills, improper handling, or over-application
Manure Storage or Spreading	2	H	Manure (microbial contaminants): improper handling
Nurseries	1	M	Fertilizers, pesticides, and other chemicals: leaks, spills, improper handling or over application
Commercial			
Body Shops	1	H	Vehicle paints, solvents, and primer products: improper management
Car/Truck/Bus Washes	2	L	Vehicle wash water, soaps, oils, greases, metals, and salts: improper management
Gas Stations	9	H	Automotive fluids and fuels: spills, leaks, or improper handling or storage
Service Stations/ Auto Repair Shops	2	H	Automotive fluids, and solvents: spills, leaks, or improper handling
Bus and Truck Terminals	3	H	Fuels and maintenance chemicals: spills, leaks, or improper handling
Cemeteries	2	M	Pesticides: improper handling or over-application of, leaks or spills, and historic embalming fluids
Dry Cleaners	2	H	Solvents and wastes: spills, leaks, or improper handling
Junk Yards and Salvage Yards	1	H	Automotive chemicals, wastes, and batteries: spills, leaks, or improper handling
Laundromats	1	L	Wash water: improper management
Medical Facilities	1	M	Biological, chemical, and radioactive wastes: spills, leaks, or improper handling or storage
Photo Processors	2	H	Photographic chemicals: spills, leaks, or improper handling or storage
Printer And Blueprint Shops	1	M	Printing inks and chemicals: spills, leaks, or improper handling or storage

Activities	Zone II #283	Threat*	Potential Source of Contamination
Repair Shops (Engine, Appliances, Etc.)	1	H	Engine fluids, lubricants, and solvents: spills, leaks, or improper handling or storage
Industrial			
Asphalt, Coal Tar, And Concrete Plants	1	M	Hazardous chemicals and wastes: spills, leaks, or improper handling or storage
Chemical Manufacture Or Storage	2	H	Chemicals and process wastes: spills, leaks, or improper handling or storage
Electronics/Electrical Manufacturers	Numerous	H	Chemicals and process wastes: spills, leaks, or improper handling or storage
Electroplaters	1	H	Solvents and other chemicals: spills, leaks, or improper handling or storage
Foundries Or Metal Fabricators	1	H	Solvents and other chemicals: spills, leaks, or improper handling or storage
Fuel Oil Distributors	2	H	Fuel oil: spills, leaks, or improper handling or storage
Industry/Industrial Parks	2	H	Industrial chemicals and metals: spills, leaks, or improper handling or storage
Machine/Metalworking Shops	7	H	Solvents and metal tailings: spills, leaks, or improper handling
Residential			
Fuel Oil Storage (at residences)	Numerous	M	Fuel oil: spills, leaks, or improper handling
Lawn Care / Gardening	Numerous	M	Pesticides: over-application or improper storage and disposal
Miscellaneous			
Aboveground Storage Tanks	8±	M	Materials stored in tanks: spills, leaks, or improper handling
Aquatic Wildlife	Numerous	L	Microbial contaminants
Large Quantity Hazardous Waste Generators	2	H	Hazardous materials and waste: spills, leaks, or improper handling or storage
NPDES Locations	1	L	Hazardous material and wastes: improper disposal
Oil or Hazardous Material Sites	16	--	Tier Classified Oil or Hazardous Materials Sites are not ranked due to their site-specific character. Individual sites are identified in Appendix B.
Pipeline (Oil or Sewer)	5	M	Oil or sewage: spills or leaks
Schools, Colleges, and Universities	2	M	Fuel oil, laboratory, art, photographic, machine shop, and other chemicals: spills, leaks, or improper handling or storage

Activities	Zone II #283	Threat*	Potential Source of Contamination
Small quantity hazardous waste generators	12	M	Hazardous materials and waste: spills, leaks, or improper handling or storage
Stormwater Drains/ Retention Basins	Numerous/1	L	Debris, pet waste, and chemicals in stormwater from roads, parking lots, and lawns
Transmission Line Rights-of-Way - Type: electric	2	L	Corridor maintenance pesticides: over-application or improper handling; construction
Transportation Corridors	2	M	Fuels and other hazardous materials: accidental leaks or spills; pesticides: over-application or improper handling
Underground Storage Tanks	35±	H	Stored materials: spills, leaks, or improper handling
Very Small Quantity Hazardous Waste Gen-	13	L	Hazardous materials and waste: spills, leaks, or improper handling or storage
Wastewater Treatment Plant/Collection Facility/ Lagoon	3	M	Treatment chemicals or equipment maintenance materials: improper handling or storage; wastewater: improper management
Water Treatment Sludge Lagoon	1	M	Sludge and wastewater: improper management

Water Supply Protection Area % that is Sewered = 100%

Notes:

1. When specific potential contaminants are not known, typical potential contaminants or activities for that type of land use are listed. Facilities within the watershed may not contain all of these potential contaminant sources, may contain other potential contaminant sources, or may use Best Management Practices to prevent contaminants from reaching drinking water supplies.
2. For more information on regulated facilities, refer to Appendix 3: Regulated Facilities within the Water Supply Protection Area information about these potential sources of contamination.
3. For information about Oil or Hazardous Materials Sites in your protection areas, refer to Appendix B: Tier Classified Oil and/or Hazardous Material Sites.

*** THREAT RANKING** - The rankings (high, moderate or low) represent the relative threat of each land use compared to other PSCs. The ranking of a particular PSC is based on a number of factors, including: the type and quantity of chemicals typically used or generated by the PSC; the characteristics of the contaminants (such as toxicity, environmental fate and transport); and the behavior and mobility of the pollutants in soils and groundwater.

Oil or Hazardous Material Contamination Sites – Recommendation:

✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination sites.

7. Comprehensive Wellhead Protection Planning - Protection planning prevents drinking water contamination by managing the land area that supplies water to a well. A Wellhead Protection Plan coordinates community efforts, identifies protection strategies, establishes a timeframe for implementation, and provides a forum for public participation. There are numerous resources available to help communities in developing a plan for protecting drinking water supply wells.

Protection Planning Recommendations:

✓ **Prevent New Development in the Zone II** - The East Chelmsford Water District should continue to purchase potentially developable land located within the existing wellhead protection areas and areas for use as future well sites.

- ✓ **Develop A Land Acquisition Plan -** Land acquisition projects protect water supplies by limiting the land development potential. Acquisitions can be accomplished by municipal water systems through conservation restrictions, land banking, land purchases and land donations. Sample conservation restrictions are available at: http://www.state.ma.us/dep/brp/dws/. Future development of Zone II is a major concern. The Department recommends that the water district acquire Zone II land closest to the Zone I or land is subject high-risk development (refer to Developing a local Wellhead Protection Plan).
- ✓ **Local Controls** - Coordinate efforts with local officials in Billerica and Lowell to compare existing controls with current MA Wellhead Protection Regulations 310 CMR 22.21(2). For more information on DEP land use controls see http://www.state.ma.us/dep/brp/dws/.
- ✓ **Inspection Program** - Develop and implement an Inspection Program for facilities that generate, use, store, or dispose of hazardous/toxic materials. Local Board of Health and Building Inspectors working on inspections often include floor drain and underground storage tanks. Local inspection programs can provide valuable technical assistance on Best Management Practices.
- ✓ **Develop a Wellhead Protection Plan** – Establish a local team, and refer them to http://www.state.ma.us/dep/brp/dws/ for a copy of DEP's guidance, "Developing a Local Wellhead Protection Plan".

Other land uses and activities that may be potential contaminant sources include auto body shops, gas stations, and schools. Refer to Table 2 and Appendix 2 for more information about these land uses.

Identifying potential contaminant sources is an important initial step in protecting your drinking water sources. Further local investigation will provide more in-depth information and may identify new land uses and activities that are potential sources of contamination.

Once potential contaminant sources are identified, specific recommendations like those below should be used to better protect the East Chelmsford wells.

Top 5 Reasons to Develop a Local Wellhead Protection Plan

❶ Reduces Risk to Human Health

❷ Cost Effective! Reduces or Eliminates Costs Associated With:

- Increased groundwater monitoring and treatment
- Water supply clean up and remediation
- Replacing a water supply
- Purchasing water

❸ Supports municipal bylaws, making them less likely to be challenged

❹ Ensures clean drinking water supplies for future generations

❺ Enhances real estate values – clean drinking water is a local amenity. A community known for its great drinking water in a place people want to live and businesses want to locate.

Section 3: Source Water Protection

Implementing source protection measures and Best Management Practices (BMPs) will reduce the East Chelmsford Water Supply System's susceptibility to contamination. Additional source protection recommendations are listed in Table 3 and the Key Issues above.

East Chelmsford is commended for taking an active role in promoting source protection measures in the East Chelmsford Water District through:

- Coordinating source protection efforts with the Planning Board and Conservation Commission
- Reviewing proposals for projects presented to the Planning Board to assure compliance with local source protection controls

Appendix 1 includes specific recommendations for each of the following:

➢ Partner with Local Businesses:

Since many small businesses and industries use hazardous materials and produce hazardous waste products, it is essential to educate the business community about drinking water protection. Encouraging partnerships between businesses, water suppliers, and communities will enhance successful public drinking water protection practices.

➢ Provide Outreach to the Community:

Public education and community outreach ensure the long-term protection of drinking water supplies. Awareness often generates community cooperation and support. Residents and business owners are more likely to change their behavior if they know where the wellhead protection recharge area is located; what types of land uses and activities pose threats; and how their efforts can enhance protection.

➢ **Plan for the Future:**

One of the most effective means of protecting water supplies is planning, such as the adoption of local controls to protect watersheds and ground water. These controls may include health regulations, general ordinances, and zoning bylaws that prohibit potential sources of contamination from wellhead protection areas.

Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures. These recommendations are only part of your ongoing local drinking water source protection.

Section 4: Additional Resources Available for Source Protection

DEP staff, informational documents, and resources are available to help you build on this SWAP report as you continue to improve drinking water protection in your community.

The assessment and protection recommendations in this SWAP report are provided as a tool to spur community discussion, support ongoing source protection efforts, and help set local drinking water protection priorities.

The East Chelmsford Water District should supplement this SWAP report with local information on potential sources of contamination and land uses. To aid in the protection of the wells, local information should be maintained and updated periodically to reflect land use changes in the Zone II. Use this information to set priorities, target inspections, focus education efforts, and to develop a long-term drinking water source protection plan.

Funding Resources:

The Department's Wellhead Protection Grant Program and Source Protection Grant Program provide funds to assist public water suppliers in addressing Water Supply Source Protection through local projects. Protection recommendations discussed in this document may be eligible for funding under the Grant Program. For additional information, please refer to the program fact sheet from this year. Please note: each spring DEP posts a new Request for Response for the Grant program (RFR).

Other grants and loans are available through the Drinking Water State Revolving Loan Fund, the Clean Water State Revolving Fund, and other sources. For more information on grants and loans, visit the Bureau of Resource Protection's Municipal Services web site at: http://www.state.ma.us/dep/brp/mf/mfpubs.htm.

Additional Documents:

To help with source protection efforts, more information is available by request or online at www.state.ma.us/dep/brp/dws including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

Section 5: Appendices

1. Protection Recommendations
2. Regulated Facilities within the Water Supply Protection Area
3. Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas
4. Data Sources and Additional Documents on Source Protection in East Chelmsford

For More Information

Contact Anita Wolovick in DEP's Wilmington Office at (978) 661-7768 for more information and assistance on improving current protection measures.

Copies of this report have been provided to the public water supplier, town boards, and the local media.

Table 3: Current Protection and Recommendations

Protection Measures	Status	Recommendations
Zone I		
Does the Public Water Supplier (PWS) own or control the entire Zone I?	**YES**	Follow Best Management Practices (BMP's) that focus on good housekeeping, spill prevention, and operational practices to reduce the use and release of hazardous materials.
Is the Zone I posted with "Public Drinking Water Supply" Signs?	**YES**	Additional economical signs are available from the Northeast Rural Water Association (802) 660-4988.
Is Zone I regularly inspected?	**YES**	Continue daily inspections of drinking water protection areas.
Are water supply-related activities the only activities within the Zone I?	**YES**	Continue monitoring non-water supply activities in Zone Is.
Municipal Controls (Zoning Bylaws, Health Regulations, and General Bylaws)		
Does the municipality have Wellhead Protection Controls that meet 310 CMR 22.21(2)?	**YES**	The Town of Chelmsford's "Aquifer Protection District" bylaw meets 310 CMR 22.21(2), however, there is no provision in Chelmsford for existing floor drains. Refer to www.state.ma.us/dep/brp/dws/ for model bylaws and health regulations, and current regulations.
Do neighboring communities protect the Zone II areas extending into their communities?	**NO**	Request that municipal officials in Lowell and Billerica develop land use restrictions that meet 310 CMR 22.21(2).
Planning		
Does the PWS have a Wellhead Protection Plan?	**NO**	Develop a wellhead protection plan. Follow "Developing a Local Wellhead Protection Plan" available at: www.state.ma.us/dep/brp/dws/.
Does the PWS have a formal "Emergency Response Plan" to deal with spills or other emergencies?	**YES**	Augment plan by developing a joint emergency response plan with fire department, Board of Health, DPW, and local and state emergency officials. Coordinate emergency response drills with local teams.
Does the municipality have a wellhead protection committee?	**NO**	Establish committee; include representatives from citizens' groups, neighboring communities, and the business community.
Does the Board of Health conduct inspections of commercial and industrial activities?	**YES**	Currently, the Board of Health and the Chelmsford Fire Department requires all commercial and industrial buildings to have a list of all hazardous materials and MSDS sheets on file with them, and to conduct inspections. The town is encouraged to continue this program, and to include municipal facilities. For more guidance see "Hazardous Materials Management: A Community's Guide" at www.state.ma.us/dep/brp/dws/files/hazmat.doc
Does the PWS provide wellhead protection education?	**YES**	Aim additional efforts at commercial, industrial and municipal uses within the Zone II.