Massachusetts Department of Environmental Protection

Source Water Assessment and Protection (SWAP) Report

for

Haverhill Water Department

What is SWAP?

The Source Water Assessment and Protection (SWAP) program, 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	Haverhill Water Department
PWS Address	131 Amesbury Road
City/Town	Haverhill Massachusetts
PWS ID Number	3128000
Local Contact	William Pauk—Superintendent
Phone Number	(978) 374-2382

Introduction

We are all concerned about the quality of the water we drink. Drinking water 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.

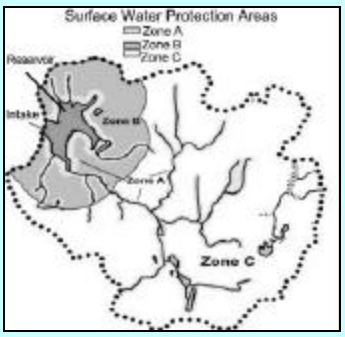
Refer to Table 3 for Recommendations to address potential sources of contamination. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

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 Watershed?

A watershed is the land area that catches and drains rainwater down-slope into a river, lake or reservoir. As water travels down from the watershed area it may carry contaminants from the watershed to the drinking water supply source. For protection purposes, watersheds are divided into protection Zones A, B and C.



Section 1: Description of the Water System

Source Name	*Source ID*	*Susceptibility*
Kenoza Lake	3128000-01S	High
Crystal Lake	3128000-03S	High
Millvale Reservoir	3128000-05S	High
Round Pond	3128000-07S	High

The Haverhill Water Department gets drinking water from four surface water sources. All four of the reservoirs are in the north of Haverhill near the New Hampshire border. Kenoza Lake and Round Pond both have watersheds completely within the town of Haverhill, the watershed for Crystal Lake extends across the border into Atkinson, New Hampshire, and the Millvale Reservoir watershed extends into the towns of Plaistow and Newton, New Hampshire.

Water from the reservoirs is filtered, treated for corrosion control, and fluoridated for dental health. 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 are also available on the web at http://www.epa.gov/safewater/ccr1.html.

Section 2: Land Uses in the Protection Areas

The protection areas for Haverhill are primarily a mixture of residential, protected open space and forest land uses (refer to attached map for details). Land uses and activities that are potential sources of contamination are listed in Table 2.

Glossary
Protection Zones

Zone A: is the most critical for protection efforts. It is the area 400 feet from the edge of the reservoir and 200 feet from the edge of the tributaries (rivers and/or streams) draining into it.

Zone B: is the area one-half mile from the edge of the reservoir but does not go beyond the outer edge of the watershed.

Zone C: is the remaining area in the watershed not designated as Zones A or B.

The attached map shows Zone A and your watershed boundary.

Key Land Uses and Protection Issues include:

1. Zone A Land Uses
2. Residential Land Uses
3. Aquatic Wildlife
4. Transportation Corridors
5. Hazardous Materials Storage and Use
6. Presence of Oil or Hazardous Materials Contamination Sites
7. Agricultural Land Uses
8. Protection Planning

The overall ranking of susceptibility to contamination for the system is high, based on the presence of at least one high threat land use within the water supply protection areas, as seen in Table 2.

1. Zone A Land Uses - The Zone A is the land area within 400 feet of a reservoir and 200 feet of its tributaries. The land uses and activities within the Zone As include: residences with on-site septic systems, above ground and underground storage tanks, roads, recreational activities, and wildlife. Public water systems are responsible for enforcing the prohibition of certain new or expanded land uses within the Zone A, as detailed in 310 CMR 22.20(b).

Zone A Recommendations:

- ✓ To the extent possible, remove all activities from the Zone As to comply with DEP's Zone A requirements.
- ✓ Actively monitor new or expanded land uses within the Zone A according to your watershed protocol submitted to DEP.

- ✓ Control stormwater and erosion within the Zone A.
- ✓ Control aquatic wildlife within the Zone A.
- ✓ Work with local emergency response teams to practice containment of spills within the Zone A.
- ✓ Conduct regular inspections of the Zone A for illegal dumping and spills.
- ✓ Install water supply protection area signs around the Zone A.

2. Residential Land Uses – The most common land use other than forested areas in the watersheds is residential. Some of the areas have public sewers, and others use septic systems. If managed improperly, activities associated with residential areas can contribute to drinking water contamination. Common potential sources of contamination include:

- **Septic Systems** – Improper disposal of household hazardous chemicals to septic systems is a potential source of contamination. If septic systems fail or are not properly maintained, they can be a potential source of microbial contamination.
- **Household Hazardous Materials** - Hazardous materials may include automotive wastes, paints, solvents, pesticides, fertilizers, and other substances. Improper use, storage, and disposal of chemical products used in homes are potential sources of contamination.
- **Heating Oil Storage** - If managed improperly, Underground and Aboveground Storage Tanks (USTs and ASTs) can be potential sources of contamination due to leaks or spills of the fuel oil they store.

Residential Land Use Recommendations:

- ✓ Educate residents on best management practices (BMPs) for protecting water supplies. Distribute the fact sheet "Residents Protect Drinking Water" available in Appendix A and on www.mass.gov/dep/brp/dws/protect.htm, which provides BMPs for common residential issues.
- ✓ Work with planners to control new residential developments in the water supply protection areas.
- ✓ Promote BMPs for stormwater management and pollution controls.

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.

3. Aquatic Wildlife—Birds, particularly gulls, are attracted to large open bodies of water. Birds may increase coliform levels through the release of fecal matter into the water and may carry other bacteria and viruses. Beaver and muskrat may introduce the pathogens Giardia and Cryptosporidium into water through fecal matter. Because of their constant contact with the water, these aquatic mammals represent a potential threat to drinking water reservoirs. Appendix A contains a DEP fact sheet titled *What You Need To Know About Microbial Contamination*.

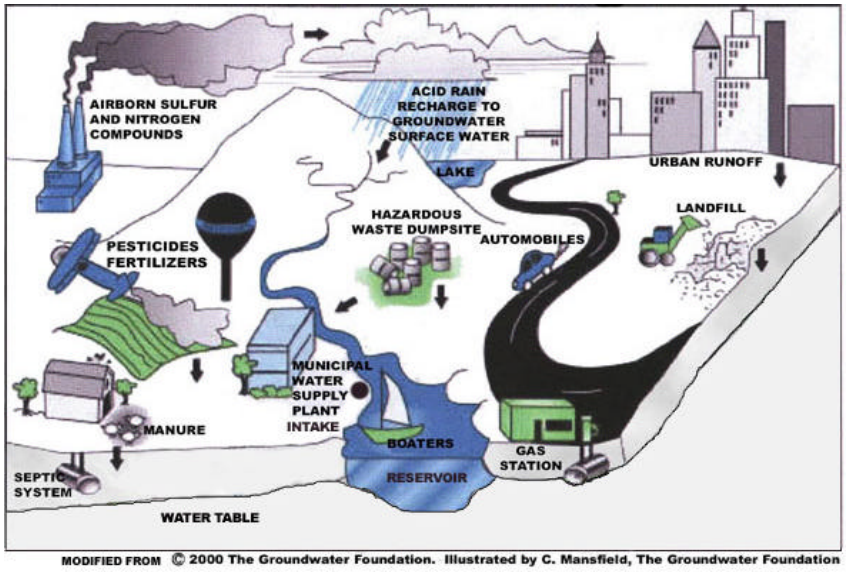


Figure 1: Sample watershed with examples of potential sources of contamination

Aquatic Wildlife Recommendations:

- ✓ Monitor wildlife populations in and around reservoirs.
- ✓ Where necessary, discourage and control aquatic wildlife. See http://mass.gov/dep/brp/dws/protect.htm for guidance and permits.

5.Transportation Corridors - Transportation corridors, especially Route 495, and other paved and unpaved local roads cross through the water supply protection areas. Spills from vehicular accidents are a major concern. In addition, 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. Roadways are frequent sites for illegal dumping of hazardous or other potentially harmful wastes. De-icing salt, automotive chemicals and other debris on roads are picked up by stormwater and wash into catch basins.

Transportation Corridor Recommendations:

Work with the City of Haverhill to:

- ✓ Ensure that, wherever possible, drains discharge stormwater outside of the Zone I.
- ✓ Identify stormwater drainage systems along transportation corridors. If maps aren't yet available, work with town officials to investigate mapping options such as the upcoming Phase II Stormwater Rule requiring some communities to complete stormwater mapping.
- ✓ Work with local emergency response teams to ensure that any spills within the Zone II can be effectively contained. Review storm drainage maps with emergency response teams.
- ✓ Work with the Town and State to best manage stormwater in the Zone II. Best management practices include street sweeping, vegetative swales, and regular catch basin inspection, cleaning and maintenance.

5. Hazardous Materials Storage and Use – A small percentage of the land area within the watersheds is commercial or industrial land uses. Many small businesses and industries use hazardous materials, produce hazardous waste products, and/or store large quantities of hazardous materials in UST/AST. If hazardous materials are improperly stored, used, or disposed, they become potential sources of contamination. Hazardous materials should never be disposed of to a storm drain, septic system, or floor drain leading directly to the ground.

Hazardous Materials Storage and Use Recommendations:

- ✓ Educate local businesses on best management practices for protecting water supplies. Distribute the fact sheet "Businesses Protect Drinking Water" available in Appendix A and on www.mass.gov/dep/brp/dws/protect.htm, which provides BMPs for common business issues.

What are "BMPs?"

Best Management Practices (BMPs) are measures that are used to protect and improve surface water and groundwater quality. BMPs can be structural, such as oil & grease trap catch basins, nonstructural, such as hazardous waste collection days or managerial, such as employee training on proper disposal procedures.

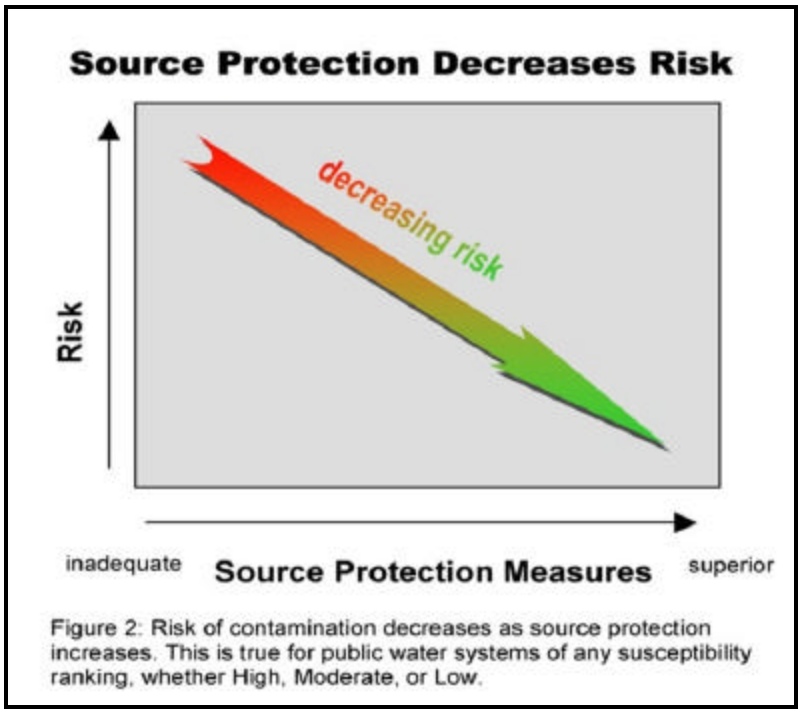


Figure 2: Risk of contamination decreases as source protection increases. This is true for public water systems of any susceptibility ranking, whether High, Moderate, or Low.

- ✓ Work with local businesses to register those facilities that are unregistered generators of hazardous waste or waste oil. Partnerships between businesses, water suppliers, and communities enhance successful public drinking water protection practices.
- ✓ Educate local businesses on Massachusetts floor drain requirements. See brochure "Industrial Floor Drains" for more information.

6. Agricultural Activities – There is cropland and pasture land scattered throughout the watersheds. Pesticides and fertilizers have the potential to contaminate a drinking water source if improperly stored, applied, or disposed. If not contained or applied properly, animal waste from barnyards, manure pits and field application are potential sources of contamination to ground and surface water.

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 Watershed

Activities	Quantity	Source #	Threat*	Potential Source of Contamination
Agricultural				
Fertilizer Storage or Use	2	01S, 05S	M	Fertilizers: leaks, spills, improper handling, or over-application
Livestock Operations	3	01S, 03S, 05S	H	Manure (microbial contaminants): improper handling
Manure Storage or Spreading	1	01S	H	Manure (microbial contaminants): improper handling
Nurseries	1	05S	M	Fertilizers, pesticides, and other chemicals: leaks, spills, improper handling, or over-application
Pesticide Storage or Use	3	01S, 03S, 05S	H	Pesticides: leaks, spills, improper handling, or over-application
Commercial				
Auto Repair Shops	2	05S	M	Automotive fluids, vehicle paints and solvents: spills, leaks, or improper handling
Body Shops	2	05S	H	Improper management of vehicle paints, solvents, and primer products
Bus and Truck Terminals	2	05S	M	Fuels and maintenance chemicals: spills, leaks, or improper handling
Cemeteries	2	05S	M	Leaks, spills, improper handling, or over-application of pesticides; historic embalming fluids
Golf Courses	1	03S	M	Fertilizers or pesticides: over-application or improper handling
Junk Yards and Salvage Yards	2	05S	H	Automotive chemicals, wastes, and batteries: spills, leaks, or improper handling
Nursing Homes	1	01S	L	Microbial contaminants: improper management
Repair Shops (Engine, Appliances, Etc.)	2	03S, 05S	M	Engine fluids, lubricants, and solvents: spills, leaks, or improper handling or storage
Sand and Gravel Mining/Washing	1	05S	M	Heavy equipment, fuel storage, clandestine dumping: spills or leaks

Table 2: Land Use in the Watershed (continued)

Activities	Quantity	Source #	Threat*	Potential Source of Contamination
Residential				
Fuel Oil Storage (at residences)	477+	All	M	Fuel oil: spills, leaks, or improper handling
Lawn Care / Gardening	Numerous	All	M	Pesticides: over-application or improper storage and disposal
Septic Systems / Cesspools	962+	All	M	Hazardous chemicals: microbial contaminants, and improper disposal
Miscellaneous				
Aquatic Wildlife	Few	All	H	Microbial contaminants
Combined Sewer Overflows	1	01S	H	Microbial and non-microbial contaminants including industrial wastewater; improper disposal of hazardous wastes
Composting Facilities	1	05S	M	Organic material, animal waste, and runoff: storage and improper handling
Fishing/Boating	Some	03S, 05S, 07S	M	Fuel and other chemical spills, microbial contaminants
Land Application of Sewage Sludge	1	03S	M	Sludge and runoff (metals): improper management
Schools, Colleges, and Universities	3	01S, 07S	M	Fuel oil, laboratory, art, photographic, machine shop, and other chemicals: spills, leaks, or improper handling or storage
Snow Dump	1	01S	M	Melt water containing de-icing and other chemicals from roads and parking lots: improper handling
Stormwater Drains/ Retention Basins	Several	03S	H	Debris, pet waste, and chemicals in stormwater from roads, parking lots, and lawns
Transportation Corridors	1	05S	M	Accidental leaks or spills of fuels and other hazardous materials, over-application or improper handling of pesticides
Underground Storage Tanks	7	01S, 03S, 07S	M	Stored materials: spills, leaks, or improper handling

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 B: 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 C: 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.

Agricultural Activities Recommendation:

- ✓ Work with farmers in your protection areas to make them aware of your water supply and to encourage the use of a US Natural Resources Conservation Service farm plan to protect water supplies.

7. Presence of Oil or Hazardous Material Contamination Sites – The watersheds contain DEP Tier Classified Oil and/or Hazardous Material Release Sites indicated on the map as Release Tracking Numbers 3-0019681, 3-0002712. Refer to the attached map and Appendix C for more information.

Oil or Hazardous Material Contamination Sites Recommendation:

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

8. Protection Planning – Protection planning protects drinking water by managing the land area that supplies water to a reservoir. Currently, the City does not have water supply protection controls that meet DEP's Surface Water Protection regulations 310 CMR 22.20 (b) and (c). A Surface Water Supply Protection Plan coordinates community efforts, identifies protection strategies, establishes a timeframe for implementation, and provides a forum for public participation. There are resources available to help communities develop a plan for protecting drinking water supply reservoirs.

Protection Planning Recommendations:

- ✓ Develop a Surface Water Supply Protection Plan. Establish a protection team, and refer them to http://mass.gov/dep/brp/dws/protect.htm for a copy of DEP's guidance, "Developing a Surface Water Supply Protection Plan".
- ✓ If local controls do not meet the current regulations, adopt controls that meet 310 CMR 22.20 (b) and (c). For more information on DEP land use controls see http://mass.gov/dep/brp/dws/protect.htm.

Top 5 Reasons to Develop a Local Surface Water Protection Plan

❶ Reduces Risk to Human Health

❷ Cost Effective! Reduces or Eliminates Costs Associated With:

- Increased 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.

- ✓ Work with town boards to review and provide recommendations on proposed development within your water supply protection areas. To obtain information on build-out analyses for the town, see the Executive Office of Environmental Affairs' community preservation web site, http://commpres.env.state.ma.us/.
- ✓ Work with Atkinson, Plaistow, and Newton, New Hampshire to encourage protection of watershed lands within those towns.

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

Other land uses and activities within the watersheds that are potential sources of contamination are included in Table 2. Refer to Appendix B for more information about these land uses. Identifying potential sources of contamination 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 sources of contamination are identified, specific recommendations like those below should be used to better protect your water supply.

Section 3: Source Water Protection Conclusions and Recommendations

Current Land Uses and Source Protection:

As with many water supply protection areas, the system watersheds contain potential sources of contamination. However, source protection measures reduce the risk of actual contamination, as illustrated in Figure 2. The water supplier is commended for taking an active role in promoting source protection measures in the Water Supply Protection Areas through:

- Applying for a source protection grant for the Millvale Reservoir to develop an emergency response plan.
- Patrolling watershed jointly with conservation officers on a regular basis.

Table 3: Current Protection and Recommendations

Protection Measures	Status	Recommendations
Zone A		
Does the Public Water Supplier (PWS) own or control the entire Zone A?	**NO**	Follow Best Management Practices (BMPs) that focus on good housekeeping, spill prevention, and operational practices to reduce the use and release of hazardous materials.
Is the Zone A posted with "Public Drinking Water Supply" Signs?	**YES**	Additional economical signs are available from the Northeast Rural Water Association (802) 660-4988.
Is the Zone A regularly inspected?	**YES**	Continue daily inspections of drinking water protection areas.
Are water supply-related activities the only activities within the Zone A?	**NO**	Continue monitoring non-water supply activities in Zone As.
Municipal Controls (Zoning Bylaws, Health Regulations, and General Bylaws)		
Does the municipality have Surface Water Protection Controls that meet 310 CMR 22.20C?	**YES**	Refer to www.state.ma.us/dep/brp/dws/ for model bylaws, health regulations, and current regulations.
Do neighboring communities protect the water supply protection areas extending into their communities?	**In process**	City of Haverhill, through a source protection grant, is in the process of developing a multi-town agreement for watershed protection
Planning		
Does the PWS have a local surface water supply protection plan?	**YES**	Update and implement the surface water supply protection plan. Follow "Developing a Local Surface Water Supply 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 watershed 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?	**NO**	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 watershed protection education?	**YES**	Lake alliance, school involvement, water treatment plant open house, consumer confidence report. Aim additional efforts at commercial, industrial and municipal uses within the watershed.

- Coordinating efforts with conservation agent and city boards to review new development and subdivision proposals and septic system plans.
- Coordinating efforts with conservation agent to review plans for compliance with State stormwater management policies.
- Conducting an annual watershed inspection.
- Acquiring land within the watershed through land swaps.

Source Protection Recommendations:
To better protect the sources for the future:
- ✓ Inspect all Zone As regularly, and when feasible, remove any non-water supply activities.
- ✓ Educate residents on ways they can help you to protect drinking water sources.
- ✓ Work with local businesses on the implementation of best management practices for protecting water supplies.
- ✓ Work with emergency response teams to ensure that they are aware of the stormwater drainage in your watershed and to cooperate on responding to spills or accidents.
- ✓ Monitor wildlife populations in and around reservoirs.
- ✓ Work with farmers in your protection areas to make them aware of your water supply.
- ✓ Continue to update and implement your Surface Water Supply Protection Plan.

Conclusions:
These recommendations are only part of your ongoing local drinking water source protection. Additional source protection recommendations are listed in Table 3, the Key Issues above and Appendix A.

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 Department's Source Protection Grant Program provides 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. Please note: each spring DEP posts a new Request for Response (RFR) for the grant program.

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://mass.gov/dep/brp/mf/mfpubs.htm.

The assessment and protection recommendations in this SWAP report are provided as a tool to encourage community discussion, support ongoing source protection efforts, and help set local drinking water protection priorities. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures. The water supplier should supplement this SWAP report with local information on potential sources of contamination and land uses. Local information should be maintained and updated periodically to reflect land use changes in the watershed. Use this information to set priorities, target inspections, focus education efforts, and to develop a long-term drinking water source protection plan.

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 and town boards.

Section 4: Appendices

A. Regulated Facilities within the Water Supply Protection Area
B. Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas
C. Additional Documents on Source Protection

APPENDIX A: DEP PERMITTED FACILITIES WITHIN HAVERHILL WATER SUPPLY PROTECTION AREAS

DEP FACILITY NUMBER	FACILITY NAME	STREET ADDRESS	TOWN	PERMITTED ACTIVITY	ACTIVITY CLASS
132330	110 MOBIL WICKSON CORP LTD INC	401 AMESBURY ROAD	HAVERHILL	FUEL DISPENSER	FUEL DISPENSER STAGEII
351772	GETTY	402 AMESBURY ROAD	HAVERHILL	FUEL DISPENSER	FUEL DISPENSER STAGEII
327063	LAKESIDE MOTORS	828 AMESBURY ROAD	HAVERHILL	HANDLER	SMALL QUANTITY GENERATOR - WASTE OIL/PCBS ONLY
35526	MAHONEY JAMES A & SONS INC	35 LIBERTY STREET	HAVERHILL	HANDLER	VERY SMALL QUANTITY GENERATOR
319056	MERRICKS TRANSMISSION	769 AMESBURY ROAD	HAVERHILL	HANDLER	SMALL QUANTITY GENERATOR - WASTE OIL/PCBS ONLY
135587	NORTHERN ESSEX COMMUNITY COLLEGE	100 ELLIOT STREET	HAVERHILL	HANDLER	VERY SMALL QUANTITY GENERATOR
135587	NORTHERN ESSEX COMMUNITY COLLEGE	100 ELLIOT STREET	HAVERHILL	HANDLER	VERY SMALL QUANTITY GENERATOR - WASTE OIL/PCBS ONLY
30480	MCGREGOR SMITH MOTOR CO INC	123 W MAIN STREET	MERRIMAC	HANDLER	VERY SMALL QUANTITY GENERATOR

UNDERGROUND STORAGE TANKS WITHIN HAVERHILL WATER SUPPLY PROTECTION AREAS

FACILITY NAME	ADDRESS	TOWN	DESCRIPTION	CAPACITY (GAL)	CONTENTS
GETTY	402 AMESBURY RD	HAVERHILL	Gas Station	6000	GASOLINE
GETTY	402 AMESBURY RD	HAVERHILL	GAS STATION	6000	GASOLINE
GETTY	402 AMESBURY RD	HAVERHILL	GAS STATION	6000	GASOLINE
WICKSON CORP	401 AMESBURY RD	HAVERHILL	GAS STATION	12000	Gasoline
WICKSON CORP	401 AMESBURY RD	HAVERHILL	GAS STATION	10000	Gasoline
WICKSON CORP	401 AMESBURY RD	HAVERHILL	GAS STATION	8000	Gasoline
WICKSON CORP	401 AMESBURY RD	HAVERHILL	GAS STATION	6000	Diesel

For more information on underground storage tanks, visit the Massachusetts department of fire services web site: http://www.state.ma.us/dfs/ust/usthome.htm

Note: This appendix includes only those facilities within the water supply protection area(s) that meet state reporting requirements and report to the appropriate agencies. Additional facilities located within the water supply protection area(s) should be considered in local drinking water source protection planning.

APPENDIX B – Table of Tier Classified Oil and/or Hazardous Material Sites within Haverhill Water Supply Protection Areas

DEP's datalayer depicting oil and/or hazardous material (OHM) sites is a statewide point data set that contains the approximate location of known sources of contamination that have been both reported and classified under Chapter 21E of the Massachusetts General Laws. Location types presented in the layer include the approximate center of the site, the center of the building on the property where the release occurred, the source of contamination, or the location of an on-site monitoring well. Although this assessment identifies OHM sites near the source of your drinking water, the risks to the source posed by each site may be different. The kind of contaminant and the local geology may have an effect on whether the site poses an actual or potential threat to the source.

The DEP's Chapter 21E program relies on licensed site professionals (LSPs) to oversee cleanups at most sites, while the DEP's Bureau of Waste Site Cleanup (BWSC) program retains oversight at the most serious sites. This privatized program obliges potentially responsible parties and LSPs to comply with DEP regulations (the Massachusetts Contingency Plan – MCP), which require that sites within drinking water source protection areas be cleaned up to drinking water standards.

For more information about the state's OHM site cleanup process to which these sites are subject and how this complements the drinking water protection program, please visit the BWSC web page at http://www.state.ma.us/dep/bwsc. You may obtain site -specific information two ways: by using the BWSC Searchable Sites database at http://:www.state.ma.us/dep/bwsc/sitellst.htm, or you may visit the DEP regional office and review the site file. These files contain more detailed information, including cleanup status, site history, contamination levels, maps, correspondence and investigation reports, however you must call the regional office in order to schedule an appointment to view the file.

The table below contains the list of Tier Classified oil and/or Hazardous Material Release Sites that are located within your drinking water source protection area.

Table 1: Bureau of Waste Site Cleanup Tier Classified Oil and/or Hazardous Material Release Sites (Chapter 21E Sites) - Listed by Release Tracking Number (RTN).

RTN	Release Site Address	Town	Contaminant Type
3-0019681	769 Amesbury Road	Haverhill	Oil and Hazardous Material
3-0002712	Brandy Brow Road	Haverhill	Oil

For more location information, please see the attached map. The map lists the release sites by Release Tracking Number (RTN).