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

Westboro Water Department

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	Westboro Water Department
PWS Address	131 Oak Street
City/Town	Westborough, Massachusetts 01581
PWS ID Number	2328000
Local Contact	John Walden
Phone Number	(508) 366-3070

Introduction

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

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.

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.

Section 1: Description of the Water System

Groundwater Sources

Zone II #: **459** ***Susceptibility:*** **Moderate**

Well Name	***Source ID#***
Hopkinton Road Well	2328000-01G
Morse Street Well	2328000-02G

Zone II #: **12** ***Susceptibility:*** **High**

Well Name	***Source ID#***
Andrews Well #1	2328000-03G
Andrews Well #2	2328000-04G
Wilkinson Well	2328000-06G

Zone II #: **460** ***Susceptibility:*** **High**

Well Name	***Source ID#***
Otis Street Well	2328000-05G

Zone II #: **404** ***Susceptibility:*** **High**

Well Name	***Source ID#***
Chauncy Lake Well #1	2328000-07G
Chauncy Lake Well #2	2328000-08G

Zone II #: **246** ***Susceptibility:*** **High**

Well Name	***Source ID#***
Indian Meadow Well	23280000-10G

Surface Water Sources

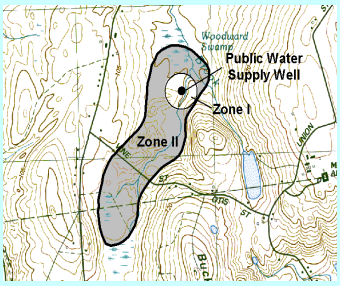
Source Name	***Susceptibility:*** **High**
Westboro Reservoir	2328000-01S

The Town of Westboro obtains its water supply from six gravel-packed wells and one surface reservoir. The sources are the Hopkinton Road Well (01G), Morse Street Well (02G), Andrews Wells #1 and #2 (03G and 04G), Wilkinson Well (06G), Otis Street Well (05G), and the Chauncy Lake Wells #1 and #2 (Wells #07G and 08G). The Hopkinton Road Well, located off of Hopkinton Road, is a 24 inch gravel packed well that was installed in 1958. The Morse Street Well, located at the intersection of Morse Street and Upton Road, is a 24 by 48-inch gravel packed well, that was installed in 1962. The Andrew Wells #1 and #2 located off Andrews Street are each 24 by 48-inch gravel-packed wells which were installed in 1975 and 1967, respectively. The Wilkinson Well located adjacent to Andrews Well #1 is a 24 by 48-inch gravel packed well which was installed in 1986. The Otis Street Well located off of Otis Street near Hocomoco Pond is 24 by 48-inch gravel-packed well which was installed in 1982. The Chauncy Lake wells are located off of Chauncy Street southwest bank of Lake Chauncy.

The wells for Westboro Water Department are located within six separate water supply protection areas, with portions of the protection areas extending into the towns of Shrewsbury, Grafton, and Northboro. Each well has a Zone I radius

What is a Wellhead 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.



of 400 feet. The wells are located in aquifers with a high vulnerability to contamination due to the absence of hydrogeologic barriers (i.e. confining clay layer) that can prevent contaminant migration. Please refer to the attached map of the Zone II.

Flouride is added to the water for dental health. The water is also treated for corrosion control through pH adjustment with potassium hydroxide and zinc orthophosphate; and disinfected with sodium hypochlorite. 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 IIs and watershed for Westborough are a mixture of forest, residential, industrial and commercial 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 Land Uses and Protection Issues include:

1. Inappropriate activities in Zone I
2. Residential land uses
3. Transportation corridors
4. Hazardous materials storage and use
5. Oil or hazardous material contamination sites
6. Agricultural activities
7. Comprehensive wellhead protection planning

The ranking of susceptibility to contamination for Zone II # 459 (the Zone II for the Hopkinton Road and Morse Street wells) is moderate, based on the presence of at least one moderate threat land use within the water supply protection areas, as seen in Table 2. The ranking of susceptibility to contamination for the other system Zone IIs and reservoir watershed 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. Inappropriate Activities in Zone Is – The Zone I for each of the wells is a 400 foot radius around the wellhead. Massachusetts drinking water regulations (310 CMR 22.00 Drinking Water) requires public water suppliers to own the Zone I, or control the Zone I through a conservation restriction. The Zone Is for the Morse Street and Hopkinton Road wells are not owned or controlled by the public water system. Only water supply activities are allowed in the Zone I. However, many public water supplies were developed prior to the Department's regulations and contain non water supply activities such as homes and public roads.

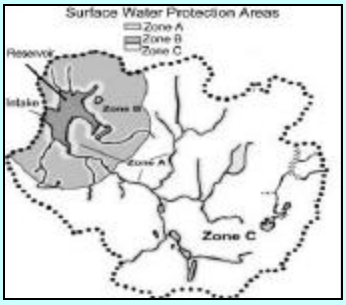
Zone I Recommendations:

- ✓ To the extent possible, remove all non water supply activities from the Zone Is to comply with DEP's Zone I requirements.
- ✓ Use BMPs for the storage, use, and disposal of hazardous materials such as water supply chemicals and maintenance chemicals.
- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.
- ✓ Keep any new non water supply activities out of the Zone I.

(Continued on page 4)

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.



2. Residential Land Uses – A portion of the protection areas consists of residential areas. Most of the area has public sewers, and so the remaining 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 to the groundwater because septic systems lead to the ground. 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.

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.

- **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.
- **Storm water** – Catch basins transport storm water from roadways and adjacent properties to the ground. As flowing storm water travels, it picks up debris and contaminants from streets and lawns. Common potential contaminants include lawn chemicals, pet waste, and contaminants from automotive leaks, maintenance, washing, or accidents.

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.
- ✓ Where town sewer is available, encourage residents to hook-up the town sewer.
- ✓ Promote BMPs for storm water management and pollution controls.

3. Transportation Corridors - Routes 135, 30,, Massachusett Turnpike (Route 90), Route 9 run through the protection areas for the wells and watershed. Local roads are common throughout the Zone IIs and watershed. 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 in to catchbasins.

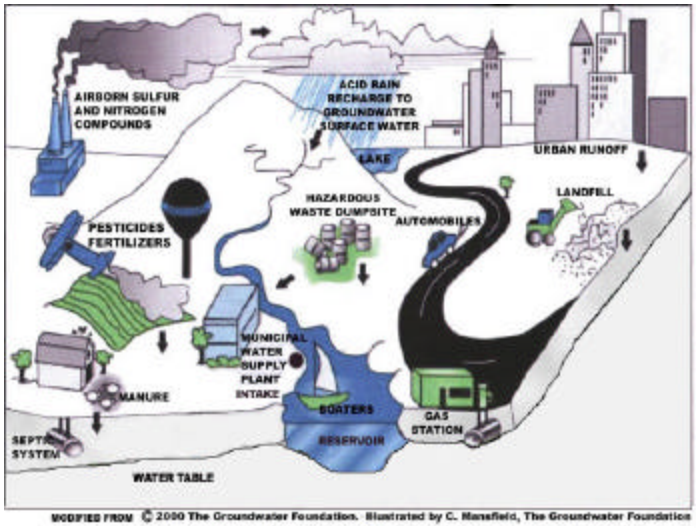


Figure 1: Sample watershed with examples of potential sources of contamination

Railroad tracks run directly through some of the water supply protection areas. Rail corridors serving passenger or freight trains are potential sources of contamination due to chemicals released during normal use, track maintenance, and accidents. Accidents can release spills of train engine fluids and commercially transported chemicals.

Transportation Corridor Recommendations:

- ✓ If storm drainage maps are available, review the maps with emergency response teams. 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.

(Continued on page 7)

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 Zone IIs and Watershed

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

Land Uses	Quantity	Zone II #	Zone C Source ID	Threat	Potential Contaminant Sources*
Agricultural					
Fertilizer Storage or Use	1	-	01S	M	Fertilizers: leaks, spills, improper handling, or over-application
Livestock Operations	4	459	01S	H	Manure (microbial contaminants): improper handling
Manure Storage or Spreading	1	459	-	H	Manure (microbial contaminants): improper handling
Commercial					
Auto Repair Shops	2	460	-	M	Automotive fluids, vehicle paints and solvents: spills, leaks, or improper handling
Car/Truck/Bus Washes	2	460	-	L	Vehicle wash water, soaps, oils, greases, metals, and salts: improper management
Cemeteries	1	459	-	L	Over-application of pesticides: leaks, spills, improper handling; historic embalming fluids
Gas Stations/ Service Stations	2	404	-	M	Automotive fluids and fuels: spills, leaks, or improper handling or storage
Golf Courses	1	246	-	M	Fertilizers or pesticides: over-application or improper handling
Laundromats	1	246	-	L	Wash water: improper management
Paint Shops	2	460	-	M	Paints, solvents, other chemicals: spills, leaks, or improper handling or storage
Railroad Tracks And Yards	1	12	-	H	Herbicides: over-application or improper handling; fuel storage, transported chemicals, and maintenance chemicals: leaks or spills
Repair Shops (Engine, Appliances, Etc.)	2	404	-	M	Engine fluids, lubricants, and solvents: spills, leaks, or improper handling or storage
Sand And Gravel Mining/Washing	1	404	-	M	Heavy equipment, fuel storage, clandestine dumping: spills or leaks

*See Table 2 Notes on Page 11

Land Uses	Quantity	Zone II #	Surface Source ID	Threat	Potential Contaminant Sources*
Industrial					
Hazardous Materials Storage	1	404	-	H	Hazardous materials: spills, leaks, or improper handling or storage
Industry/ Industrial Parks	1	459	-	H	Industrial chemicals and metals: spills, leaks, or improper handling or storage
Pharmaceutical Manufacturers	1	460	-	H	Chemicals: spills, leaks, or improper handling or storage
Residential					
Fuel Oil Storage (at residences)	Many	459,12 404	-	M	Fuel oil: spills, leaks, or improper handling
Lawn Care / Gardening	Many	459, 404	-	M	Pesticides: over-application or improper storage and disposal
Septic Systems / Cesspools	Many	459,	-	M	Hazardous chemicals: microbial contaminants, and improper disposal
Miscellaneous					
Aquatic Wildlife	1	459, 12, 404	01S	H	Microbial contaminants
Fishing/Boating	1	459, 12 404	-	M	Fuel and other chemical spills, microbial contaminants
Landfills and Dumps	1	12	-	H	Seepage of leachate
Large Quantity Hazardous Waste Generators	2	460	-	H	Hazardous materials and waste: spills, leaks, or improper handling or storage
NPDES Locations	1	246	-	H	Hazardous material and wastes: improper disposal
Oil or Hazardous Material Sites	3	460, 404, 246	-	--	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)	4	459, 12, 404, 460	-	M	Oil or sewage: spills or leaks
Schools, Colleges, and Universities	1	459	-	M	Fuel oil, laboratory, art, photographic, machine shop, and other chemicals: spills, leaks, or improper handling or storage
Small quantity hazardous waste generators	2	460, 404	-	L	Hazardous materials and waste: spills, leaks, or improper handling or storage
Stormwater Drains/ Retention Basins	Many	459, 12, 404, 460	-	H	Debris, pet waste, and chemicals in stormwater from roads, parking lots, and lawns
Superfund Sites	1	460	-	H	Oil or hazardous materials and waste: spills, leaks, or improper handling or storage
Transportation Corridors	4	459, 12, 404, 460	-	H	Fuels and other hazardous materials: accidental leaks or spills; pesticides: over-application or improper handling

*See Table 2 Notes on Page 11

- ✓ Identify stormwater drains and the drainage system along transportation corridors. Wherever possible, ensure that drains discharge stormwater outside of the Zone Is and away from the Zone IIs if possible.
- ✓ Work with the Town and State to have catch basins inspected, maintained, and cleaned on a regular schedule. Street sweeping reduces the amount of potential contaminants in runoff.
- ✓ Work with local officials during their review of the railroad right of way Yearly Operating Plans to ensure that water supplies are protected during vegetation control.

4. Hazardous Materials Storage and Use – Some of the land area within the Zone IIs and watershed 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 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 BMP's for common business issues.
- ✓ 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 floordrain requirements. See brochure "Industrial Floor Drains" for more information.

Top 5 Reasons to Develop a Local Wellhead and 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.

5. Presence of Oil or Hazardous Material Contamination Sites – The Zone IIs contain DEP Tier Classified Oil and/or Hazardous Material Release Sites indicated on the map as Release Tracking Numbers 2-000153, 2-000529, and 2-000865. Refer to the attached map and Appendix 3 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.

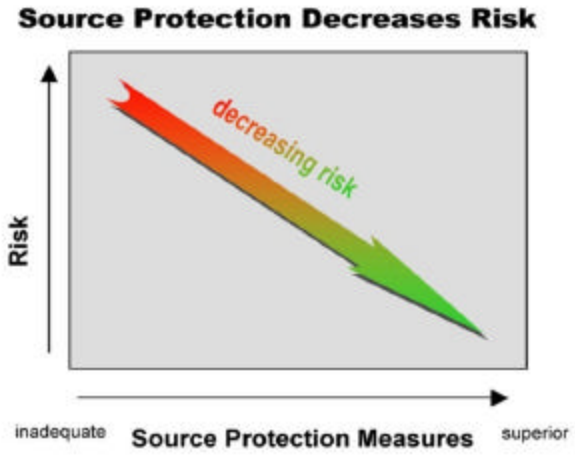


Figure 2: Risk of contamination decreases as source protection increases. This is true for public water systems of any susceptibility ranking, whether High, Moderate, or Low.

6. Agricultural Activites – 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 is a potential source of contamination to ground and surface water. 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.

Agricultural Activities Recommendations:

- ✓ 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 (NRCS) farm plan to protect water supplies.
- ✓ Encourage farmers to incorporate an Integrated Pest Management (IPM) approach into their pest management program. IPM is an ecologically-based approach to pest control that links together several

related components, including monitoring and scouting, biological controls, mechanical and/or other cultural practices, and pesticide applications. By combining a number of these different methods and practices, satisfactory pest control can be achieved with less impact on the environment.

- ✓ Promote Best Management Practices (BMPs) for fuel oil storage, hazardous material handling, storage, disposal, and emergency response planning.
- ✓ Work with farmers to ensure that pesticides and fertilizers are being stored within a structure designed to prevent runoff.

5. Protection Planning – Protection planning protects drinking water by managing the land area that supplies water to a well. A Wellhead and Surface Water 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 wells.

Protection Planning Recommendations:

- ✓ 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 Local Wellhead Protection Plan" and "Developing a Local Surface Water Supply Protection Plan".
- ✓ Coordinate efforts with local officials to compare local wellhead and surface water protection controls with current MA Wellhead Protection Regulations 310 CMR 22.21(2) and Surface Water Supply Protection Regulations 310 CMR 22.20B and 310 CMR 22.20C. If they do not meet the current regulations, adopt controls that meet 310 CMR 22.21(2), 310 CMR 22.20B and 310 CMR 22.20C. For more information on DEP land use controls see http://mass.gov /dep/brp/dws/protect.htm.
- ✓ If local controls do not regulate floor drains, be sure to include floor drain controls that meet 310 CMR 22.21(2).

Other land uses and activities within the Zone II and watershed 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, Westboro's Zone IIs and Zone C 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:

- Reviewing all projects involving earth moving (over 500 cu.bic yards), subdivisions, commercial site plans, and residential building lot site plans
- Attending Planning Board meetings, including those at which site plans may be presented or reviewed.

What is a Zone III?

A Zone III (the secondary recharge area) is the land beyond the Zone II from which surface and ground water drain to the Zone II and is often coincident with a watershed boundary.

The Zone III is defined as a secondary recharge area for one or both of the following reasons:

1. The low permeability of underground water bearing materials in this area significantly reduces the rate of groundwater and potential contaminant flow into the Zone II.
2. The groundwater in this area discharges to a surface water feature such as a river, rather than discharging directly into the aquifer.

The land uses within the Zone III are assessed only for sources that are shown to be groundwater under the direct influence of surface water.

For More Information

Contact Josephine Yemoh-Ndi in DEP's Worcester Office at (508) 849-4030 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 A		
Does the Public Water Supplier (PWS) own or control the entire Zone I ?	**NO** (Zone I for 01G & 02G)	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.
Are the Zone I and Zone A posted with "Public Drinking Water Supply" Signs?	**YES**	Additional economical signs are available from the Northeast Rural Water Association (802) 660-4988.
Are the Zone I and Zone A regularly inspected?	**YES**	Continue daily inspections of drinking water protection areas.
Are water supply-related activities the only activities within the Zone I?	**NO**	Continue monitoring for non-water supply activities in Zone I.
Municipal Controls (Zoning Bylaws, Health Regulations, and General Bylaws)		
Does the municipality have Surface Water Protection Controls that meet 310 CMR 22.20C and Wellhead Protection Controls that meet 310 CMR 22.21(2)	**YES**	For additional source protection measures, refer to www.state.ma.us/dep/brp/dws.
Do neighboring communities protect the water supply protection areas extending into their communities?	**NO**	Work with neighboring municipalities to include the watershed in their protection controls.
Planning		
Does the PWS have a local surface water and wellhead protection plan?	**YES**	Continue the implementation of water supply protection plan. Follow "Developing a Local Surface Water Supply Protection Plan" available at: www.state.ma.us/dep/brp/dws/. 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 watershed and wellhead protection committee?	**YES**	Establish a committee with representatives from citizens' groups, neighboring communities, and the business community.
Does the Board of Health conduct inspections of commercial and industrial activities?	**YES**	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**	Education is done through providing protection information to residents in Zone C watershed. Material is periodically provided to the public in the newspaper. Other outreach occurs through the annual Consumer Confidence Report. Increase residential outreach through bill stuffers, Drinking Water Week activities, and coordination with local groups. Aim additional efforts at commercial and municipal uses within the Zone IIs and Zone C.

Source Protection Recommendations:
To better protect the sources for the future:

- ✓ Inspect the Zone 1 and Zone A 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 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.
- ✓ Develop and implement a 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.

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

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 Zone II. Use this information to set priorities, target inspections, focus education efforts, and to develop a long-term drinking water source protection plan.

Section 4: Appendices

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

Table 2 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.

APPENDIX B:
REGULATED FACILITIES WITHIN THE WATER SUPPLY PROTECTION AREA

DEP Permitted Facilities

DEP Facility Number	Facility Name	Street Address	Town	Permitted Activity	Activity Class
126364	RONS MOBIL SERVICENTER INC SS # E5F	130 TURNPIKE RD	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator
130627	ASTRAZENECA	50 OTIS ST	WESTBOROUGH	Toxic Use Reduction Filer	Large Quantity Toxic User
130627	ASTRAZENECA	50 OTIS ST	WESTBOROUGH	Sewer Discharge	Industrial Wastewater to Sewer
130627	ASTRAZENECA	50 OTIS ST	WESTBOROUGH	Generator of Hazardous Waste	Large Quantity Generator of waste Oil/PCBs
130627	ASTRAZENECA	50 OTIS ST	WESTBOROUGH	Generator of Hazardous Waste	Large Quantity Generator of Hazardous Waste
130627	ASTRAZENECA	50 OTIS ST	WESTBOROUGH	PLANT	Air Quality Permit
130631	BULLARD ABRASIVE PRO	52 HOPKINTON RD	WESTBOROUGH	PLANT	Air Quality Permit
130631	BULLARD ABRASIVE PRO	52 HOPKINTON RD	WESTBOROUGH	Toxic Use Reduction Filer	Large Quantity Toxic User
130631	BULLARD ABRASIVE PRO	52 HOPKINTON RD	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator
284032	CLOVERLEAF CHEVROLET	150 TNPK RD	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator
284032	CLOVERLEAF CHEVROLET	150 TNPK RD	WESTBOROUGH	Generator of Hazardous Waste	Small Quantity Generator of waste Oil/PCBs

DEP Facility Number	Facility Name	Street Address	Town	Permitted Activity	Activity Class
284032	CLOVERLEAF CHEVROLET	150 TNPK RD	WESTBOROUGH	Generator of Hazardous Waste	Air Quality Permit
36854	GOODALL & SONS TRACTOR CO INC	75 OTIS ST	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator
36854	GOODALL & SONS TRACTOR CO INC	75 OTIS ST	WESTBOROUGH	Generator of Hazardous Waste	Small Quantity Generator of waste Oil/PCBs
326413	IKON	3 SASSACUS DR	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator
2916	JIFFY LUBE	126 BOSTON TNPK RD	WESTBOROUGH	Generator of Hazardous Waste	Large Quantity Generator of waste Oil/PCBs
2916	JIFFY	126 BOSTON TNPK RD	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator
328264	MAGIC MOMENTS PHOTO BOUTIQUE	160 MILK ST	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator
368187	MOBIL 11680	130 TURNPIKE RD	WESTBOROUGH	Fuel Dispenser	Fuel Dispenser
35533	PICARD SHELL	128 TURNPIKE RD	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator
126364	RONS MOBIL SERVICENTER INC SS # E5F	130 TURNPIKE RD	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator
12636r4	RONS MOBIL SERVICENTER INC SS # E5F	130 TURNPIKE RD	WESTBOROUGH	Generator of Hazardous Waste	Recycle
125845	SHELL 137889	128 TURNPIKE RD	WESTBOROUGH	Fuel Dispenser	Fuel Dispenser
334227	SOLECTRON MASSACHUSETTS CORP	125 FISHER ST	WESTBOROUGH	Generator of Hazardous Waste	Large Quantity Generator of Hazardous Waste

DEP Facility Number	Facility Name	Street Address	Town	Permitted Activity	Activity Class
322614	SOLECTRON MASSACHUSETTS CORP	155 FLANDERS ROAD	WESTBOROUGH	Toxic Use Reduction Filer	Large Quantity Toxic User
334227	SOLECTRON MASSACHUSETTS CORP	125 FISHER ST	WESTBOROUGH	Toxic Use Reduction Filer	Large Quantity Toxic User
139116	THE GREEN THUMB	183 TNPK RD	WESTBOROUGH	PLANT	Air Quality Permit
132600	WESTBORO WWTF	238 TNPK RD	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator of Hazardous Waste
132600	WESTBORO WWTF	238 TNPK RD	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator Waste Oil/PCBs
132600	WESTBORO WWTF	238 TNPK RD	WESTBOROUGH	Surface Major	Surface Discharge
133733	WESTINGHOUSE ABB POWER T & D CO	25 BRIDLE LN	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator of Hazardous Waste
269089	WHEELABRATOR EOS INC	238 TNPK RD	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator of Waste Oil/PCBs
35948	WAYSIDE SERVICE CENTER	165 TNPK RD	WESTBOROUGH	Generator of Hazardous Waste	Very Small Quantity Generator of Waste Oil/PCBs

Underground Storage Tanks

Facility Name	Address	Town	Description	Tank Type	Tank Leak Detection	Capacity (gal)	Contents
ASTRAZENECA	50 OTIS ST	WESTBOROUGH	INDUSTRIAL	2 WALL	INTERSTITIAL MONITORING	1000	Diesel
MOBIL 11680	130 TURNPIKE RD	WESTBOROUGH	GAS STATION	1 WALL	APPROVED INTANK MONITORING	10000	Gasoline
MOBIL 11680	130 TURNPIKE RD	WESTBOROUGH	GAS STATION	1 WALL	APPROVED INTANK MONITORING	1000	Waste oil
SHELL 137889	128 TURNPIKE RD	WESTBOROUGH	GAS STATION	1 WALL	APPROVED INTANK MONITORING	8000	Gasoline
SHELL 137889	128 TURNPIKE RD	WESTBOROUGH	GAS STATION	1 WALL	APPROVED INTANK MONITORING	1000	Waste oil
RONS MOBIL SERVICENTER INC SS # E5F	130 TURNPIKE RD	WESTBOROUGH	GAS STATION	1 WALL	APPROVED INTANK MONITORING	12000	Gasoline
RONS MOBIL SERVICENTER INC SS # E5F	130 TURNPIKE RD	WESTBOROUGH	GAS STATION	1 WALL	APPROVED INTANK MONITORING	1000	Waste oil
WESTBORO WWTF	238 TNPK RD	WESTBOROUGH	UTILITY	2 WALL	Interstitial Monitoring	2000	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 may be located within the water supply protection area(s) that should be considered in local drinking water source protection planning.

APPENDIX C – Table of Tier Classified Oil and/or Hazardous Material Sites within the 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/sitelist.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
2-00153	FISHER STREET	WESTBOROUGH	Hazardous Material
2-00529	129 FISHER STREET	WESTBOROUGH	Oil
2-00865	240 TURNPIKE ROAD	WESTBOROUGH	Oil

For more location information, please see the attached map. The map lists the release sites by RTN.