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

Hingham/Hull Water Supply

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	Aquarion Water Company of Massachusetts
PWS Address	P.O. Box 336
City/Town	Accord, Massachusetts 02061-0336
PWS ID Number	3131000
Local Contact	Eileen Commane
Phone Number	(781) 740-6633

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 #: 394

Source Name	*Source ID#*	*Susceptibility*
Free St. Well #1	3131000-01G	High
Free St. Well #2	3131000-02G	High
Scotland St. Well	3206000-03G	High
Downing St. Well	3206000-04G	High
Free St. Well #3	3206000-05G	High
Prospect Well	3206000-06G	High

Surface Water Sources

Source Name	*Source ID#*	*Susceptibility*
Accord Pond	3206000-01S	High
Accord Brook	3206000-02S	High
Fulling Mill Collection Basins	3206000-03S	High

The wells for the Hingham/Hull water supply are located within a single water supply protection area, with a portion extending into the Town of Norwell. Each well has 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 barrier (i.e. confining clay layer) that can prevent contaminant migration. Please refer to the attached map of the Zone II.

The reservoirs for Hingham and Hull are located within three separate water supply protection areas, with a portion of the Accord Pond water supply protection area extending into the towns of Norwell and Holbrook, and a portion of the Accord Brook water supply protection area extending into the town of Norwell.

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

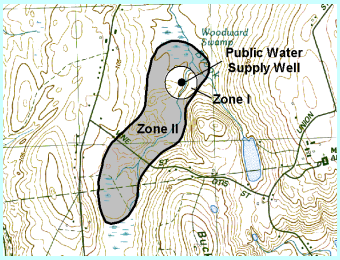
The Zone II and Zone Cs for Hingham and Hull's sources are primarily a mixture of forest, residential, and wetlands, and open land, with a small portion consisting of commercial and waste disposal land uses (refer to attached map for details). Land uses and activities that are potential sources of contamination 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. Activities in Zone I
2. Activities in Zone A
3. Hazardous Materials Storage and Use
4. Transportation Corridor
5. Residential Land Uses
6. Oil or Hazardous Material Contamination Sites
7. Comprehensive Wellhead Protection Planning

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 I I protection area.



The ranking of susceptibility to contamination for the Zone II of the Free St. Well #1, Free St. Well #2, Scotland St. Well, Downing St. Well, Free St. Well #3, and Prospect Well is high, based on the presence of at least one high threat land use within the water supply protection area, as seen in Table 2; the ranking of susceptibility to contamination for Accord Pond, Accord Brook, and Fulling Mill Collection Basin Zone Cs 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. Activities in Zone I – 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. 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. The following non-water supply activities occur in the Zone Is of the system wells:

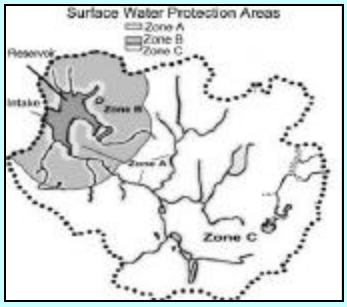
Free Street Well #1 - There are several homes served by on-site septic systems in the Zone I.

Free Street Well #2 - There is one home served by an on-site septic system in the Zone I.
Free Street Well #3 - There are four homes served by on-site septic systems, and local roads in the Zone I.
Scotland Street Well - There is one home served by an on-site septic system and local roads in the Zone I.
Downing Street Well - There are recreational activities occuring in the Zone I.
Prospect Well - There are four homes served by an on-site septic system , and local roads in the Zone I.
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.
- ✓ Agreement Options - Until land is available, attempt to obtain a *Memorandum of Understanding* and *Right of First Refusal*.

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.



Memorandum of Understanding (MOU) is an agreement between the landowner and public water supplier in which the landowner agrees not to engage in specific threatening activities. The MOU should be specific to the land use or activity. For instance, if the land is residential with a septic system the owner could agree not to place chemicals, petroleum products, or other hazardous or toxic substances, including septic system cleaners into the septic system, and that the system will be pumped at a specific frequency. The application of lawn care chemicals could also be restricted. Understanding how an activity threatens drinking water quality is an important component of developing and effective MOU.

Right of First Refusal is a legal document that gives the water supplier first chance to purchase land when it becomes available. See *Right of First Refusal* in Appendices.

2. Activities in Zone A - Existing and future land use activities which may have an impact on surface water sources include: public and private recreational activities; untreated stormwater runoff; domestic animals; new construction; spills along roads; above ground and underground storage tanks; erosion; and un-permitted and unauthorized activities. Wild animals and domestic pets can be carriers of waterborne diseases such as Giardia, Cryptosporidium, Salmonella, etc. The following activities occur in the Zone A of the system's reservoirs:

Accord Pond - There are numerous homes throughout the Zone A of the reservoir and its tributary, some of which are served by on-site septic systems;

local roads run throughout the Zone A of the reservoir and its tributaries, with a potion of Route 3 crossing a small section of a tributary; numerous commercial activities occur throughout the reservoir's Zone A and its tributary, some of which have underground storage tanks.

Accord Brook - There are numerous homes throughout the Zone A, some of which are served by on-site septic systems; local roads cross Accord Brook in several locations, with Route 53 crossing near the intake of Accord Pond.

Zone A Recommendations:

- ✓ To the extent possible, remove all activities from the Zone As to comply with DEP's Zone A requirements.
- ✓ Use BMPs for the storage, use, and disposal of hazardous materials such as water supply chemicals and maintenance chemicals.
- ✓ Storage of pesticides, fertilizers or road salt within the Zone A should be covered and contained.
- ✓ Keep any new prohibited activities out of the Zone A.

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.

3. Hazardous Materials Storage and Use – 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.

4. Transportation Corridors - 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:

- ✓ Identify stormwater drains and the drainage system along transportation corridors. Wherever possible, ensure that drains discharge stormwater outside of the Zone II and Zone Cs.

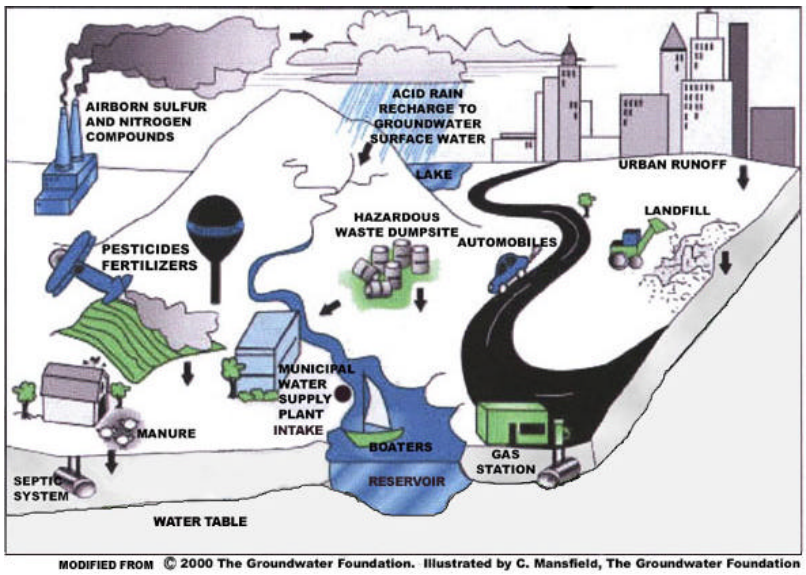


Figure 1: Sample watershed with examples of potential sources of contamination

- ✓ 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 Town and State emergency response teams to ensure that any spills within the Zone II, Zone A and Zone C can be effectively contained.
- ✓ If storm drainage maps are available, review the maps with emergency response teams. If maps aren't yet available, work with city officials to investigate mapping options such as those in the upcoming Phase II Stormwater Rule requiring some communities to complete stormwater mapping.

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

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

Land Uses	Quantity	Threat	Zone II Number	Zone C Source ID	Potential Contaminant Sources*
Commercial					
Gas Stations	2	H	394		Spills, leaks, or improper handling or storage of automotive fluids and fuels
Service Stations/ Auto Repair Shops	12	H	394	01S, 03S	Spills, leaks, or improper handling of automotive fluids, and solvents
Bus and Truck Terminals	2	H	394	03S	Spills, leaks, or improper handling of fuels and maintenance chemicals
Cemeteries	3	M	394	03S	Leaks, spills, improper handling, or over-application of pesticides; historic embalming fluids (such as arsenic)
Dry Cleaners	3	H	394	01S, 03S	Spills, leaks, or improper handling of solvents and wastes
Medical Facilities	1	M	394		Spills, leaks, or improper handling or storage of biological, chemical, and radioactive wastes
Paint Shops	2	H	394	03S	Spills, leaks, or improper handling or storage of paints, solvents, other chemicals
Repair Shops (Engine, Appliances, Etc.)	3	H	394	03S	Spills, leaks, or improper handling or storage of engine fluids, lubricants, and solvents
Residential					
Fuel Oil Storage (at residences)	Numerous	M	394	01S, 02S, 03S	Spills, leaks, or improper handling of fuel oil
Lawn Care/ Gardening	Numerous	M	394	01S, 02S, 03S	Over-application or improper storage and disposal of pesticides
Septic Systems/ Cesspools	Numerous	M	394	01S, 02S, 03S	Microbial contaminants, and improper disposal of hazardous chemicals
Miscellaneous					
Large Quantity Hazardous Waste Generators	1	H	394	02S	Spills, leaks, or improper handling or storage of hazardous materials and waste

Land Uses	Quantity	Threat	Zone II Number	Zone C Source ID	Potential Contaminant Sources*
Oil or Hazardous Material Sites	2	--	394	02S	Tier Classified Oil or Hazardous Materials Sites are not ranked due to their site-specific character. Individual sites are identified in Appendix B.
Schools, Colleges, and Universities	5	M	394	03S	Spills, leaks, or improper handling or storage of fuel oil, laboratory, art, photographic, machine shop, and other chemicals
Small quantity hazardous waste generators	5	M	394	01S, 02S	Spills, leaks, or improper handling or storage of hazardous materials and waste
Stormwater Drains/ Retention Basins	Numerous/ several	L	394	01S, 02S, 03S	Debris, pet waste, and chemicals in stormwater from roads, parking lots, and lawns
Transportation Corridors	6	M	394	01S, 03S	Accidental leaks or spills of fuels and other hazardous materials, over-application or improper handling of pesticides
Underground Storage Tanks	26	H	394	02S	Spills, leaks, or improper handling of stored materials
Very Small Quantity Hazardous Waste Generator	8	L	394	01S, 02S	Spills, leaks, or improper handling or storage of hazardous materials and waste
Wastewater Treatment Plant/ Collection Facility/ Lagoon	7	M	394	01S, 03S	Improper handling or storage of treatment chemicals or equipment maintenance materials; improper management of wastewater

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.

5. Residential Land Uses – Approximately 35% of the combined Zone II and Zone Cs consist of residential areas. A portion of the Zone II for the wellfield is served by municipal sewering, with the remaining homes having on-site 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.
- **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.

- **Stormwater** – Catch basins transport stormwater from roadways and adjacent properties to the ground. As flowing stormwater 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.

✓ Promote BMPs for stormwater management and pollution controls.

6. Presence of Oil or Hazardous Material Contamination Sites – The Zone II and Zone Cs contain DEP Tier Classified Oil and/or Hazardous Material Release Sites indicated on the maps as Release Tracking Numbers 4-0000134, and 4-0015314. 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.

7. Protection Planning – Currently, the Town of Hingham does not have water supply protection controls. Protection planning protects drinking water by managing the land area that supplies water to a well or reservoir. A Water Resource 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.

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.

Protection Planning Recommendations:

✓ Develop a Wellhead and Surface Water 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 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 there are no local controls or 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 floordrains, be sure to include floordrain controls that meet 310 CMR 22.21(2).

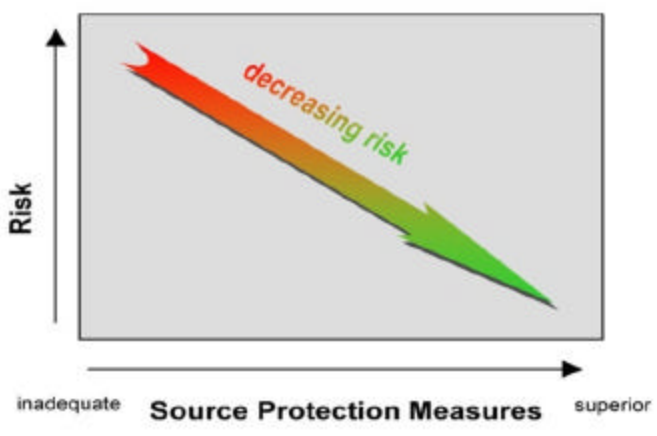


Figure 2: Risk of contamination decreases as source protection increases. This is true for public water systems of any susceptibility ranking, whether High, Moderate, or Low.

Other land uses and activities within the Zone I and Zone Cs that are potential sources of contamination are included in Table 2. Refer to Appendix A 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's Zone II and Zone Cs 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:

- Having an Emergency Response Plan that deals with spills or other emergencies
- Working with Conservation Commission, Board of Health, Selectmen, and other local officials on source protection issues

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

- ✓ Inspect the Zone I 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 Zone II and Zone C and to cooperate on responding to spills or accidents.
- ✓ Partner with local businesses to ensure the proper storage, handling, and disposal of hazardous materials.
- ✓ Monitor progress on any ongoing remedial action conducted for the known oil or contamination sites.
- ✓ Develop and implement a Wellhead and Surface Water Protection Plan.

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.

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.

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 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. 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://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.

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 and/or Zone A?	**NO**	To the extent possible, remove prohibited activities in Zone A to comply with DEP's Zone I and Zone A requirements. Investigate options for gaining ownership or control of the Zone A.
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 and Zone A?	**NO**	Monitor prohibited activities in Zone A, and investigate options for removing these activities.
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)?	**UNKNOWN**	Work with the Planning Board and the Selectmen to develop bylaws that meet land use controls required by 310 CMR 22.21(2) and 310 CMR 22.20B & C. Refer to www.state.ma.us/dep/brp/dws/ for model bylaws and health regulations, and current regulations.
Do neighboring communities protect the water supply protection areas extending into their communities?	**UNKNOWN**	Request that municipal officials in Rockland and Norwell develop land use restrictions that meet 310 CMR 22.21(2) and 310 CMR 22.20C, and to incorporate Hingham's source protection areas.
Planning		
Does the PWS have a local surface water and wellhead protection plan?	**NO**	Develop a wellhead and surface water supply protection plan to include all sources. Follow "Developing a Local Wellhead Protection Plan" and "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**	Supplement 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?	**NO**	A committee exists for the Weir River Watershed. To have a well rounded committee, include representatives from local government, citizens' groups, neighboring communities, and the business community, and expand interests to all sources.
Does the Board of Health conduct inspections of commercial and industrial activities?	**YES**	Floor drain inspection was conducted in conjunction with DEP. 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?	**SOME**	Currently, the outreach is through the annual Consumer Confidence Report, and through the water department website. Increase residential outreach through bill stuffers, school programs, Drinking Water Week activities, and coordination with local groups. Aim additional efforts at commercial, industrial and municipal uses within the Zone II and Zone C.

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.

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.

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

APPENDIX A: DEP PERMITTED FACILITIES WITHIN HINGHAM/HULL WATER SUPPLY PROTECTION AREAS

DEP FACILITY NUMBER	FACILITY NAME	STREET ADDRESS	TOWN	PERMITTED ACTIVITY	ACTIVITY CLASS
136527	CUMBERLAND GULF #200102	19 WHITING STREET	HINGHAM	FUEL DISPENER	FUEL DISPENSER
37161	FIRESTONE STORE	22 WHITING STREET	HINGHAM	HANDLER	SMALL QUANTITY GENERATOR - WASTE OIL/PCBS ONLY
312084	FRIDAY GRAPHICS	49 WHITING STREET	HINGHAM	HANDLER	VERY SMALL QUANTITY GENERATOR
209230	GETTY 30375	4 WHITING ROAD	HINGHAM	FUEL DISPENER	FUEL DISPENSER
32666	HINGHAM MUNICIPAL LIGHT	308 CUSHING STREET	HINGHAM	HANDLER	SMALL QUANTITY GENERATOR - WASTE OIL/PCBS ONLY
323110	7 ELEVEN 32493	95 WASHINGTON STREET	NORWELL	HANDLER	VERY SMALL QUANTITY GENERATOR
323110	7 ELEVEN 32493	95 WASHINGTON STREET	NORWELL	FUEL DISPENSER	FUEL DISPENSER
364940	ALLEGRA PRINT & IMAGING	77 ACCORD PARK DRIVE	NORWELL	HANDLER	VERY SMALL QUANTITY GENERATOR
35008	AUTOMOTIVE HARD PARTS	9 GROVE STREET	NORWELL	HANDLER	VERY SMALL QUANTITY GENERATOR
33605	FABRIC CARE HOUSE	62 POND STREET	NORWELL	HANDLER	SMALL QUANTITY GENERATOR
134271	JIFFY LUBE	49 WASHINGTON STREET	NORWELL	HANDLER	LARGE QUANTITY GENERATOR - WASTE OIL/PCBS ONLY
134271	JIFFY LUBE	49 WASHINGTON STREET	NORWELL	HANDLER	VERY SMALL QUANTITY GENERATOR
178008	MOBIL OIL CORP SS QLW	89 WASHINGTON & GROVE STREETS	NORWELL	HANDLER	VERY SMALL QUANTITY GENERATOR
178008	MOBIL OIL CORP SS QLW	89 WASHINGTON & GROVE STREETS	NORWELL	HANDLER	SMALL QUANTITY GENERATOR - WASTE OIL/PCBS ONLY
357758	NORWELL MOBIL	89 WASHINGTON STREET	NORWELL	FUEL DISPENSER	FUEL DISPENSER

DEP FACILITY NUMBER	FACILITY NAME	STREET ADDRESS	TOWN	PERMITTED ACTIVITY	ACTIVITY CLASS
359392	PLANET SUBARU	22 POND STREET	NORWELL	HANDLER	LARGE QUANTITY GENERATOR
31954	QUEEN ANNES SHELL	10 WASHINGTON STREET	NORWELL	HANDLER	VERY SMALL QUANTITY GENERATOR
31954	QUEEN ANNES SHELL	10 WASHINGTON STREET	NORWELL	HANDLER	SMALL QUANTITY GENERATOR - WASTE OIL/PCBS ONLY
29670	RIETZL CORP	59 POND STREET	NORWELL	APPR	INDUSTRIAL WASTE WATER HOLDING TANK
36464	SEARS ROEBUCK & CO	ACCORD PARK DRIVE	NORWELL	HANDLER	VERY SMALL QUANTITY GENERATOR
325669	SHELL 137821	10 WASHINGTON STREET	NORWELL	FUEL DISPENSER	FUEL DISPENSER
293551	SOUTH SHORE IMPORTED CARS INC	75 POND STREET	NORWELL	APPR	INDUSTRIAL WASTE WATER HOLDING TANK
34745	SULLIVAN TIRE	QUEEN ANNES CORNER	NORWELL	HANDLER	VERY SMALL QUANTITY GENERATOR
38141	SUN REFINING & MARKETING CO	117 POND STREET	NORWELL	HANDLER	VERY SMALL QUANTITY GENERATOR
38141	SUNOCO #0012-3653	117 POND STREET	NORWELL	FUEL DISPENSER	FUEL DISPENSER

UNDERGROUND STORAGE TANKS WITHIN HINGHAM/HULL WATER SUPPLY PROTECTION AREAS

FACILITY NAME	ADDRESS	TOWN	DESCRIPTION	CAPACITY (GAL)	CONTENTS
CUMBERLAND GULF	19 WHITING STREET	HINGHAM	GAS STATION	10000	GASOLINE
CUMBERLAND GULF	19 WHITING STREET	HINGHAM	GAS STATION	10000	GASOLINE
CUMBERLAND GULF	19 WHITING STREET	HINGHAM	GAS STATION	10000	GASOLINE
CHRISTY'S	95 WASHINGTON STREET	NORWELL	GAS STATION	6000	GASOLINE
CHRISTY'S	95 WASHINGTON STREET	NORWELL	GAS STATION	6000	GASOLINE
CHRISTY'S	95 WASHINGTON STREET	NORWELL	GAS STATION	6000	GASOLINE
GETTY STATION	4 WHITING STREET/ POND STREET	NORWELL	GAS STATION	10000	GASOLINE
GETTY STATION	4 WHITING STREET/ POND STREET	NORWELL	GAS STATION	8000	GASOLINE
GETTY STATION	4 WHITING STREET/ POND STREET	NORWELL	GAS STATION	6000	GASOLINE
GETTY STATION	4 WHITING STREET/ POND STREET	NORWELL	GAS STATION	510	WASTE OIL
GOODYEAR ASSOCIATION	POND STREET & WASHINGTON STREET	NORWELL	AUTO REPAIR	500	WASTE OIL
MOBIL	85 WASHINGTON STREET	NORWELL	GAS STATION	10000	GASOLINE
MOBIL	85 WASHINGTON STREET	NORWELL	GAS STATION	10000	GASOLINE
MOBIL	85 WASHINGTON STREET	NORWELL	GAS STATION	10000	GASOLINE
MOBIL	85 WASHINGTON STREET	NORWELL	GAS STATION	10000	GASOLINE
MOBIL	85 WASHINGTON STREET	NORWELL	GAS STATION	1000	WASTE OIL

FACILITY NAME	ADDRESS	TOWN	DESCRIPTION	CAPACITY (GAL)	CONTENTS
SHELL SERVICE STATION	10 WASHINGTON STREET	NORWELL	GAS STATION	12000	GASOLINE
SHELL SERVICE STATION	10 WASHINGTON STREET	NORWELL	GAS STATION	12000	GASOLINE
SHELL SERVICE STATION	10 WASHINGTON STREET	NORWELL	GAS STATION	12000	GASOLINE
SHELL SERVICE STATION	10 WASHINGTON STREET	NORWELL	GAS STATION	500	FUEL OIL
SUNOCO	117 POND STREET	NORWELL	GAS STATION	8000	GASOLINE
SUNOCO	117 POND STREET	NORWELL	GAS STATION	8000	GASOLINE
SUNOCO	117 POND STREET	NORWELL	GAS STATION	8000	GASOLINE
SUNOCO	117 POND STREET	NORWELL	GAS STATION	1000	WASTE OIL
SUNOCO	117 POND STREET	NORWELL	GAS STATION	550	FUEL OIL
SUNOCO	117 POND STREET	NORWELL	GAS STATION	550	WASTE OIL

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 Hingham/Hull's 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
4-0000134	Route 228 & 53	Norwell	Oil
4-0015314	86 High Street	Norwell	Oil

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