Massachusetts Department of Environmental Protection

Source Water Assessment and Protection (SWAP) Report

for

Seekonk Water District

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	Seekonk Water District
PWS Address	50 Water Lane
City/Town	Seekonk, Massachusetts 02771
PWS ID Number	4265000
Local Contact	Bruce Baldwin
Phone Number	(508) 761-8170

Introduction

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

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

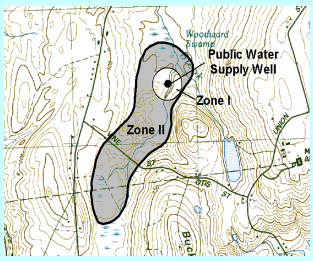
Refer to Table 3 for Recommendations to address potential sources of contamination. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes the following sections:

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

What is a Protection Area?

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



Glossary

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

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

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

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

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

Section 1: Description of the Water System

Zone II #: 162 ***Susceptibility:*** High

Well Names	***Source IDs***
Brown Avenue Wellfield	4265000-01G

Zone II #: 164 ***Susceptibility:*** High

Well Names	***Source IDs***
Newman GP Well #1	4265000-02G
Newman GP Well #2	4265000-03G
Newman GP Well #3	4265000-04G
Newman GP Well #4	4265000-05G
McHale GP Well #5	4265000-06G

The Seekonk Water District (the Water District) provides water to over 13,000 people and 550 businesses from five wells and one wellfield that are all located in a single aquifer. Source water protection is a priority due to the fact that all of the District's water comes from one aquifer and if it were to be contaminated costly treatment might be required. The wellfield has a Zone I of 250 feet from the perimeter of the wellfield and each of the other wells has a Zone I of 400 feet. Two separate Zone IIs have been delineated as the recharge areas for the District's water supply sources. The wells and wellfield are located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers (i.e. clay) that can prevent contaminant migration. Please refer to the attached map to view the boundaries of the Zone IIs.

All of Seekonk's water supply has fluoride added for dental health. For the most 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 Zone IIs for the District are a mixture of forest, residential, participation recreation land uses with small areas of cropland, commercial, and light industrial land uses (refer to attached map for details). Land uses and activities that are potential sources of contamination are listed in Table 2, with further detail provided in the Table of Regulated Facilities and Table of Underground Storage Tanks in Appendix A.

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. Comprehensive wellhead protection planning
7. Agricultural activities
8. Intermediate School Wastewater Discharge System

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. **Inappropriate Activities in Zone Is –** The Zone I for each of the five wells is a 400 foot radius around the wellhead and the Zone I for the wellfield is 250 feet around the individual well points. 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. A portion of the Zone I for the Brown Avenue wellfield extends into the Ledgemont Country Club golf course. Portions of the Zone Is for Newman GP Well #1 and Newman GP Well #2 extend into East Providence Rhode Island. A small area of the Zone I for Newman GP Well #4 extends onto the Seekonk Intermediate School's playing fields. 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.

   Until land is available, attempt to obtain a Memorandum of Understanding and Right of First Refusal on the Zone I lands. A 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 agree that the system will be pumped at a specific frequency. Understanding how an activity threatens drinking water quality is an important component of developing and effective MOU. A Right of First Refusal is a legal document that gives the water supplier the first chance to purchase land when it becomes available.

The following non water supply activities occur in the Zone Is of the system wells:

Benefits of Source Protection

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

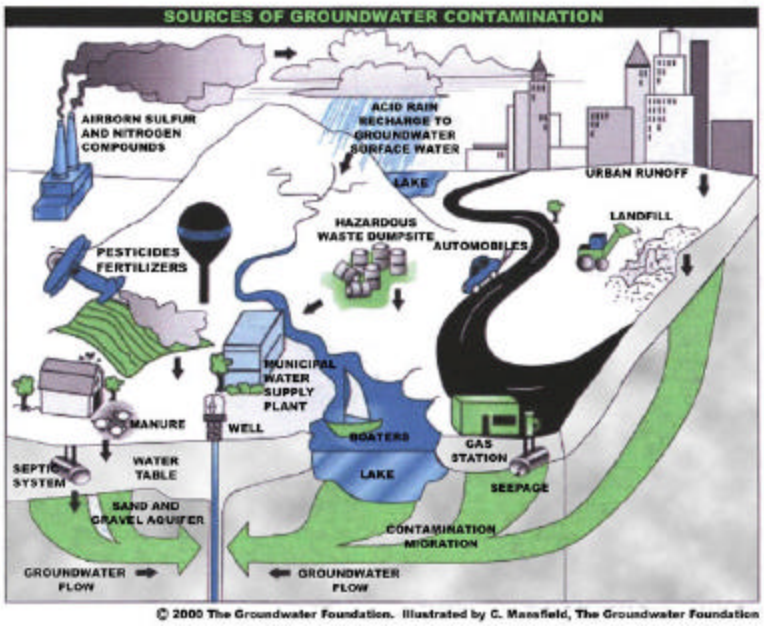
- Protects drinking water quality at the source
- Reduces monitoring costs through the DEP Waiver Program
- Treatment can be reduced or avoided entirely, saving treatment costs
- Prevents costly contamination clean-up
- Preventing contamination saves costs on water purchases, and expensive new source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

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

Zone I: Brown Avenue Wellfield 4265000-01G – The wellfield was originally installed in 1946 and the land was conveyed to the Water District in 1947 by Ledgemont Associates. The agreement allows for Ledgemont Associates to construct and maintain a golf course on the land.

Zone I: Newman GP Wells #1 and #2 – The Zone Is for these wells extend into East Providence, Rhode Island. The Zone I area in East Providence is municipally owned (East Providence Water Department) and undeveloped.

Zone I: Newman GP Well #4 – The Zone I extends into the Town of Seekonk school playing field and is managed through an easement granted by the Town to the Water District. The easement allows playing fields, bleachers, backstops, fences and the



use of fertilizers, herbicides and pesticides.

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.
- ✓ Work with the Town to eliminate or minimize the use of fertilizers, herbicides and pesticides within the Zone I of Newman GP Well #4.
- ✓ Work with Ledgemont Associates to eliminate or minimize the use of fertilizers, herbicides and pesticides within the Zone I of the Brown Avenue Wellfield.
- ✓ Keep any new non water supply activities out of the Zone I.

2. Residential Land Uses – Approximately 23% of the Zone IIs consist of residential areas. None of the areas have public sewers, and so all 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.
- **Heating Oil Storage** - If managed improperly, Underground and Aboveground Storage Tanks (UST and AST) 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 C 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.

3. Transportation Corridors - Route 152 and local roads run through the Zone IIs. Roadway construction, maintenance, and typical highway use can all be potential sources of contamination. Accidents can lead to spills of gasoline and other

(Continued on page 7)

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.

For More Information

Contact Isabel Collins in DEP's Lakeville Office at (508) 946-2726 for more information and assistance on improving current protection measures.

Copies of this report have been provided to the public water supplier, board of health, and the town.

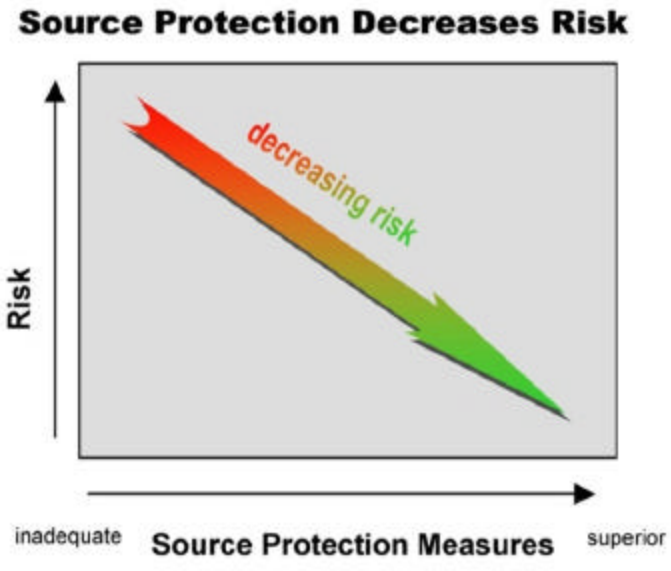


Figure 2: Risk of contamination decreases as source protection increases. This is true for public water systems of any susceptibility ranking, whether High, Moderate, or Low.

Potential Source of Contamination vs. Actual Contamination

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

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

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

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

Activities	Quantity	Threat*	Zone II #	Potential Source of Contamination
Agriculture				
Fertilizer Storage or Use	1	M	162 & 164	Fertilizers: leaks, spills, improper handling, or over-application
Pesticide Storage or Use	1	H	162 & 164	Pesticides: leaks, spills, improper handling, or over-application
Livestock Operations	1	M	164	Manure (microbial contaminants) Improper handling (Very small Operation)
Landscaping	1	M	164	Fertilizers and pesticides: leaks, spills, improper handling, or over-application
Nurseries	1	M	164	Fertilizers, pesticides, and other chemicals: leaks, spills, improper handling, or over-application
Commercial				
Service Stations/ Auto Repair Shops	3	H	162 & 164	Automotive fluids and solvents: spills, leaks, or improper handling
Bus and Truck Terminals	2	H	162	Fuels and maintenance chemicals: spills, leaks, or improper handling
Cemeteries	1	M	164	Over-application of pesticides: leaks, spills, improper handling; historic embalming fluids
Gas Stations	2	H	162	Automotive fluids and fuels: spills, leaks, or improper handling or storage
Service Stations/ Auto Repair Shops	2	H	162	Automotive fluids and solvents: spills, leaks, or improper handling
Golf Courses	2	M	162	Fertilizers or pesticides: over-application or improper handling
Railroad Tracks And Yards	1	H	162	Herbicides: over-application or improper handling; fuel storage, transported chemicals, and maintenance chemicals: leaks or spills
Repair Shops (Engine, Appliances, Etc.)	1	H	162 & 164	Engine fluids, lubricants, and solvents: spills, leaks, or improper handling or storage

* Notes for Table 2 can be found on page 11 of this document

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

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

Activities	Quantity	Threat*	Zone II #	Potential Source of Contamination
Industrial				
Foundries Or Metal Fabricators	1	H	162	Solvents and other chemicals: spills, leaks, or improper handling or storage (Metal Fabricator)
Residential				
Fuel Oil Storage (at residences)	Numerous	M	162 & 164	Fuel oil: spills, leaks, or improper handling
Lawn Care / Gardening	Numerous	M	162 & 164	Pesticides: over-application or improper storage and disposal
Septic Systems / Cesspools	Numerous	M	162 & 164	Hazardous chemicals: microbial contaminants, and improper disposal
Miscellaneous				
Aboveground Storage Tanks	3	M	162	Materials stored in tanks: spills, leaks, or improper handling
Aquatic Wildlife	Numerous	L	162 & 164	Microbial contaminants
Clandestine Dumping	Few	H	162 & 164	Debris containing hazardous materials or wastes
Landfills and Dumps	1	H	164	Seepage of leachate (Closed, but, uncapped)
Pipeline (Oil or Sewer)	1	M	162	Oil or sewage: spills or leaks (Oil)
Schools, Colleges, and Universities	1	M	164	Fuel oil, laboratory, art, photographic, machine shop, and other chemicals: spills, leaks, or improper handling or storage
Stormwater Drains/ Retention Basins	Numerous	L	162 & 164	Debris, pet waste, and chemicals in stormwater from roads, parking lots, and lawns
Transmission Line Rights-of-Way -	1	L	162 & 164	Corridor maintenance pesticides: over-application or improper handling; construction
Transportation Corridors	Several	M	162 & 164	Fuels and other hazardous materials: accidental leaks or spills; pesticides: over-application or improper handling. (Rt. 152 and local roads)
Underground Storage Tanks	Numerous	H	162	Stored materials: spills, leaks, or improper handling
Utility Substation Transformers	1	L	162	Chemicals and other materials including PCBs: spills, leaks, or improper handling
Small quantity hazardous waste generators	1	M	162	Hazardous materials and waste: spills, leaks, or improper handling or storage

* Notes for Table 2 can be found on page 11 of this document

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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.

Railroad tracks run directly through the Zone II for McHales Pond GP Well #5. 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:

- ✓ Identify stormwater drains and the drainage system along transportation corridors. Wherever possible, ensure that drains discharge stormwater outside of the Zone Is.
- ✓ 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 emergency response teams to ensure that any spills within the Zone II 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 town officials to investigate mapping options such as the upcoming Phase II Stormwater Rule requiring some communities to complete stormwater mapping.
- ✓ 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 – Commercial and industrial land uses make up a small portion of the land area within the Zone IIs for Seekonk. Activities associated with commercial and industrial land use are often the greatest concern when evaluating water supply protection. 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.

Top 5 Reasons to Develop a Local Wellhead Protection Plan

❶ Reduces Risk to Human Health

❷ Cost Effective! Reduces or Eliminates Costs Associated With:

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

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

❹ Ensures clean drinking water supplies for future generations

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

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 C 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.

5. Presence of Oil or Hazardous Material Contamination Sites – The Zone II contains a DEP Tier Classified Oil and/or Hazardous Material Release Site indicated on the map as Release Tracking Number 4-0000626. Refer to the attached map and Appendix B for more information.

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Table 3: Current Protection and Recommendations

Protection Measures	Status	Recommendations
Zone I		
Does the Public Water Supplier (PWS) own or control the Zone Is?	**NO**	Pursue Zone I ownership. If ownership is not feasible seek conservation restrictions, Memorandum of Understandings restricting uses.
Are the Zone Is posted with "Public Drinking Water Supply" Signs?	**YES**	Additional economical signs are available from the Northeast Rural Water Association (802) 660-4988.
Are Zone Is regularly inspected?	**YES**	Continue regular inspections of drinking water protection areas.
Are water supply-related activities the only activities within the Zone I?	**NO**	Continue monitoring non-water supply activities in Zone Is.
Municipal Controls (Zoning Bylaws, Health Regulations, and General Bylaws)		
Does the municipality have Wellhead Protection Controls that meet 310 CMR 22.21(2)?	**NO**	Update Seekonk's bylaws and health regulations to meet DEP's requirements. Refer to www.state.ma.us/dep/brp/dws/ for model bylaws and health regulations, and current regulations.
Do neighboring communities protect the Zone II areas extending into their communities?	**YES**	Work with neighboring municipalities to include Zone IIs in their wellhead protection controls.
Planning		
Does the PWS have a Wellhead Protection Plan?	**YES**	Use Wellhead Protection Committee to implement the Plan.
Does the PWS have a formal "Emergency Response Plan" to deal with spills or other emergencies?	**YES**	Continue to update plan annually. Coordinate emergency response drills with local teams.
Does the municipality have a wellhead protection committee?	**NO**	Establish committee; include representatives from the Water District, Town officials, citizens' groups, neighboring communities, and the business community.
Does the Board of Health conduct regular 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 wellhead protection education?	**YES**	Aim additional efforts at commercial, industrial and municipal uses within the Zone IIs.

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Oil or Hazardous Material Contamination Sites Recommendation:

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

6. Protection Planning – Protection planning protects drinking water by managing the land area that supplies water to a well. Currently, the Town of Seekonk has local controls to protect the water supply. However, the boundaries of Seekonk's Groundwater Aquifer Protection District are not consistent with DEP's delineated Zone II boundaries and the regulations governing restricted land uses in Seekonk do not meet DEP's restrictions specified in DEP's regulations 310 CMR 22.21(2). A Wellhead Protection Plan coordinates community efforts, identifies protection strategies, establishes a timeframe for implementation, and provides a forum for public participation. The District has a Wellhead Protection Plan.

Protection Planning Recommendations:

- ✓ Establish a Wellhead Protection Committee to implement "The Seekonk Water District Wellhead Protection Plan". June 2002. Tellus Institute.
- ✓ Coordinate efforts with local officials to update local wellhead protection controls with current MA Wellhead Protection Regulations 310 CMR 22.21 (2). For more information on DEP land use controls see http://mass.gov /dep/ brp/dws/protect.htm.
- ✓ Be sure to include local floordrain controls that meet 310 CMR 22.21(2).

7. Agricultural Activites – There is one farm, one nursery/landscaping operation, and one smaller greenhouse/flower and plant shop within Seekonk's protection areas. Pesticides, herbicides 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.

Agricultural Activities Recommendation:

- ✓ Work with the farm in your protection area 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.
- ✓ Work with users of fertilizers, herbicides and pesticides to ensure proper use and storage.

8. Intermediate School Wastewater Discharge System – Seekonk's Intermediate School utilizes a Smith & Loveless FAST treatment system to treat its wastewater. DEP approved the use of this type of subsurface wastewater disposal system and set effluent limits not to be exceeded. Due to insufficient inputs of waste to the system nitrate levels exceeded the set limits on several occasions. The School modified the system by including methanol injection to provide more "food" to the system. Both methanol and nitrate are concerns for drinking water supplies. No adverse effects on the Water District's wells has been detected from either nitrate and methanol, however, the situation should be continually monitored.

Intermediate School Wastewater Recommendations:

- ✓ Work with School to explore alternatives to methanol as a "food" for the system.
- ✓ Work with School to optimize system operation and update a detailed plan for operation, monitoring and maintenance of the system.
- ✓ Ensure current procedures for delivery, storage and use of methanol adequately protect the water supply.

Other land uses and activities within the Zone IIs that are of concern include an

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.

Additional Documents:

To help with source protection efforts, more information is available by request or online at mass.gov/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

uncapped landfill, auto repair shops, gas stations, a metal fabricator and schools. Refer to Table 2 and 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 Water District's Zone IIs contain potential sources of contamination. However, source protection measures reduce the risk of actual contamination, as illustrated in Figure 2. The water supplier and the Town of Seekonk are commended for taking an active role in promoting source protection measures in the Water Supply Protection Areas through:

- Developing a Wellhead Protection Plan in conjunction with the Tellus Institute, funded by a DEP Source Protection Grant Program.
- Actively pursuing land purchases or controls within the Zone I areas by the Water District and the Town.
- Developing an "Emergency Response Plan" and updating it annually.
- The Department of Public Works' (DPW) active street sweeping and catch basin cleaning program.
- The DPW program to accept (free of charge) automotive wastes, paints and solvents year round and annual household hazardous waste collection.

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

- ✓ Form a Wellhead Protection Committee to implement Wellhead Protection Plan recommendations.
- ✓ Partner with local businesses to promote Best Management Practices.
- ✓ Address commercial and residential fertilizer, herbicide and pesticide use within Zone Is and Zone IIs.
- ✓ Make "Best Effort" to protect all of Zone II areas by encouraging the Town to update Seekonk's bylaws to meet DEP's current 310 CMR 22.21(2) regulations and develop and implement a Board of Health Floor Drain Regulation.
- ✓ Develop and implement a Hazardous Materials Controls Program.
- ✓ Provide public education on source protection.
- ✓ Consider Land Acquisition Program and Growth Controls.
- ✓ Review Seekonk Intermediate School Wastewater Discharge Treatment System.

Conclusions:
These recommendations are only part of your ongoing local drinking water source protection. Additional detailed source protection recommendations can be found in Seekonk Water District's Wellhead Protection Plan, Table 3 and the Key Issues. To review a copy of Seekonk's Wellhead Plan a requests needs to be directed to the public water supply contact listed in Table 1 of this report.

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 Wellhead Protection Grant Program and 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. 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. 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

Notes For Table 2 (Pages 5&6):

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 A: REGULATED FACILITIES WITHIN THE WATER SUPPLY PROTECTION AREA

DEP Permitted Facilities

DEP Facility Number	Facility Name	Street Address	Town	Permitted Activity	Activity Class
54640	M AITKENS SCHOOL	NEWMAN AVE	SEEKONK	Plant	Air Quality Permit
126957	MUTUAL OIL	1075 NEWMAN AVE	SEEKONK	Fuel Dispenser	Fuel Dispenser
132134	G M IND INC	257 PINE ST	SEEKONK	Generator of Hazardous Waste	Very Small Quantity Generator of Hazardous Waste
137282	DB MART #13	1035 NEWMAN AVE	SEEKONK	Fuel Dispenser	Fuel Dispenser
281561	MODERN TRACTOR & TRUCK SERVICE INC	400 PINE ST	SEEKONK	Generator of Hazardous Waste	Very Small Quantity Generator of Waste Oil or PCBs
297553	DAIRY MART #831	1502 NEWMAN AVE	SEEKONK	Fuel Dispenser	Fuel Dispenser
315811	CVS #0394	1475 NEWMAN AVE	SEEKONK	Generator of Hazardous Waste	Small Quantity Generator

APPENDIX A Continued: Underground Storage Tanks

Facility Name	Address	Town	Tank Material	Tank Type	Tank Leak Detection	Capacity (gal)	Contents
DB MARKETING #831 ID #3712	1502 NEWMAN AVE	SEEKONK	Cathodic	1 Wall	I	10000	Gasoline
			Cathodic	1 Wall	I	4000	Gasoline
			Cathodic	1 Wall	I	8000	Gasoline
LEDGEMONT COUNTRY CLUB ID #3718	131 BROWN AVE	SEEKONK	Steel	1 Wall	I	650	Diesel
MUTUAL OIL CO INC ID #3733	1075 NEWMAN AVE	SEEKONK	Reinforced	2 Walls	I	10000	
			Reinforced	2 Walls	I	10000	
MUTUAL OIL CO INC ID #3733	1075 NEWMAN AVE	SEEKONK	Reinforced	2 Walls	I	10000	
			Reinforced	2 Walls		275	Waste Oil
NEWMAN AVE TEXACO ID #3726	1035 NEWMAN AVE	SEEKONK	Reinforced	1 Wall	A	4000	Gasoline
			Reinforced	1 Wall	A	6000	Gasoline
			Reinforced	1 Wall	A	6000	Gasoline

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 B – 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
4-0000626	1502 NEWMAN AVENUE	SEEKONK	Oil

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