



Massachusetts Department of Environmental Protection Source Water Assessment and Protection (SWAP) Report For Lakeside Trailer Park

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.

SWAP and Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

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

Prepared by the
Massachusetts Department of
Environmental Protection,
Bureau of Resource Protection,
Drinking Water Program

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Table 1: Public Water System (PWS) Information

<i>PWS NAME</i>	Lakeside Trailer Park
<i>PWS Address</i>	Route 151
<i>City/Town</i>	Mashpee, Massachusetts 02649
<i>PWS ID Number</i>	4172001
<i>Local Contact</i>	William Haney
<i>Phone Number</i>	(508) 477-8828

<i>Well Name</i>	<i>Source ID#</i>	<i>Zone I (in feet)</i>	<i>IWPA (in feet)</i>	<i>Source Susceptibility</i>
Well #1	4172001-01G	269	701	High

Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential sources of contamination, including septic systems, 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. 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:

1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Appendix
5. Attachments, including a Map of the Protection Areas

1. Description of the Water System

The well for the Lakeside Trailer Park is located west of the park in a wooded area. The well has a Zone I of 269 feet and an Interim Wellhead Protection Area (IWPA) of 701 feet. The IWPA provides an interim protection area for a water supply well when the actual recharge area has not been delineated. The actual recharge area to the well may be significantly larger or smaller than the IWPA. The well is located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers that can prevent contaminant migration. Please refer to the attached map of the Zone I and IWPA. The well serving the facility has no treatment at this time. The DEP requires public water suppliers to monitor the quality of the water. For current information on monitoring

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 an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.
- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

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 via EPA's Envirofacts website at http://www.epa.gov/enviro/html/sdwis/sdwis_query.html.

2. Discussion of Land Uses in the Protection Areas

There are a number of land uses and activities within the drinking water supply protection area that are potential sources of contamination.

Key issues include:

1. **Zone I;**
2. **Gasoline station with Underground storage tank (UST);**
3. **Garden Center;**
4. **Septic systems, and;**
5. **Funeral Home.**

The overall ranking of susceptibility to contamination for the well is High, based on the presence of a High threat within the IWPA.

1. **Zone Is** – Currently, the well does meet DEP's Zone I regulations, which allow only water supply related activities in the Zone I and require that the land within the Zone I be owned or controlled by the public water system. Please note that systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying systems.

Recommendations:

- ✓ Never use or store pesticides, fertilizers or road salt within the Zone I.
 - ✓ Keep non-water supply activities out of your Zone I.
2. **Gasoline station with Underground storage tank (UST)** – A gasoline station is located north of the well on Route 151. The gasoline is stored in two underground storage tanks. Underground storage of hazardous materials can be a potential source contamination due to leaks or spills of the chemicals they store. Proper stormwater management at gasoline stations is critical to water supply protection due to the nature of operations at gasoline/service stations and the types of chemicals involved.

Table 2: Table of Activities within the Water Supply Protection Areas

Potential Contaminant Sources	Zone I	IWPA	Threat	Potential Concern
Gas/Service Station	No	Yes	High	Gasoline and other hazardous materials.
Garden Center	No	Yes	High	Fertilizer and Pesticide use and storage
Funeral Home	No	Yes	Low	Hazardous materials: spills, leaks, or improper handling
Septic systems	No	Yes	Moderate	bacteria, improper disposal of hazardous materials
Roads	No	Yes	Moderate	stormwater runoff, spills

* For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/dep/brp/dws/.

Glossary

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

IWPA: A 400 foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone I. To determine IWPA radius, refer to the attached map.

Zone II: The primary recharge area defined by a hydrogeologic study.

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 that resists penetration by water.

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

Recommendation:

- ✓ Educate the neighboring gasoline/service station about the location of your well and IWPA.
- ✓ Encourage the gasoline/service station to use BMP's for the storage, handling, and disposal of all hazardous chemicals.
- ✓ If the gasoline/service station has floor drains, ensure that the floor drains lead to a tight tank or municipal sewer as required by the plumbing code and Underground Injection Control Regulations, 310 CMR 27.00..

3. Garden Center – Fertilizers, pesticides and other gardening products contain hazardous materials that make them potential contaminants to ground water if improperly managed. Following BMPs can prevent contamination from mishandling and spillage of these products.

Recommendation:

- ✓ Educate the neighboring businesses about the location of your well and IWPA.
- ✓ Encourage use of BMPs for applying, handling, and storing pesticides and fertilizers or other hazardous materials.
- ✓ Ensure proper stormwater management practices are in place at the garden center.

4. Funeral Home – There is a funeral home on the edge of the IWPA. Funeral homes use chemicals that have the potential to contaminate groundwater if improperly managed.

Recommendation:

- ✓ Educate the funeral home about the location of your well to their facility and the potential impacts their operations might have on your well.
- ✓ Ensure that hazardous materials are properly managed and are not allowed into groundwater through a septic system or another route.

Implementing the following recommendations will reduce the system's susceptibility to contamination.

3. Protection Recommendations

Implementing protection measures and best management practices (BMPs) will reduce the well's susceptibility to contamination. The Lakeside Trailer Park is commended for

purchasing and controlling their entire Zone I area. The Park should review and adopt the key recommendations above and the following:

Priority Recommendations:

Zone I:

- ✓ Ensure non-water supply activities are kept out of the Zone I.
- ✓ Prohibit public access to the well and pumphouse by locking facilities.
- ✓ Continue regular inspections of the Zone I. Look for illegal dumping or evidence of vandalism.
- ✓ Use Best Management Practices (BMPs) and restrict activities that could pose a threat to the water supply.
- ✓ Keep road and parking lot drainage away from the well.
- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.

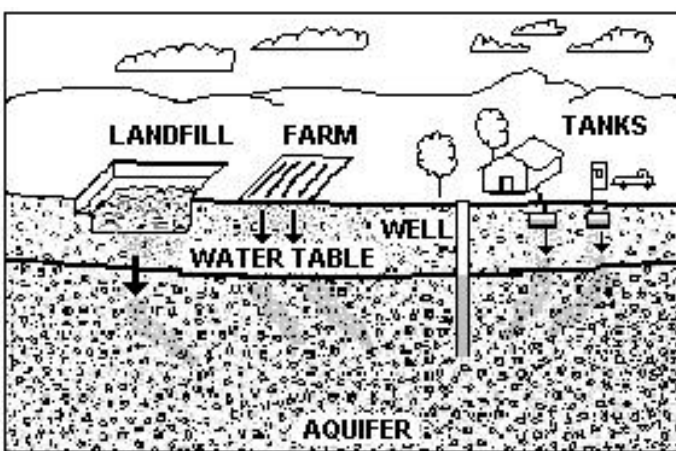


Figure 1: Example of how a well could become contaminated by different land uses and activities.

For More Information:

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

More information relating to drinking water and source protection is available on the Drinking Water Program web site at:
www.state.ma.us/dep/brp/dws/

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

Copies of this assessment have been made available to the public water supplier and town boards.

Training and Education:

- ✓ Train your staff and neighboring businesses on proper hazardous material use, disposal, emergency response, and best management practices; include custodial staff, groundskeepers, and certified operator. Post labels as appropriate on raw materials and hazardous waste.
- ✓ Work with your community to ensure that stormwater runoff from Route 151 is directed away from the well and is treated according to DEP guidance.

Facilities Management:

- ✓ Ensure your and neighbors' septic system components are located, inspected, and maintained on a regular basis.

Planning:

- ✓ Work with local officials in town to include the facility's IWPA in the Aquifer Protection District Bylaw and to assist you in improving protection.
- ✓ Supplement the SWAP assessment with additional local information and incorporate it into water supply educational efforts. Use a land use inventory to assist in setting priorities, focusing inspections, and creating educational activities.

Funding:

The Department's Wellhead Protection Grant Program provides funds to assist public water suppliers in addressing wellhead protection through local projects. Protection recommendations discussed in this document may be eligible for funding under that program. For additional information, please refer to DEP's web site. Other funding opportunities are described in *Grant and Loan Programs: Opportunities for Watershed Protection, Planning and Implementation* at <http://www.state.ma.us/dep/brp/mf/files/glprgm.pdf>.

Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures.

5. Attachments

- Appendix
- Map of the Public Water Supply (PWS) Protection Area.
- Recommended Source Protection Measures Fact Sheet
- Your Septic System Brochure
- Industrial Floor Drains Brochure
- Healthy Schools Fact Sheet
- Source Protection Sign Order Form

Appendix: Regulated Facilities in Protection Area

DEP Facility Number	Facility Name	Street Address	Town	Permitted Activity	Activity Class
375482	Rapid Refill Mashpee (Sunoco)	414 Nathan Ellis HWY.	Mashpee	FULDSP	Fuel Dispenser

Underground Storage Tanks:

Facility Name	Address	Town	Tank Material	Tank Type	Tank Leak Detection	Capacity (gal)	Contents
RAPID REFILL ID #1409	414 NATHAN ELLIS HWY	MASHPEE	Reinforced	2 Walls	Interstitial Monitoring	550	Waste Oil
			Steel w/ H	2 Walls	Interstitial Monitoring	15000	Gasoline
			Steel w/ H	2 Walls	Interstitial Monitoring	15000	Gasoline/D

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.

* Above Ground Tank