

# Source Water Assessment Program (SWAP) Report

## For

### L&P CONVERTERS



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

Date Prepared:  
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**Table 1: Public Water System (PWS) Information**

<i>PWS NAME</i>	L&P CONVERTERS
<i>PWS Address</i>	RTE 169
<i>City/Town</i>	CHARLTON
<i>PWS ID Number</i>	2054062
<i>Local Contact</i>	ANDRE LAVALLEE
<i>Phone Number</i>	(508) 248-2041

<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	2054062-01G	100	419	High

#### 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.

#### Maintaining Your Good 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.

## 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 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 contaminant sources, 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. Attachments, including a Map of the Protection Areas

## 1. DESCRIPTION OF THE WATER SYSTEM

#### The Well

This water supply obtains its drinking water from a 180 feet deep rock well located within the parking lot, about 18 feet from the building. The well has a Zone I of 100 feet and an Interim Wellhead Protection Area (IWPA) of 419 feet. 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. For current information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1.

### 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).

## 2. DISCUSSION OF LAND USES IN THE PROTECTION AREAS

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

#### Key issues include:

1. **Inappropriate activities in Zone I;**
2. **Storage and use of hazardous materials;**
3. **Aboveground storage tank with liquid propane; and**
4. **Stormwater drains.**

The overall ranking of susceptibility to contamination for the well is High, based on the presence of at least one high threat land use or activity in the IWPA.

1. **Zone I-** Currently, the well does not meet DEP's restrictions, which only allow water supply related activities in Zone Is. The facility's Zone I contains a portion of the on-site building, local road and parking areas. 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.
2. **Hazardous materials storage & use** - This facility cuts paper and packages it. There is no paper manufacturing machinery on-site. They do use light oils and lubricants for their daily operations. The waste from the operation is collected in a separate room from the production area, outside of the Zone I. The room is properly marked and the waste is hauled away by an outside contractor.
3. **Aboveground storage tank with liquid propane** - There is a filling station at the site, approximately 297 feet from the wellhead. The area is fenced in and paved.
4. **Stormwater drains** - There are a total of three stormdrains located within the IWPA. As flowing storm water travels, it picks up debris and contaminants from parking areas and lawns. Common potential contaminants include lawn chemicals, leakage from dumpsters, and contaminants from vehicle leaks. Pollutants are actually not removed from most catch basins until they are cleaned out. Regular maintenance is required to reduce the risk of resuspension of sediments during large storm events. Maintenance is essential for the proper operation of catch basins.

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

Facility Type	Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Industrial	Hazardous materials storage & use	No	Yes	High	Anti-freeze and hydraulic oil stored in ASTs
	Storage of Hazardous Waste (ASTs)	No	Yes	High	Waste oil & lubricant collected in ASTs
	Aboveground storage tank with liquid propane	No	Yes	Moderate	Fences and paved area
	Parking lot, driveway & road	Yes	Yes	Moderate	Limit road salt usage and provide drainage away from wells
	Stormwater drains	No	Yes	Low	

\* -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/](http://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 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.

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

## 3. PROTECTION RECOMMENDATIONS

L & P Converters should review and adopt the following key recommendations:

### Zone I:

- ✓ Keep non-water supply activities out of the Zone I.
- ✓ Remove all non-water supply activities from the Zone I to comply with DEP's Zone I requirements. Please note that water systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying their system.
- ✓ Consider well relocation if Zone I threats cannot be mitigated.
- ✓ Conduct regular inspections of the Zone I and IWPA. Look for illegal dumping, evidence of vandalism, check any above ground tanks for leaks, etc.
- ✓ If it's not feasible to purchase privately owned land within the Zone I at this time, consider a conservation restriction that would prohibit potentially threatening activities or a right of first refusal to purchase the property.
- ✓ Redirect road and parking lot drainage away from well. Work with your community to ensure that stormwater runoff in the IWPA is directed away from the well and is treated according to DEP Stormwater guidance.

### Training and Education:

- ✓ Train staff on proper hazardous material use, disposal, emergency response, and best management practices; include custodial staff, groundskeepers and certified operator.
- ✓ Post drinking water protection area signs at key visibility locations.

### Facilities Management:

- ✓ Implement standard operating procedures regarding proper storage, use and

disposal of hazardous materials. To learn more, see the hazardous materials guidance manual at <http://www.dep.state.ma.us/dep/bwp/dhm/dhmpubs.htm>

- ✓ Upgrade all oil/hazardous material storage tanks to incorporate proper containment and safety practices.
- ✓ Implement Best Management Practices (BMPs) for the use of fertilizer, herbicides and pesticides on facility property.
- ✓ Septic system components should be located, inspected, and maintained on a regular basis. Refer to the attachment for more information regarding septic systems.

### Planning:

- ✓ Work with local officials in Charlton to include the facility IWPA in Aquifer Protection District Bylaws and to assist you in improving protection.
- ✓ Have a plan to address short-term water shortages and long-term water demands. Keep the phone number of a bottled water company readily available.

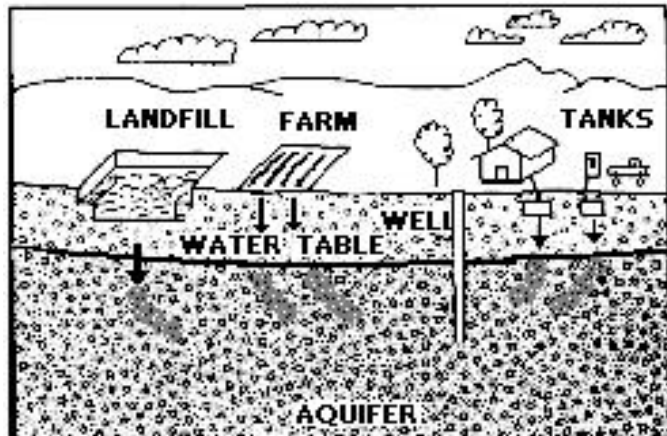


Figure 1: Example of how a well could become contaminated by different land uses and activities.

### **For More Information:**

Contact **Josephine Yemoh-Ndi** in DEP's **Worcester Office** at **(508) 792-7650 x 5030** for more information and for assistance in improving current protection measures.

More information relating to drinking water and source protection is available on DEP's web site at:  
[www.state.ma.us/dep/brp/dws](http://www.state.ma.us/dep/brp/dws).

Copies of this assessment have been provided to the Public Water Supplier, town boards, the town library and the local media.

- ✓ Supplement the SWAP assessment with additional local information and incorporate it into water supply educational efforts. Use a potential contaminant threat inventory to assist in setting priorities, focusing inspections, and creating educational activities.

These recommendations are only part of your ongoing local drinking water source protection. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures.

## **5. ATTACHMENTS**

- Map of the Public Water Supply (PWS) Protection Area.
- Recommended Source Protection Measures Fact sheet
- Your Septic System Brochure
- Pesticide Fact Sheet
- Fertilizer Fact Sheet