# Source Water Assessment Program (SWAP) Report
# For
# Heritage Professional Building

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**

| | |
|---|---|
| ***PWS NAME*** | Heritage Professional Building |
| ***PWS Address*** | One Heritage Mall |
| ***City/Town*** | Berlin |
| ***PWS ID Number*** | 2028001 |
| ***Local Contact*** | Paul McGovern |
| ***Phone Number*** | (508) 335-2583 |

| *Well Name* | *Source ID#* | *Zone I (in feet)* | *IWPA (in feet)* | *Source Susceptibility* |
|---|---|---|---|---|
| WELL #1 | 2028001-01G | 104 | 423 | Moderate |

### 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 maintenance, 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. Attached Map of the Protection Areas
5. Appendices

## 1. DESCRIPTION OF THE WATER SYSTEM

**The Well**
The well for Heritage Professional Building is located northwest of the site. The well has a Zone I of 104 feet and an Interim Wellhead Protection Area (IWPA) of 423 feet. Directly across the on-site building on Central Street (Route 62), is an Exxon gasoline station. One of the tenants in the on-site building is a hairdresser. Please refer to the attached map of the Zone I and IWPA.This source has had historic detects of methyl tertiary butyl ether (MTBE). The water from this source is treated using activated carbon to remove organic compounds. The water quality of the well currently meets all U.S. Environmental Protection Agency drinking water standards. For current information on monitoring results and treatment, please contact the Public Water System contact person listed above

**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 the Zone I;**
2. **Presence of a contamination site within the IWPA; and**
3. **Potential discharge of non-sanitary waste to the septic system.**

The overall ranking of susceptibility to contamination for the wells is Moderate, 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 for a Zone I; only water supply related activities are allowed in the Zone I. The parking lot and a portion of Route 62 are located within the Zone I. 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. **Presence of a contaminated site within the IWPA** – The IWPA contains a DEP Tier Classified Oil and/or Hazardous Material Release Site indicated on the map as Release Tracking Number 2-0572. The referenced site is a gas station with underground storage tanks (USTs) The site's responsible party is cleaning up the site, and monitoring groundwater quality. See the attached map and Appendix 1 for more information.

3. **Septic system** – The septic system is located within the IWPA. Improper disposal of hazardous materials and / or Industrial wastewater to the septic system is a source of potential contamination to the well.

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

| Facility Type | Potential Contaminant Sources | Zone I | IWPA | Threat | Comments |
|---|---|---|---|---|---|
| Service Station | 21E site | No | Yes | ---- | 21E USTs & Service station |
| Commercial building | Parking lot, driveways & roads | Yes | Yes | Moderate | Limit road salt usage and provide drainage away from wells |
| | Septic System | No | Yes | Moderate | See brochure on septic systems in the appendices |

*** -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 II. 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

Heritage Realty Trust should review and adopt the following recommendations:

### 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. Please note that DEP permit approvals must be obtained prior to the installation of a new well.
- ✓ Prohibit public access to the well by gating roads and posting signs.
- ✓ Conduct regular inspections of the Zone I and IWPA. Look for illegal dump ing and evidence of vandalism.

### Training and Education:

- ✓ Train staff on proper hazardous material transportation, 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:

- ✓ Monitor progress on any ongoing remedial action conducted for the known contamination site.
- ✓ Implement standard operating procedures regarding proper storage, use, transportation and disposal of hazardous materials. The facility should investigate participating with the Town of Berlin in its household hazardous waste collection to discard its spent chemicals. The facility will need to obtain a Very Small Quantity Generators (VSQG) Permit through DEP. To learn more, see the hazardous materials guidance manual at http://www.dep.state.ma.us/dep/bwp/dhm/dhmpubs.htm
- ✓ Eliminate discharge of non-sanitary wastewater from the hairdresser to on-site septic systems. Instead the waste from the hairdresser should discharge into a tight tank. The septic system components should be located, inspected, and maintained on a regular basis. Refer to the appendices for more information regarding septic systems.

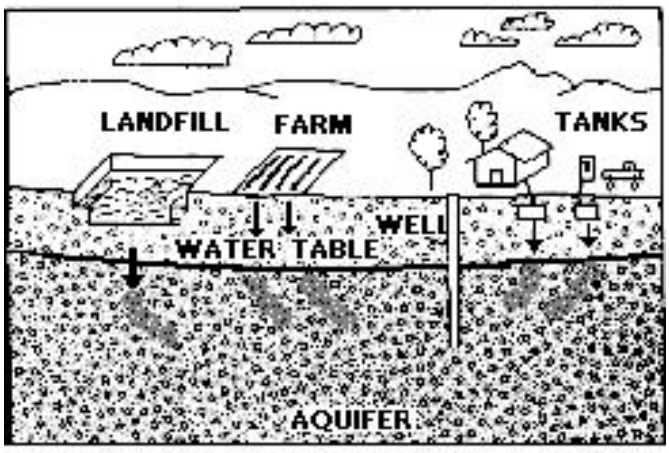


Figure 1: Example of how a well could become contaminated by different land uses and activities.

### Planning:

- ✓ Work with local officials in Berlin to include the Heritage Building well's IWPA in their Aquifer Protection District Bylaws and other regulations 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 potential contaminant threat inventory to assist in setting priorities, focusing inspection, and creating educational 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.

Copies of this assessment have been provided to the water department, town boards, the town library and the local media.

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.

### 4. Attachments:

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

## 5. APPENDICES

- Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas.

**APPENDIX 1 – Table of Tier Classified Oil and/or Hazardous Material Sites within the Water Supply Protection Areas**

DEP's data layer 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 |
|---|---|---|---|
| 2-0572 | Route 62 & I-495 | Berlin | Oil |

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