



Massachusetts Department of Environmental Protection Source Water Assessment and Protection (SWAP) Report For Copperwood II Condominiums

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

PWS NAME	Copperwood II Condominiums
PWS Address	62 Copperwood Drive
City/Town	Stoughton, MA 02072
PWS ID Number	4285003
Local Contact	Wayne Southworth
Phone Number	508-238-4230

Well Name	Source ID#	Zone I (in feet)	IWPA	Source Susceptibility
Well #1	01G	140	½ mile	HIGH
Well #2	02G	140	½ mile	HIGH
Well #3	03G	140	½ mile	HIGH
Well #4	04G	140	½ mile	HIGH
Well #5	05G	140	½ mile	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 is available to provide information about funding and other resources that may be available to you.

This report includes:

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

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.

1. Description of the Water System

Wells #1 through #5 provide drinking water to the residents of the Copperwood II condominium community in Stoughton. The wells have Zone Is of 140 feet and an Interim Wellhead Protection Area (IWPA) of one-half mile. 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 for land uses that are located within the Zone I and IWPA.

DEP requires public water suppliers to monitor the quality of the water. For current information on monitoring results and treatment, please contact the public water system 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

Key issues include the following.

1. Zone I Issues (residences, parking, roadways)
2. Transportation Corridors
3. Industrial Land Uses
4. Landfill
5. Gas Stations/Body Shops/Automobile Repair
6. Car Wash
7. Railroad Tracks
8. Transmission Line
9. Regulated Facilities – Very Small Quantity Generators of Hazardous Waste
10. DEP Tier Classified Hazardous Material or Oil Release Sites

Table 2: Activities within the Water Supply Protection Areas

Potential Contaminant Sources	Zone I	IWPA	Threat	Potential Concern
Residential, Parking, Roadways	Yes	Yes	M	pesticides and fertilizers from lawn care; leaks or spills of automotive fluids; stormwater
Transportation Corridors (local roads)	Yes	Yes	M	leaks or spills of fuel and other substances; contamination from vehicular accidents; over-application or spills of pesticides for vegetation management along rights-of-way; stormwater contaminants
Industrial Land Uses	No	Yes	H	leaks or spills of chemicals; stormwater
Landfill	No	Yes	H	movement of leachate
Gas Stations/Body Shop/Automotive Repair	No	Yes	H	leaks or spills of automotive solvents
Car Wash	No	Yes	L	vehicle washwater; illegal dumping
Railroad Tracks	No	Yes	H	over-application of herbicides; accidents
Transmission Line	No	Yes	L	spills or over-application of herbicides
Regulated Facilities	No	Yes	L	spills, leaks of hazardous wastes
DEP Tier Classified Release Sites	No	Yes	not ranked	spills, leaks of hazardous materials & wastes

* 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

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.

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).

The overall ranking of susceptibility to contamination for the wells is HIGH based on the presence of at least one HIGH threat within the Zone I and IWPA.

1. **Zone I**– The public water system conducts regular inspections but does not own or control the entire Zone I. About 50 homes, on sewer, and associated roadways are located within the Zone I. Additional homes and roadways are located within the Zone II. The public water system does not meet DEP's Zone I requirements because of non-water supply activities within the Zone I.

Forty-two percent of the Zone I and IWPA consists of residences. The homes are on sewer and use gas for heating. Spills or over-application of pesticides and fertilizers used for lawn care are a potential concern.

Recommendations

- ✓ Keep additional non-water supply activities out of the Zone I.
- ✓ If a lawn care company services the complex, inform them of protection measures to take to protect the wells. Do not use pesticides or fertilizers within the Zone I.
- ✓ Do not use or store de-icing materials within the Zone I.

2. **Transportation Corridors** – Local roads are located within the IWPA. Leaks and spills, vehicular accidents, and over-application or spills of pesticides are potential sources of contamination.

In addition, stormwater from roadways and adjacent properties flows over, and discharges 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 and washing.

Recommendations

- ✓ Wherever possible, ensure that drains discharge to outside the Zone I and IWPA.
- ✓ Educate residents on source protection measures for protecting water supplies. Distribute the enclosed fact sheet *Residents Protect Drinking Water*.

3. **Industrial Land Uses** – Industrial land uses comprise 19% of the IWPA.

Recommendations

- ✓ Encourage the town to do inspections of industrial facilities to encourage BMPs.

4. **Landfill** – Canton's landfill is within the IWPA.

Recommendation

- ✓ Be aware of the location of the landfill.

5. **Gas Stations/Body Shops/Auto Repair** – There are numerous facilities within the IWPA.

Recommendation

- ✓ Encourage the town to do inspections of these facilities.

6. **Car Wash** – There is a car wash within the IWPA.

Recommendation

- ✓ Encourage the town to inspect the facility.

7. **Railroad Tracks** – A railroad track runs along the edge of the IWPA.

Recommendation

- ✓ The railroad's Vegetation Management Plan and Yearly Operating Plan are on file in the local Conservation Commission office. These documents, which can be viewed by the public, describe herbicide use along the railroad right-of-way.

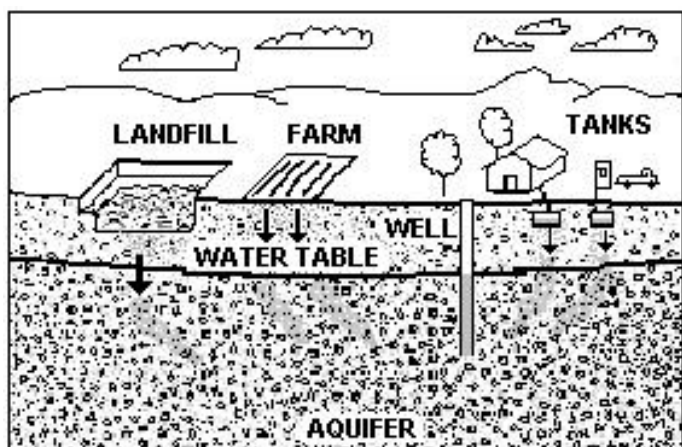


Figure 1: Example of how a well could become contaminated by different land uses and activities.

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.

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; and
4. Draft Land/Associated Contaminants Matrix.

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

8. Transmission Line – There is a transmission line running through the IWPA.

Recommendation

- ✓ The utility's Vegetation Management Plan and Yearly Operating Plan are on file in the local Conservation Commission office. These documents, which are available for view by the public, describe herbicide use along the right-of-way.

9. Regulated Facilities – There are some DEP regulated facilities, such as Very Small Quantity Generators of Hazardous Waste, in the IWPA.

Recommendation

- ✓ Be aware of the locations of these facilities.

10. DEP Tier Classified Oil or Hazardous Material Release Sites – There are some contamination sites within the IWPA.

Recommendation

- ✓ The status of clean-ups at these sites can be tracked at www.state.ma.us/dep/bwsc/sitelist.htm.

3. Recommendations for Protection

Implementing protection measures will reduce susceptibility to contamination.

Priority Recommendations:

Zone I

- ✓ Keep non-water supply activities out of the Zone I.
- ✓ Continue to inspect the Zone I.

Training and Education

- ✓ Educate residents on source protection measures for protecting water supplies. Distribute the enclosed fact sheet *Residents Protect Drinking Water*.

Facilities Management

- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.

Planning

- ✓ Work with town officials to improve water supply protection.

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 encourage discussion of local drinking water protection measures.

4. Attachments

- Map of the Public Water Supply Protection Area
- Recommended Source Protection Measures fact sheet
- Residents Protect Drinking Water fact sheet