



Massachusetts Department of Environmental Protection  
Source Water Assessment and Protection (SWAP) Report  
for  
**OCEAN PINES 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.

### 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**

<i>PWS Name</i>	Ocean Pines Condominiums
<i>PWS Address</i>	Route 6, P.O. Box 893
<i>City/Town</i>	Wellfleet, MA 02663
<i>PWS ID Number</i>	4318011
<i>Local Contact</i>	Peter Hall/Russell Tierney
<i>Phone Number</i>	508-349-2127

### 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.

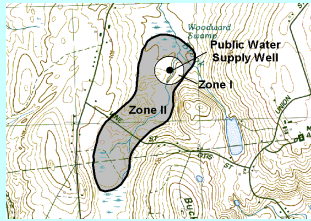
#### This report includes the following sections.

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

## Section 1: Description of the Water System

### 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.

**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.

### Source Information

**Susceptibility: High**

Well Name	Zone I	IWPA	Source IDs
Well #1	100 feet	422 feet	4318011-01G
Well #2	100 feet	422 feet	4318011-02G

The Ocean Pines condominiums have two active wells. Each well has a Zone I of 100 feet and an Interim Wellhead Protection Area (IWPA) of 422 feet. These terms are defined in the Glossary. The wells have 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 for Zone I and IWPA boundaries.

For current information on treatment and the results of water quality monitoring, 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 within Protection Areas

Land uses and activities that are potential sources of contamination for the wells are listed in Table 2.

Key Land Uses and Protection Issues include:

1. Land Uses Within Zone I
2. Residential Land Uses
3. Transportation Corridors
4. Commercial Businesses
5. Transmission Line

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. **Land Uses Within Zone I**– The Zone I for the wells is a 100 foot radius around each wellhead. Massachusetts drinking water regulations (310 CMR 22.00) require public water suppliers to own the Zone I or control the Zone I through a conservation restriction. 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. Ocean Pines does not own or control the Zone I but they do post drinking water protection signs and conduct regular inspections. Route 6, condominiums, access roads, parking and a restaurant are located within the Zone I.

### Zone I Recommendations

- ✓ Use BMPs for the storage, use, and disposal of hazardous materials such as water supply chemicals and maintenance chemicals.
- ✓ Keep additional non-water supply activities out of the Zone I.
- ✓ Do not use fertilizers, pesticides or road salt within the Zone I.

2. **Residential Land Uses** – Condominium buildings and other residences are located within the IWPA. Common potential sources of contamination associated with residential land use 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.

### Residential Land Use Recommendations

- ✓ Educate residents on source protection measures for protecting water supplies. Distribute the fact sheet “Residents Protect Drinking Water” available in Appendix A and at [www.mass.gov/dep/brp/dws/protect.htm](http://www.mass.gov/dep/brp/dws/protect.htm).
- ✓ Work with officials in Wellfleet to improve water supply protection.
- ✓ Encourage the Town of Wellfleet to conduct household hazardous waste collection days.

### 3. Transportation Corridors -

Route 6, access roads and parking areas are located within the IWPA. Accidents can lead to spills of gasoline and other potentially dangerous transported chemicals. De-icing salt, automotive chemicals and other debris on roads are picked up by stormwater and wash into catch basins.

There is a railroad bed located within the IWPA. The bed is abandoned and is used as a bike trail.

### Transportation Corridor Recommendations

- ✓ Identify stormwater drains. Wherever possible, ensure that drains discharge to outside the IWPA.
- ✓ If applicable, encourage Wellfleet to inspect, maintain and clean storm drains on a regular basis. Street sweeping reduces the amount of potential contaminants in runoff.

4. **Commercial**— There are businesses located within the IWPA.

### Business Recommendation

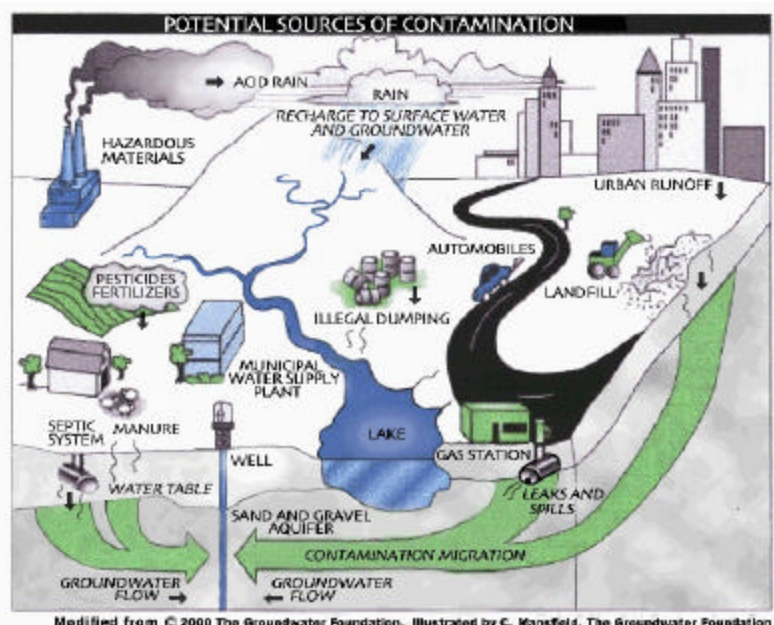
- ✓ Talk with businesses about the public well and about their location within the

### 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.



IWPA.

5. **Transmission Line** - There is a transmission line located within the IWPA. Spills or over-application of pesticides are a concern.

#### **Transmission Line Recommendation**

- ✓ Check with the local Conservation Commission to determine whether pesticides are used on the transmission line. The utility is responsible for submitting a copy of their approved Vegetation Management Plan and Yearly Operating Plan to the Town if pesticides are used on the right-of-way. There are state regulatory setbacks and other requirements to help protect drinking water sources from pesticide over-application or spills.

### **Section 3: Source Water Protection Conclusions and Recommendations**

**Protection Planning** – Ocean Pines posts water supply protection signs and conducts inspections of the Zone I.

#### **Protection Planning Recommendations**

- ✓ Continue to protect the Zone I and IWPA.
- ✓ Maintain contact with Wellfleet public officials about local water supply protection.

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.

#### **Current Land Uses and Source Protection**

As with many water supply protection areas, this system's IWPA contains potential sources of contamination. However, source protection measures

reduce the risk of actual contamination, as illustrated in Figure 2.

The water supplier is commended for taking an active role in promoting source protection measures in the Water Supply Protection Areas by posting signs and conducting regular inspections of the Zone I.

#### **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.

#### **Source Protection Decreases Risk**

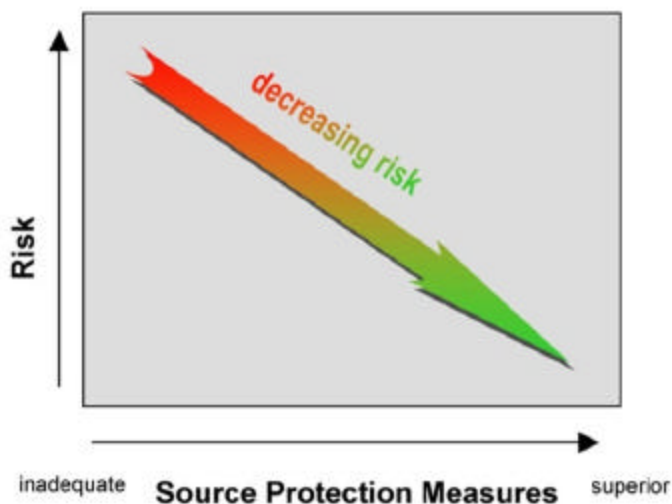


Figure 2: Risk of contamination decreases as source protection increases. This is true for public water systems of any susceptibility ranking, whether High, Moderate, or Low.

### 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 (Zone I and IWPA)**

Activities	Quantity	Threat*	Potential Source of Contamination
<b>Residential</b>			
Septic Systems	few	M	microbial contaminants; improper disposal of hazardous chemicals
Lawn Care	few	M	spills, over-application or improper storage and disposal of pesticides & fertilizers
<b>Commercial</b>			
Restaurant	1	L	spills in parking lot
<b>Miscellaneous</b>			
Transportation Corridors	Route 6, local roads	H	leaks or spills of fuel, other hazardous materials or pesticides
Transmission Line	1	L	spills or over-application of pesticides



**Notes:**

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.

\* **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 ground-water.

**Table 3: Current Protection and Recommendations**

Protection Measures	Status	Recommendations
<b>Zone I</b>		
Does the Public Water Supplier (PWS) own or control the entire Zone I?	<b>NO</b>	Follow Best Management Practices (BMPs) that focus on good housekeeping, spill prevention, and operational practices to reduce the use and release of hazardous materials.
Is the Zone I posted with “Public Drinking Water Supply” Signs?	<b>YES</b>	Additional economical signs are available from the Northeast Rural Water Association (802) 660-4988.
Is Zone I regularly inspected?	<b>YES</b>	Continue inspections of drinking water protection areas.
Are water supply-related activities the only activities within the Zone I?	<b>NO</b>	Continue monitoring activities in Zone I.
<b>Municipal Controls</b> (Zoning Bylaws, Health Regulations, and General Bylaws)		
Does the municipality have Wellhead Protection Controls that meet 310 CMR 22.21(2)?	<b>N/A</b>	
Do neighboring communities protect the Zone II areas extending into their communities?	<b>Yes</b>	
<b>Planning</b>		
Does the PWS have a Wellhead Protection Plan?	<b>NO</b>	
Does the PWS have a formal <i>Emergency Response Plan</i> to deal with spills or other emergencies?	<b>YES</b>	Work with the Town’s Local Emergency Planning Committee to conduct drills with local emergency response officials to test procedures.
Does the municipality have a wellhead protection committee?	<b>N/A</b>	Work with the Town of Wellfleet.
Does the Board of Health conduct inspections of commercial and industrial activities?	<b>YES</b>	
Does the PWS provide wellhead protection education?	<b>NO</b>	Educate residents on how <u>they</u> can protect drinking water.

## Conclusions

Source protection recommendations are listed in Table 3, the Key Issues above and Appendix A. These recommendations are only part of your ongoing local drinking water source protection.

DEP staff, documents, and other resources are available to help you build on this SWAP report to continue to improve drinking water protection. 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/nfpubs.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: Appendix

- A. Source Protection Fact Sheets - *Water Suppliers Protect Drinking Water, Residents Protect Drinking Water*