

**Hazardous  
Waste  
Factsheet**

# Doing Business in a Wellhead Protection Area

*“If your business is in the one-year time-of-travel zone, a hazardous material spill may reach a drinking water well in only one year.”*

## Help Keep Our Drinking Water Clean

Groundwater is Thurston County's sole source of drinking water. About 98% of us drink groundwater from local aquifers. Wells for public water utilities operated by Olympia, Tumwater, Lacey, and Thurston County are located throughout the county.

To protect and ensure safe drinking water for the future, “wellhead protection areas” were designated in the areas surrounding a well that replenish the aquifer through rainfall. These recharge areas are divided into time-of-travel zones, based on estimates of how long it will take water infiltrating within the zone to reach the well.

Thurston County’s drinking water and wellhead protection areas are vulnerable to contamination for three reasons:

1. Our soils are permeable; a pollutant can easily flow through our soils to contaminate local aquifers, impacting drinking water supplies.
2. Our groundwater moves rapidly. Once a pollutant reaches the groundwater, it can reach an aquifer in relatively little time. For example, if your business is located in a one-year time-of-travel zone, a spill of a hazardous material, such as gasoline, is predicted to reach a drinking water well in only one year.
3. Our public drinking water wells are shallow, usually around 200 feet or less. Most private wells are even shallower, often only 50 feet deep.

For these reasons, contamination within a wellhead protection area threatens our drinking water supply. Each resident and business needs to pay attention to avoid contamination in wellhead protection areas.

## Doing Business in a Wellhead Protection Area - Know the Risks

A variety of materials and products threaten safe drinking water. Hazardous materials such as solvents, oil, kerosene, pesticides, and fertilizers, if handled carelessly or stored improperly, are all potential threats. Leaking underground fuel storage tanks and failing septic systems are also sources of contamination. Groundwater contamination can and has occurred here in Thurston County. Cleanup is expensive, in terms of both time and money.

Thurston County Public  
Health and Social Services  
Environmental Health Division

412 Lilly Rd. NE  
Olympia, WA 98506-5132  
Hazardous Waste Hotline:  
360-867-2664

TDD Line: 360-867-2603

<http://www.co.thurston.wa.us/health/ehhw/index.html>



The City of Tumwater's experience with contaminated municipal wells is one example. During routine water testing, unacceptable levels of trichloroethylene, an industrial solvent, were discovered in its city wells. Three of the city's wells were immediately taken out of service – equaling approximately 25% of Tumwater's water supply. The area was declared a Superfund site by the U.S. Environmental Protection Agency (EPA). This determination spurred an investigation to determine the cause and extent of the contamination.

The researchers found that the most likely source of the hazardous materials was improper waste disposal by gas stations, a testing lab, and a dry cleaner. The chemicals moved underground to the Palermo Valley (also known as Tumwater Valley), where the city's drinking water wells are located.

Tumwater drilled two new wells to ensure an adequate water supply for residents. It has cost taxpayers, businesses, and ratepayers close to four million dollars to clean up the solvent and provide new water supplies.

## **An Ounce of Prevention is Worth Millions in Cure**

Learn how to manage hazardous materials properly to save money, protect the health of your employees, and protect our community's drinking water supply.

### **1). Develop a spill prevention and response plan for your business.**

A spill plan prepares you and your employees to deal with small spills and leaks during business operations. Even small spills that occur on a regular basis can turn into big problems. A spill plan will also provide a strategy for catastrophic, unexpected spills. The basic plan includes:

- Description of business activities, with a site map showing where hazardous materials are stored.
- A list of spill control equipment on the site (low-cost items include spill pads and floor dry).
- An emergency response procedure, including whom to call in an emergency.
- Training and awareness building for employees on a regular basis.

### **2). Keep all hazardous materials in secondary containment.**

Hazardous materials, such as petroleum products and solvents, should be stored in secondary containment. Secondary containment is a liquid-tight barrier or container that prevents a hazardous material that spills or leaks from contaminating surface water or groundwater. In case of flooding, earthquake or fire, secondary containment can prevent hazardous materials from escaping into the soil or nearby waterways.

Secondary containment doesn't have to be expensive. It can be as simple as placing a gasoline container into a plastic tub. However, there are technical requirements for the capacity of any secondary containment.

### **3). Reduce the amount of hazardous materials you store and use.**

Reduce the risk of spills by using less-toxic products. Less toxic products are less likely to contaminate groundwater if a spill or leak occurs. Consult your vendor, trade association or other businesses in your industry about less-toxic products that are available and effective alternatives.

## **Additional Information**

Thurston County Business Pollution Prevention Program staff will answer questions, offers **FREE** on-site technical assistance, and can provide you with detailed fact sheets on the spill plans and secondary containment. Contact the Hazardous Waste Assistance Line (360) 867-2664, Monday through Friday, TDD (360) 867-2603, or visit our website at [www.co.thurston.wa.us/health/ehhw/index.html](http://www.co.thurston.wa.us/health/ehhw/index.html).