

## Results of Investigation and Proposed Cleanup Alternatives Available for Comment

The City of Walla Walla has completed a Remedial Investigation and Feasibility Study (RI/FS) of the Sudbury Road Landfill at 414 Landfill Road in Walla Walla. The report is now available for public comment.

The Washington State Department of Ecology (Ecology) entered into an Agreed Order with the City of Walla Walla in 2011. The Order required the City to conduct an RI/FS to look into chemicals in groundwater linked to landfill activities. The purpose of the Remedial Investigation was to find out the extent of groundwater contamination. The Feasibility Study explores cleanup options.

### You are Invited to Comment

- ◆ Review the Remedial Investigation and Feasibility Study.
- ◆ Send your comments to Ecology from **September 25 through October 24.**

See the box at the right for details about where to review the report and submit comments. Ecology will hold a public meeting to discuss findings of the investigation and cleanup options if ten or more people request such a meeting. Please send meeting requests to Marni Solheim, whose contact information is in the box at the right.

### Comments Accepted

October 7 through November 5

### Submit Comments and Questions to

Marni Solheim - Site Manager  
WA Department of Ecology  
Waste 2 Resources Program  
4601 N. Monroe  
Spokane, WA 99205  
Phone: 509/329-3564  
E-mail:  
marni.solheim@ecy.wa.gov

### Document review locations

**Walla Walla Public Library**  
238 E. Alder, Walla Walla, WA  
99362 Phone: 509/527-4550  
Hours: Tue-Fri 11 am - 7 pm,  
Sat 10 am - 3 pm

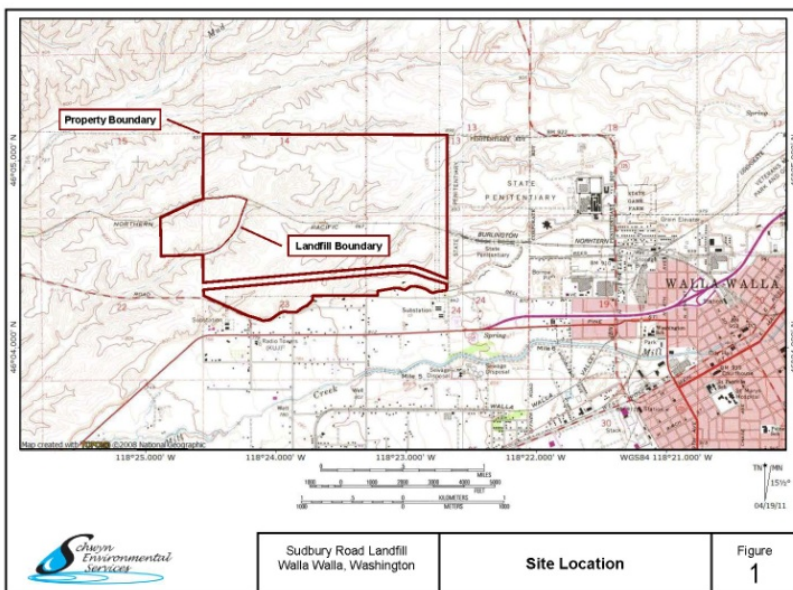
**WA Department of Ecology**  
Kari Johnson, Public Disclosure  
4601 N. Monroe  
Spokane, WA 99205  
Call for an appointment  
509/329-3415

**Ecology's Cleanup Website**  
<https://fortress.wa.gov/ecy/gsp/SitepaSi.aspx?csid=2485>

For ADA accommodations or documents in an alternate format call 509/329-3564, 711 (relay service), or 877-833-6341 (TTY).

**Para asistencia en Español:**  
360/407-6097

**Facility Site ID No. 4446540**  
**Cleanup Site ID No. 2485**



## Site Overview

The City of Walla has operated the Sudbury Road Landfill since 1978 and continues to operate it today. The landfill sits on 125 acres owned by the City and is used for disposal of municipal solid waste and other wastes generated in the area. There are seven discrete areas referred to as Areas 1-7 where waste has been disposed. See the figure on the last page.

The City has tested groundwater around the landfill since 1977. The City first found chemicals in groundwater that differed from area groundwater after installing a new monitoring well (MW-15) in 2001. Chemicals were at higher levels in MW-15 relative to other site wells and surrounding groundwater. The figure on the last page shows the location of all wells.

Groundwater flows under the site from east to west/southwest. MW-15 is at the western border of the site, next to two unlined areas the City used for disposal until 2006 (Areas 5 and 6). To prevent spread of contaminants suspected of coming from those areas, the City improved stormwater controls to stop water from flowing into Area 5. It also placed cover, gas, and stormwater control systems in Area 6.

The City investigated further to find the source, route, and destination of contaminants. It focused on Areas 1, 2, 5, and 6. The City also examined which contaminants are at levels that require cleanup, and explored cleanup options.

## Remedial Investigation Results

The City worked on the Remedial Investigation from 2011-2013. It installed several new groundwater and landfill gas monitoring wells, sampled well water from residents to the west/southwest of the landfill, sampled soils beneath buried waste, looked at stormwater controls and cover over landfill areas to see if they would prevent water from getting into waste, and checked existing gas control systems.

The investigation showed that two contaminants are at levels that exceed state cleanup standards – tetrachloroethylene (PCE) and vinyl chloride (VC). These chemicals are found at levels exceeding standards only in MW-15 and have not been found off-site at levels that require cleanup action.

The investigation showed the following are suspected sources of contamination:

- **Landfill gas.** As waste decays, it produces landfill gas. When there are poor gas controls, gas can contaminate groundwater. Areas 1 and 5 have no gas controls and produce enough gas to potentially impact groundwater.
- **Leachate.** When water flows through waste, it picks up contaminants, producing a liquid called leachate. If water enters a landfill and there is no collection system for the leachate, it can flow to groundwater and introduce contaminants.

The investigation pointed to three potential leachate problems:

- **Landfill cover:** Cover on Areas 2 and 5 is poor and may allow precipitation to leak into waste.
- **Area 5 Northern Stormwater:** A stormwater ditch along the north side of Area 5 may not be moving stormwater away from waste.
- **Area 5 Southern Stormwater:** Ground to the south of Area 5 is graded in a way that may lead to stormwater flow onto Area 5.

Areas 2 and 5 have no leachate collection system, so leachate may be the source of contaminants in groundwater.

For Area 6, the investigation found the gas extraction and treatment system was working well, and the cover and stormwater controls are effective at preventing water from getting into Area 6.

## Feasibility Study Results

The City explored several cleanup alternatives in the Feasibility Study.

### Control of Landfill Gas

**Areas 1, 2, and 5:** The City looked at the following cleanup options:

- Taking no action
- Building a trench system in the waste to actively pull gas out and vent it to air
- Installing multiple wells through the waste to allow passive venting of gas to the air



- Installing multiple wells through the waste to actively pull gas out and through the Area 6 gas system for destruction

The City prefers the last option as the cleanup action – multiple gas extraction wells. The Area 6 system can handle the volumes of landfill gas expected from Areas 1, 2, and 5.

### **Control of Leachate**

**Area 2 and 5 cover systems:** The City explored installation of a geomembrane cover over each area to prevent precipitation from leaking into waste.

Another option is to increase the thickness of soil over each area to serve as an “evapotranspiration (ET) cover”. The City also explored re-grading each area to promote and control stormwater movement away from waste.

ET cover systems can be effective in arid areas like the site. They are less expensive than geomembranes when large surpluses of soil exist, as they do at this site. Area 6 was engineered with an ET cover consisting of 4.8 feet of soil and seems to be working as designed.

The City prefers to use the same ET cover option for Areas 2 and 5, as well as re-grading for the cleanup action. The City also proposes an erosion control berm on Area 5 to prevent stormwater from eroding cover soils.

**Area 5 northern stormwater control:** A drainage ditch made of soil and an erosion control mat runs along the north side of Area 5. It should carry stormwater off-site, yet despite improvements a few years ago, it has filled with soil and vegetation that impedes flow. Water backing up in this ditch may leak into waste in Area 5.

To improve flow of stormwater and promote natural cleanout during storm events, the City explored building a cast-in-place concrete channel, using precast concrete panels to form a channel, or using blocks in the channel. All options include a geomembrane liner under the channel to further prevent infiltration of stormwater. All channels

would be wide enough to allow the City’s equipment to clean the channel if needed.

The City’s preferred cleanup action is to use the cast-in-place concrete option.

**Area 5 southern stormwater control:** The site’s compost facility and an access road are to the south of Area 5. Land north and east of the asphalt compost pad, including the access road, is graded to carry stormwater to a culvert that flows north onto Area 5.

One alternative to correct this is to build a soil berm to prevent flow onto Area 5. This would also serve as part of the proposed cover for Area 5. The City also would remove the existing culvert, re-grade the problem areas to direct stormwater onto the compost pad for flow into the compost lagoon, and place a new culvert under the re-graded access road to direct stormwater toward the compost pad.

The other alternative would remove the existing culvert, replace it with a storage basin and sediment sump, and install piping from the basin to the compost lagoon to carry stormwater to the lagoon. The piping would connect through the geomembrane liner of the lagoon.

The City prefers the first alternative as the cleanup action - re-grading the site.

**Monitoring and land use restrictions:** The City proposes also to do long-term monitoring of groundwater, gas, landfill cover, and stormwater control systems. The City will place a restrictive covenant on the property to protect all systems at the site.

### **What Happens Next?**

Ecology will review and consider all comments received by **November 5, 2014**. The report may be changed based on public comment. If no changes are made, the report will become final and Ecology will start writing a draft Cleanup Action Plan (DCAP). The DCAP will provide Ecology’s selected cleanup options, which may or may not be the same as those presented in the Feasibility Study. You will have an opportunity to comment on the DCAP before it becomes final.





