



State of Oregon
Department of
Environmental
Quality

Land Quality Division

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Why Oregon Needs an Orphan Site Program

What are “Orphan Sites”?

Orphans are sites contaminated by a release of hazardous substances that poses serious threats to human health or the environment, where the parties responsible for the contamination are either unknown -- or unwilling or unable -- to pay for needed remedial actions.

What's Wrong With Leaving These Sites Unaddressed?

- Failure to clean up Orphan Sites may endanger public health and the environment (including groundwater and municipal drinking water sources).
- Contamination will continue to spread, affecting water, soil, people, and adjacent properties.
- Costs will increase – the more that contamination spreads, the more expensive it becomes to clean up.
- A viable Orphan and Enforcement program encourages careful handling of hazardous substances, and removes any competitive advantage for businesses engaged in sloppy waste-management practices.
- Contaminated property is economically unproductive land. Contamination that remains will continue to devalue building, land, and water assets on the affected and neighboring properties.

DEQ's Approach

Addressing emergency situations and immediate threats to human health and the environment should always occur first. Wherever possible, DEQ pursues cost recovery from liable parties, but only after stabilizing the conditions at such sites.

Examples of Orphan Sites

Black Butte Mine. At this private, abandoned mine south of Cottage Grove, mercury was extracted and processed from native rock between the 1890s and 1969. The site continues to release large quantities of mercury to downstream creeks and Cottage Grove Reservoir, where fish contain high levels of mercury. Since 1995, DEQ has taken

the lead in site investigation, leveraging limited contributions from EPA, the U.S. Army Corps of Engineers, and Oregon State University. Substantial work remains, to remediate mercury contamination at the site and in downstream surface waters; this work is likely to cost several million dollars.

Elmira Family Store. This facility had operated as a convenience store and gas station for 40 years. In 1998, DEQ discovered piping leaks in the underground storage tank system, which caused significant gasoline contamination of soil and groundwater in the site vicinity, including the adjacent post office. The gasoline threatens residents, post office employees and customers, drinking water supplies in the site vicinity, and nearby surface waters. DEQ used funds from an EPA grant for a subsurface investigation in 2003; but the grant prohibited cleanup activities. DEQ estimates remedial costs of over \$200,000.

Frontier Leather Sedimentation Lagoons.

Between 1947 and 1988, Frontier Leather tanned leather hides on a site adjacent to Rock Creek (a tributary of the Tualatin River). Lagoon sediments and buried hide remains contain high levels of chromium, which pose significant ecological threats to an area the U.S. Fish & Wildlife Service wishes to add to the Tualatin River National Wildlife Refuge. DEQ completed a full investigation of the site in 2004. The next step is to evaluate cleanup options, which may cost up to \$1.6 million.

Keizer Area Groundwater Contamination.

In 2002, the City of Keizer discovered solvents in two of its oldest and shallowest municipal drinking water wells (which were shut down and decommissioned). Follow-up sampling showed solvents in private drinking water wells of 34 homes in south Keizer; the solvents are suspected carcinogens, even at very low concentrations. Sources of these solvents in groundwater were not known. It was DEQ's first priority to connect contaminated homes to the city's water supply. The cost to complete residential water hookups, discover sources of contamination,

and ensure groundwater protection of local residents' health is estimated at \$275,000.

Sweet Home Area Groundwater

Contamination. In 1991, the Oregon Health Division found solvents in a community drinking-water well in Sweet Home. DEQ sampled 30 private drinking-water wells nearby, finding that most contained solvents at unsafe levels. More recent investigations show the contaminants still present at high concentrations. DEQ supplied bottled water to affected residents as soon as it learned of the problem, and installed treatment systems on some private wells. Working with the City of Sweet Home and the Cascades West Council of Governments, DEQ helped secure a grant to upgrade the city's water supply; 20 households in the area were hooked up to city water, and all affected residences are now protected. The city also adopted an ordinance prohibiting new drinking water wells in the area.

Size of the Problem in Oregon

- There are approximately 2,250 sites with known or suspected releases of hazardous substances that are still to be addressed.
- 11 sites are on the federal Superfund list (cleanup of other sites is up to the state).
- More than 60 sites are active in DEQ's Orphan program.
- DEQ is currently overseeing the cleanup of about 500 sites, including orphans.

Oregon is only working on Orphan Sites that are high environmental and community priorities.

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