



State of Oregon  
Department of  
Environmental  
Quality

# 19<sup>th</sup> Annual Environmental Cleanup Report

**Submitted to:**

**Governor Ted Kulongoski  
Oregon Legislative Assembly  
Environmental Quality Commission**

**by**

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## Introduction

Oregon's environmental cleanup program:

- assists property owners and local communities in restoring properties to productive use through voluntary cleanup, brownfield redevelopment, and prospective purchaser agreements; and
- requires investigation and cleanup of sites that present significant risks to human health or to the environment.

The purpose of the Environmental Cleanup Report is to summarize major developments in the state's environmental cleanup program, identify accomplishments from fiscal year 2007, and forecast future activities. The Department of Environmental Quality (DEQ) is required by ORS 465.235 to prepare this report annually for the Legislature, the Governor, and the Environmental Quality Commission. Every fourth year, the report must also include an updated four-year plan.

The report includes:

- Statistics on environmental cleanup program activities in fiscal year 2007 and anticipated activities from fiscal year 2008 to fiscal year 2011;
- Descriptions of environmental cleanup program components; and
- A report on significant cleanup program budget shortfalls, and steps DEQ has taken to address the shortfalls.

## Highlights

In the past year, the state's cleanup program met or exceeded projections for the number of sites:

- Added to the database of suspected releases of contaminated sites (168 sites added);
- Preliminary assessments and equivalentents completed (26);
- Removal actions completed (6);
- Remedial investigations completed (7);
- Feasibility studies completed (7);
- Records of decisions completed (11); and
- Remedial actions initiated (14).

As discussed in this report, we have also stabilized the cleanup program's funding shortfall.

# Accomplishments – Fiscal Year 2007

## Sites Discovered

DEQ has identified over 4,000 contaminated and potentially contaminated sites in Oregon since 1988. 168 new sites were identified in Fiscal Year 2007 (FY 2007). DEQ added these sites to its Environmental Cleanup Site Information System (ECSI) for tracking and public-reporting purposes.

## Sites on the Confirmed Release List

Of the approximately 4,150 sites recorded in ECSI, 749 are on the Confirmed Release List. The Confirmed Release List is comprised of sites where the presence of contamination has been documented (rather than just being suspected). DEQ added 33 sites to the Confirmed Release List in FY 2007. DEQ removed (“delisted”) one site in FY 2007. Sites are delisted when contamination has been eliminated or reduced to levels that pose no unacceptable risks to human health or the environment.

## Sites on the Inventory

The Inventory of Hazardous Substance Sites is a list of sites where contamination has been confirmed and where further investigation or cleanup is necessary. There are 460 sites listed on the Inventory. Of those, 20 sites were added and one site was delisted from the Inventory in FY 2007. Sites that rely on engineering or institutional controls as the remedy are not eligible for delisting. All sites on the Inventory are also on the Confirmed Release List.

## Removals

At sites with fairly extensive contamination, a removal may take place to prevent further spread of contamination and to protect the public. A removal is essentially a cleanup that occurs before a Remedial Investigation or Feasibility Study has been completed. In FY 2007, six removals were initiated under DEQ supervision, and six were also completed. Since some removal actions may take months or years to complete, the number of removals completed is not always the same as the number started.

## The Cleanup Process in Oregon

DEQ **screens** sites where hazardous substances may have been released to determine priorities for further action. If a release appears likely, a **preliminary assessment** may be conducted to investigate the presence of contamination. A **site investigation** may also be conducted to delineate the extent of contamination. However, if an emergency situation exists, a **removal action** may be needed to stabilize the site before any investigations occur.

Sites known to be contaminated proceed through a three-step investigation process to determine how (or whether) they are to be cleaned up. A **remedial investigation** determines the full nature and extent of the contamination. A **risk assessment** looks at threats the contamination may pose to human health and the environment. Finally, a **feasibility study** evaluates various options for cleaning up the site. From this information, DEQ determines whether the site needs to be cleaned up, and if so, how it should be done. A **removal action** may be conducted at any time during this process to quickly reduce the amount of contamination and the treat it poses.

For sites where the necessary cleanup is relatively straightforward and simple, an initial removal action may be all that is required. However, if the cleanup will be more difficult and complex, a formal cleanup decision (called a **Record of Decision**) will be adopted by DEQ after a **public comment period**. The resulting cleanup is referred to as a **remedial action**. In addition to (or instead of) removing or eliminating the contamination, an **engineering control** (such as a cap or fencing) may be put in place to isolate the contamination. Or an **institutional control** may be recorded to limit future activities at the site so that people don't come into contact with the contamination.

A site receives a **No Further Action** designation when DEQ determines that the site poses no significant threat to human health or the environment. This may occur at any point during the investigation and cleanup process.

## Preliminary Assessments

A Preliminary Assessment is an investigation of a site and its surrounding area. The history of a site is reviewed to determine whether any contamination is likely to be present. Certain characteristics of the surrounding area (land use and population, nearby streams, depth to groundwater, etc.) are also reviewed to determine the likelihood of any contamination migrating off-site. DEQ uses all of this information to determine the site's priority for further investigation and cleanup.

In FY 2007, DEQ or parties working with DEQ initiated Preliminary Assessments at 25 sites, and completed assessments at 26 sites. Because Preliminary Assessments generally take only a few months to complete, the majority of assessments started in FY 2007 were also completed in FY 2007.

## Remedial Investigations

A Remedial Investigation of a site involves extensive sampling to determine what contaminants are present, and their locations, concentrations, and migration patterns. The investigation also includes an assessment of risks the contamination poses to human health and the environment. DEQ reviews and approves the investigations. DEQ initiated four Remedial Investigations in FY 2007, and completed seven. Because Remedial Investigations often take more than a year to complete, investigations started and completed during a given fiscal year are generally not the same.

## Feasibility Studies

Feasibility Studies provide detailed comparisons of different methods to clean up a site. Because various approaches or technologies can be used, each is evaluated for effectiveness, protectiveness, and cost, among other criteria. A preferred option is then chosen and recommended as the final cleanup strategy. Six Feasibility Studies were initiated in FY 2007, and seven were completed. Because Feasibility Studies often take more than a year to complete, the studies started and completed during a given time period are generally not the same.

## Records of Decision

A Record of Decision is a final cleanup decision on a site issued by DEQ after taking public comment into consideration. The Record of Decision incorporates information from the Remedial Investigation and Feasibility Study to summarize the nature and extent of contamination at the site, risks posed by the contamination, and the

## Routes to Cleanup in Oregon

The Environmental Cleanup Program has many components to help owners and operators of contaminated property move through the investigation and cleanup process. A popular option is **Voluntary Cleanup**. Willing parties and their contractors essentially hire DEQ staff to oversee their projects, to ensure that their work meets all appropriate requirements. Parties can choose the standard Voluntary Cleanup approach or **Independent Cleanup**, depending on the complexity of the project and the amount of oversight they wish to receive.

DEQ also "discovers" contaminated properties through **Site Assessment**. DEQ learns about potential contamination from phoned-in complaints, unsolicited reports, and from other government agencies, in addition to conducting its own inquiries. Sites are evaluated and ranked according to their potential threats. Responsible parties are often encouraged to address their contamination through Voluntary Cleanup.

If a site is a high priority, however, it may not be prudent for DEQ to wait for responsible parties to take action. DEQ can require cleanups to be conducted through **Site Response**. Parties can also enter Site Response voluntarily if they want to conduct cleanup under a legally-enforceable order or judgment. If no responsible parties are able or willing to clean up a high-priority site, or if responsible parties are unknown, DEQ may designate the site as an **Orphan Site** and conduct the cleanup using funds from the Orphan Site Account. **Dry Cleaner** sites are also addressed through their own separate account.

Other types of cleanups are conducted under separate statutory authority. Hazardous material spills are cleaned up through **Emergency Response**. Releases of petroleum from regulated **Underground Storage Tanks (USTs)** are likewise addressed via the UST Program.

method selected to implement a remedy. DEQ initiated 12 Records of Decision in FY 2007, and completed 11. It generally takes several months for a Record of Decision to be written, released for public comment, and approved. As a result, for a given period of time, the Records of Decision started are generally not the same as those completed.

### **Remedial Actions**

A Remedial Action is the final cleanup action taken at a site; it may involve eliminating contamination from a site, or isolating the contamination through institutional controls such as deed restrictions, or engineering controls such as caps, fencing, or barrier walls. In FY 2007, DEQ initiated 14 Remedial Actions, and completed nine. Because Remedial Actions may take years, the actions started and completed during a given time period are generally not the same.

### **No Further Actions**

DEQ issues a No Further Action letter to a responsible party when the agency concludes that the site no longer poses risks to human health or the environment, and no further investigation or cleanup is necessary. This may occur at any point in the process. Since 1988, DEQ's Cleanup Program has issued No Further Action letters for 1,302 sites, which is nearly one-third of all sites in the ECSI database. During FY 2007, DEQ made No Further Action determinations at 67 sites.

### **Brownfield Redevelopment**

A brownfield is a vacant or underused property where expansion or redevelopment is complicated by actual or perceived environmental contamination. These sites are often highly visible community eyesores where uncertainty about possible contamination and cleanup costs hinders potential redevelopment. DEQ does not have a separate and distinct Brownfields Program. However, the Cleanup Program supports brownfield identification and cleanup efforts, and seeks to partner with local communities and prospective purchasers to help leverage resources needed to return abandoned sites to productive use.

DEQ has an internal, cross-program brownfields workgroup, and works with staff from the Oregon Economic and Community Development Department to find available state and federal funding sources to investigate and/or clean up brownfields. In FY 2007, DEQ's Cleanup Program continued to provide technical assistance to three local governments and non-profit organizations that won EPA brownfield grants worth \$600,000. DEQ also distributed over \$200,000 in EPA grant money to evaluate levels of contamination at eligible brownfield sites. In addition, brownfields redevelopment is an integral part of the mission of the integrated state Economic Revitalization Team, of which DEQ is a member.

### **Orphan Sites**

Orphan sites are highly contaminated properties or areas where persons responsible for the contamination are unknown, unwilling, or unable to clean it up. The 1991 Legislature authorized the Orphan Site Account (Account) to help DEQ clean up contamination at Orphan sites where contamination posed a potentially serious threat to human health or the environment. The Account is funded through the sale of long-term bonds and cost recovery from insurance policies and responsible parties. Since 1992, DEQ has issued bonds totaling approximately \$38 million, and during its 2007 session, the Oregon Legislature approved an additional \$4 million in Orphan bond sales.

Eighty-nine sites has been funded, in whole or in part, with funds from the Orphan Site Account since 1992. This includes six sites that were designated as Orphan projects in FY 2006, and two additional sites designated in FY 2007. Orphan sites include a range of contaminated sites such as small businesses, abandoned mines, and areas where hazardous substances have affected sources of drinking water.

### **Voluntary Cleanups**

The 1991 Legislature authorized a Voluntary Cleanup Program to provide willing parties with DEQ oversight while they investigated and, if necessary, cleaned up contamination from their properties. Parties pay for a DEQ Project Manager and technical team who oversees their work and makes sure that it meets requirements of the

Environmental Cleanup Law. This cooperative process helps parties to move through the process efficiently, and to meet sometimes tight funding and redevelopment deadlines.

In 1999, DEQ added a second Voluntary Cleanup “pathway.” *Independent Cleanup* is a process by which parties complete their own investigations and cleanups with minimal DEQ oversight. If a party provides DEQ with 90 days’ notice, DEQ staff can arrange to review and approve a final cleanup report within 60 days after the report is submitted. This process allows parties to proceed at a pace that suits their needs. The Independent Cleanup option is available for low- to moderately-contaminated sites that exceed acceptable risk levels, but do not pose an imminent threat to human health or the environment.

There are approximately 413 active Voluntary Cleanup sites, with 316 sites following the traditional pathway, and about 97 in Independent Cleanup. Since 1991, Voluntary Cleanup has completed cleanups at 669 sites, far more than Site Response alone could have completed.

### **Cleanup Program Budget Shortfall and DEQ’s Response**

Two years ago, the environmental cleanup program dealt with a significant funding shortfall resulting from reduced revenue, increased expenditures and declining carryover funds from previous biennia. DEQ realized that, unless immediate steps were implemented to reduce spending in 2005 and 2006, the program would not have sufficient funds to pay for expenses beyond fiscal year 2006.

A significant contributing factor in the shortfall was the diversion of cleanup program funding to replace General Fund lost in the Emergency Response Program in 2003. The funds diverted from cleanup - waste disposal fees at the Arlington hazardous waste landfill and EPA grant funds are flat to declining. DEQ also believes the number of cost recovery projects and amount of cost recovery work is stable. Finally, EPA has indicated that grant funds are likely to decrease over time.

At the same time, personnel costs, including salaries and benefits, and other program costs have increased. Given declining program balances and program revenue, the program took steps necessary to reduce expenses, including reassigning staff to other DEQ programs and, in some cases, leaving positions vacant. Also during the 2007-09 biennium, we permanently reduced the number of staff by 6.67 FTE. This permanent reduction was in addition to reassigning, at least temporarily, approximately 10 FTE to other DEQ environmental program activities for a net program reduction of about 17 FTE or 25% of the total FTE formerly working on emergency response and environmental cleanup activities.

Fortunately, these steps appear to have stabilized our emergency response and environmental cleanup program budget. Of course, the transition necessarily implied a smaller program, resulting in some reductions in cleanup program services and activities, even as demand for brownfield project work, prospective purchaser agreements, federal Superfund project support, and Voluntary Cleanup program activity has remained strong.

Despite the FTE reductions outlined above, the DEQ intends to maintain a core program of services to support its highest priority activities: emergency response, site assessment, voluntary and independent cleanup, brownfield redevelopment, orphan site cleanup, and enforcement activities.

If you have questions or comments about this report, please contact Jeff Christensen, Cleanup and Emergency Response Program Manager at [christensen.jeff@deq.state.or.us](mailto:christensen.jeff@deq.state.or.us) or (503) 229-6391.

### **For More Information**

More information about specific cleanup projects and cleanup programs is available from the Environmental Cleanup section of DEQ’s web site, DEQ Online: <http://www.deq.state.or.us/lq/cu/index.htm>.

**Cleanup Phases Completed and Initiated,  
Fiscal Year 2007 (Actuals) and 2008 (Projections)**

Site actions	Fiscal Year 2007 (Actual)		Fiscal Year 2008 (Forecast)	
	Initiated	Completed	Initiated	Completed
Suspected Releases Added to Database	NA	168	NA	150
Added to Confirmed Release List	NA	33	NA	35
Added to Inventory	NA	20	NA	22
Site Screenings	64	41	55	50
Preliminary Assessments & Equivalentents	25	26	25	25
Removal Actions	6	6	7	6
Remedial Investigations	4	7	7	6
Feasibility Studies	6	7	6	5
Records of Decision	12	11	10	11
Remedial Actions	14	9	13	10
No Further Action Determinations	NA	67	NA	80

**Note:** Projections for initiated and completed cleanup phases were established in the 2007 - 2011 "Four Year Plan of Action." As provided by ORS 465.235, the four year plan is part of this year's annual report; actions expected to be completed over that period appear in the table below. The current four year plan is unchanged from last year's Annual Report.

**4 Year Plan - Actions Projected to be Completed and Initiated:  
7/1/07 – 6/30/11**

Site actions	2007-2009 Biennium		2009-2011 Biennium	
	Initiated	Completed	Initiated	Completed
Suspected Releases Added to Database	NA	300	NA	275
Added to Confirmed Release List	NA	65	NA	50
Added to Inventory	NA	40	NA	35
Site Screenings	120	100	100	110
Preliminary Assessments & Equivalent	50	50	50	50
Removal Actions	15	12	15	12
Remedial Investigations	18	20	20	25
Feasibility Studies	12	12	13	12
Records of Decision	22	22	20	20
Remedial Actions	30	25	28	30
No Further Action Determinations	NA	160	NA	165

This four-year plan assumes stable funding over the next two biennia. Projections are based on: 1) the number of actions initiated and completed over the past four years; and 2) the effects of an approximately 25% FTE reduction in DEQ's Cleanup Program during 2005 and 2006. Voluntary Cleanup sites are both more numerous and (generally) simpler than Site Response sites, and so move through the investigation and cleanup process much faster. DEQ often makes No Further Action determinations during the site screening and preliminary assessment phase, and there are fewer removals, remedial investigations, etc. conducted at these sites.