



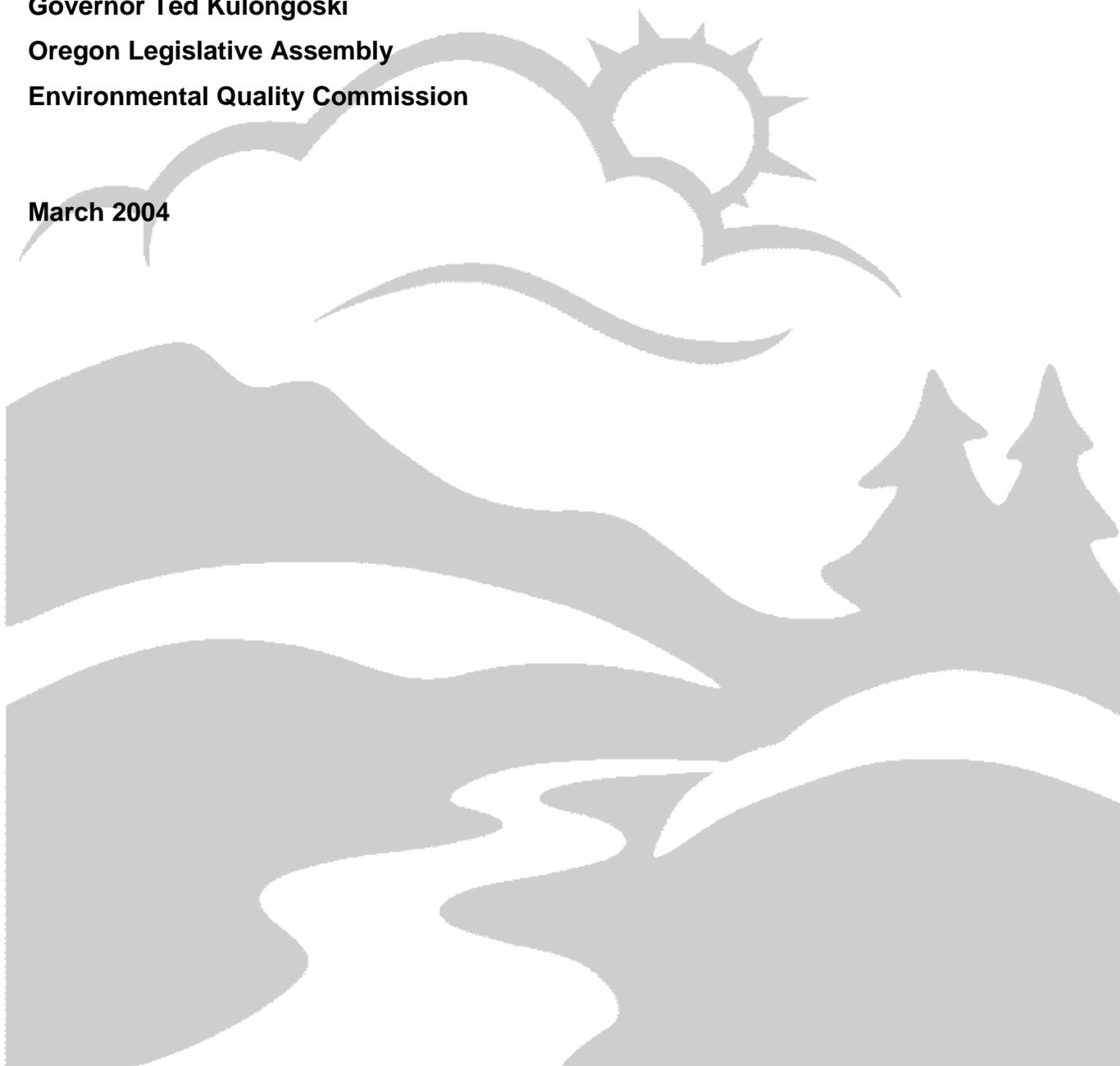
State of Oregon  
Department of  
Environmental  
Quality

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

Submitted to:

Governor Ted Kulongoski  
Oregon Legislative Assembly  
Environmental Quality Commission

March 2004



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## Introduction

The Department of Environmental Quality (DEQ) is required by statute (ORS 465.235) to report annually to the Legislature, the Governor and the Environmental Quality Commission on DEQ's Environmental Cleanup Program. The purpose of this report is to identify cleanup accomplishments from the previous fiscal year; forecast activities for the current fiscal year; report on the status of DEQ's Environmental Cleanup Program; and update the four-year Environmental Cleanup Program Plan.

## Highlights

This report includes:

- Statistics on Environmental Cleanup Program activities in fiscal year 2003;
- Descriptions of Environmental Cleanup Program components; and
- The 2003-2007 Environmental Cleanup Program Plan

## Major Projects and Initiatives

- DEQ is working with other state and federal agencies to address environmental and public health problems associated with abandoned mines. DEQ is using some of its limited Orphan Program funds to conduct this work.
- DEQ is taking a broader look at cross-program work, initially focusing on abandoned mines, contaminated sediments, and persistent bioaccumulative toxins.

## For More Information

More information about many of the items covered in this report is available from the Land Quality section of DEQ's web site, DEQ Online: <http://www.deq.state.or.us/wmc/index.htm>. Information can be found under the Emergency Response, Environmental Cleanup, and Underground Storage Tank headings.

# Accomplishments – Fiscal Year 2003

## Sites Discovered

DEQ has identified approximately 3054 contaminated and potentially-contaminated sites in Oregon since 1988. 154 new sites were identified in Fiscal Year 2003 (FY 2003). These sites were all added to DEQ's Environmental Cleanup Site Information System (ECSI) for tracking purposes.

## Sites on the Confirmed Release List

Of the approximately 3054 sites recorded in ECSI, 676 have been added to the Confirmed Release List (CRL). The CRL is a list of sites where the presence of contamination has actually been confirmed (rather than just being suspected). 91 sites were added to the CRL in FY 2003. Thirteen other sites were removed, or "delisted", from the CRL in FY 2003. (Sites are delisted when contamination at the site has been eliminated or reduced to levels that pose no significant threat 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. 410 sites are currently listed on the Inventory. Of those, 67 sites were added in FY 2003. Six other sites were delisted from the Inventory in FY 2003 after they were cleaned up. All sites on the Inventory are also on the CRL.

## Removals

At sites where contamination is fairly extensive, and the best method for cleaning up the contamination is not in dispute, a removal may take place. A removal is essentially a cleanup action that occurs before a Remedial Investigation or Feasibility Study has been completed. Fourteen (14) removals were

## The Cleanup Process in Oregon

Sites where a hazardous substance is suspected to have been released are **evaluated** by DEQ to determine their priority for further action. If a release appears to have occurred, a **preliminary assessment** may be conducted to confirm or deny the presence of contamination. A **site investigation** may also be conducted to delineate the extent of the contamination. However, if an emergency situation exists, a **removal action** may be necessary to stabilize the site before any investigations occur.

Sites that are 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** is performed to determine the full nature and extent of the contamination. A **risk assessment** looks at the threats posed by the contamination to human health and the environment. Finally, a **feasibility study** evaluates various options for cleaning up the site. From this information, a determination is made as to whether the site needs to be remediated, and if so, how it should be remediated. A **removal action** may be conducted at any time during this process to quickly reduce the amount of contamination.

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 it poses no significant threat to human health or the environment. This may occur at any point during the investigation and cleanup process.

initiated under DEQ supervision in FY 2003, and seventeen (17) removals were completed. Since some removal actions may take months or years to complete (such as extracting contaminated groundwater), the removal actions that were completed in FY 2003 may be different from the removals that were started.

### 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 (population and land use, nearby streams, depth to groundwater, etc.) are also reviewed to determine the likelihood of any contamination migrating off of the site. All of this information is used to determine whether the site is a high, medium, or low priority for further investigation and cleanup by DEQ.

Preliminary Assessments were initiated by DEQ or other parties at 61 sites in FY 2003, and 46 assessments were completed in the same year. Because Preliminary Assessments generally take only a few months to complete, the majority of assessments started in FY 2003 were also completed in FY 2003.

### Remedial Investigations

A Remedial Investigation is a detailed examination of a site to determine the nature and extent of the contamination. Extensive sampling is conducted to determine what contaminants are present, where the contaminants are located, and how concentrated they are. The investigation also includes a detailed assessment of the risks to human health and the environment posed by the contamination. The investigations are reviewed and approved by DEQ. Twelve (12) Remedial Investigations were initiated in FY 2003, and nine (9) were completed. Because Remedial Investigations often take more than a year to complete, the investigations that were started are generally not the same investigations that were completed.

### Feasibility Studies

Feasibility Studies are conducted to evaluate various methods of cleaning up a site. Because various approaches or technologies can be used to clean up a site, each is evaluated for effectiveness, protectiveness, and cost, among other criteria. A preferred

### 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. One of the most popular options 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 an Independent Cleanup approach, depending on 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 the responsible parties to take action. DEQ can require cleanups to be conducted through **Site Response**. (Parties can also voluntarily enter Site Response if they want to conduct their cleanup under a legally-enforceable order or decree). If no responsible parties are able or willing to clean up a high priority site, 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 materials spills are cleaned up through **Emergency Response**. Releases of petroleum from regulated **Underground Storage Tanks** are likewise addressed through their own separate program.

option is then chosen and recommended as the final cleanup strategy. Eleven (11) Feasibility Studies were initiated in FY 2003, and four (4) were completed. Because Feasibility Studies often take more than a year to complete, the studies that were started are generally not the same studies that were completed.

### **Records of Decision**

A Record of Decision (ROD) is a final cleanup decision on a site, signed by both DEQ and the responsible parties. The ROD incorporates information from the Remedial Investigation and Feasibility Study to summarize the nature and extent of contamination at the site, the risks posed by that contamination, and the agreed-upon method for addressing the contamination. Ten (10) Records of Decision were initiated in FY 2003, and ten (10) were completed. It generally takes several months for a ROD to be written, released for public comment, and approved. Because of this, the RODs that were started are generally not the same ones that were completed.

### **Remedial Actions**

A Remedial Action is the final cleanup action taken at a site. A Remedial Action may involve actually eliminating contamination from a site, or it may involve isolating the contamination through institutional controls (deed restrictions, etc.) or engineering controls (caps, fencing, barrier walls, etc.). Sixteen (16) Remedial Actions were initiated in FY 2003. Only nine (9) Remedial Actions were completed. This is largely because institutional and engineering controls are never really “completed”. They are intended to remain in place indefinitely.

### **No Further Actions**

DEQ will issue a No Further Action (NFA) letter to the responsible parties when the agency concludes that a site no longer poses a substantial threat to human health or the environment and no further investigation or cleanup is necessary. This may occur at any point in the process. DEQ’s Environmental Cleanup Program has issued over 810 NFA letters since work began in 1988. In other words, DEQ has “signed-off” on 25% of the 3054 sites in the ECSI database. 65 sites were issued No Further Action letters in FY 2002 after being investigated and/or cleaned up.

### **Brownfield Redevelopment**

A brownfield is a vacant or underutilized property where expansion or redevelopment is complicated by actual or perceived environmental contamination. These sites are often community eyesores where there is pressure to “do something”, but the fear of costs associated with cleaning up contaminated property keeps potential developers at bay. DEQ’s Brownfields effort emerged from a cross-program workgroup in 1996 in response to requests from local communities and prospective purchasers to provide assistance in investigating and cleaning up these abandoned sites.

DEQ strives to work with communities, public organizations, government agencies, and private parties to facilitate and encourage the redevelopment of brownfields. For example, the program works with staff from the Oregon Economic and Community Development Department (OECDD) to find state and federal funding sources that can be tapped to investigate and/or clean up brownfields. Recently, the Brownfields Program has been working with the City of St. Helens, along with a volunteer organization, on developing a list of local brownfield sites. Brownfields redevelopment is also an integral part of the mission of the Economic Revitalization Teams (ERT), of which DEQ is a member.

Brownfields redevelopment projects in Oregon that DEQ has been involved with have been regional winners of the national “Phoenix Awards” for four years in a row. The Phoenix Awards recognize outstanding brownfields redevelopment projects across the country. The Yards at Union Station housing development in Portland won in 2000, and the redevelopment of the Astoria Plywood Mill into Mill Pond Village won in 2001. The Old Mill District in Bend is the winner for 2002. The Old Mill District covered 250 acres along the Deschutes River south of downtown Bend, and was the site of an active lumber mill from 1922 to 1994. When the mill went out of business, River Bend LP purchased the property for redevelopment. Working with DEQ, the site was investigated and cleaned up in sections, thus allowing redevelopment to occur in stages. The formerly vacant industrial property has now been largely transformed into a mixed commercial and residential development. The Portland South Waterfront was the winner for 2003.

### **Orphan Sites**

Orphan sites are high priority contaminated properties or areas where the persons responsible for the contamination are either unknown, unwilling or unable to clean up the contamination. The Orphan Site Account was authorized by the 1991 Legislature to help DEQ address contamination at these “orphaned” sites where the contamination posed a potentially serious threat to human health or the environment. The Account is funded through the sale of long-term bonds. Since 1992, DEQ has issued bonds totaling \$33.3 million. An additional \$4 million bond sale was approved by the 2001 Legislature and is planned in early 2003.

Investigation and cleanup of 66 sites has been funded, in whole or in part, with funds from the Orphan Site Account since 1992. This includes seven (7) sites that were designated as Orphan projects in FY 2002, and seven (7) additional sites that have been designated so far in FY 2003. Orphan sites include a range of contaminated sites such as: small businesses; abandoned mines; and areas of contaminated groundwater.

### Voluntary Cleanups

Voluntary Cleanup was authorized by the 1991 Legislature 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 to oversee their work, while the Project Manager ensures that the work meets the requirements of the Environmental Cleanup Law. This cooperative process helps parties to efficiently move through the process to meet sometimes tight funding and construction deadlines.

In 1999, DEQ formally added a second “pathway” through the Voluntary Cleanup process. Independent Cleanup is a process by which parties complete their own investigations and cleanups with minimal DEQ oversight. By providing DEQ with 90 days notice, Independent Cleanup staff can arrange to review and approve a final cleanup report from the parties within a 60-day time-frame. This process allows parties to proceed at their own pace, with minimal delays caused by regulatory review. Independent Cleanup is only available for low- to moderately-contaminated sites that do not pose an imminent threat to human health or the environment.

There are 296 currently active Voluntary Cleanup sites, with 229 sites following the traditional pathway and 67 sites in Independent Cleanup. Voluntary Cleanup has completed cleanups at 359 sites since 1991, far more cleanups than Site Response alone could have completed.

**Cleanup Phases Completed and Initiated  
Actual and Projected, Fiscal Years 2003 and 2004**

Actions	Completed		Initiated	
	7/02-6/03	Projected 7/03-6/04	7/02-6/03	Projected 7/03-6/04
Suspected Releases Added to Database	154	120	NA	NA
Added to Confirmed Release List	91	60	NA	NA
Added to Inventory	67	50	NA	NA
Site Screenings	76	80	110	70
Preliminary Assessments & Equivalents	46	40	61	30
<b>Voluntary Cleanup</b>				
Removal Actions	8	2	7	4
Remedial Investigations	11	8	9	7
Feasibility Studies	2	8	9	7
Records of Decision	9	8	9	7
Remedial Actions	4	6	7	5
No Further Action Determinations	54	40	NA	NA
<b>Site Response</b>				
Removal Actions	9	2	7	5
Remedial Investigations	7	3	3	4
Feasibility Studies	2	3	2	4
Records of Decision	1	3	1	2
Remedial Actions	5	2	9	3
No Further Action Determinations	11	6	NA	NA

**Notes:**

- Site Response figures include dry cleaners and orphan sites.
- Environmental Cleanup Program numbers have improved slightly compared to last year, reflecting an improvement in the economy and redevelopment of contaminated properties.

**4 Year Plan of Actions Completed and Initiated  
7/1/2003 – 6/30/2007**

Actions	2003-2005		2005-2007	
	Completed	Initiated	Completed	Initiated
Suspected Releases Added to Database	350	NA	350	NA
Added to Confirmed Release List	90	NA	90	NA
Added to Inventory	60	NA	60	NA
Site Screenings	225	225	225	225
Preliminary Assessments & Equivalent	140	140	140	140
<b>Voluntary Cleanup</b>				
Removal Actions	14	16	15	17
Remedial Investigations	25	27	28	30
Feasibility Studies	13	15	14	15
Records of Decision	13	15	14	15
Remedial Actions	10	15	12	15
No Further Action Determinations	80	NA	80	NA
<b>Site Response</b>				
Removal Actions	12	16	12	16
Remedial Investigations	7	14	7	14
Feasibility Studies	8	8	8	8
Records of Decision	8	8	8	8
Remedial Actions	3	8	3	8
No Further Action Determinations	10	NA	10	NA

This four-year plan assumes stable funding over the next two biennia, and is based on the number of actions actually initiated and completed over the past four years. 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. No Further Action determinations are often made during the site screening and preliminary assessment phase, and therefore no removals, remedial investigations, etc. are conducted at these sites.