

Annual Environmental Cleanup Report 2020

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Governor Kate Brown

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Environmental Cleanup Program

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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.



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Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.

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Executive Summary

The Oregon Department of Environmental Quality's Environmental Cleanup program protects human health and the environment by identifying, investigating, and remediating sites contaminated with hazardous substances. The program's objective is to improve sites to the point where no further cleanup action is necessary - as inexpensively and quickly as possible.

This annual report to the Legislature describes the Environmental Cleanup program's efforts to assess, investigate and clean up contaminated lands and help return them to productive use. Oregon Revised Statute 465.235 mandates this annual report to the Oregon Legislature, the Governor, and Oregon's Environmental Quality Commission. This report includes:

- A description of fiscal year 2019 statewide cleanup program activities and key statistics.
- A summary of Cleanup program highlights including: ongoing work with the U.S. Environmental Protection Agency (EPA) to plan remedial actions and prevent new contamination within the Portland Harbor Superfund site; efforts to improve program performance; voluntary cleanup progress; brownfields work and milestones; prospective purchaser agreement projects; and an outline of future funding needs for the state's Industrial Orphan Site program.
- A description of the program's plans to modernize.

DEQ's Cleanup program had many successes in fiscal year 2019, including recognition by EPA, policy and program development, completion of multiple projects statewide, oversight of voluntary cleanups, brownfield redevelopments, and cleanup at orphan sites. DEQ continues to return contaminated and unusable lands to productive use through prospective purchaser agreements, and funds specifically directed to address "orphan" sites – highly contaminated properties whose responsible parties are unknown, unwilling or unable to clean up these sites.

Despite all these successes, it is time to modernize the program. Originally modeled after EPA's Superfund Program, DEQ's Cleanup program once focused its efforts on site discovery and issuing orders to compel responsible parties to complete cleanups through a formal process. Today, much of the program's work involves parties who voluntarily seek DEQ's oversight and associated liability protection as they clean sites for redevelopment. As Oregon's population grows and its industries evolve, DEQ's Environmental Cleanup program faces new opportunities and new challenges. Former industrial sites statewide are being redeveloped for new purposes, and DEQ often works on smaller sites that require quick turnaround due to real estate transaction needs. Chemicals of emerging concern may require DEQ to change policies and evaluate new technologies in the years ahead. Meanwhile, DEQ is called to meaningfully engage residents in neighboring communities while it performs essential oversight of environmental cleanup.

Over the past two decades, revenue sources have declined while DEQ adjusted programs and responsibilities to meet changing needs and expectations. The program relies on a complex variety of revenue sources, including cost recovery, fees, federal grants, and bond sales. The program's internal systems and funding structure have remained largely the same since its inception over 30 years ago. Both internal systems and funding structure need an update. The program is operating with fewer filled positions, despite greater pressures on staff and management. Simply put, the program's funding levels no longer sustain the work that is required. To address this situation, DEQ will modernize its program by stabilizing funding and strategically planning the work ahead.

In 2020, DEQ intends to initiate a two-phase strategic planning process. The first phase will address program funding in the next five years. The second phase will envision what the program could and should look like by the year 2050. DEQ will include a robust stakeholder process in both phases.

1. About the Environmental Cleanup Program

Oregon's Environmental Cleanup program:

- Discovers, evaluates and prioritizes sites contaminated with hazardous substances for further action.
- Oversees the investigation and cleanup of sites presenting significant risks to human health or the environment through voluntary cleanup, or through enforceable agreements for high priority sites.
- Assists property owners and communities in restoring productive use of contaminated sites using brownfield technical assistance and prospective purchaser agreements.
- Leads the investigations and cleanups of orphan sites in cases where the responsible party is unknown, unwilling, or unable to complete necessary cleanup actions.

Oregon's Cleanup Process

DEQ screens sites where hazardous substances may have been released to determine the need and priority for further action. A preliminary assessment may be conducted to investigate the presence and extent of contamination, which may involve collection of samples for laboratory testing. In the event of an emergency, a removal may be needed to stabilize the site and prevent current exposure to contamination.

Sites known to be contaminated proceed through a two-step investigation process to determine how (or whether) they should be cleaned up. A remedial investigation determines the full nature and extent of the contamination, and evaluates risks to human health and the environment from exposure to determine a need for a cleanup. For sites posing unacceptable risk, a feasibility study evaluates various site cleanup options. From this information, DEQ determines what needs to be cleaned up and how it should be done.

When the necessary cleanup is relatively straightforward and simple, an initial removal action may be all that is required. However, if the cleanup is more difficult and complex, DEQ may issue a formal cleanup decision (called a record of decision [ROD]) after a public comment period. The resulting cleanup is called a remedial action. In addition to (or instead of) removing or treating the contamination, an engineering control (such as capping or fencing) may be put in place to isolate the contamination with an institutional control recorded to limit future activities at the site so that people and animals are not exposed to 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.

Routes to Cleanup in Oregon

DEQ has several options for owners and operators of contaminated property to move through the investigation and cleanup process. The most common is voluntary cleanup. Property owners seeking a signoff from DEQ agree to have DEQ oversee their projects to ensure that their work meets regulatory requirements. Parties can choose the standard voluntary cleanup approach or independent cleanup, depending on the project's complexity and amount of oversight needed. Parties intending to purchase property with existing contamination may enter a Prospective Purchaser Agreement with DEQ prior to the purchase that describes the cleanup actions they will perform at the property and receive protections from liability from DEQ and third parties for any remaining contamination.

DEQ also "discovers" contaminated properties through site assessment. DEQ learns about potential contamination from complaints, unsolicited reports and other DEQ programs or government agencies, in addition to conducting its own inquiries. DEQ evaluates and ranks sites based on their known or potential threats. Responsible parties are encouraged to address site contamination through voluntary cleanup.

DEQ will require parties with high priority sites to conduct investigation and cleanup under the terms of a legally enforceable order.

DEQ may designate the site an orphan and conduct the cleanup of high priority sites using its orphan site account where responsible parties are “unknown, unable or unwilling” to perform a cleanup.

Qualifying contaminated dry cleaner sites may also be addressed by DEQ through a separate account funded by fees paid by eligible dry cleaning facility owner/operators. However, funds are very limited, and DEQ is reevaluating the viability of the program.

Other types of cleanups are conducted under separate statutory authority. DEQ’s Emergency Response program ensures new hazardous material spills are immediately cleaned up by the spilling party. Petroleum releases from underground storage tanks are also addressed through DEQ’s Cleanup Program to meet federal and state requirements.

2. Program Highlights, Fiscal Year 2019

DEQ’s Environmental Cleanup program had many successes in fiscal year 2019, including recognition by EPA; policy and program development; completion of multiple projects statewide; oversight of voluntary cleanups; brownfield redevelopments; and, clean up at orphan sites.

EPA’s State Excellence in Supporting Reuse Award

In 2014, EPA developed the State Excellence in Supportive Reuse award to recognize state partners whose work has led to lasting benefits that enhance community quality of life; ensure the long-term protectiveness of Superfund site remedies; and, stewardship of the environment. In 2019, EPA presented the award to DEQ, highlighting the following projects:

North Ridge Estates, Klamath Falls

North Ridge Estates is an EPA [National Priorities List](#) site comprised of a residential subdivision approximately three miles north of Klamath Falls. At the North Ridge Estates Superfund site, DEQ was an engaged and committed partner that worked closely with EPA Region 10 to support the complex cleanup, which addressed asbestos contamination in a residential subdivision, and the sites continued use and reuse. Notably, the rapport DEQ had with the community created trust throughout the remedial action which significantly disrupted the neighborhood as residents were relocated and some homes demolished. DEQ achieved this through unique public involvement events, such as construction kick-off events with open houses; several end-of-the remedial season picnics; leading tours of the construction work, and emphasizing hiring local labor and subcontracting business to keep the cleanup cost money in the area, benefitting the local economy.

McCormick & Baxter, Portland

McCormick & Baxter Creosoting Company is a National Priorities List site along the Willamette River in north Portland. EPA and DEQ have partnered since 1994 to investigate and address wood-treating chemicals in site soils, groundwater and river sediments. This attractive riverfront property has garnered community interest since well before cleanup completion. A Portland Bureau of Planning and Sustainability reuse assessment identified opportunities for recreational uses at the property. These findings informed DEQ’s cleanup planning. Construction of site remedies were completed in 2005. Since 2005, ongoing monitoring and maintenance have demonstrated the site controls remains protective. In 2018, EPA designated the site as Ready for Reuse. DEQ and EPA developed potential terms for site reuse. Terms include ensuring redevelopment is compatible with long-term cleanup goals, riparian protection, and public access. In addition, the University of Portland’s 2013 Master Plan includes the possibility of obtaining the property for athletic fields and other recreational uses, similar to the adjacent River Campus. The River Campus is also a cleanup site (previously known as Triangle Park), where the University of Portland is redeveloping the property under EPA and DEQ oversight.

Reynolds Metals Company, Troutdale

Formerly an aluminum reduction plant, the property has been transformed into a major commercial center, as well as natural areas. Reynolds Metals Superfund Site was established in 1994. In the early stages of cleanup, the responsible party, Alcoa, Inc., initiated outreach to DEQ for support and guidance on returning the site to safe and beneficial use. Recognizing the cleanup options could significantly restrict the site's reuse potential, DEQ provided grant resources for an economic redevelopment plan, assisting the site in becoming a major community asset. The approximately 700-acre site presented challenges for cleanup, but also redevelopment opportunities, including proximity to major transportation networks. The Port of Portland purchased the site through DEQ's Prospective Purchaser Agreement program, which facilitated a pathway for the Port to begin redevelopment of the property into Troutdale Reynolds Industrial Park (TRIP). At present, TRIP provides approximately 3,000 jobs and \$145 million in employment income. This generated \$1.5 million in total tax revenues for City of Troutdale and Multnomah County in 2018. EPA recognized site stakeholders, including DEQ, with the EPA Region 10 Howard Orlean Excellence in Site Reuse Award in January 2018.

Policy and Program Development

In October 2019, the Environmental Cleanup and Emergency Response programs at DEQ Headquarters were divided into two separate programs for a one year pilot. The goal is to give each program the capacity to strategize and grow for the future. In addition to administering federal grants and overseeing some statewide activities, the Cleanup program accomplished considerable policy and program development activities in fiscal year 2019.

Fiscal Framework Project

DEQ evaluated the Cleanup program's funding structure to identify sources of financial instability. The project provided a detailed summary of program funding areas, a timeline of significant program milestones, and initial recommendations on how to improve program financial stability in the medium and long term. Based on these findings, the program will initiate strategic planning as described in Section 4 of this report.

Solid Waste Orphan Site Assessment Program

In 2019, a new program and position was created in the Cleanup Program: Solid Waste Orphan Site Assessment program and Project Manager. Utilizing Solid Waste Orphan program funding, this program will be instrumental to help pay for cleanup of "orphaned" sites where the disposal of solid waste resulted in the release of hazardous substances into the environment. Eligible sites include publicly owned solid waste facilities and privately owned sites without a responsible party. The program has worked closely with Oregon Health Authority to initiate cleanup of the Forest Creek Salvage Yard, contaminated by drug lab activity. In Eugene, the project manager provided oversight on the removal of solid waste at the Kelso Street Tire Dump. DEQ is also developing a ranking tool to prioritize abandoned sites for potential DEQ funding.

Heating Oil Tank Rulemaking

In 2019, the Environmental Quality Commission adopted rule amendments in the Heating Oil Tank (HOT) Program to increase existing fees. The effective date of the new fees is January 1, 2020. DEQ's HOT program authorizes and facilitates a third-party certification process for decommissioning and cleanup oversight. To perform HOT decommissioning work, contractors must hold a DEQ service provider license, including errors and omissions insurance, and certify that their work complies with Oregon administrative rules. DEQ's role is to ensure that work is performed appropriately by updating and disseminating standards, licensing service providers, maintaining public records, and auditing project work.

Internal Management Directives (IMDs)

DEQ focused on numerous internal management directives in 2019. The following documents are in various stages of completion:

- Building Surface Hazards IMD
- Ecological Risk Assessment IMD
- Guidance for Evaluating Residual Pesticides on Lands Formerly Used for Agricultural Production IMD

- Tribal Engagement and Resource Protection at Cleanup Sites IMD
- Professional Stamping of Cleanup Program Documents IMD¹

Cleanup Program Workgroups

In 2019, the Cleanup Program initiated four internal workgroups focused on toxicology, engineering, hydrogeology, and lead-worker topics. The workgroups are a forum for the exchange of information in the different disciplines, and to identify issues that may warrant clarification or policy development. These efforts will increase DEQ's program-wide consistency on cleanup projects across the state.

Statewide Cleanups

NW Metals Scrapyard Fire, Portland

A five-alarm fire started on March 12, 2018 at an auto dismantler called NW Metals in northeast Portland. The fire destroyed several nearby homes and created billowing black smoke that prompted evacuation orders in the Cully neighborhood in Portland. Multiple DEQ programs continued to work on the site in subsequent months. In the weeks after the fire, DEQ's Cleanup program issued a Remedial Action Order (RAO) requiring assessment of conditions on site. Due to ongoing noncompliance concerns, DEQ pursued enforcement actions. On August 29, 2019 an Administrative Law Judge ruled on the NW Metals enforcement case. The ruling requires that work specified in the previously issued RAO be completed. On Wednesday, November 20, 2019, DEQ obtained a Temporary Restraining Order against NW Metals, which requires it to correct the violations at the site, including completion of work under the RAO, and reimbursement of DEQ's remedial action costs.

Harbor of Hope Navigation Center, Portland

In September 2018, DEQ approved a cleanup work plan for a riverfront property owned by Prosper Portland to be temporarily used as a location for a facility to provide services to people without homes. DEQ approved the construction completion report in October 2019, requiring ongoing inspection and maintenance of the temporary capping features on a semi-annual basis. Informal inspections will occur regularly.

Bradford Island, Columbia River

DEQ learned in September 2019 that the US Army Corp of Engineers (USACE) budget for FY 19-20 included no funding for ongoing work at this Columbia River site contaminated with PCBs. Subsequently, on September 18, 2019, the USACE terminated the longstanding voluntary agreement with DEQ Cleanup program. On October 10, 2019, DEQ submitted a joint letter with the Yakama Nation and Washington State Department of Ecology to U.S. EPA Region 10, requesting that EPA place Bradford Island on the National Priorities List. If EPA approves this request, it would take steps to make Bradford Island a Superfund site. On November 7, 2019, EPA Region 10 indicated they were considering a rulemaking process to list the site on the National Priorities List.

EPA Proposed Changes to the Portland Harbor Superfund Cleanup Plan

EPA is the lead agency for investigating and cleaning up contaminated sediments along the 10-mile stretch of the Lower Willamette River designated as the Portland Harbor Superfund Site while DEQ is the lead agency for upland and upriver source control. EPA issued its ROD for the site in January 2017, calling for a \$1 billion cleanup. On October 20, 2018, EPA solicited public comments on proposed changes to the ROD based on national research that showed the chemical benzo(a)pyrene (BaP) is less toxic than previously thought. The toxicity of BaP is used as the basis for evaluating risk for a group of contaminants called carcinogenic polycyclic aromatic hydrocarbons (cPAHs) targeted for cleanup in the ROD. EPA's proposed changes to the ROD were finalized in December in an Explanation of Significant Differences document. These changes

¹ In preparing this IMD, DEQ received input from several state agencies as well as the Oregon State Board of Geologist Examiners, and the Oregon State Board of Examiners for Engineering and Land Surveying.
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reduced the estimated cleanup cost by \$35 million. DEQ agrees with the changes and concurred with EPA's Explanation of Significant Differences.

Armstrong World Industries, St. Helens

The Armstrong World Industries site is a former fiberboard manufacturing plant in St. Helens, Oregon. The site includes about 38 acres of developed land and over 100 acres of adjacent wetlands in Scappoose Bay that were contaminated by former industrial activities.

In June 2018, DEQ issued its final cleanup plan to address contaminated surface soils in the upland portion of the site. Cleanup of the upland was completed on September 9, 2019, and included soil excavation and disposal, installation of a gravel and asphalt cap, and institutional controls. DEQ solicited public comments in December on a proposed Certificate of Completion and Conditional No Further Action determination for the upland area.

In September 2016, one of the former property owners, Kaiser Gypsum Company, filed for bankruptcy, delaying work on the wetland portion of the site. As part of the bankruptcy, DEQ filed a claim against Kaiser for remedial action costs for both the upland and wetland areas. The wetland cleanup remains on hold while DEQ works to resolve its claim. Work on the wetland cleanup could resume as early as spring of 2020.

J.H. Baxter, Eugene

DEQ made a final decision on the cleanup plan for the J.H. Baxter wood treatment facility in Eugene and completed the formal documentation of the plan in a ROD. The ROD describes not only the final cleanup plan, but also includes DEQ's response to the public comments received on the proposed plan in May and June 2019. J.H. Baxter has been an active wood treatment facility in Eugene since the early 1940s. Historical spills and material handling practices have resulted in soil and groundwater contamination by various chemicals including dioxins, furans, pentachlorophenol and arsenic. From 1993 through 1999, J.H. Baxter took interim measures such as improving operating procedures, installing a groundwater extraction system, removing contaminated soil, and creating an inventory of all pumping wells in the area to ensure no drinking water use. The cleanup plan builds on those measures making them permanent as well as addressing remaining soil contamination.

Red Rock Road, Sutherlin

DEQ oversaw the cleanup of arsenic-contaminated soil associated with the Red Rock Road cleanup site in Sutherlin, Oregon. The Red Rock Road was constructed by several timber companies between the 1930s and the 1960s using mine tailings from the nearby Bonanza and Nonpareil mercury mines. Weyerhaeuser Company and its predecessors used the road for hauling timber from the forests east of Sutherlin to the mills in Sutherlin and the I-5 corridor. Rail operations stopped in 1966, and eventually, the rails and ties were removed and the rail easement was mostly absorbed by adjacent properties. The mine tailings in Red Rock Road contained arsenic, which was not removed from the ore during the mining process, unlike mercury which was mostly removed from the ore. Multiple properties were affected by the mine tailings. Weyerhaeuser Company conducted several assessments and also removed contaminated soil from several residential properties. Based on the findings of a detailed risk assessment, and removal of contaminated material, DEQ issued a No Further Action determination in January 2019. Currently, all properties along Red Rock Road meet DEQ cleanup rules and do not require further assessment or cleanup.

Eugene Water and Electric Board, Eugene

DEQ worked with the Eugene Urban Renewal Agency, City of Eugene, and Eugene Water and Electric Board to facilitate the cleanup and redevelopment of a large industrial area along the Willamette River in downtown Eugene. The property has been used for a variety of industrial purposes since 1911 and was impacted with arsenic, polychlorinated biphenyls, and petroleum. DEQ oversaw the site characterization, cleanup, and extensive soil management efforts during redevelopment to allow the work to proceed efficiently, while also being protective of human health and the environment. This area will now be redeveloped into multi-family residential housing, commercial operations, and public greenspace as part of the City of Eugene's Downtown Riverfront Corridor Master Plan.

Northstar Development Site, Salem

DEQ worked with owners of the Northstar Development Site, in Salem, to convert the former agricultural property into a residential subdivision. Dieldren-contaminated soil was excavated and removed from the site and managed on the site to eliminate the exposure to humans and the environment. Cleanup and redevelopment is occurring in phases and DEQ is addressing each phase through issuance of No Further Action determinations. There is no formal mechanism in the development process that requires property owners to work with DEQ on these conversions of agricultural lands. Many developers enter DEQ's voluntary cleanup program to address this type of contamination and Western Region staff worked on similar projects in the Medford area in recent years. As a result of the increased number of agricultural land conversions, DEQ updated its Guidance for Evaluating Residual Pesticides on Lands Formerly Used for Agricultural Production in January 2019.

North Ridge Estates, Klamath Falls

As mentioned above in Section 2, North Ridge Estates is an EPA National Priorities List site comprised of a residential subdivision approximately three miles north of Klamath Falls. The site is contaminated with asbestos-containing material resulting from demolition of about 80 military barracks buildings from the 1940s. EPA is the lead agency for the cleanup and DEQ is working closely with them through remedy implementation. In March 2014, EPA set aside approximately \$37 million to fund remedial actions, with the focus on removing asbestos-containing material from all residential parcels and disposing of it in two on-site landfill cells. While the majority of work on this site is complete, DEQ continues to work with the county on long term management of the site repositories and establishment of a memorial park complete with outreach and information kiosks. A bankruptcy receiver continues to work with DEQ to sell off remaining properties with the expectation that all properties will be back into productive use by early 2020. DEQ also recently began working on operable Unit 2 adjacent to the site in conjunction with EPA and the Army Corps of Engineers. This property is mostly impacted by historical munitions.

Former Bend Demo Landfill / OSU-Cascades, Bend

DEQ continues to work with individuals on facilitating reuse of properties through DEQ's prospective purchaser process. Specific examples in Eastern Region include, OSU-Cascades, Lake Ewauna, and the Golconda Mine. At the OSU-Cascades site, DEQ's Cleanup and Materials Management programs have been overseeing this work over the past decade, utilizing a combination of Brownfield and Solid Waste Orphan funds. Beginning in December 2019, OSU-Cascades began full-scale operation of waste excavation at the Bend Demolition Landfill, which it recently purchased from Deschutes County. The waste, which is largely wood waste and sawdust from mills, will be screened and blended with clean soil or pumice to create a blended soil with sufficient structural strength to support future buildings. Much of this soil will be placed in the adjacent former pumice quarry in order to raise the elevation of the quarry floor by about 40 feet, and site new campus buildings in this space.

Umatilla Depot, Umatilla

EPA and DEQ continue to work on the closure and transition of the former Umatilla Chemical Depot, which is also on the EPA National Priorities List site. The Depot was established in 1941 on 19,728 acres and closed in August 2012 as a munitions and chemical weapons storage facility. Work continues on the cleanup at the remaining two operable units, the Explosives Washout Lagoons and the Ammunition Disposal Area. The western portion of the Depot has transitioned to active use by the Oregon Military Department for training, and the eastern portion will transition to the Columbia Development Authority, a local redevelopment authority as a multi-use property including a wildlife refuge.

Wallowa Lake Drum Response, Joseph

EPA and DEQ completed an investigation into reports of drums at the bottom of Wallowa Lake labeled with the herbicides "2,4-D or 2,4,5-T." The investigation identified 72 drums, only one with an herbicide label. That 55-gallon drum was rusted out with holes and contained lake water. Over the years, many 55-gallon drums have been filled with rocks and concrete to be used as anchors for floating docks. EPA and DEQ believe the drums found are part of that history. EPA's contractors removed all drums that appeared to be intact or had a label indicating it may have previously contained a hazardous substance. EPA and DEQ determined the remaining

drums assessed at the bottom of Wallowa Lake are filled with lake water and do not pose an imminent risk to people or wildlife. EPA and DEQ worked in collaboration with the City of Joseph, Wallowa Lake State Park, Oregon Department of State Lands, Oregon Department of Fish and Wildlife, Oregon Health Authority, Oregon State Marine Board, Wallowa County Sheriff's Office, Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation, and Confederated Tribes of the Colville Reservation.

Lindsey Lake Spill Response, Hood River / Cascade Locks

A tanker truck crashed and spilled 4,400 gallons of diesel on I-84 near Lindsey Lake between Hood River and Cascade Locks in extreme weather conditions in February 2019. The fuel entered Lindsey Lake, an embayment connected to the Columbia River. The lake contains sensitive wetland habitat and supports several species of economic and environmental significance. The spill and subsequent snow removal response also impacted Lindsey Creek, adjacent wetlands, a portion of the Columbia Gorge trail, and nearby woodlands. DEQ, Oregon Department of Transportation, EPA, Washington State Department of Ecology, the responsible party and others spend approximately three weeks cleaning up and facilitating work at the location. Long term monitoring of soil, groundwater, and wildlife habitat is continuing under a rehabilitation plan.

Voluntary Cleanups

The 1991 Oregon Legislature authorized a Voluntary Cleanup Program (VCP) to provide DEQ oversight to willing parties for investigating and cleaning up contamination from their properties. This cooperative approach helps parties proceed efficiently, and meet funding and redevelopment deadlines. In 1999, DEQ added a second VCP pathway - independent cleanup - which allows parties to complete their own remedial actions with limited or no DEQ oversight. With 90 days' notice, Cleanup staff typically review and approve a final cleanup report within 60 days of report submittal. The independent cleanup option is available for relatively simple and moderately contaminated sites that may exceed acceptable risk levels but do not pose significant threats to human health or the environment.

As of June 2019, about 1783 sites were active in the VCP, with some 1,231 sites following the traditional pathway and 552 in independent cleanup. Since 1991, the VCP has issued NFA decisions for 1,234 sites, far more than an enforcement/penalty approach could have produced.

Brownfield Redevelopment

A brownfield is a vacant or underused property where actual or perceived contamination hinders the site's expansion or redevelopment. These are often highly visible eyesores where uncertainty about potential cleanup liability has derailed opportunities to bring new site uses and jobs that would revitalize a community's health and vitality. Nearly every community has brownfields. They are vacant lots we drive by daily, the piles of polluted dirt behind rusting chain-link fences, abandoned storefronts along our main streets. Cleanup and reuse of these properties can cure blight, increase local property tax bases, provide jobs, help meet Oregon's land use goals, and enhance public health and the environment.

In fiscal year 2019, DEQ provided significant technical assistance and advice to 15 local governments that received EPA brownfield planning, site assessment, or cleanup grants. DEQ used about \$388,000 in EPA grant funds at eight brownfields to conduct site investigations and explain further-action recommendations (or make NFA decisions). The paragraphs below are examples of important brownfield activities and outcomes DEQ was involved in during the fiscal year.

In December 2019, DEQ attended EPA's National Brownfield Conference in Los Angeles. The participation in the conference was funded by EPA's State Response Cooperative Agreement. A DEQ Brownfield Coordinator presented "Community-Led Landfill Transformation – Construimos Cully Park!", speaking to the importance of ongoing, sustained community engagement in the successful transformation of a landfill into a community park, in an environmental justice neighborhood with no access to green space.

Oregon Brownfields Coalition

In 2014, DEQ joined the Oregon Brownfields Coalition, a diverse group of public, private, and nonprofit partners with a common agenda of finding collaborative strategies to transform brownfield liabilities into community assets quickly and equitably. In 2015, Oregon's Brownfield Coalition was instrumental in the passage of HB 2734, establishing Land Bank Authorities where a local government may create an authority for the purpose of acquiring, rehabilitating, redeveloping, reutilizing or restoring brownfield properties that are located within the geographic boundaries over which the local government has jurisdiction. In 2018, Clackamas County initiated the formation of Oregon's first Brownfields Land Bank Authority (CCLBA). This will allow the county to bring strategic but under-performing sites back into productive use, create a cleaner and healthier environment by remediating contamination, and address the severe challenge of regional industrial land shortage. The county will also use the CCLBA to protect the Region's Urban Growth Boundary (UGB) by optimizing the use of land within the UGB, taking advantage of existing infrastructure rather than incurring the cost of extending transportation, water and sewer infrastructure to the region's periphery. Other advantages of the Authority is it will provide the opportunity to create more open spaces and parks, as well as affordable housing. DEQ will continue to participate in the Oregon Brownfields Coalition to support this important work.

City of Beaverton Creekside District Site Assessment

Beaverton applied for, and received, a \$300,000 Brownfields Assessment grant from EPA. The community-wide hazardous substances and petroleum grant funds will be used to conduct ten Phase I and five Phase II Environmental Site Assessments, with technical assistance by DEQ. If requested, DEQ will conduct oversight for the assessments using cost-recovery agreements for each site. Grant funds will also be used to develop a Public Involvement Plan and conduct community engagement and cleanup planning activities. The target area for this grant is the Creekside District located in Beaverton's downtown.

Prosper Portland Central Post Office Redevelopment Planning

Prosper Portland applied for and received an EPA Brownfield Hazardous Substance Cleanup Grant for \$500,000 to clean up the former US Postal Service (USPS) Portland Processing Distribution Center located at 715 NW Hoyt Street in the City of Portland. The 14-acre site is located in an area known as the Broadway Corridor, near Portland's Central Business District. From 1882-1959, the eastern area of the site was owned by the Northern Pacific Terminal Company, which conducted railyard operations on the site. From 1893 into the 1930s, a manufactured gas plant operated in the northwest corner of the site. The site was used as a USPS mail processing facility from 1962 until 2018 when it was vacated. Prosper Portland will remove and properly dispose of over 1,800 tons of contaminated soil that exceed human health hot spot screening levels, and conduct asbestos abatement of two large buildings prior to demolition. These cleanup actions will support the larger site redevelopment effort at the 14-acre site.

EPA's grant funding will support the grantees mixed-use redevelopment plan for the property, including park and open space, commercial uses, and 2,400 units of urban residential construction (30% of which will be affordable housing). In addition to creating an estimated 4,000 jobs, site redevelopment will be expected to significantly reduce blight and crime. Grant funding also will support community outreach activities, public meetings, and the development of fact sheets and web pages.

On-Going Assessment Grants

DEQ continues to provide technical assistance and oversight on previously awarded (2017) EPA assessment grant. The grant winners include the following programs:

- City of Ontario, Malheur County and partner cities Nyssa and Vale received two brownfields environmental site assessment grants totaling \$600,000.
- Oregon Cascades West Council of Governments, and coalition partners - the cities of Newport and Toledo, the Confederated Tribes of the Siletz Indians, and Lincoln County – received two brownfields environmental site assessment grants totaling \$600,000.
- Rogue Valley Council of Governments and coalition partners Jackson County and the cities of Medford, Central Point and Grants Pass received two brownfields environmental site assessment grants totaling \$600,000.

- City of Eugene, City of Springfield and Lane County received their second coalition grant for \$500,000.

The 2018 grant winners include the following programs:

- Cities of Corvallis, Albany, Monroe, and Philomath, and Benton County received two brownfields environmental site assessment grants totaling \$600,000.
- Cities of Lakeview and Paisley, and Lake County received two brownfields environmental site assessment grants totaling \$600,000.
- City of Beaverton received \$400,000 in petroleum cleanup funds for the Beaverton Activities Center, located at 12500 SW Allen Boulevard. The cleanup sites will be home to a new, state-of-the-art Public Safety Center.

Prospective Purchaser Agreements

Prospective Purchaser Agreements (PPA), facilitate the cleanup and return to productive use of properties contaminated with hazardous substances. The agreements provide developers and others with the means to manage risk and liability before acquiring contaminated property, and to make financial investments and move forward with redevelopment following acquisition. A PPA is a legally binding agreement between DEQ and a prospective purchaser that limits the purchaser's liability for environmental cleanup at the property, in exchange for the purchaser providing a "substantial public benefit" such as cleanup, funding for cleanup, redevelopment of a vacant or underused property, or any other important public purpose. For each project, DEQ uses its discretion in determining what constitutes a substantial public benefit, believing that flexibility is key to providing the best community outcomes from new site uses.

During fiscal year 2019, DEQ received numerous inquiries about both the PPA program in general and specific sites; completed nine new PPAs; and assisted parties owning properties with existing PPAs with various cleanup, redevelopment and transactional needs through: acknowledging notices of transfer, negotiating PPA amendments, and issuing certifications of completion.

Seven of the new PPAs are in the Northwest Region, and supported cleanup and redevelopment of privately owned industrial/commercial properties; enabled nonprofits to develop properties needed to realize public benefits including affordable housing and animal welfare; and assisted municipalities with downtown revitalization and community development. In the Eastern Region, the Baker School District obtained a PPA to continue its national award winning program building educational and vocational opportunities around contaminated site cleanup and sale. In the Western Region, the North Ridge Estates superfund cleanup reached a successful conclusion including entering a PPA with Klamath County covering the site to be used for final disposal. The PPA program continues to effectively transition properties from long-term state cleanup oversight (NuWay Oil in Portland) and also supports redevelopment of major Superfund sites previously under federal oversight (Northwest Aluminum in The Dalles). DEQ is also using the PPA program to extend the innovative and effective settlement framework for the Columbia Slough in Portland (supporting ongoing industrial uses) and in Klamath Falls/Lake Ewauna (helping to facilitate the transition from legacy lumber-related operations to commercial and residential uses).

All three of the award winning projects mentioned in the brownfields section of this annual report (North Ridge Estates, McCormick & Baxter, and the Troutdale Reynolds Industrial Park) include PPAs as one component in the overall plan for cleanup and redevelopment, and the Prosper Portland redevelopment of the Hoyt property likewise will be accomplished under a PPA with a detailed scope of work designed to ensure cleanup protective of public health and the environment as multiple parties work on the site.

In addition to the PPAs completed during fiscal year 2019, one PPA, completed in August 2019, is of special interest. The PPA with the Confederated Tribe of the Grand Ronde (CTGR) covers a 23-acre site in Oregon City. The site is a core ancestral homeland of CTGR, and CTGR's acquisition will enhance, preserve, and restore CTGR's cultural connections to the site as well as traditional sustainable management of the natural resources of the area. CTGR intends to rehabilitate the site and rebuild its tribal homelands by investing in the

natural and cultural resources which were and are central to CTGR, its history, and its future. The site most recently was occupied by the Blue Heron Paper Company, and CTGR has represented it intends to partner with the Willamette Falls Legacy Project (a joint effort of Metro, State of Oregon Parks, Oregon City, and Clackamas County to promote reuse of portions of the site) in support of that Project's core values of health habitat, economic redevelopment, historic and cultural interpretation, and public access.

This is the first PPA that DEQ has entered with a tribe. CTGR is taking fee title to the property, and as such is subject to state and local laws applicable to the property. CTGR Tribal Council passed Resolution 159-19 to provide a limited waiver of the tribe's sovereign immunity to enable them to enter into an enforceable PPA Consent Order with DEQ. This PPA provides CTGR with liability protection for legacy contamination resulting from development by settlers dating back to the 1860s through the date of acquisition, and will ensure ongoing protection of public health and environmental quality as the property is cleaned up and repurposed over the coming years.

The major elements of the PPA scope of work include:

- Initiating site stabilization best management practices within 90 days of entry into the PPA. This includes environmental site worker protection and safe building access, identifying and removing residual hazardous substances used in prior operations, and implementing stormwater source control measures.
- Initiating cleanup work on five high priority remedial areas within 18 months.

Industrial Orphan Sites

Industrial Orphan sites² are contaminated properties whose responsible parties are unknown, unwilling, or unable to conduct cleanup. These sites include individual properties as well as area-wide sites where hazardous substances have affected sources of drinking water and other waterbodies.

DEQ generally designates a site as an orphan when it poses serious threats to human health or the environment. DEQ may also consider designating contaminated sites with significant but unrealized reuse (brownfields) potential as orphans. DEQ may also refer large and complex orphan sites to EPA for listing on the National Priorities List and use the Orphan Site Account to pay the state's required 10 percent share of remedial action costs. Since 1992, DEQ has declared 124 sites as industrial orphans. It is important to note that 34 of these sites have been cleaned up to no further action status, with many now supporting enhanced uses through redevelopment. The remaining orphans are in various stages of investigation and cleanup, including long-term monitoring and/or operation and maintenance (such as ongoing treatment systems to protect drinking water resources). During fiscal year 2019, DEQ worked actively on eight orphan sites.

The 2017 Legislature approved two General Fund-financed bond sales to be issued during the 2017-2019 biennium. The first bond sale occurred on October 18, 2017, providing \$5.8 million to fund projected Industrial Orphan expenditures through fiscal year 2021. The second bond sale is scheduled for spring 2019. Based on ongoing and projected future orphan cleanup work, DEQ projects that funds from the 2017 and 2019 bond sales, coupled with cost-recovery activities (see below) will be exhausted by the end of fiscal year 2021.

DEQ will continue funding sites presenting significant risks to human health or the environment where responsible-party resources are unavailable. Subject to the availability of funds, DEQ will also consider using orphan funds to complete site cleanups rather than simply stabilize contamination, and to address eligible sites where development potential is significant.

Since 1991, DEQ has returned approximately \$9.3 million to the Orphan Site Account by recovering some past expenditures from responsible parties and their insurance companies. While prospects for additional cost

² There is also a *Solid Waste Orphan* account to clean up contaminated solid waste landfills, funded by solid waste disposal fees rather than bond sales. To date, DEQ has declared four former landfills as solid waste orphans.

recovery are limited, DEQ will continue pursuing recovery of past orphan expenses to maximize funding available for current and future orphan sites.

As mentioned above, states must contribute 10 percent of EPA’s remedial-action costs at National Priorities List sites with no viable responsible parties. Subject in part to the cost and timing of EPA’s remedial activities at National Priorities List sites in Oregon, DEQ anticipates the need for \$5 - \$10 million of additional orphan funding to meet its estimated federal match requirements over the next 10 years. In the coming years DEQ will continue to face a very significant issue in paying for orphan site cleanups, including the required state share of remedial-action costs at National Priorities List sites.

3. Cleanup Milestones and Projections

This section summarizes Cleanup program achievements in fiscal year 2019 (July 1, 2018 to June 30, 2019) and projections for the fiscal year ahead.

Accomplishments – Fiscal Year 2019

Sites in DEQ’s Database

Since 1988, DEQ has identified over 5,600 contaminated and potentially contaminated sites in Oregon and compiled information regarding these sites in the Environmental Cleanup Site Information database. DEQ identified 63 new sites in fiscal year 2019.

The most highly contaminated sites have been identified and the discovery of new sites should decline in the future. However, the “universe” of future cleanup sites is unknown. State law does not require reporting of contaminated sites to DEQ (with the exception of underground storage tank releases and current spills above reportable quantities). Thus, there are “legacy” contaminated sites that DEQ may not learn about until: 1) they come into the voluntary cleanup program (described in Section 2); or 2) a third party reports them to DEQ; or 3) they are discovered by DEQ’s Cleanup staff conducting research in various parts of the state. Additionally, new releases still occur, and people find unexpected contamination during construction or other activities – events that DEQ cannot predict.

Confirmed Release List Sites

In fiscal year 2019, DEQ added two sites to the Confirmed Release List and removed two. The list includes sites with documented contamination (rather than just being suspected). In recent years DEQ has limited its use of the Confirmed Release List, preferring instead to document sites in other ways.

Sites on the Inventory

In fiscal year 2019, DEQ added two sites to the Inventory of Hazardous Substance Sites and removed two. The Inventory lists sites where DEQ has confirmed contamination that presents risks to human health or the environment. Sites relying on engineering or institutional controls to manage risks must also remain on the Inventory. In recent years DEQ has limited its use of the Inventory, preferring instead to document sites in other ways.

Preliminary Assessments

A preliminary assessment is an investigation of a site, its surroundings, and plants and animals potentially affected by pollution. DEQ reviews a site’s history and conducts a walk-through to determine whether contamination is likely and what its effects could be – and may take samples. DEQ uses this information to determine the site’s priority for further investigation and cleanup. In fiscal year 2019, DEQ or parties working with DEQ completed seven Preliminary Assessments.

Removals

A removal is a cleanup that occurs before, during or in lieu of, a remedial investigation, feasibility study or a final cleanup remedy. Removals are commonly used to address “hot spots” of contamination. Removals help protect public health by preventing exposure to contaminants and the further spread of contamination. Removals are typically short-term activities over several months but on occasion may take several years to complete. In fiscal year 2019, Oregon initiated and completed five formal removal actions.

Remedial Investigations

A remedial investigation involves taking samples at a site to determine if contaminants are present, their locations, concentrations, and migration patterns. Remedial investigations include an evaluation of the risks the contamination poses to human health and the environment (plants and animals). In fiscal year 2019, DEQ approved three as final. Remedial investigations often take more than a year to complete so investigations started in a given fiscal year are generally completed in a subsequent fiscal year.

Feasibility Studies

Feasibility studies provide detailed comparisons of possible cleanup methods for site contamination posing unacceptable levels of risk. Various remedial approaches or technologies are developed and evaluated for protectiveness. Options that would protect human health and the environment are then evaluated for effectiveness, ease of implementation, reliability, implementation risk and reasonableness of cost, as the law requires. DEQ recommends an option as the cleanup strategy and makes the selection after consideration of public comment. DEQ approved three Feasibility Studies as complete in fiscal year 2019.

Records of Decision

A ROD documents DEQ’s decision on a site’s cleanup method, based on the options evaluated in the feasibility study. DEQ finalizes the record of decision after evaluating public comments on the proposed approach and adjusting it as needed. The ROD draws upon remedial investigation and feasibility study findings to summarize the nature and extent of contamination and any risks it poses, the alternatives considered in the feasibility study, and the selected cleanup alternative to be implemented. DEQ completed two RODs in fiscal year 2019. It takes several months to write a ROD, open it for public comment, and approve it. Many simpler sites are addressed using staff memos and reports rather than a ROD.

Remedial Actions

A remedial action is the final cleanup action at a site. Remedial actions may involve eliminating contamination from a site by excavation or treatment; isolating the contamination through institutional controls, such as deed restrictions that limit certain land or water uses to prevent exposure; or use of engineering controls such as caps, fencing or subsurface barriers. DEQ provided oversight for 40 remedial actions initiated in fiscal year 2019 and determined that 17 were complete.

No Further Action Decisions

DEQ makes a “no further action” (NFA) decision after concluding that a site no longer poses risks to human health or the environment, and no additional investigation or cleanup is needed. During fiscal year 2019, DEQ issued NFA decisions for 61 sites. The number of NFA decisions exceeds the number of records of decisions and remedial actions because many simple sites are cleaned up independently and then request DEQ review that the site is now protective in order to issue a NFA decision. In other cases, DEQ determines that low levels of contamination do not threaten human health or the environment. At the end of fiscal year 2019, there were a total of 2,170 cleanup sites with DEQ NFA decisions. This amounts to approximately 37% percent of all sites in DEQ’s ECSI database.

Cleanup Actions Initiated and Completed for Fiscal Year 2019; Forecast for Fiscal Year 2020

The following table summarizes actions completed by DEQ’s Environmental Cleanup Program during fiscal year 2019. A forecast for fiscal year 2020 is also included.

Site actions	FY 2019 (Actual)		FY 2020 (Forecast)	
	Initiated	Completed	Initiate	Complete
Suspected Release Sites Added to Database		63		60
Added to Confirmed Release List		2	--	--
Added to Inventory		2	--	--
Site Screenings	11	2	8	8
Preliminary Assessments	5	7	4	4
Removal Actions	7	5	7	5
Remedial Investigations	9	3	5	3
Feasibility Studies	5	3	8	4
Records of Decision	3	2	6	4
Remedial Actions	7	5	12	13
No Further Action Determinations		94		100

Fiscal year 2020 forecasts are based on best professional judgement of the cleanup program management team. One-time actions show data in the "complete" columns only.

Four-Year Plan: Projected Cleanup Actions

The program's most recent four-year plan was developed for the 2015 Environmental Cleanup Annual Report. It identified goals for cleanup activities from July 2015 to June 2019. DEQ plans to initiate long-term strategic planning effort as described in the following section. One outcome of the planning will be a new four-year plan for projected cleanup actions, which will be included in the 2020 Annual Report to the Legislature.

4. Cleanup Program Modernization

As Oregon's population grows and its industries evolve, DEQ's Environmental Cleanup program faces new opportunities and new challenges. Statewide, former industrial sites are being redeveloped for new purposes, and DEQ often now works on smaller sites that require quick turnaround due to real estate transactions. Meanwhile, DEQ is called to engage residents in neighbouring communities while it performs essential oversight of cleanup.

Over the past two decades, revenue sources have declined while DEQ adjusted programs and responsibilities to meet changing needs and expectations. The program is operating with fewer filled positions, despite greater pressures on staff and management. Simply put, the program's funding levels no longer sustain the work that is required. To address this situation, DEQ will modernize its program by stabilizing funding and strategically planning the work ahead.

Funding Modernization

DEQ's Environmental Cleanup program relies on a complex variety of revenue sources, including cost recovery, fees, federal grants, and bond sales. The program's internal systems and funding structure have remained largely the same since its inception over 30 years ago. Both internal systems and funding structure need an update. A description of funding sources follows.

Cost recovery

Cleanup and hazardous waste laws authorize DEQ to charge all reasonable costs attributable to or associated with cleanup or hazardous waste activities at a particular site. Many of DEQ's expenses are financed through cost recovery and from the parties performing cleanups. DEQ recovers costs for both cleanup oversight and, if

necessary, the cost of contractors hired to perform the cleanup. Responsible parties are often reluctant to pay full costs.

Fees

Fees pay a portion of Environmental Cleanup program costs, and fee revenue has declined in recent years. Two-thirds of the revenues from hazardous waste disposal fees, collected at the hazardous waste landfill near Arlington, are devoted to the Environmental Cleanup and Emergency Response programs. DEQ also uses a portion of this fee revenue to meet federal grant match requirements. Dry cleaning facility operators pay fees to fund site assessment and/or cleanup of qualifying dry cleaner sites, and DEQ oversight of the industry. Both chemical waste fees and dry cleaner fee revenues are declining. Dry cleaner revenues are declining as businesses close over time or switch to less toxic products. A “bulk rate discount” for chemical waste fees means that many waste haulers today currently pay about \$10 per ton, compared to \$20-26 per ton 15 to 20 years ago. Tonnage disposed has remained relatively flat since 2002, but fewer waste haulers are disposing of larger loads resulting in drastically reduced revenue.

Grants

Federal funds, primarily from EPA, support cleanup in several ways. DEQ uses grants to fund the development and administration of the statewide Environmental Cleanup program; support efforts to develop brownfield sites; pay for federal-level site assessments and brownfield assessments; and, enable staff to participate in decisions related to EPA Superfund sites in Oregon. The U.S. Department of Defense provides some funding through a cooperative agreement for DEQ’s oversight of cleanups at military facilities. Federal grant funds are decreasing or remaining flat, which effectively erodes DEQ’s “buying power” as costs increase with inflation.

Bond Sales and Other Revenue Sources

For sites where responsible parties have not been identified, or where they are unable or unwilling to finance the cleanup, DEQ uses a few different revenue streams to fund the work:

- The Solid Waste Orphan Site Account is funded by a portion of solid waste tipping fees.
- The Industrial Orphan Site Account has been funded by long-term bonds, financed primarily from General Funds, and a contribution from hazardous substance possession fees.
- DEQ has also been successful in recovering orphan funds used to clean up sites through agreements with prospective purchasers of contaminated properties, settlements with responsible parties once liability is established, or owners’ insurance claims.

Strategic Planning

In 2020, DEQ intends to initiate a two-phase strategic planning process. While background work has been done to describe the program’s current state, the program requires long-term strategic planning to identify potential rulemaking and/or statutory changes, plans for future staffing needs, and to evaluate additional sources of program funding. The first phase of strategic planning will address issues with program funding in the next five years. The second phase will envision what the program could and should look like by the year 2050. This will include extensive stakeholder involvement with the regulated community and others potentially impacted by proposed changes. DEQ will bring an environmental justice lens to all these efforts, which will require different types of stakeholder engagement than the agency has historically employed. One result will be an updated four-year plan for projected cleanup actions.