Oregon
Kate Brown, Governor

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Senator Kathleen Taylor, Co-Chair
Representative Jeff Reardon, Co-Chair
Joint Committee on Ways and Means
Subcommittee on Natural Resources
900 Court Street NE
Room H-178
Salem, OR 97301

Dear Co-Chairs:

Thank you for the opportunity to present an overview of the Governor's Recommended Budget for 2019-21 for the Oregon Department of Environmental Quality. Below are the Department's responses to questions that came up during this week's budget hearing.

1. How does DEQ pay for the costs of emergency response cleanup of spills?

In 2018, DEQ's Emergency Response program received approximately 1,300 spills notifications through the Oregon Emergency Response System (OERS). There are four main categories of notifications requiring a response: (a) highway, rail and marine spills; (b) sewage spills; (c) drug labs; and (d) other.

In 2018, program costs for Emergency Response totaled $1.4 million. Of this amount, DEQ recovered $526,000 from responsible parties. Another $68,000 in funding was provided through the petroleum load fee (for highway spills), and we received another $30,000 from the federal government for training costs. This left a funding gap of $777,000 for 2018 (which is fairly typical of our experience in recent years). Funding for this gap is provided from hazardous waste disposal fees (largely from the Arlington facility), and by funding from the cleanup program (fees).

2. Please share the number and location of orphan sites and brownfields across Oregon.

See the attached maps for the location of sites. There are 444 brownfield sites listed on DEQ's Environmental Cleanup Site Information list as of February 22, 2019. Many of these sites are listed as no further action required, or as no further action required with conditions. In addition, this list does not includes sites with leaking underground storage tanks (the LUST program)

Business Oregon works closely with DEQ to manage two brownfields financing funds -- the Oregon Brownfields Redevelopment Fund (BRF) and the Oregon Brownfields Cleanup Fund (BCF). The BRF is capitalized by proceeds from the sale of state lottery revenue bonds. The BRF is able to assist both public and private entities with financing to address environmental assessment through cleanup of contamination on real property. The BCF is capitalized through a U.S. Environmental Protection Agency Revolving Loan Grant from the U.S. E.P.A. The BCF is only able to assist public and private entities with financing to cleanup contamination on real property. Given the federal source of funds to capitalize the BCF, both the eligibility of the applicant and the property is subject to federal crosscutting regulatory requirements.

Both the BRF and the BCF are structured as revolving loan funds, which are able to provide grant funding opportunity to public entities for publicly owned projects. Both funds offer low interest flexible loans and both funds require Business Oregon to consult with DEQ prior to making a funding decision as well as to ensure appropriate DEQ regulatory oversight and review.

3. What are the goals of the Water Core Team?

The Governors Natural Resource Office convened a Water Core Team beginning in March 2018. The team is comprised of representatives from various natural resource agencies, Regional Solutions, Business Oregon and the Oregon Health Authority. The intent is to organize around a need for efficiency, collaboration and communication across state agencies, with a focus on improved inter-agency coordination of work programs and state resources related to water. Specific objectives of the team include:

- Helping to develop an inventory of current water-related infrastructure, as well as future water-related infrastructure needs;
- Coordinating state resources being devoted to meeting Oregon's needs for investments in natural and built water-related infrastructure (pending development of longer-term proposals for decision-making);
- Identifying potential policy constraints, barrier and gaps to advancing
- priority water infrastructure needs.
- Sharing information on major water-related issues and activities in progress or emerging.
- Developing options and recommendations for the Natural Resources Cabinet and the Governor's Office consideration to address water-related issues and achieve the shared water goals and objectives.

A direct outcome of this team has been the development of the Governor's 100-year vision for preparing a secure, safe and resilient water future for the state (see attached). Associated with this vision are companion Policy Option Packages for DEQ to (POP 161) and WRD (POP 107) to begin assessment and coordination efforts to meet these needs.

4. **Is the Klamath basin considered part of the federal Coastal Zone Management Program?**

A small portion of Klamath County is included within the Coastal Zone Management Area of Oregon (see map). However, no portion of the Klamath basin falls within the CZMA zone, and no portion of the Klamath is associated with the coastal nonpoint program under Section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA) or related withholding of federal funding. In addition, only a small portion of the Klamath basin in California (the estuarine area at the mouth of the river) is included in the California portion of the federal coastal zone under the CZMA.

5. What is the status of Oakridge community work to reduce wood smoke pollution, including the dry-wood exchange?

The community of Oakridge, located in eastern Lane County is officially designated by the US EPA as nonattainment for the 24-hour fine particulate matter (PM) standard. Residential wood burning is the primary contributor to wintertime PM emissions, leading to violations of the national health based standard. Being in Lane County, efforts to monitor and reduce PM emissions is managed by the Lane Regional Air Protection Agency (LRAPA). The community has focused a tremendous amount of energy and resources on reducing wood smoke while ensuring households have access to affordable home heating. Those efforts have resulted in great progress in recent years and Oakridge has been complied with the standard (when exceptional event data is excluded) since 2016. LRAPA has begun the regulatory process needed to secure a "maintenance" designation.

DEQ supports wood smoke reduction efforts through technical and financial assistance. In 2017 the Oregon Legislature authorized $250,000 in one-time General Funds to support local-level wood smoke reduction efforts. DEQ awarded those funds through a competitive grant process. The City of Oakridge received a grant of $75,000. Those funds have supported the development and implementation of a wood smoke mitigation plan. One element of the plan is a community firewood program. The program, a partnership between the City of Oakridge, LRAPA, the Southern Willamette Forest Collaborative and Inbound LLC, provides fully cured cordwood at significantly reduced rates for those in needs. Cured wood burns hotter and cleaner, reducing PM emissions.

For additional information about efforts to reduce wood smoke in the Oakridge community please contact LRAPA Director Merlyn Hough at merlyn@lrapa.org or 541-736-1056.

6. Please provide information about Oregon's air quality monitoring network, how it is funded, which stations are mobile and what monitoring does and doesn't tell us about diesel emissions.

DEQ maintains an extensive statewide network of ambient air quality monitors. The network is designed to conform to the US EPA's National Monitoring Strategy as well as state and local needs. The table below describes the types of monitors used in the network and how the data they generate are used.

Air Monitoring Networks	Number of Sites	Purpose
National Ambient Air Quality Standards compliance		
Ozone	11	These monitors are designed to determine community compliance with the national ambient air quality standards.
Carbon Monoxide	2	
Nitrogen Dioxide	2	
Sulfur Dioxide	2	
Lead	--	
PM 2.5 (Federal Method)	10	
Air Toxics Monitoring		
National Air Toxics Trend Sites	2	These monitors provide data on air toxics concentrations in small and large communities across the state.
Oregon Long-Term Trend Sites	6	
Oregon Annual Rotating Sites	4	
Real-time Particulate Monitoring		
Existing sites	43	Data from these monitors track levels of smoke from residential wood burning, prescribed burning and wildfires.
Planned additional sites	30	
Meteorology		

Meteorological stations	22	These monitors collects meteorological data that inform air quality forecasting and modeling.

Air Toxics and PM monitoring sites are funded through a combination of federal grants and state general fund dollars. DEQ receives various federal grants to support monitoring networks including PM2.5 and National Air Toxics Trend Sites, as well as Performance Partnership Grants under the 105 Clean Air Act, equating to approximately $3.3 million dollars for the 19-21 biennium. In order to maintain the current service level of monitoring work, federal funds are supplemented with general funds as necessary due to federal funds remaining relatively flat over multiple past biennia. Flexibility in funding between PM and Air Toxic monitoring is critical due to the many shared activities between the two types of monitoring. Activities that are shared between the two are difficult to specifically attribute to either PM or Air Toxics and are instead categorized as generally related to maintaining the air quality monitoring network.

In recent biennia the legislature has invested in expansions of the air quality monitoring network. Specifically:

- In February 2016, the Oregon legislature provided funding to investigate concerns about air toxics through additional air monitoring. The resources provided were for two metals monitoring sites, additional moss studies, data analysis and two full air toxics monitoring sites for rotation around the state. Funding included $350,000 for capital outlays. The legislature subsequently approved emergency funds of $225,000 for additional metals monitors to replace equipment on loan from EPA.
- During the 2017-2019 session, the legislature approved $2.5 million in general fund for an additional six full air toxics trend sites and 30 particulate monitors.

The locations and data generated by the monitors can be viewed in real-time at www.oraqi.deq.state.or.us or by downloading the "OregonAIR" app on your smart phone.

Currently, there is no effective method to directly monitor **diesel engine exhaust**. Diesel exhaust is a complex mixture of pollutants including carbon monoxide, sulfur oxides, volatile organic compounds, and very fine particles coated with compounds that can cause adverse health effects.

Different diesel engines produce different exhaust profiles, and while black carbon can be used as a surrogate for diesel exhaust, there are other sources of black carbon including smoke from wood stoves. DEQ is involved in an effort to address this data challenge. The Environmental Protection Agency Community-Scale Air Toxics Ambient Monitoring Grant is designed to allow DEQ and research partners at PSU and Reed College to better quantify diesel emissions from significant but poorly understood sources such as rail activity, construction, freight distribution, and marine vessels. DEQ and collaborators will identify two priority Portland neighborhoods of high vulnerability to diesel particulate matter. PSU will analyze the data for source contribution and health impacts in those areas, and engage the public by hosting workshops regarding the study. DEQ and PSU will communicate the study results to stakeholders and policy makers to inform emission reduction and mitigation measures. The amount of the grant, awarded in 2018, was $466,276.

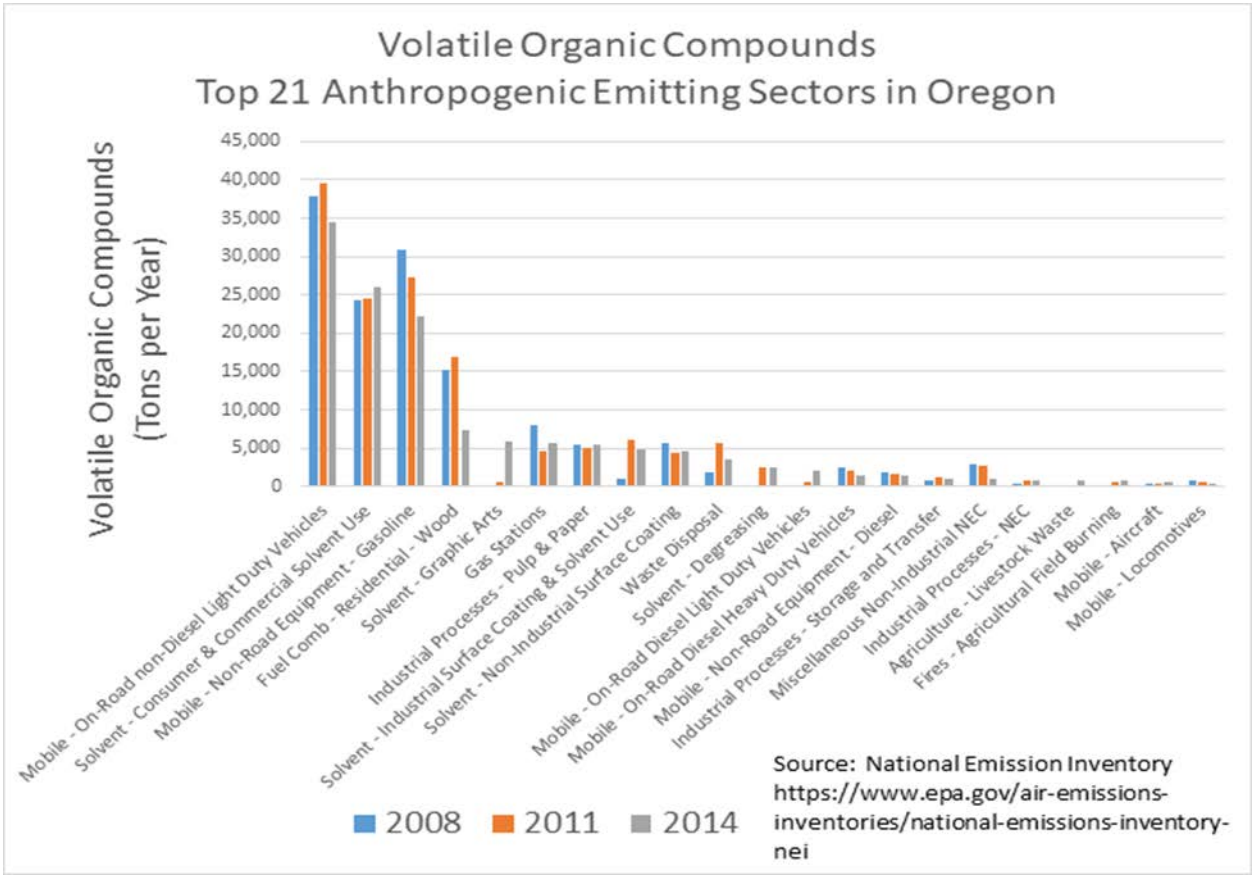
Despite challenges in ambient air monitoring, there are other sources of data that DEQ analyzes and makes available to communities when characterizing emissions of diesel engine exhaust. The primary source is the National Emissions Inventory (NEI). NEI estimates emissions of pollutants from a variety of sources. Additional modeling tools (such as the National Air Toxics Assessment) can be used to estimate and communicate the concentrations of pollutants (including diesel engine exhaust) in the air at particular location.

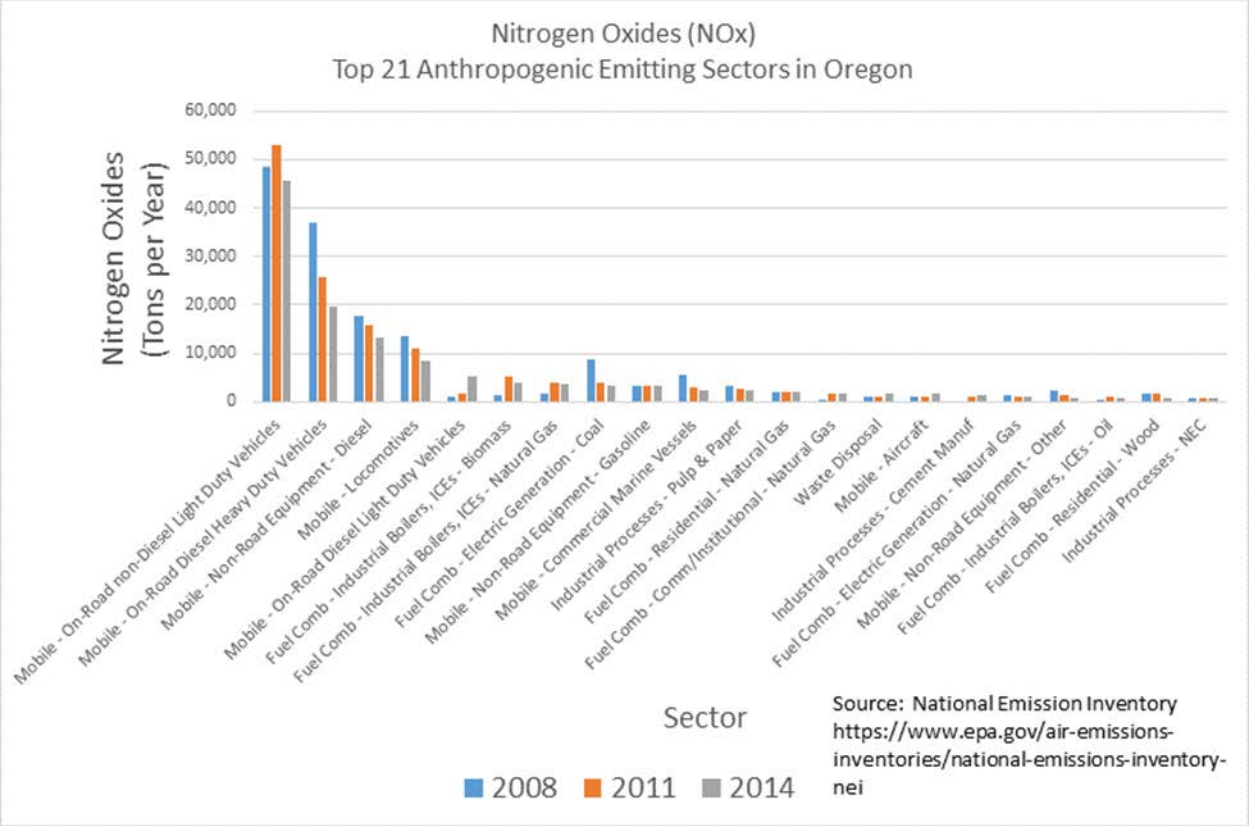
DEQ is also engaged in work to improve the accuracy of modeling tools, specifically as they relate estimates from non-road sources. In 2017 the Oregon legislature authorized $500,000 in one-time General Funds for DEQ to hire a third-party contractor to survey owners and operators of non-road diesel powered equipment (construction, agriculture, logging, diesel generators, etc.). The survey is designed to assess the horsepower, age and operating profiles of equipment used in Oregon. This project is scheduled to conclude in October 2019 and the data will be used to update air quality modeling of diesel emissions.

7. What are the top contributors to ozone?

Ozone is a "secondary" pollutant, meaning it is not directly emitted. Rather it is formed in the atmosphere when primary pollutants, particularly nitrogen oxides (NOx) and volatile organic compounds (VOCs) react in sunlight and stagnant air. Efforts to address ozone formation focus on reducing the primary pollutants.

The figures below illustrate the top 21 anthropogenic sources of NOx and VOCs in Oregon. Data used to generate the graphs are from the National Emission Inventory (NEI). The NEI I is an estimate of air emissions of dozens of pollutants from several source categories. Examples of categories include point sources (such as industrial emissions), mobile sources from vehicles, events such as wildfires and prescribed burns, and nonpoint sources such as residential heating and consumer solvent use. EPA assembles the inventory from emission reports that state, local and tribal air agencies send them. EPA also develops its own data. The data are estimates, not measured air monitoring results.
These data tell us that the estimated highest anthropogenic nitrogen oxide emitting sectors in Oregon are on-road light duty non-diesel vehicles, on-road heavy duty diesel vehicles, non-road diesel equipment, and locomotives. The highest emitting sectors of anthropogenic volatile organic compounds are light duty non-diesel vehicles, consumer and commercial solvent use, non-road gasoline equipment, and residential wood burning.


Volatile Organic Compounds
Top 21 Anthropogenic Emitting Sectors in Oregon
Volatile Organic Compounds (Tons per Year)
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Mobile - On-Road non-Diesel Light Duty Vehicles
Solvent - Consumer & Commercial Solvent Use
Mobile - Non-Road Equipment - Gasoline
Fuel Comb - Residential - Wood
Solvent - Graphic Arts
Gas Stations
Industrial Processes - Pulp & Paper
Solvent - Industrial Surface Coating & Solvent Use
Solvent - Non-Industrial Surface Coating
Waste Disposal
Solvent - Degreasing
Mobile - On-Road Diesel Light Duty Vehicles
Mobile - On-Road Diesel Heavy Duty Vehicles
Mobile - Non-Road Equipment - Diesel
Industrial Processes - Storage and Transfer
Miscellaneous Non-Industrial NEC
Industrial Processes - NEC
Agriculture - Livestock Waste
Fires - Agricultural Field Burning
Mobile - Aircraft
Mobile - Locomotives
2008
2011
2014
Source: National Emission Inventory
https://www.epa.gov/air-emissions-inventories/national-emissions-inventory-nei



8. What is the rationale behind the fee increase for the ACDP program.

Policy Option Package 116 authorizes six permit writing positions in the ACDP program and two permit writing positions in the Title V program. DEQ can support the two additional Title V permit writing positions with existing revenue. However, additional revenue is needed to support the ACDP positions identified as necessary to manage the backlog in permit renewals and inspections (as documented in the Secretary of State's performance audit of the program).

Funding the six positions identified through the workload analysis requires a 70% increase in ACDP fee revenue. There are approximately 2,400 ACDP permit holders who pay annual permit fees ranging from $144 to $9,216 (see table below for details). ACDP fees are established in administrative rule.

If POP 116 is approved, DEQ will work with an advisory committee to determine how fee increases are allocated between each permit category. As noted verbally in the hearing on DEQ's budget, these positions (and fee increases) would be phased in relatively late in the 19-21 biennium.

Permit Type		Facility Example	Approximate Number of Payees	Existing Annual Fee
Basic ACDP		Autobody paint shops	103	$ 432
General ACDP	Fee Class One	Cement ready-mix plants	345	$ 864
General ACDP	Fee Class Two	Rock crushers	290	$ 1,555
General ACDP	Fee Class	Hard chrome plating	120	$ 2,246

	Three			
General ACDP	Fee Class Four	Wood preserving	375	$ 432
General ACDP	Fee Class Five	Gasoline dispensing facilities	800	$ 144
General ACDP	Fee Class Six	Dry cleaners	72	$ 288
Simple ACDP	Low Fee	Coffee roster, criteria pollutant emissions & attainment dependent	61	$ 2,304
Simple ACDP	High Fee	Simple sources that do not qualify for "low fee" classification	94	$ 4,608
Standard ACDP		ACDP sources whose emissions exceed limits for generic permits, are especially complex or have history of violations. Ex: Incinerators for PCBs/hazardous waste	136	$ 9,216

There are three factors contributing to the magnitude of the fee increase:

- **DEQ has not raised ACDP fees since 2013.** ACDP fees were last raised (by 20%) in 2013. Unlike the Title V permitting program, ACDP fees are not adjusted annually to keep pace with inflation. As a result, fee revenue has remained stagnant while costs have increased.
- **POP 116 proposes six new positions.** Six new permit writing positions, while justified by the Secretary of State Audit and DEQ's workload analysis, is a substantial new cost to the program. **POP 116 delays positions and the fee increase until 2020.** POP 116 proposes a fee increase that does not take effect until halfway through the biennium. Delaying the effective date satisfies two objectives: (1) this allows the agency 12 months to complete an administrative rulemaking to establish exact fee increases for each permit category and, (2) it allows fee payers adequate time to budget for the increase. However, delaying the increase concentrates the revenue need in one year, rather than spread across the biennium. As a result, a 70% is needed to afford the new positions, exiting positions and maintain an adequate ending balance heading into the 2021-2023 biennium.

Substantial, but irregular fee increases present challenges for both DEQ and fee payers. DEQ is interested in exploring options that would allow permit fees to be adjusted more regularly, keeping pace with the costs of implementing the program.

Note: POP 116 includes two additional positions from the Agency Request Budget, but does not include the General Fund needed to finance them. The positions, as proposed in ARB related to complaint response and follow-up.

9. Please clarify the costs of the EV rebate program and contracting costs.

The Oregon Clean Vehicle Rebate Program was established by the Oregon Legislature through HB 2017 (2017). The statute directs DEQ to develop and implement a program to incentive the purchase or lease of electric vehicles in Oregon. The program is funded with a privilege tax on the sale new motor vehicles. $12 Million is made available to DEQ per calendar year for the program. The statute limits administrative expenses to no more than 10% of total funds:

> Oregon Laws 2017 Chapter 750 Section 152 (5): No more than 10 percent of the moneys deposited in the fund per biennium may be expended to pay the expenses incurred in the administration of sections 148 to 152 of this 2017 Act by: (a) The department; and (b) Any third-party organization that the department hires or contracts with under sections 149 and 150 of this 2017 Act.

DEQ is in the final stages of contract negotiations with a third-party organization to manage the day-to-day implementation of the rebate program. The contract includes a not-to-exceed figure that ensures total administrative expenses (DEQ and the third-party) remain below $2.4 million per biennium.
POP 111 does not request new or additional funds to implement the rebate program, although it does increase DEQ's Other Fund expenditure limitation to ensure the agency has the limitation needed to disburse all $24 Million in rebate funds per biennium. Because the program was phased-in during the 2017-19 biennium, DEQ's Current Service Level budget only includes approximately $18 Million in Other Fund Limitation for the rebate program, requiring an additional $6 Million (approximately) to align with the $24 Million in program expenses for the 2019-2021 biennium.

10. Please provide updated financial data on the Clean Water State Revolving Fund.

DEQ issued its first CWSRF loan in 1990, and since then has loaned more than $1.26 billion to 194 Oregon communities, counties, irrigation districts and other public agencies and districts.

For 2019, DEQ will have approximately $255 million available to loan for eligible projects. DEQ is setting aside about $64 million of the total amount available in the fund to assist communities with a population of 10,000 or less. In addition, DEQ sets aside a portion of their federal grant for green projects; this amount is currently about $1.8 million. To date, 89 percent of funded projects address point source improvements (such as wastewater treatment and collection systems) and 11 percent address nonpoint source projects (such as irrigation improvements and stream bank restoration). The CWSRF program currently has 178 active loans and funds 10 to 15 new loans per year.

Thank you for the opportunity to respond to the Committee's questions. We will respond to the remaining outstanding questions early next week. Please let me know if you want additional information on any of our programs.

Sincerely,

Richard Whitman
Director

Oregon Environmental Cleanup Sites
(4,844 Sites)

as of March 2013

Base Imagery from Bing Map Service.
Cleanup site data from DEQ databases.

0 20 40 60 80 100 Miles

N
W E
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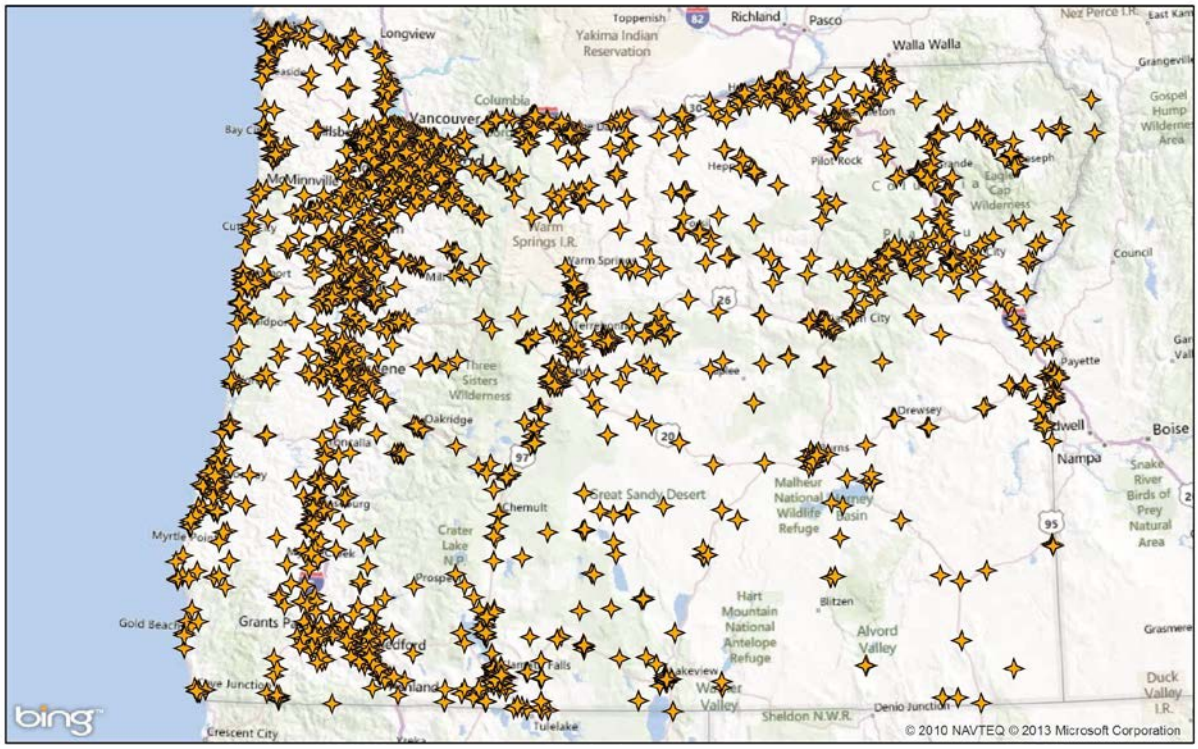
DEQ
State of Oregon Department of Environmental Quality

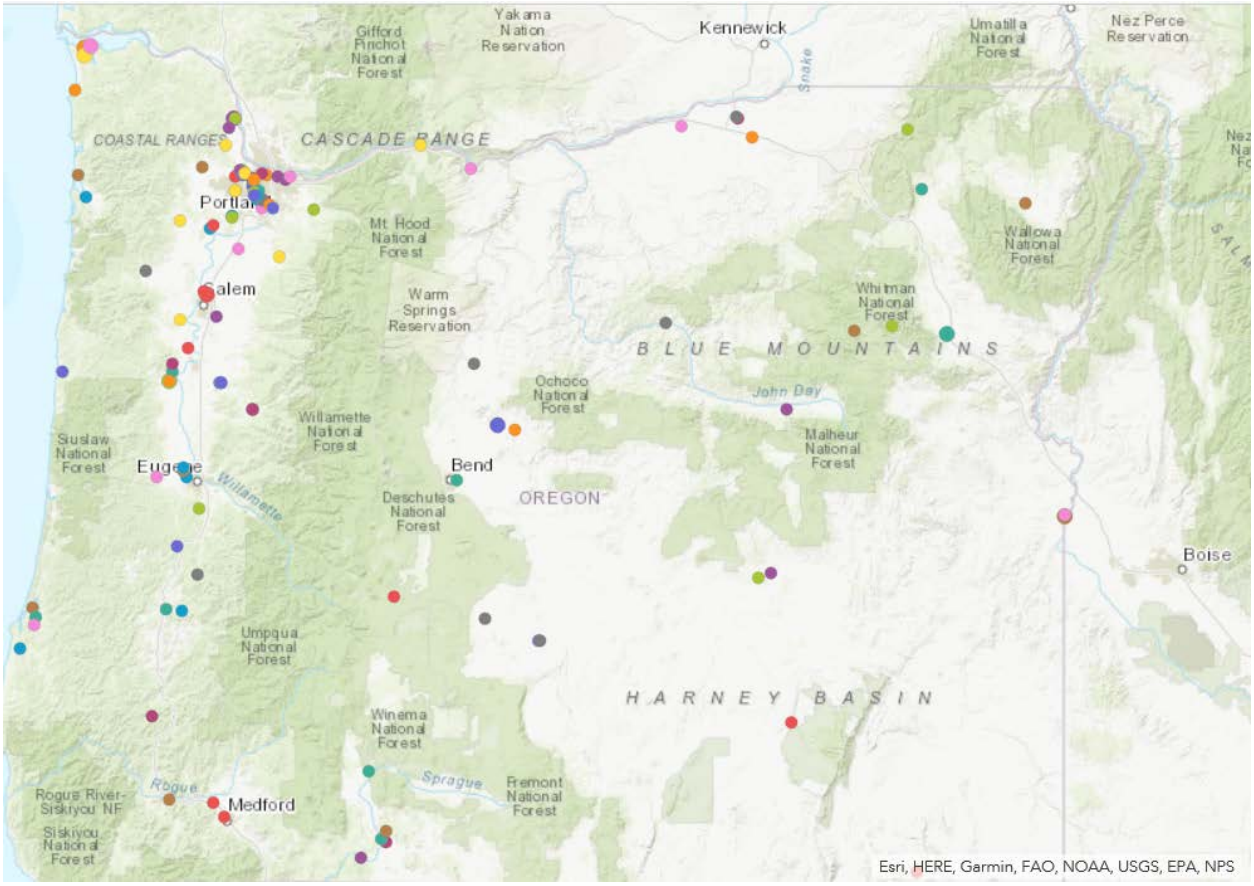


At the February 18th Joint Ways and Means Committee hearing DEQ was asked to provide information on the number and location of orphan sites, and the number and location of brownfield sites across Oregon.

Orphan Sites

Industrial orphan sites 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. Since 1992 DEQ has declared 114 sites as industrial orphans. 39 of these sites have been cleanup up to no further action status, and 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. A more complete discussion of DEQ Orphan Sites is found in the Annual Environmental Cleanup Report - 2019 at https://digital.osl.state.or.us/islandora/object/osl%3A629158.

The map below shows the location of 118 orphan sites (114 industrial orphan sites plus 4 solid waste orphan sites).



Brownfields

A brownfield is a vacant or underused property where actual or perceived contamination hinders the use or reuse of the site. A more complete discussion of DEQ's brownfield program and recent projects is found in the Annual Environmental Cleanup Report -2019 at https://digital.osl.state.or.us/islandora/object/osl%3A629158.

There is no single comprehensive list of brownfield properties in Oregon. The map below shows 446 identified brownfields across the state, based on expenditure of public funds or technical assistance through DEQ or another agency related to these properties.