



DEPARTMENT OF
ECOLOGY
State of Washington

Cleanup Settlement Account

Annual Report Fiscal Year 2018

Toxics Cleanup Program

October 2018
Publication No. 18-09-102

This report is available on the Department of Ecology's website at <https://fortress.wa.gov/ecy/publications/SummaryPages/1809102.html>

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Report to the Legislature

Cleanup Settlement Account Annual Report Fiscal Year 2018

Toxics Cleanup Program
Washington State Department of Ecology
Olympia, Washington

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Purpose of Report

The main purpose of this report is to meet the reporting statutory requirements of RCW 70.105D.130 (7).

RCW [70.105D.130](#):

(1) The cleanup settlement account is created in the state treasury. The account is not intended to replace the state toxics control account established under RCW [70.105D.070](#). All receipts from the sources identified in subsection (2) of this section must be deposited into the account. Moneys in the account may be spent only after appropriation. Expenditures from the account may be used only as identified in subsection (4) of this section.

(2) The following receipts must be deposited into the cleanup settlement account:

(a) Receipts from settlements or court orders that direct payment to the account and resolve a person's liability or potential liability under this chapter for either or both of the following:

(i) Conducting future remedial action at a specific facility, if it is not feasible to require the person to conduct the remedial action based on the person's financial insolvency, limited ability to pay, or insignificant contribution under RCW [70.105D.040](#)(4)(a);

(ii) Assessing or addressing the injury to natural resources caused by the release of a hazardous substance from a specific facility; and

(b) Receipts from investment of the moneys in the account.

(3) If a settlement or court order does not direct payment of receipts described in subsection (2)(a) of this section into the cleanup settlement account, then the receipts from any payment to the state must be deposited into the state toxics control account.

(4) Expenditures from the cleanup settlement account may only be used to conduct remedial actions at the specific facility or to assess or address the injury to natural resources caused by the release of hazardous substances from that facility for which the moneys were deposited in the account. Conducting remedial actions or assessing or addressing injury to natural resources includes direct expenditures and indirect expenditures such as department oversight costs. During the 2009-2011 fiscal biennium, the legislature may transfer excess fund balances in the account into the state efficiency and restructuring account. Transfers of excess fund balances made under this section shall be made only to the extent amounts transferred with required repayments do not impair the ten-year spending plan administered by the department of ecology for environmental remedial actions dedicated for any designated clean-up site associated with the Everett smelter and Tacoma smelter, including plumes, or former Asarco mine sites. The cleanup settlement account must be repaid with interest under provisions of the state efficiency and restructuring account.

(5) The department shall track moneys received, interest earned, and moneys expended separately for each facility.

(6) After the department determines that all remedial actions at a specific facility, and all actions assessing or addressing injury to natural resources caused by the release of hazardous substances from that facility, are completed, including payment of all related costs, any moneys remaining for the specific facility must be transferred to the state toxics control account established under RCW [70.105D.070](#).

(7) The department shall provide the office of financial management and the fiscal committees of the legislature with a report by October 31st of each year regarding the activity within the cleanup settlement account during the previous fiscal year.

This is the sixth annual report for this account. This report covers the financial activity from July 1, 2017 to June 30, 2018 and background and accomplishment information on each cleanup project through the fiscal year (FY) 2018.

Introduction

Cleanup Settlement Account continues to help protect human health and the environment

This report to the Washington State Legislature describes how the Department of Ecology (Ecology) uses the Cleanup Settlement Account to allocate funds to specific cleanup projects.

The mission of Ecology is to protect, preserve, and enhance Washington's environment. The mission of the Toxics Cleanup Program is to protect human health and the environment by preventing and cleaning up pollution and supporting sustainable communities and natural resources for the benefit of current and future generations.

Under the State's Cleanup Law, the Model Toxics Cleanup Act (MTCA), Ecology oversees cleanup work performed by potentially liable persons or conducts cleanups and recovers its costs for the work. However, this isn't feasible when a company declares bankruptcy or does not have the financial means to pay the full cleanup cost.

In response to this problem, the Legislature created the Cleanup Settlement Account. The account not only creates a financial reserve, but also allows the state to use the interest on deposited funds for more cleanup activities. Due to the Legislature's action, Ecology and the Attorney General's Office can now agree to settlements in which a potentially liable person contributes money for future cleanup work in exchange for settling its liability. Cleanup settlements may also help fund future natural resource restoration work at a particular site. The Cleanup Settlement Account is a valuable tool that helps us work together for a healthier environment, improve the quality of life in our communities, and create a more vibrant economy for current and future generations.

In the future, as projects are funded and the Cleanup Settlement Account funds are spent, we will need to rely on alternative funds to move cleanup projects forward. While the Cleanup Settlement Account is an important repository of funds, it is insufficient. We are beginning to plan and look ahead to other funds, like the Model Toxics Control Act accounts, which may be able to help bridge the expected shortfall.

The following cleanup projects are currently funded through the Cleanup Settlement Account:

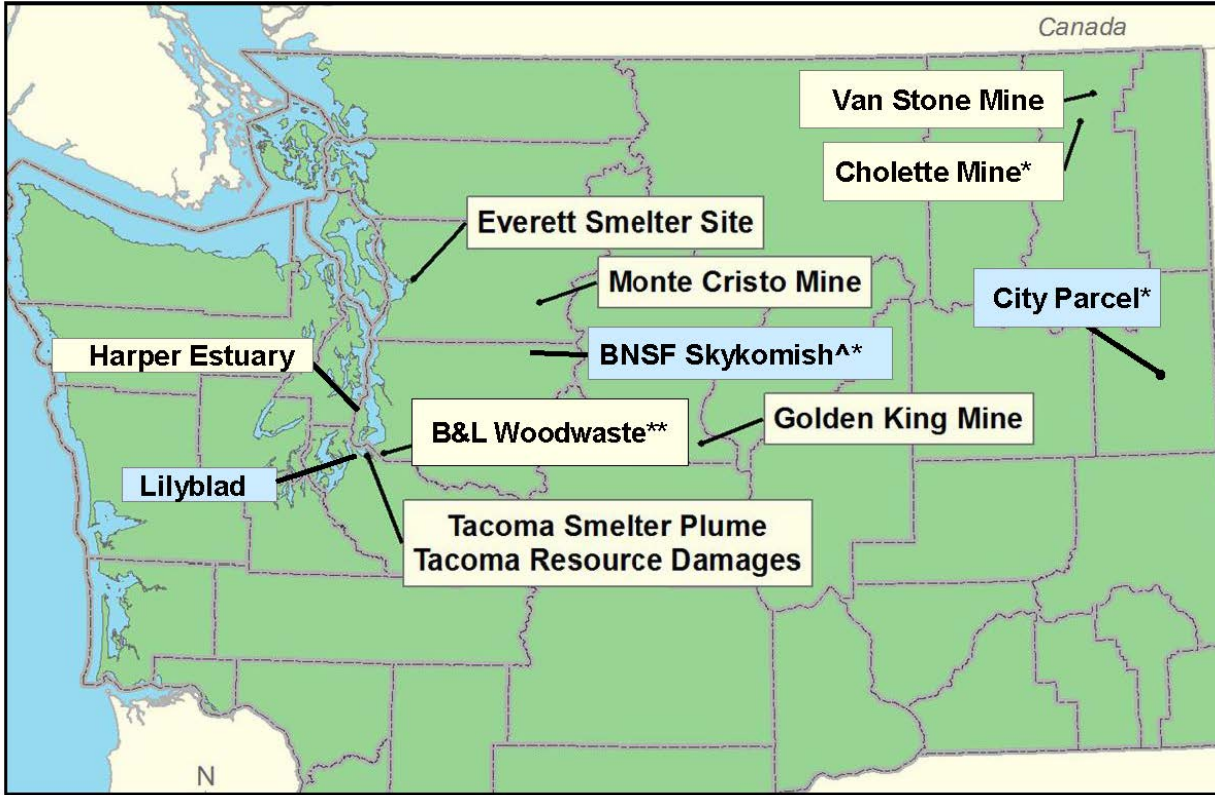
- B&L Woodwaste (Tacoma), Louisiana Pacific Trust
- Everett Smelter (Snohomish County)
- Golden King Mine (Chelan County)
- Lilyblad (Tacoma)
- Monte Cristo Mine (Snohomish County)
- Tacoma Smelter Plume (Pierce, King, and Thurston Counties)
- Van Stone Mine (Stevens County)
- Harper Estuary (Kitsap County)

The following cleanup projects were funded in past years through the Cleanup Settlement Account:

- BSNF Skokomish Natural Resource Damages (King County)
- City Parcel Site (Spokane County)
- Cholette Mine (Stevens County)

The following land acquisition was funded in the past through the Cleanup Settlement Account:

- Maury Island Open Space Acquisition (King County)



Cleanup Sites Overview



Figure 1: Cleanup Sites

^Ecology used this settlement to fund a portion of the cleanup. If Ecology determines there are future site costs, we will make a future budget request.

*Sites not covered in the report; funded in past years by Cleanup Settlement Account.

**Asarco site but Cleanup Settlement Account funds not from Asarco bankruptcy.

Cleanup Settlement Account

During the 2008 legislative session, the Legislature passed Senate Bill 6722 that created the Cleanup Settlement Account. Ecology requested this legislation to create an interest-bearing account in the state treasury to manage money from settlements or court orders in cases of bankruptcy, limited ability to pay, or natural resource damages. This account ensures that settlement funds are linked to specific site cleanup activities or damages to natural resources.

Ecology needed this new account because we anticipated several large settlements. Although large settlements and court orders are rare, they do pose a unique problem for the state. By accepting the settlement funding, the state agrees to manage the funds and use them as intended in the settlement agreement or court order. However, the funds recovered from a bankrupt party, or a party with a limited ability to pay, typically do not cover the entire cost of cleanup. The Cleanup Settlement Account allows the state to retain the earned interest on the funds in this account.

Earning and retaining the interest ensures the state will have more money over time to complete the work. Therefore, it is important to set aside the funds from the settlement for each cleanup. The State Toxics Control Account (STCA) does not retain interest earnings and there is no other appropriate interest-bearing account into which the State can deposit these funds.

Settlement Summary

The following is a summary of settlements, by site, which the State originally deposited into the Cleanup Settlement Account before earning any interest or making any expenditures. Table 2 (see page 5) shows activity in the account after the settlements were deposited.

Table 1: Original Settlement Summary

Settlement	Amount
Burlington Northern Sante Fe - Skykomish Site [^] *	\$ 5,050,000
City Parcel Site*	\$ 270,000
Louisiana Pacific - B & L Woodwaste Site	\$ 1,000,000
Lilyblad Petroleum Site	\$ 800,000
Asarco - Natural Resource Damages ^{**}	\$ 8,236,782
Asarco - Tacoma Smelter Plume	\$ 94,554,730
Asarco - Everett Smelter Site	\$ 33,888,476
Asarco - Monte Cristo Mine	\$ 6,471,758
Asarco - Van Stone Mine	\$ 3,530,050
Asarco - Cholette Mine*	\$ 353,005
Asarco - Golden King Mine	\$ 470,673
Asarco Subtotal	\$ 147,505,474
Total Settlement Funding	\$ 154,625,474

[^]Ecology used this settlement to fund a portion of the cleanup. If Ecology determines there are future site costs, we will make a future budget request.

*Sites not covered in the report; funded in past years by Cleanup Settlement Account.

** This includes \$4.1 million for Maury Island Open Space and \$4.1 million for Harper Estuary.

Cleanup Settlement Account remaining balance

Table 2: Remaining Balance

Cleanup Settlement Site	Fund Balance
Louisiana Pacific - B&L Woodwaste site	\$ 1,103,000*
Lilyblad Petroleum Site	\$ 33,000
Asarco - Natural Resource Damages	\$ 1,372,000
Asarco - Tacoma Smelter Plume	\$ 21,361,000**
Asarco - Everett Smelter Site	\$ 8,677,000**
Asarco - Monte Cristo Mine	\$ 3,598,000^
Asarco - Van Stone Mine	\$ 2,208,000*
Asarco - Golden King Mine	\$ 490,000*
Remaining Fund Balance June 30, 2018	\$ 38,842,000

Loans Receivable	Fund Balance
State Efficiency and Restructuring Account Loan	\$ 4,994,000
Total Point Ruston Sediment Capping and Shoreline Restoration Loan	\$ 3,660,000
Aquatic Lands Enhancement Account	\$ 1,830,000
State Toxics Control Account	\$ 1,830,000
Local Toxics Control Account	\$ 23,371,000

Actual Loan Receipts for FY 2018	Principal & Interest
State Efficiency and Restructuring Account Loan	\$ 5,085,000
Total Point Ruston Sediment Capping and Shoreline Restoration Loan	\$ 1,298,000
Aquatic Lands Enhancement Account	\$ 649,000
State Toxics Control Account	\$ 649,000
Local Toxics Control Account	\$ -
Total Actual Loan Receipts for FY 2018	\$ 6,383,000

* The Cleanup Settlement Account retains interest. Settlements that increased from the last report had no or few expenditures and earned interest.

** The remaining balance reflects the cleanup costs and loans taken from and repaid to the account.

^ The remaining balance includes a credit of unspent funds received back from the United States Forest Service.

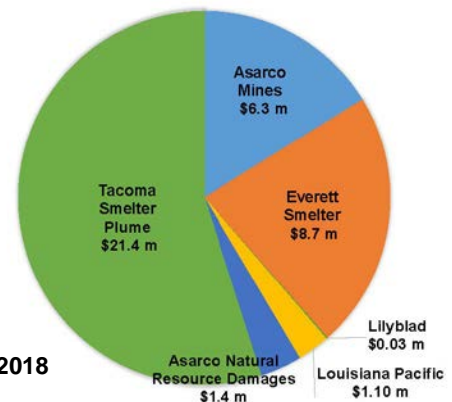


Figure 2: Cleanup Settlement Account Cash (millions), as of June 30, 2018

Fund transfers: State Efficiency and Restructuring Account (SERA)

Fiscal year 2011 \$39,480,000 transfer

In the 2010 supplemental budget, the Legislature authorized the transfer of \$39.48 million from the Cleanup Settlement Account to the State Efficiency and Restructuring Account (SERA). The Legislature provided a payback provision in the budget. The provision required that the SERA repays the funds over an eight year period with an interest rate that is five tenths of a percent higher than the interest rate the funds would have earned without the transfer.

2017-19 biennium repayment appropriations

Outstanding Loan as of June 30, 2018	\$4,994,000
Loan Receivable FY 2019	\$5,002,000

Repayments: Point Ruston sediment capping and shoreline restoration

Fiscal year 2012 \$7,200,000 appropriation

In the 2012 supplemental budget, the Legislature appropriated \$7.2 million from the Cleanup Settlement Account to the Washington Department of Natural Resources (DNR) for the Point Ruston Sediment Capping and Shoreline Restoration project. The funding was provided to cap sediment and stabilize shorelines on aquatic lands next to the Asarco cleanup site in Commencement Bay.

The funding was restricted, to be used only after DNR entered into agreements with the U.S. Environmental Protection Agency or the land owner, Point Ruston LLC, to fully relieve the state from any further liability or contributions relating to the cleanup of these aquatic lands. This appropriation from the Cleanup Settlement Account was a loan payable over an eight year period. Half came from the Aquatic Lands Enhancement Account (ALEA) and half from the State Toxics Control Account. The repayment interest is five-tenths of one percent higher than what the funds would have normally earned on deposits in the state treasury

2017-19 biennium repayment appropriations

Aquatic Lands Enhancement Account

Outstanding Loan as of June 30, 2018	\$1,830,000
Loan Receivable FY 2019	\$ 620,000

State Toxics Control Account

Outstanding Loan as of June 30, 2018	\$1,830,000
Loan Receivable FY 2019	\$ 620,000

Maintaining positive balances in MTCA accounts

The Capital Budget authorized two loans totaling \$23 million repaid with interest in the 2015-17 biennium budget to balance the MTCA Accounts. The Washington State Treasurer transferred one of these loans for \$13 million from the Cleanup Settlement Account to the Local Toxics Control Account (LTCA) in January 2016. The Washington State Treasurer transferred the second loan of \$10 million from the Cleanup Settlement to the Local Toxics Control Account on June 30, 2017. The Legislature accelerated repayment with \$8,150,000 in FY 2019. Local Toxics Control Account will repay the remainder with interest in three equal repayments in FY 2020, FY 2021, and FY 2022.

Local Toxics Control Account

Outstanding Loan as of June 30, 2018	\$23,371,000
Loan Receivable FY 2019	\$8,150,000

Asarco Settlement

Asarco's legacy in Washington

Contamination from smelters and mines

The American Smelting and Refining Company (Asarco) was founded in 1899, with refineries and smelters across the United States and Mexico. Asarco operated two smelters and four mines in Washington, leaving a legacy of contamination. The cleanup activities around the smelters and mines in Washington, are funded through the Cleanup Settlement Account.

The *Everett smelter* operated from 1894 to 1912, and a neighborhood was later built over the site. In 1990, Ecology discovered high levels of arsenic and other heavy metals in soil and groundwater.

The *Tacoma smelter* operated far longer, from 1890 to 1986, and the Town of Ruston grew up around it. Air emissions from the smelter contaminated over 1,000 square miles of soil in the Puget Sound region.

The former *mines* are in remote areas of Chelan, Stevens, and Snohomish counties. Remaining mine tailings pose a threat to local ecosystems, polluting waterways and soil.

The *B&L Woodwaste Landfill* site, on the border of Fife and Milton, has arsenic contamination. Slag from the Asarco plant leached arsenic into groundwater, threatening a nearby wetland.

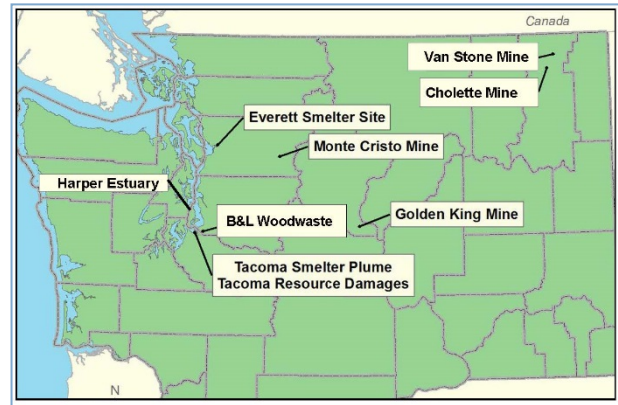


Figure 3: Asarco Cleanup Sites

The 2009 Asarco bankruptcy settlement

Washington becomes part of the nation's largest environmental settlement in history

In 2005, Asarco declared bankruptcy, largely due to environmental liabilities from its nearly 100 cleanup sites across the country. The State of Washington joined the federal government and other states in a suit against Asarco that spanned four years.

In November 2009, Asarco paid out a \$1.79 billion settlement. The settlement covered past and future cleanup costs, as well as interest earned over the four years. Washington's share, deposited into the Cleanup Settlement Account in December of 2009, was \$188.5 million, nearly 90 cents for every dollar claimed.

Years of planning and a vision for cleanup set the stage for a successful settlement

A key to Washington's success is having management plans in place for both smelter sites, and a clear vision for how to manage the risk from "area-wide" arsenic and lead contamination. From 2001-2003, the Area Wide Soil Contamination Task Force developed recommendations that Ecology used as the basis for its management strategies. These include cleaning up soil in the most highly contaminated areas, focusing on protecting children, and providing broad-based education and outreach, all pieces now funded by the settlement.

State of Washington Asarco settlement breakdown

Smelter cleanups comprise the largest cleanup costs

Of the \$188.5 million received by the state, \$22 million has gone to a trust to pay for the B&L Woodwaste Landfill cleanup, and the remainder went to the two smelter sites and four mine sites (see figure 4).

An additional \$19 million of settlement funds reimbursed the State Toxics Control Account for past cleanup costs for the Everett Smelter and Tacoma Smelter Plume. It also provided \$8.2 million for natural resource damages from the Tacoma smelter.

The majority of the settlement will cover soil cleanup and outreach work for the two smelter sites. Everett cleanup costs are high due to deep, concentrated contamination close to the former smelter property. The Tacoma Smelter Plume contamination is shallower and less concentrated, but covers a much larger area.



Photo 1: Asarco 50th Anniversary

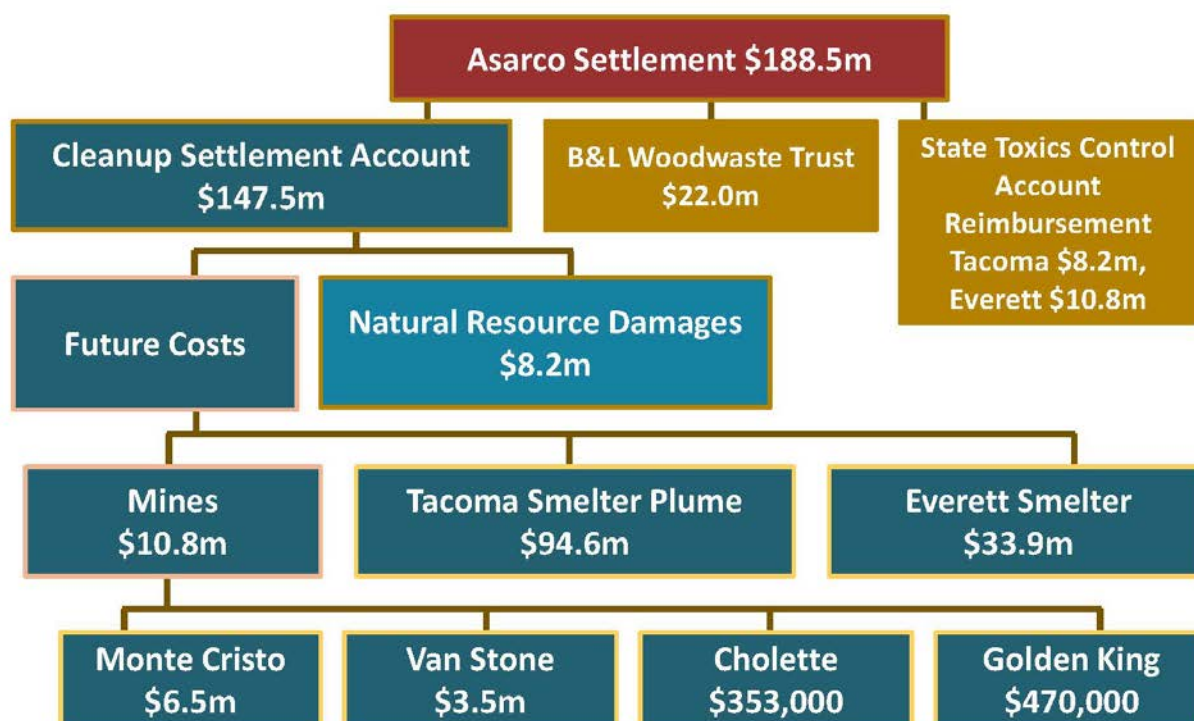


Figure 4: Asarco Settlement breakout

Everett Smelter

Everett smelter at a glance

Total settlement: \$33.9 million

County: Snohomish

Total size: 1.1 square miles

Cleanup focus: Soils and groundwater

The Everett smelter operated from 1894 to 1912 in northeast Everett. Particles from the smokestacks settled on surface soils over a 1.1 square mile area (see figure 5).

Ten-year settlement plan

In 2000, Ecology developed a cleanup plan for the Everett Smelter. On receiving the Asarco settlement, Ecology created a ten-year plan (see figure 6). The plan addresses two areas impacted by the Everett Smelter operations: the mostly residential uplands area on the west side of the site, and the mostly industrial lowlands area east of East Marine View Drive, bordering the Snohomish River.

Ecology’s plan includes:

- **Residential soil sampling and cleanup program:** This voluntary program provides free sampling and cleanup of accessible soils down to 2-3 feet.
- **Education and outreach:** This program serves the general community and homeowners participating in the cleanup program.
- **Lowlands investigation and cleanup:** Ecology is investigating soil, surface water and groundwater contamination in the lowlands area. Ecology will remove or contain contamination and do long-term monitoring.

Cleanup focuses on those most at risk

The Everett Smelter cleanup protects residents who are most at risk. Ecology began sampling and cleanup in areas closest to the former smelter site and will move outwards.

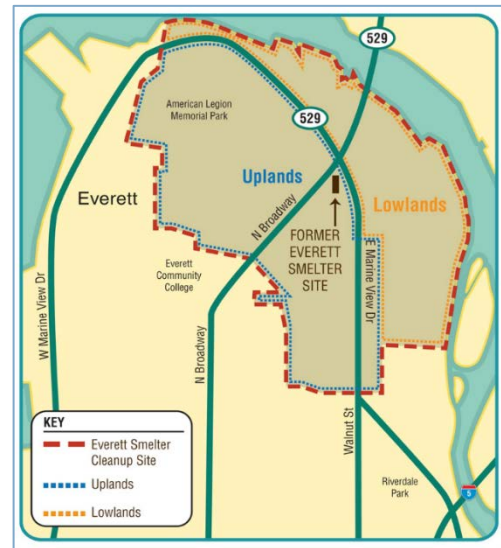


Figure 5: Everett Smelter site

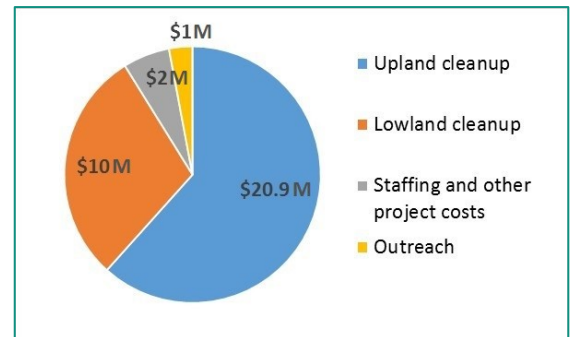


Figure 6: Everett Smelter spending breakdown of settlement money

Accomplishments through fiscal year 2018

Yard sampling and cleanups continue

We have cleaned up more than half of the properties in the cleanup area. In FY 18, Ecology completed the removal of contaminated soil from 11 more residential properties (approximately 1.6 acres). We continued the landscape care support program to help the owners care for their new yards.

In FY 18, we sampled the soil in 76 yards (approximately 16.1 acres of residential property). We finished sampling for all property owners in the entire cleanup area who responded to our offer (see figure 5). We added properties that require cleanup to the waiting list. We will clean up these properties as funding becomes available.

This spring we offered sampling to new owners and owners who were not responsive in the past. Sampling will be completed during the summer and fall of 2018.



Photo 2: Property after cleanup and contractor maintenance is complete.

Cleanup of source to the groundwater contamination in the Lowlands area

We finalized plans for the first cleanup area in the lowlands (see figure 5). Ecology worked closely with the City of Everett to develop plans to remove contaminated soil underneath the interchange of State Route 529 and E Marine View Drive. During the summer and fall of 2018, we will remove contaminated material that is a source of groundwater contamination in the Lowlands area of the site.

City parks cleanups beginning in the fall

We received \$2.7 million in Ecology's *Cleanup Toxic Sites – Puget Sound* capital budget to clean up Everett City parks located within the cleanup area. Ecology worked closely with the City of Everett to design a cleanup plan for the Wiggums Hollow Park and the Viola Oursler Overlook. This work will have begun and will continue through 2018.

Additional funding is needed to continue with cleanup and sampling

Ecology initially estimated cleanup of the Everett Smelter site to cost around \$64 million. We dedicated \$33.9 million of the 2009 settlement funds to the Everett Smelter cleanup. We will spend the remaining settlement funds during the next biennium.

Puget Sound cleanups have traditionally been funded from the Model Toxics Control Act accounts. The plan for continuing Everett Smelter work is to include cleanup projects in Ecology's *Cleanup Toxic Sites – Puget Sound* capital budget request each biennium.

In the next year, we will complete the parks cleanup, the first phase of Lowlands cleanup, and continue sampling the remaining properties to determine the areas needing cleanup.

Tacoma Smelter Plume

Tacoma Smelter Plume at a glance

- Total settlement:** \$94.6 million
- Counties:** Pierce, King, Thurston
- Total size:** Over 1,000 square miles
- Cleanup focus:** Surface soils

The Tacoma smelter operated from 1890 to 1986, on the border of north Tacoma and Ruston. Its smokestack emissions dispersed arsenic, lead, and other heavy metals across a 1,000 square mile area now called the Tacoma Smelter Plume.

Settlement spending plan

Using lessons from early cleanup work, Ecology developed a plan for the Asarco settlement (see figure 8). It has four main strategies:

- **Yard cleanups:** Soil sampling and cleanup for existing residential yards in areas of highest contamination (see figure 7).
- **Soil Safety Program:** Continue sampling and cleaning up school, childcare, park, and camp play areas.
- **Outreach and education:** Continue “Dirt Alert” programs at health departments in King, Pierce, and Thurston counties.
- **Technical assistance:** Work with local governments and developers to encourage voluntary cleanup during grading.

Work moves forward but future funds needed

The State made a bankruptcy claim for future environmental remediation costs for \$112.7M. We received only \$94.6 M. We have managed the money resourcefully over the last 8 years. However the remaining funds will not be enough to cover the cost of cleanup activities. We are beginning to plan and look ahead to other possible funds like Model Toxics Control Act.

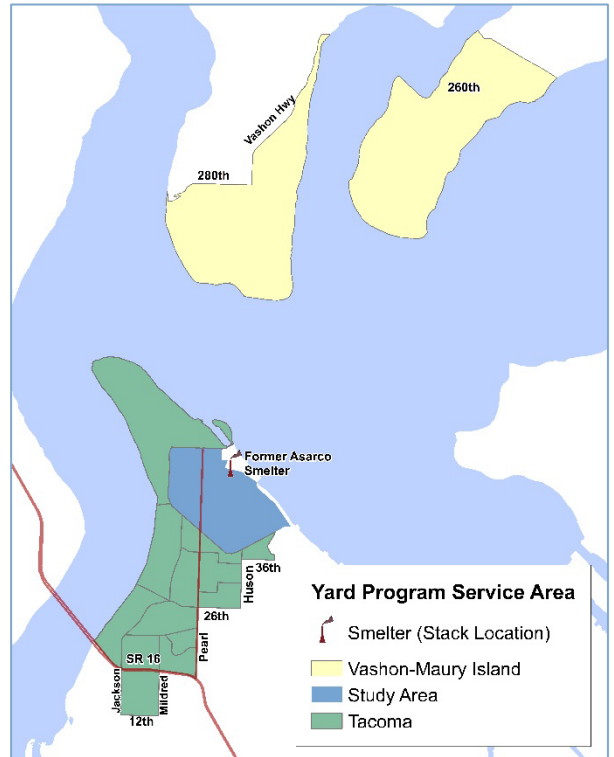


Figure 7: Residential Yard Sampling and Cleanup Program in service area

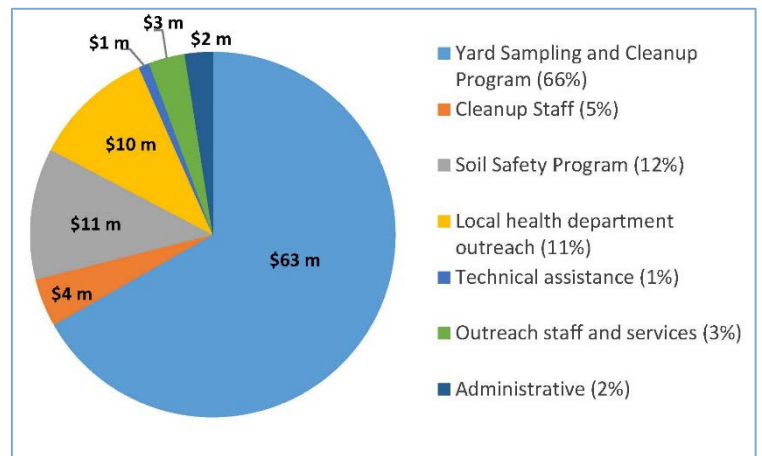


Figure 8: \$94.6M Tacoma Smelter Plume settlement breakdown

Accomplishments through fiscal year 2018

Yard sampling continues

Through FY 2018, we completed sampling on a total of 3,960 yards, with 754 on Vashon-Maury Island and 3,206 in the Tacoma area (see figure 7). We sampled 187 properties in the Study Area to confirm that they qualify for soil replacement.

There are 1,186 yards which qualify for soil replacement. This includes 716 yards in the Study Area and 470 more yards that we identified through recent soil sampling efforts. The sampling effort is completed. However, we continue to sample properties if new residents request sampling on properties where previous owners declined or did not respond to our sampling offers.



Photo 3: Contractors removed the top 18 inches of contaminated soil at a home in Tacoma.

Only twenty four yards completed in FY 2018

The delay in passing the 2017-2019 capital budget slowed our soil replacement progress. Ecology has completed soil replacement on a total of 245 yards since 2013. In FY 2018, we replaced soil on 24 yards in Tacoma. We plan to complete soil replacement on 100 yards in FY 2019.

Soil Safety Program continues work in areas where children play

In FY 2018, Ecology assessed and sampled 7 play areas. Ecology partnered with the city of Des Moines to remove and replace 700 cubic yards of contaminated soil. This removal was completed while the city completed park improvements with King County grant funding.

Dirt Alert! Behavior change for social good

Ecology has teamed with local health department partners in King and Pierce Counties to assist local residents in changing their behavior to reduce exposure to lead and arsenic contaminated soil. For many years the Dirt Alert program has been promoting healthy actions. Healthy actions are simple practices like removing shoes at the door, damp dusting, or covering bare patches of soil in the yard. We know that many residents are aware of healthy actions, but do not practice them. We want local residents to understand and practice healthy actions.

Each Health Department is focusing on one healthy action. Over the next year they will develop and pilot a social marketing strategy around the selected healthy action. Their pilot programs will launch in 2019.

Technical Assistance

Ecology provides free technical advice to property owners and developers who want to cleanup contamination on their property. We partner with local permitting offices in King, Pierce, and Thurston counties to encourage developers to replace soil during property development. In 2018, two developers joined Ecology's Voluntary Cleanup Program and cleaned 60 acres of contaminated soil within the plume. Ecology determined no further action was required on these properties.

Other work supported by the Tacoma Smelter Plume project

Ecology's staff provides oversight and technical assistance for other projects funded by appropriations from the Asarco settlement. These projects deal with soils impacted by the former Tacoma smelter. Our role is to ensure contaminated soils are properly managed.

Ruston tunnel

In the 2013-2015 biennium, the Legislature set aside \$400,000 of the Asarco settlement for the closure of the Ruston Tunnel. In April 2017, Ecology and the City of Ruston entered into an interagency agreement to complete this project.

The tunnel shown in Phot 4 connected Ruston Way to Tacoma, under the former Asarco plant. Today, a new road goes around the tunnel and the old tunnel is being filled with soil (Completion by December 2019).

In 2018, the City of Ruston notified Ecology that it will not be incurring costs associated with the filling of the Ruston tunnel. Ecology let these funds lapse, and they have been returned to the Cleanup Settlement Account. Per a legal agreement between Point Ruston, LLC and the U.S. Environmental Protection Agency, Point Ruston, LLC is responsible for filling the Ruston Car Tunnel.

Point Defiance Trail

In 2013-2015, the Legislature also set aside \$5 million of the Asarco settlement for the Point Defiance Trails Project. The Trails Project completes a 7 mile waterfront trail connecting Ruston Way to Point Defiance Park. It will be completed and open to the public by the end of 2018. Metro Parks spent \$5 million for soil management, bridge work, concrete flatwork, and site cleanup and remediation.

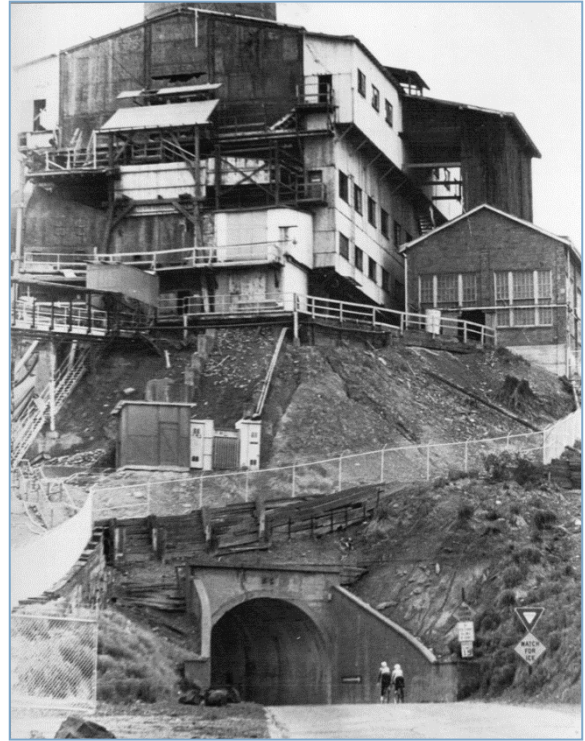


Photo 4: Ruston Tunnel under the former Asarco plant. Photo courtesy of Sherri Forch.



Photo 5: Point Defiance Trails project during construction. Photo courtesy of Atkinson Construction.

Maury Island Open Space Acquisition

Maury Island Open Space

Funding Source for land acquisition: Tacoma Smelter Plume natural resource damage settlement

County: King

Maury Island is in a highly contaminated area of the Tacoma Smelter Plume (see pages 11-12). Ecology has found high levels of arsenic and lead in forest soils on Vashon-Maury Island. The Maury Island Open Space site, in the King County Parks system, includes 265 acres and about one mile of shoreline. King County (not CSA) is the source of funding for ongoing cleanup activities. King County is working under Ecology's oversight to clean up arsenic and lead at the site.

King County site acquisition

In the 2010 supplemental budget, the Legislature appropriated \$15 million to assist King County in acquiring the site. The appropriation included:

- \$4.1 million from the Cleanup Settlement Account.
- \$10.9 million from the State Toxics Control Account.

This funding came from the portion of the Asarco bankruptcy settlement that provided compensation for damages to natural resources from the Tacoma Smelter Plume.

Maury Island Open Space Site (Maury Island Natural Area)

The future Maury Island Natural Area includes pure madrone forests and other habitats that support threatened species in Puget Sound, such as chinook salmon, orca, and bull trout. The site's nearly one mile of shoreline is the longest undeveloped stretch of shore in King County. When combined with the County's nearby 320 acre Maury Island Marine Park, the two properties represent the largest public holding of protected marine shoreline in Puget Sound.

King County is addressing soil contamination at the site under Ecology's formal cleanup program. In FY 2013, King County and Ecology entered into a legal agreement that required the county to investigate the site and develop a cleanup plan. Subsequent environmental work established the nature and extent of site contamination and was followed with a set of potential cleanup options. A formal Cleanup Action Plan to implement a preferred cleanup option and govern future project work was adopted in FY 2018.

Accomplishments through fiscal year 2018

King County has produced a 90% design report for project construction. Ecology approval is expected in October with final construction plans to follow before the end of the year.

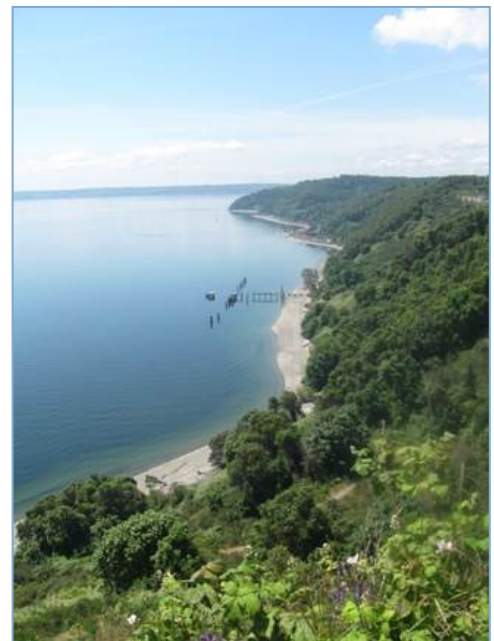


Photo 6: View looking south from inside the future Maury Island Natural Area.

Harper Estuary

Harper Estuary, McNeil Island, and Ross Point

Funding Source: Tacoma Smelter Plume Natural Resource Damage settlement

County: Kitsap and Pierce

The Harper Brick and Tile Company operated at Harper Estuary until the 1930s, when it was demolished. Washington Department of Fish and Wildlife (WDFW) led restoration efforts for the Harper Estuary restoration project with assistance from Kitsap County. In 2016-17, we worked together to complete the first phase of restoration.

Since completion of the first phase, Ecology has been working with WDFW and Kitsap County to advance maintenance, monitoring, and stewardship activities at Harper Estuary. Ecology also directed funding towards two additional restoration projects.



Photo 7: Restored shoreline habitat at Harper Estuary

Restoration Project Highlights

- *McNeil Island Shoreline Restoration* –WDFW has completed designs and is currently awaiting permits for the shoreline restoration project at the Barge Landing site.
- *Ross Point Bulkhead Removal in Sinclair Inlet* – Permits are in hand to complete the removal of the bulkhead. However, WDFW is working through cultural resources with the State Historic Preservation Office (SHPO) and tribes. It may take several months to reach concurrence with all involved parties. Depending on weather and forage fish spawning avoidance, construction will occur in 2019.

Gathering Public Input

For projects on McNeil Island and at Ross Point, we gathered feedback from the community members and tribes (Suquamish, Squaxin Island, Nisqually, and Puyallup) to help guide restoration efforts. This engagement included sharing draft restoration plans, discussing procedures for cultural resource management at the sites, and responding to inquiries during permitting.

Next Steps

Construction of the McNeil Island Barge Landing Restoration project is anticipated for February 2019 (delayed by Corps permit issuance). Ecology will contract with WDFW to apply remaining funds to complete the Ross Point Bulkhead Removal if it cannot be completed before June 2019. Additional work for 2019 will include further development of the McNeil Island Milewa Creek Estuary Restoration project design (permit drawings and materials, and wetland analysis) and construction of a road bypass around the estuary (to be completed by DNR). WDFW submitted a grant application for ESRP funding in 2018 and is awaiting approval from the State Legislature. WDFW will submit grant proposals to the Alliance for Healthy South Sound and the National Coastal Wetland Conservation Program (USFWS) to complete full estuary restoration.

B&L Woodwaste (Louisiana Pacific)

B&L Woodwaste site

Total settlement: \$1.0 million

County: Pierce

Total size: 11 acres + wetlands

Cleanup focus: Groundwater

In the 1970s and 1980s, the B&L Woodwaste landfill received woodwaste, soil, and slag from log sort yards in Commencement Bay. The slag—a byproduct of Asarco’s Tacoma smelter—leached arsenic into soils and groundwater. This contamination poses a threat to nearby Hylebos Creek.



Photo 8: Northern Stormwater Pond at B&L Woodwaste

Cleanup liability and funding

Asarco, Murray Pacific, and Louisiana Pacific Corp. were among the parties found liable for cleanup. When Asarco went into bankruptcy in 2005, the other two companies pursued settlements jointly with the state. Most of Murray Pacific’s \$22 million settlement is held in a trust that is funding the majority of current cleanup work. The Cleanup Settlement Account holds an additional \$1 million for future work.

Cleanup accomplishments and remaining work

The B&L Woodwaste cleanup has three phases:

- **Phase 1, completed in 1992:** Asarco consolidated the original 18-acre site to an 11-acre landfill. It then installed a cap to minimize rainfall flushing metals and contaminated groundwater out of the landfill.
- **Phase 2, 2008 to early 2013:** Ecology installed a slurry wall around the edge of the landfill. This underground barrier minimizes the flow of contaminated groundwater. We then built a facility to extract and treat groundwater from inside the slurry wall and from the nearby wetlands. Finally, we excavated contaminated sediments from the drainage ditches on three sides of the site.
- **Phase 3, 2015 to the present:** In 2017, as a part of an adaptive management plan to contain and reduce the arsenic plume in groundwater, groundwater was treated by chemicals outside the landfill on nearby Washington State Department of Transportation property. In September 2017, the groundwater treatment system was shut down and currently groundwater is monitored quarterly.

In 2018, the long term groundwater monitoring for arsenic contamination is continuing and based on groundwater monitoring data, necessary action (s) will be taken for the arsenic plume control/containment.

Golden King Mine

Golden King Mine

Total settlement: \$0.5 million

County: Chelan

Total size: 13 acres

Cleanup focus: Soil and stream water quality

The Lovitt/Golden King Mine is located near Wenatchee, on the west side of the Squillchuck Creek Drainage. There are an estimated 450,000 cubic yards of tailings deposited in a tailings impoundment in the bottom of Squillchuck Creek.



Photo 9: Golden King/Lovitt Mine

Table 3: Ten-year spending plan for Golden King mine

Years	Activity
2010-2017	Negotiate access with private land owners
2018-2019	Remedial Investigation and Feasibility Study (contingent on access agreements)
2019-2020	Cleanup Action Plan
2017-2022	Water quality treatment monitoring Institutional controls to protect human health Engineered controls such as capping and slope stabilization

Accomplishments through fiscal year 2018:

Work at Golden King has been stalled due to lack of access to the former mine by the current private owners. The owners are adamant about not allowing access to their property. When access issues are resolved, Ecology plans to continue with the cleanup activities outlined in Table 3.

Monte Cristo Mine

Monte Cristo Mine

Total settlement: \$6.5 million

County: Snohomish

Total size: 54 mines and one mill

Cleanup focus: Soil, surface water, and sediment

In the summer of 1889, settlers discovered the site and quickly established a town site. In 1893, the railroad was completed to transport ore to the smelter in Everett (see page 9).

Mineral production flourished for a few years until massive floods destroyed rail access in 1897. Mining became intermittent, operated by a number of smaller companies until 1920. The site is located on a mix of private and federal property. The Monte Cristo Mining Area is a popular historic mining town site and hiking area.

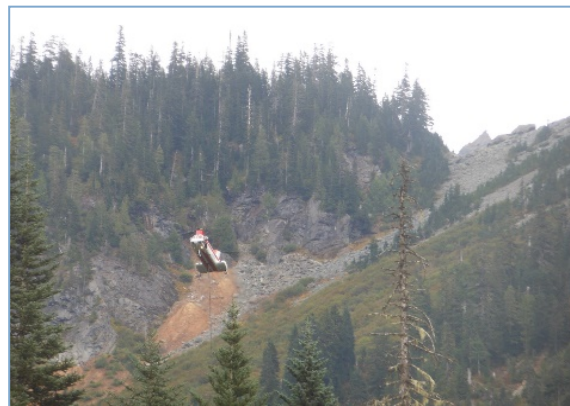


Photo 10: Helicopter carrying heavy equipment into wilderness area to conduct cleanup work.

Table 4: Ten-year settlement spending plan for Monte Cristo mine

Years	Activity
2011-2017	Remedial Investigation and Feasibility Study
2012-2013	Environmental review, public outreach, and bat habitat and topographic survey
2013-2015	Completed construction of access route and onsite repository
2015-2016	Removal of contaminated waste rock to repository, water quality monitoring, revegetation
2016-2022	USFS Interim Action completed; ongoing repository operations and maintenance, water quality monitoring, review of USFS results for privately owned sites.

Accomplishments through fiscal year 2018

In FY 2018, the United States Forest Service (USFS) continued monitoring stream water quality to assess stream health following the Interim Action. Ecology will be compiling data gathered for the privately owned mine sites in order to determine future remedial actions at the Monte Cristo Mining Area.

Van Stone Mine

Van Stone Mine

Total settlement: \$3.5 million

County: Stevens

Total size: ~150 acres

Cleanup focus: Soil, sediment, surface water

The Van Stone Mine was the state's largest open-pit mine. It is located about 28 miles northeast of Colville. It operated from 1951 to 1994 under several owners, including Asarco. Approximately 270,000 tons of ore were extracted from 1.3 million tons of rock. The Upper Tailings Pile has breached twice, with the most recent event occurring in 2012.



Photo 11: Van Stone Mine

Table 5: Ten-year settlement spending plan for Van Stone mine

Years	Activity
2014- 2017	Remedial Investigation and Feasibility Study for soils, sediments, wastes, groundwater, and surface water
2018-2019	Engineering design for cleanup and cover systems at the upper and lower tailings piles and other areas identified during the investigation
2019-2020	Cleanup and building the cover systems
2020	Start of operations and maintenance for the cover systems

Accomplishments through fiscal year 2018

The Feasibility Study was finalized in the fall of 2017 with a presentation to local residents. The draft Cleanup Action Plan is currently being developed and should be completed by winter of 2018.

Additional funding is needed to continue work

While cleanup is planned, the current funds earmarked for the Van Stone mine site will not cover the cost of cleanup. Over the next two years, the Van Stone mine settlement funds will be used for creating an engineering design for cleanup, and the cost of remediating a small, unpermitted dam at the site. Additional funds outside of the settlement account will be needed to further address site contamination, and continue planned cleanup activities.

Lilyblad Petroleum Insurance Settlement

Lilyblad

Total settlement: \$800,000

County: Pierce

Total area: Two acres

Cleanup focus: Soil and groundwater

From 1978 to 1988, Lilyblad Petroleum, Inc. ran a spent solvent and dangerous waste recycling operation. The business was located at 2244 Port of Tacoma Road.

Since then, Lilyblad has dissolved and Pacific Functional Fluids now operates the facility. Soil and groundwater at the site are contaminated with petroleum and chlorinated solvents.



Photo 12: Worker installing a remedial well at the former Lilyblad property.

Multiple funding sources for cleanup work

Over the years, the cleanup site has received funding from multiple sources, including the Old Republic Settlement, the State Toxics Control Account, the Cleanup Settlement Account, and the Environmental Stewardship Legacy Account.

Accomplishments through fiscal year 2018

In 2008, Ecology installed and started a pump and treatment system for contaminated groundwater at the site. In 2012, we had a 50 percent reduction in the system to the northern part of the Lilyblad property because we didn't receive full funding for that fiscal year. These wells continued pumping to maintain hydraulic control and prevent migration of contaminated groundwater toward the Blair Waterway.

The most recent accomplishments include:

- **July 2013- June 2015:** By December 2013, full scale operation of dual phase extraction wells resumed on the Lilyblad property. In the summer of 2015, Ecology did site-wide groundwater and soil sampling to evaluate the progress of the treatment system.
- **July 2015- June 2016:** Due to iron fouling, the pump and treatment system shut down periodically for maintenance. Site monitoring showed the extent of contamination decreased in the southern area of the site.
- **July 2016- June 2017:** Annual soil samples showed a decrease in contaminants in the outer portions of the contaminated site.
- **July 2017- June 2018:** Contaminated soil vapor and groundwater extraction and treatment continued and focused on the center of the site. To date an approximate 42,335 pounds of contaminant has been removed. Site activities are same with no changes since June 2018.

Conclusion

Conclusion

In FY 2018, work continued on many of the cleanup projects funded by the Cleanup Settlement Account. One significant example is the sampling and cleanup work underway within the Everett Smelter and Tacoma Smelter Plume sites. In FY 2018, Ecology replaced soil on 24 yards in Tacoma Smelter Plume area. Ecology also sampled soils in 76 yards, finished sampling for all property owners who responded to their offer, and offered sampling to new owners in Everett. Ecology is also working with the City of Everett to design a cleanup plan for the Wiggums Hollow Park and Viola Oursler Overlook.

The Cleanup Settlement Account also moved forward cleanup, ongoing operations and maintenance, and water quality monitoring at former mine sites like the Monte Cristo Mine and the Van Stone Mine. Contaminated soil vapor and groundwater extraction and treatment continues at Lilyblad to contain the plume within the site. To date an approximate 42,335 pounds of contaminants have been removed.

Work is moving forward on restoration activities. Ecology is working with WDFW and Kitsap county to advance maintenance, monitoring and stewardship activities at Harper Estuary. Ecology has directed funds towards two additional restoration projects—McNeil Island Shoreline Restoration and Ross Point Bulkhead. The Cleanup Settlement Account makes this work possible and moves this work forward.

Cleanup Settlement Account moves important work forward but future funds needed

At the end of FY 2018, the remaining balance in the Cleanup Settlement Account was \$38,842,000. The loans outstanding to the account total \$ 32,025,000. This total of nearly \$71 million will not be enough to complete all cleanup activities.

In the future, sites like the Everett Smelter, Tacoma Smelter Plume, and Van Stone Mine will need to rely on funds other than the Cleanup Settlement Account to fund cleanup. Historically, Ecology has requested and the Legislature has funded cleanup projects from the Model Toxics Control Act accounts. Right now, those accounts are unable to fund existing environmental work, including all of the anticipated costs for large cleanup projects.

Every year, more contaminated sites are identified than can be cleaned up. As of June 30, 2018, 12,900 sites have been reported and almost 7,200 sites have completed cleanups. This growing backlog of contaminated sites needing cleanup, coupled with ongoing cleanups of existing sites (like the former Asarco sites), will require that priorities be set and solutions identified to fund Washington's cleanup work. The funding may come from the Model Toxics Cleanup Act accounts, bond appropriations, or other funding sources.

The Cleanup Settlement Account moves forward important cleanup projects by cleaning up pollution, supporting sustainable communities, and enhancing natural resources for the benefit of current and future generations. With sound management plans in place, and additional funding in the future, the cleanup work made possible through the Cleanup Settlement Account will continue for many more years.

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Cleanup Site Information

Cleanup site search page: <https://fortress.wa.gov/ecy/gsp/SiteSearchPage.aspx>

Everett Smelter website: <https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-sites/Toxic-cleanup-sites/Everett-Smelter>

Tacoma Smelter Plume website: <http://ecology.wa.gov/Tacoma-smelter>

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