DEPARTMENT OF
ECOLOGY
State of Washington

Model Toxics Control Accounts

Ten-Year Financing Report
2012 Report

Toxic Cleanup, Toxic Pollution Prevention, and Hazardous & Solid Waste Management

July 2013
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Introduction

Model Toxics Control Act

In 1988, Washington voters passed Initiative 97, the Model Toxics Control Act (MTCA). The act cites its main purpose as raising "sufficient funds to clean up all hazardous waste sites and to prevent the creation of future hazards due to improper disposal of toxic wastes into the state's lands and waters." To do this work, the voters authorized a tax on hazardous materials, including petroleum products, pesticides, and some chemicals. MTCA anticipated the need to respond to new threats from toxic materials. It dedicated the funding raised by the tax to a broad range of toxic pollution prevention, hazardous and solid waste management, water and environmental health protection and monitoring, and toxic cleanup purposes.

Background

During the 2007 legislative session, Substitute House Bill 1761 passed the Legislature. The bill amended the Model Toxics Control Act requiring the Department of Ecology (Ecology) to develop a comprehensive ten-year financing report to identify long-term remedial action costs, track expenses, and project future needs.

Voters Spell Out MTCA Spending Formula

In the original initiative, and in the law today, use of the Hazardous Substance Tax (HST) is prescribed to certain local and state activities. Voters authorized a broad range of uses for MTCA to address both existing needs and emerging problems.

- 53 percent is deposited to the Local Toxics Control Account (LTCA) and is dedicated to toxic pollution prevention, hazardous and solid waste management, and toxic cleanup activities in local communities, including:
  - Remedial actions.
  - Hazardous and solid waste plans and programs.
  - Public participation grants.

- 47 percent is deposited to the State Toxics Control Account (STCA) and is dedicated to the state's responsibility for:
  - Hazardous and solid waste planning, management, regulation, enforcement, technical assistance, and public education.
  - Hazardous waste cleanup.
  - State matching funds required under federal cleanup law.
  - Financial assistance for local programs.
  - State government programs for the safe reduction, recycling, or disposal of hazardous wastes from households, small businesses, and agriculture.
  - Hazardous materials emergency response training.
  - Water and environmental health protection and monitoring programs.
  - Public participation grants.

About This Report

The law requires two financing reports—a MTCA Ten-Year Financing Report, and a MTCA Annual Report.

Both the MTCA Ten-Year Report and the MTCA Annual Report are authorized in RCW 70.105D.030. The MTCA Ten-Year Report, specifically, is in 70.105D.030 (Subsections 3 and 4), and the MTCA Annual Report is in 70.105D.030 (Subsection 4(e)).

MTCA Ten-Year Financing Report

The law requires Ecology to do the following before December 20 of each even-numbered calendar year:

- Develop a comprehensive ten-year financing report, in coordination with all local governments with cleanup responsibilities.
- Identify the projected biennial hazardous waste site remedial action needs that are eligible for funding from the Local Toxics Control Account (LTCA).
- Work with local governments to develop working capital reserves to be incorporated in the ten-year financing report.
- Identify the projected remedial action needs for orphaned, abandoned, and other cleanup sites that are eligible for funding from the State Toxics Control Account (STCA).
- Project the remedial action needs, costs, revenues, and any recommended working capital reserve estimates to the next biennium's long-term remedial action needs from both the LTCA and the STCA.
- Submit this information to the appropriate standing fiscal and environmental committees of the Senate and House of Representatives, including a ranked list of remedial action projects for both accounts.

This is the third MTCA Ten-Year Financing Report. Since the first report the scope has been expanded beyond the statutory requirement to report on remedial action needs. Specifically, future needs were included for: (1) hazardous and solid waste planning; (2) toxic pollution prevention, reduction, and recycling; and (3) solid waste facility compliance and enforcement. Needs for all cleanups have not been consistently addressed in the report—these include hazardous materials spills and nuclear waste, and emerging toxic pollution prevention and hazardous waste management efforts surrounding air toxics and water quality/stormwater management.

This 2012 report will follow past reports, and outline the needs with an expanded scope. This approach comprehensively represents the major demands on MTCA funding for the next ten years across all programs in the MTCA policy framework—toxic pollution prevention, hazardous and solid waste management, and toxic cleanup.

The content and scope of future reports will be reviewed in the summer of 2013 to ensure the report meets the informational needs of the Legislature. The report review will also include an assessment of how the ten-year financial data should be reported to consider recent interest in cash management of the STCA and LTCA.

The MTCA ten-year report has been published biannually since 2008. Reports can be found at:

- 2008 – https://fortress.wa.gov/ecy/publications/summarypages/0801044.html
- 2010 – https://fortress.wa.gov/ecy/publications/summarypages/1109045.html
- 2012 (this report) – https://fortress.wa.gov/ecy/publications/SummaryPages/1309045.html

MTCA Annual Report

The law also requires, each year, Ecology to provide the Legislature and the public with an accounting of activities supported by appropriations from the LTCA and STCA. The MTCA Annual Report includes information on:

- Known hazardous waste sites and their hazard rankings.
- Actions taken and planned at each site.
- Ecology's work to meet its toxic and solid waste management priorities.
- A summary of all funds expended.

The MTCA Annual Report has been published since 1986. Previous reports can be found here: http://www.ecy.wa.gov/programs/tcp/MTCA_AnnualReport/annualRpt.html

Report Organization

The report is divided into four major sections: (1) Summary of the MTCA Ten-Year Financing Plan; (2) Toxic Cleanup; (3) Toxic Pollution Prevention; and (4) Hazardous and Solid Waste Management.

- **Summary of the MTCA Ten-Year Financing Plan –** Consists of financial data that outlines the resources available and the plans for MTCA investments over the next ten years. Information is provided on the Hazardous Substance Tax and revenues to the STCA and LTCA, working capital reserves for each account, and expenditure plans for all state agencies spending from MTCA.

Within each of the following sections, activities or program areas are described, including background, findings, conclusions, and a statement of ten-year needs illustrated by project lists, major deliverables, or other program plans.

- **Toxic Cleanup –** Includes activities that remove or immobilize hazardous substances at contaminated sites, keep hazardous substances out, and provide opportunities for habitat restoration, economic development, and public recreation.

- **Toxic Pollution Prevention –** Includes activities that focus on changes to processes, practices, materials, and energy use to minimize or eliminate creation of hazardous waste or use of toxic chemicals. It also includes activities that would prevent, recycle, and reuse solid wastes.

- **Hazardous and Solid Waste Management –** Includes activities that focus on making sure toxic chemicals, hazardous materials, and solid wastes are safely collected, stored, treated, recycled, or disposed of properly.

Assumptions

- The data and information in this report were collected and analyzed in late 2012. As a result, it represents the best estimates of needs and financial plans known at that time. The budget and revenue information generally reflects Ecology's 2013-15 biennial operating and capital budget requests. Notes will indicate where data is based on another source.

- Governor Gregoire's Priority of Government budget activities provide a uniform, generally accepted way of summarizing MTCA programs and initiatives. Ecology's biennial budget is developed in this framework.

- This report contains cleanup cost estimates for known contaminated sites in Washington. It also includes an estimate for the number of contaminated sites that may be orphaned and/or abandoned and the eventual need for public funding for cleanup. Cost estimates were developed using current site information and will change as more information becomes available as further investigations are conducted.

- Cost estimates for most programs beyond the 2013-15 biennium for cleanup projects were inflated using project cost escalation factors from the Remedial Action Cost Engineering and Requirement (RACER) software program. RACER provides costs to complete estimates for all phases of cleanup. RACER is used by the United States Environmental Protection Agency, Department of Defense, Department of Energy, other state environmental agencies, and private environmental consultants to develop long-term cleanup cost estimates.

- Toxic pollution prevention, hazardous and solid waste management, and other activities not inflated by RACER were inflated by the state fiscal growth factor for the 2015-17 through 2021-23 biennia. The fiscal growth factors are the average growth in the state personal income for the prior ten fiscal years.

- Ten-year Hazardous Substance Tax revenue forecasts and distributions to the STCA and the LTCA are based on the November 2012 Washington State Department of Revenue forecast. Other ten-year STCA revenue estimates (voluntary cleanup, cost recovery, and miscellaneous revenues) were prepared by Ecology staff.

- Ten-year LTCA cost estimates for contaminated site cleanup work were prepared by Ecology staff working with local governments.
- The MTCA carry-forward level for Ecology's environmental programs is not described in detail in this report. Instead, the focus is on future funding needs. A comprehensive understanding of Ecology's core work on toxic pollution prevention, hazardous and solid waste management, and toxic cleanup is described in a separate publication, the *Budget & Program Overview*. The 2011-13 version of the overview can be found at https://fortress.wa.gov/ecy/publications/summarypages/1101009.html.

Stakeholder Involvement and Coordination

The MTCA Ten-Year Financing Report is intended to provide more planning and funding certainty by identifying future toxic cleanup, toxic pollution prevention, and hazardous and solid waste management needs. Stakeholder participation in the process and input on cost estimates is critical for providing a comprehensive and credible report.

In preparing this report, Ecology coordinated and consulted with local governments (cities, counties, local air agencies, and ports) that receive MTCA funds.

Local Government Input

Local governments, through activities and initiatives funded largely by appropriations from the LTCA, are critical to delivering the environmental benefits of toxic cleanup, toxic pollution prevention, and hazardous and solid waste management strategies. The LTCA grant programs—Remedial Action Grants and Coordinated Prevention Grants—generally require matching funds from local governments. This increases the total resources available to support toxic cleanup, toxic pollution prevention, and hazardous and solid waste management initiatives. Ecology worked closely with local governments to identify needs for MTCA resources, consistent with requirements of the law. Ecology provides ongoing technical assistance, and administers local government grants and loans.

Local government coordination provided opportunities for input on the assumptions in this report. Local governments also provided insight into:

- Technical issues related to toxic waste cleanup cost estimates.
- Solid and hazardous waste planning.
- Solid and hazardous waste prevention and reduction.
- Recycling and solid waste facility compliance and enforcement needs.
- Remedial action project lists.
- Cost estimates.

State Agencies Receiving MTCA Funding

In addition to Ecology, other state agencies receive MTCA funds for toxic cleanup, toxic pollution prevention, and hazardous and solid waste management activities. They include the Washington State Departments of Health, Agriculture, Natural Resources, Revenue, Washington State Patrol, and the Puget Sound Partnership. The budgets shown in Figures 2 and 3 for these agencies represent 2013-15 biennial operating budget carry-forward levels inflated by the fiscal growth factors in future biennia.

Summary of MTCA Ten-Year Financing Plan

Washington has made progress in the past 25 years when it comes to handling, reducing, recycling, and cleaning up toxic chemicals and solid wastes. Thousands of cleanups have been completed or are underway, most hazardous wastes from industry are managed well, and the volume of hazardous waste has dropped considerably.

- In 2005, Ecology reached the legislative goal set in 1990 of reducing hazardous waste in the state by 50 percent. Ecology continues to maintain one of the highest recycling and diversion rates of hazardous waste in the nation.
- Washington reached the legislative goal of a 50 percent recycling rate for solid wastes.

Over the next ten years, Ecology will continue to work to understand and prevent contamination where possible, and manage it when it cannot be prevented. Although the majority of today's contaminated site cleanups are still from legacy pollutants, Ecology will ensure today's management strategies continue to reduce additional contaminated sites.

Approaches that anticipate and prevent creation of pollutants and wastes are preferred to management methods, such as treatment, re-use, and recycling. Safe management of hazardous and solid waste is still important in overall environmental protection efforts, but even the best waste management practices are not the same as avoiding creation of waste in the first place. Avoiding use of toxic chemicals is the smartest, cheapest, and healthiest approach.

The following financial data is presented as balanced budget or appropriation data, as opposed to a long-term statement of cash flow. The information outlines the resources available and the plans for MTCA investments over the next ten years. Descriptions of revenues, working capital reserves, and expenditure plans for the STCA and the LTCA are summarized below.

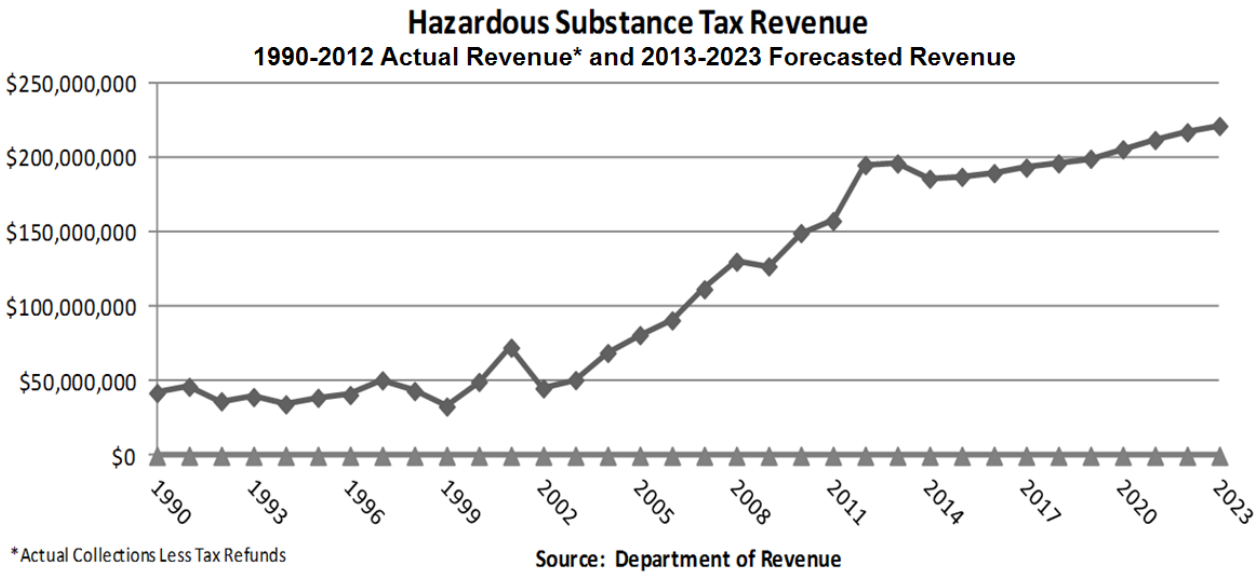
> ***Report Requirement:*** *Project the remedial action need, cost, revenue, and any recommended working capital reserve estimate to the next biennium's long-term remedial action needs from both the LTCA and the STCA.*

Revenues From The Hazardous Substance Tax

Under MTCA, the Hazardous Substance Tax (HST) is intended to provide the resources to clean up all hazardous waste sites and prevent the creation of future hazards due to improper disposal of toxic wastes into the state's lands and waters. Revenue from the HST can be extremely

volatile. As oil prices and demand change, HST revenue can increase or decrease dramatically. Over the past few biennia, oil prices have increased, which has significantly increased the available revenue to the State and Local Toxics Control Accounts. Figure 1 shows HST revenue since 1990, and includes a ten-year forecast of future revenues through the 2013-23 biennium.

Figure 1. Hazardous Substance Tax Revenue (November 2012)



To sustain funding for long-term needs and mitigate for revenue volatility, it is important to not over-commit the accounts to unsustainable levels. Historically, this has been accomplished by funding one-time projects (primarily capital projects) and activities at a level to maintain sustainable funding of ongoing activities. The MTCA ten-year financing plan includes a reserve of $3.0 million in both the STCA and LTCA to mitigate short-term fund volatility due primarily to oil price fluctuations and tax refunds. Working capital reserves are intended to cover fluctuations in cash flow. For most funds, a reasonable amount would be sufficient to cover two month's worth of cash expenditures.

Estimates in this report reflect Ecology's work with local governments to develop working capital reserves.

> ***Report Requirement:*** *Work with local governments to develop working capital reserves to be incorporated in the ten-year financing report.*

State and Local Toxics Control Accounts Summaries

Figures 2 and 3 summarize the MTCA ten-year financing plan for revenues and expenditures from the STCA and LTCA.

The summaries in Figures 2 and 3 represent: (1) Ecology's 2013-15 biennial operating and capital budget requests submitted to the Office of Financial Management in September 2012; (2) additional capital cleanup projects identified by Ecology for the November 2012 Hazardous Substance Tax (HST) revenue forecast increase; and (3) the 2012 Washington State Department of Revenue ten-year HST forecast. Budget information from other state agencies that receive MTCA funding is also included.

The future biennia (2015-17 through 2021-23) operating and capital budget needs were adjusted using fiscal growth factors or RACER cost escalation factors for remedial action projects.

> ***Report Requirement:*** *Develop a comprehensive ten-year financing report in coordination with all local governments with cleanup responsibilities.*

Figure 2. State Toxics Control Account Ten-Year Financing Plan – 2013-15 Biennial Budget

State Toxics Control Account

Ecology's 2013-2015 Biennial Budget Request & 2013-15 through 2021-23 Projected Needs

	2013-15	2015-17	2017-19	2019-21	2021-23	10 Year Total
Revenue						
Hazardous Substance Tax [1]	175,330,000	180,010,000	185,870,000	196,220,000	206,030,000	943,460,000
Mixed Waste Fee	13,800,000	13,800,000	13,800,000	13,800,000	13,800,000	69,000,000
Ecology Other Revenue [2]	11,917,000	11,917,000	11,917,000	11,917,000	11,917,000	59,585,000
Total Revenue	**201,047,000**	**205,727,000**	**211,587,000**	**221,937,000**	**231,747,000**	**1,072,045,000**
Fiscal Growth Factor[3]	-	1.045	1.045	1.045	1.045	
Operating						
Ecology Maintenance Level	114,586,000	119,691,000	125,023,000	130,593,000	136,411,000	626,304,000
Ecology Performance Level Requests [4]						
Implement Better Brakes Law	188,000	149,000	156,000	163,000	170,000	826,000
Preventing Non-Attainment Areas	1,022,000	-	-	-	-	1,022,000
Washington State BEACH Porgram	579,000	784,000	819,000	855,000	893,000	3,930,000
Low Level Radioactive Waste MTCA	537,000	264,000	276,000	288,000	301,000	1,666,000
State Revolving Fund Admin Charge	439,000	513,000	-	-	-	952,000
Statewide LID Training Program	1,980,000	2,065,000	-	-	-	4,045,000
Spokane River PCB Source Abatement	1,000,000	-	-	-	-	1,000,000
Smart, Targeted Toxics Reductions	2,600,000	-	-	-	-	2,600,000
Tsunami Debris	1,945,000	-	-	-	-	1,945,000
Total Ecology Operating	**124,876,000**	**123,466,000**	**126,274,000**	**131,899,000**	**137,775,000**	**644,290,000**
Other Agencies (ML plus PL):						
Department of Revenue	89,000	93,000	97,000	101,000	105,000	485,000
Department of Health	3,693,000	3,858,000	4,030,000	4,210,000	4,398,000	20,189,000
Department of Natural Resources	80,000	84,000	88,000	92,000	96,000	440,000
Department of Agriculture	5,133,000	5,362,000	5,601,000	5,851,000	6,112,000	28,059,000
Puget Sound Partnership	667,000	697,000	728,000	760,000	794,000	3,646,000
State Patrol	510,000	533,000	557,000	582,000	608,000	2,790,000
Total Operating	**135,048,000**	**134,093,000**	**137,375,000**	**143,495,000**	**149,888,000**	**699,899,000**
Capital						
Ecology New Requests						
Mercury Switch Removal	500,000	-	-	-	-	500,000
Reducing Toxic Diesel Emissions [5]	5,000,000	5,223,000	5,456,000	5,699,000	5,953,000	27,331,000
Reducing Toxic Wood Smoke Emissions [5]	4,000,000	4,178,000	4,364,000	4,558,000	4,761,000	21,861,000

Cleanup Toxic Sites-Puget Sound [6]	66,481,000	62,560,000	47,882,000	22,327,000	11,462,000	210,712,000
Eastern Washington Clean Sites Initiative [6]	16,080,000	2,817,000	2,638,000	3,936,000	3,599,000	29,070,000
Total Ecology Capital Requests	**92,061,000**	**74,778,000**	**60,340,000**	**36,520,000**	**25,775,000**	**289,474,000**
Total Operating and Capital	**227,109,000**	**208,871,000**	**197,715,000**	**180,015,000**	**175,663,000**	**989,373,000**
Future Needs beyond 2013-15 Requests [7]						
Air Quality Nonattainment Areas [8]	5,334,000	6,429,000	6,478,000	6,529,000	6,582,000	31,352,000
Western Washington Clean Sites Initiative [9]	4,916,000	7,514,000	1,643,000	851,000	1,010,000	15,934,000
Safe Soils Program (Eastern Washington)	-	3,164,000	585,000	242,000	250,000	4,241,000
Toxic Pollution Prevention	-	3,400,000	4,183,000	4,370,000	4,564,000	16,517,000
Hazardous Waste Management	-	627,000	655,000	684,000	714,000	2,680,000
Total Future Needs	**10,250,000**	**21,134,000**	**13,544,000**	**12,676,000**	**13,120,000**	**70,724,000**
Total	**237,359,000**	**230,005,000**	**211,259,000**	**192,691,000**	**188,783,000**	**1,060,097,000**

NOTES:

1. From November 2012 GAAP forecast (DOR worksheet sent November 13, 2012, used "Control" line and rounded to the 5th digit.)

2. Ecology other revenue includes cost recovery, VCP, penalties, recovered LUST, and local interest.

3. The Fiscal Growth Factor is applied to maintenance levels, budget requests and future requests except for items in italics. The Fiscal Growth Factor reflects the current factors from the State of Washington's Expenditure Limit Committee. The biennial factor shown is the average of the fiscal growth factors for Fiscal Years 2016 (4.46%) and FY 2017 (4.45%).

4. Figures in 2015-17 and beyond reflect the ongoing impact of Ecology's PL requests from the 2013-15 biennium if they are approved by the Legislature.

5. Diesel and woodstove projects are eligible in either STCA or LTCA. This reports shows all the amounts in STCA; future amounts may be funded from either account.

6. Ecology's normal process and budget strategy for managing the volatility in the MTCA accounts is to review capital project lists and provide additional, ready to proceed projects for Clean-Up Toxic Sites Puget Sound (STCA), Eastern WA Clean Sites Initiative (STCA), and Remedial Action Grants (LTCA). Ecology's original capital project request for 2013-15:

   - Cleanup Toxic Sites - Puget Sound 18,000,000
   - Eastern Washington Clean Sites 4,780,000

7. Narrative sections throughout the report describe and estimate amounts that may be requested in future legislative sessions.

8. Air Quality Non-Attainment includes an ongoing General Fund-State to STCA shift proposed by Governor Gregoire and future biennial budget requests. The 2013-15 budget request for non-attainment and the future needs equal the summary table for non-attainment in the Toxic Pollution Prevention section, under Preventing and Addressing Air Quality Nonattainment Areas.

9. Western Washington Clean Sites Initiative - Historically, Ecology has funded these projects in its operating budget from unspent emergency cleanup funding.

Figure 3. Local Toxics Control Account Ten-Year Financing Plan – 2013-15 Biennial Budget

Local Toxics Control Account

Ecology's 2013-2015 Biennial Budget Request & 2013-15 through 2021-23 Projected Needs

	2013-15	2015-17	2017-19	2019-21	2021-23	10 Year Total
Revenue						
Hazardous Substance Tax[1]	197,710,000	202,990,000	209,600,000	221,270,000	232,340,000	1,063,910,000
Fiscal Growth Factor[2]	-	1.045	1.045	1.045	1.045	
Operating						
Ecology Maintenance Level	27,307,000	28,524,000	29,795,000	31,122,000	32,508,000	149,256,000
Total Operating	**27,307,000**	**28,524,000**	**29,795,000**	**31,122,000**	**32,508,000**	**149,256,000**
Capital						
Ecology New Requests						
Remedial Action Grants [3]	128,602,000	150,512,000	150,718,000	164,787,000	169,498,000	764,117,000
Coordinated Prevention Grants	28,240,000	30,180,000	31,940,000	33,720,000	35,680,000	159,760,000
Total Capital	**156,842,000**	**180,692,000**	**182,658,000**	**198,507,000**	**205,178,000**	**923,877,000**
Total Operating and Capital	**184,149,000**	**209,216,000**	**212,453,000**	**229,629,000**	**237,686,000**	**1,073,133,000**
Future Needs beyond 2013-15 Requests [4]						
Capital Stormwater Retrofit & Low Impact Development	-	50,000,000	52,228,000	54,555,000	56,985,000	213,768,000
Municipal Stormwater Capacity Grant	10,000,000	10,446,000	-	-	-	20,446,000
Hazardous Waste Management	-	2,300,000	2,402,000	2,509,000	2,621,000	9,832,000
Total Future Needs	**10,000,000**	**62,746,000**	**54,630,000**	**57,064,000**	**59,606,000**	**244,046,000**
Total	**194,149,000**	**271,962,000**	**267,083,000**	**286,693,000**	**297,292,000**	**1,317,179,000**

NOTES:

1. From November 2012 GAAP forecast (DOR worksheet sent November 13, 2012, used "Control" line and rounded to the 5th digit.)

2. The Fiscal Growth Factor is applied to maintenance levels, budget requests and future requests except for items in italics. The Fiscal Growth Factor reflects the current factors from the State of Washington's Expenditure Limit Committee. The biennial factor shown is the average of the fiscal growth factors for Fiscal Years 2016 (4.46%) and FY 2017 (4.45%).

3. Ecology's normal process and budget strategy for managing the volatility in the MTCA accounts is to review capital project lists and provide additional, ready to proceed projects for Clean-Up Toxic Sites Puget Sound (STCA), Eastern WA Clean Sites Initiative (STCA), and Remedial Action Grants (LTCA). Ecology's original capital project request for 2013-15:

- Remedial Action Grants 62,537,000

4. Narrative sections throughout the report describe and estimate amounts that may be requested in future legislative sessions.

5. Diesel and woodstove projects are eligible in either STCA or LTCA. This reports shows all the amounts in STCA; future amounts may be funded from either account.

Toxic Cleanup – Ten-Year Financing Plan

Background

Ecology's goal is to remove contaminants from the environment and keep them out. This includes the work of five Ecology programs: (1) Toxics Cleanup; (2) Nuclear Waste; (3) Hazardous Waste and Toxic Reduction; (4) Waste 2 Resources; and (5) Spill Prevention, Preparedness, and Response.

Specific to toxic site cleanup, Ecology has identified over 11,586 toxic contaminated sites since the mid-1980s, and 53 percent of these sites have been cleaned up or require no further action. Over 3,400 sites are currently in the process of being cleaned up by the site owner (including the government) or through the orphaned site (clean sites) program. Roughly 1,900 sites still need to begin cleanup actions. A majority of these sites are contaminated with petroleum, usually from leaking underground storage tanks.

Over the past ten years, over 300 new sites have been reported to Ecology each year. Most of these sites have less extensive contamination and cost less to cleanup. Usually these sites are cleaned up voluntarily by the site owner.

Once a site is contaminated with toxic chemicals, it can take several years to clean up, depending on the regulatory process used (formal versus voluntary), nature of the contaminants, and number of media and exposure pathways. The longer timeframe sites tend to have contaminated water (surface or ground) or marine sediment. Ecology makes every attempt to locate and hold liable individuals and businesses—both private and government—responsible for site cleanup. Ecology works with potentially liable parties to:

- Investigate the extent of contamination.
- Develop feasible approaches for cleanup.
- Develop cleanup plans and conduct the cleanup.

Emerging Issues

There continue to be two significant issues creating challenges for cleaning up contaminated sites: (1) the financial mechanisms to pay for large, complex cleanup projects; and (2) additional "area-wide" type contamination that will create new sites or threaten to re-contaminate sites already cleaned up.

Also, sites with sediment contamination—like most of the Remedial Action Grant (RAG) sites—are more complex and take longer to clean up.

Ecology participated in a Lean event to streamline publicly-funded cleanup projects. The goal of this event was to speed up cleanups and reduce the amount of capital budget re-appropriations for these projects. Ecology cleanup site managers, program management staff, and local government representatives from the Port of Anacortes and Port of Bellingham all participated in the Lean

event. Tools to speed up cleanups are currently being developed and will be completed and implemented with all new RAG cleanup sites by July 2013.

Funding Large Cleanup Projects

Today's contaminated site cleanups are much larger than in the past, and the complexity at sites is increasing. For instance, marine ports with sediment contamination are very expensive to clean up and currently use most of the available LTCA grant funding. Port sites commonly take several years to clean up. The current model for financing these longer-term cleanup projects is tied to the state's biennial funding and expenditure plan. While this model depends on biennial budget decisions by the Legislature, Ecology collaborates with local governments to ensure cleanup needs are in Ecology's budget request each biennium.

The ten-year financing plan shows the long-term funding needs of large multi-year cleanup projects located in Bellingham Bay, Lower Duwamish, Commencement Bay, and Budd Inlet.

Area-wide Contamination

Traditionally, Washington has cleaned up contaminated sites one-at-a-time. Technology and knowledge about the science of contamination is improving. This is leading to an increased understanding of widespread contamination. For instance, Ecology is working with local governments to address lead and arsenic contamination from the historical use of smelters and former orchard lands that are now schools and playgrounds. Broad areas of land have been contaminated from these sources.

Nonpoint source pollution, such as stormwater, is causing contamination and re-contamination of already cleaned up sites. Controlling the source of pollution is becoming a major focal point in use of funds to prevent site contamination.

Five ranked and prioritized cleanup project lists are included in this report. The first list is for RAG local government sites eligible for funding from the LTCA. The remaining lists are from the STCA and are comprised of sites that include Safe Soils, Puget Sound Initiative, and "orphaned, abandoned, or other eligible sites." Orphaned and abandoned sites (Western and Eastern Washington Clean Sites Initiative) are ones where the site owner has been unable or unwilling to pay cleanup costs, and these are sites where the state steps in and begins cleanup actions. The state retains the option to cost recover cleanup and oversight costs. Several factors were considered in developing criteria for the contaminated site lists:

- Discussions with local governments.
- Hazard ranking of contaminated sites.
- Length of time the site has been waiting to be cleaned up.
- Contaminated site priority of local governments.
- Readiness of local government or private owner to proceed with a cleanup.

A steady number of sites are reported to Ecology each year. It is likely that sites more hazardous to human health and the environment will be reported and moved up in priority for cleanup actions in the future.

Remedial Action Grant (RAG) Program

Background

Through Ecology, the state offers RAGs to local governments to encourage and expedite cleanup activity. “Local government” means any political subdivision, regional government unit, district, or municipal or public corporation. This includes cities, towns, and counties. Grants and loans lessen the impact of the cost to rate payers and taxpayers, and remove harmful substances from the environment.

As part of the RAG program, Ecology provides additional funding to local governments through Independent Remedial Action Grants (called the Voluntary Cleanup Program), Integrated Planning Grants, and Site Hazard Assessment Grants.

> *Independent Remedial Action Grants* are provided to local governments that voluntarily take on cleanup actions without Ecology’s oversight or approval.
>
> *Integrated Planning Grants* are given to local governments to develop integrated project plans for cleanup and reuse of a contaminated site.
>
> *Site Hazard Assessment Grants* are given to local health departments and districts to conduct assessments at sites to confirm the type and level of contamination at sites listed on Ecology’s hazardous sites list.

Ecology developed a project list (Figure 4) based on known projects where local governments will need state grant funding to complete their cleanup project. The project list anticipates when grant funding will be needed by local governments. Some large cleanup projects will need state grant funding beyond the 2021-23 biennium.

All RAG projects are ranked high, medium, or low according to the Washington Assessment and Ranking Method (WARM). Sites ranked “high” pose the highest risk to human health and the environment, are ready to proceed with cleanup, and the grant is necessary to expedite cleanup.

The application procedure for remedial action grants is an open process. The RAG program responds to the worst contaminated sites first. Newer projects may take priority over other listed projects depending on their risk and ability to proceed with cleanup.

Findings

- RCW 70.105D provides for a minimum 50 percent matching grant program to reimburse local government costs for federal (Superfund) and state (MTCA) remedial action sites. Recent changes to the statute allow for raising the state share for fund contributions to expedite cleanups and encourage revitalizing properties where contamination has hindered reuse.

- The total estimated cost to complete remediation at these sites is $2.159 billion. This estimate goes beyond a ten-year timeframe.
- The state share of these costs is estimated at a minimum of $1.114 billion.
- The cost range is between $50,000 and $600,000,000 per site cleanup, indicating variability in the size and nature of cleanups being conducted under the RAG program.

Conclusions

The RAG program estimated need for state matching funds for all projects currently identified is $1.114 billion. Operating the program at this level would provide the resources to meet current local government estimates for site cleanups under the RAG program as reported in Figure 4. This is based on Ecology estimates for the state portion of RAG cleanups, which is 50 percent in most cases.

Port-managed RAG needs on the current list include over $1.097 billion in cleanup costs. Based on a state share matching ratio of 50 percent, the state grant need is $556.5 million as reported in Figure 4. These sites represent 50 percent of the total grant needs statewide.

> ***Report Requirement:*** *Identify the projected biennial hazardous waste site remedial action needs that are eligible for funding from the Local Toxics Control Account.*

Estimating costs accurately for these sites is based largely on the degree of project definition. Some sites have had an initial investigation which provides only enough information to determine if the site needs further investigation, emergency cleanup, or no further action. Other sites have been assessed and the presence of hazardous substances has been confirmed as well as the site risk. Sites that have begun a formal investigation will have the most project definition. Generally, sites that receive initial cost estimates have minimal project definition. The best estimate is developed based on available information. The RACER model is one method to estimate site cleanup costs based on typical costs for variables at the site. Most estimates will likely move up or down as actual remedial investigations get underway at the contaminated site. Ecology will continue to refine cost estimates for those sites that take several biennia to complete.

Figure 4. Remedial Action Grants – Ten-Year Estimate of Funding Needs

Remedial Action Grants - Ten-Year Estimate of Funding Needs by County and Grantee

This table represents the ten year funding needs for known projects eligible for Remedial Action Grants (RAGs) and a placeholder for potential unknown projects. Also, included are the funding needs for Voluntary Cleanups (VCPs) and Integrated Planning Grants (IPGs), Site Hazard Assessments (SHAs), and Ecology grant administration costs.
Project costs rounded to nearest $100s.

						Inflation Factors	1.00	1.13	1.17	1.21	1.25	1.30				
						2010 1761 Report Information Project Costs with Inflation										
Grantee	Project	TCP Rank	Region	County	Total Estimated Project Cost 2012		Total Project Costs Requested 2013-15	Total Project Costs Requested 2015-17	Total Project Costs Requested 2017-19	Total Project Costs Requested 2019-21	Total Project Costs Requested 2021-23	Future Biennia Costs (Past 2021-23)	Total	State	Local	Total
City of Port Angeles	Western Port Angeles Harbor	H	NWRO	Clallam	$ 400,000		$ 800,000	$ -	$ -	$ -	$ -	$ -	$ 800,000	$ 400,000	$ 400,000	$ 800,000
Port of Port Angeles	Western Port Angeles Harbor	H	SWRO	Clallam	$ 1,500,000		$ 1,500,000	$ -	$ -	$ -	$ -	$ -	$ 1,500,000	$ 750,000	$ 750,000	$ 1,500,000
Port of Ridgefield	Pacific Woodtreating	H	SWRO	Clark	$ 15,000,000		$ 15,000,000	$ -	$ -	$ -	$ -	$ -	$ 15,000,000	$ 15,000,000	$ -	$ 15,000,000
City of Castle Rock	Maintenance Shop	M	SWRO	Cowlitz	$ 329,000		$ -	$ 214,200	$ 162,400	$ -	$ -	$ -	$ 376,600	$ 188,300	$ 188,300	$ 376,600
Port of Pasco	Bulk Fuel Terminal - remediation and monitoring	H	ERO	Franklin	$ 1,346,700		$ 1,346,700	$ -	$ -	$ -	$ -	$ -	$ 1,346,700	$ 1,010,030	$ 336,670	$ 1,346,700
Grant County	Ephrata Landfill	H	ERO - W2R	Grant	$ 8,000,000		$ 4,000,000	$ 2,424,100	$ 876,300	$ 726,500	$ 627,400	$ -	$ 8,654,300	$ 6,490,730	$ 2,163,570	$ 8,654,300
Port of Grays Harbor	Hungry Whale	L	SWRO	Grays Harb	$ 797,400		$ 400,000	$ 352,000	$ 99,600	$ -	$ -	$ -	$ 851,600	$ 425,800	$ 425,800	$ 851,600
City of Bothell	Crossroads,	H	NWRO	King	$ 16,000,000		$ 6,001,600	$ 11,273,300	$ -	$ -	$ -	$ -	$ 17,274,900	$ 8,637,450	$ 8,637,450	$ 17,274,900
City of Bothell	Case Property	H	NWRO	King	$ 7,200,000		$ 6,000,000	$ 1,353,000	$ -	$ -	$ -	$ -	$ 7,353,000	$ 3,676,500	$ 3,676,500	$ 7,353,000
City of Bothell	Bothell Service Center	H	NWRO	King	$ 7,300,000		$ 7,300,000		$ -	$ -	$ -	$ -	$ 7,300,000	$ 3,650,000	$ 3,650,000	$ 7,300,000
City of Seattle	Gas Works Park	H	NWRO	King	$ 23,000,000		$ 13,846,600	$ 6,368,300	$ 3,505,200	$ -	$ -	$ -	$ 23,720,100	$ 11,860,050	$ 11,860,050	$ 23,720,100
City of Seattle	Lower Duwamish Waterway Phase 1	H	NWRO	King	$ 6,000,000		$ -	$ 2,255,000	$ 2,336,800	$ 2,421,600	$ -	$ -	$ 7,013,400	$ 3,506,700	$ 3,506,700	$ 7,013,400
City of Seattle	Lower Duwamish Waterway Riverwide Cleanup	H	NWRO	King	$ 420,000,000		$ -	$ 22,275,100	$ 61,684,100	$ 100,108,200	$ 119,548,100	$ 238,160,500	$ 541,776,000	$ 270,888,000	$ 270,888,000	$ 541,776,000
City of Seattle	Seattle S Transfer Station/South Park Landfill	M	NWRO	King	$ 13,000,000		$ 12,626,900	$ 420,700	$ -	$ -	$ -	$ -	$ 13,047,600	$ 6,523,800	$ 6,523,800	$ 13,047,600
City of Seattle	Sternoff Metals	H	NWRO	King	$ 1,127,500			$ 1,127,500	$ -	$ -	$ -	$ -	$ 1,127,500	$ 563,750	$ 563,750	$ 1,127,500
City of Seattle	Union Ship Canal	H	NWRO	King	$ 8,700,000		$ -	$ 1,691,300	$ 3,154,700	$ 5,448,700	$ -	$ -	$ 10,294,700	$ 5,147,350	$ 5,147,350	$ 10,294,700
City of Seattle	LDW RI/FS, Port Technical and Port Source Control	H	NWRO	King	$ 6,500,000		$ -	$ 7,328,800	$ -	$ -	$ -	$ -	$ 7,328,800	$ 3,664,400	$ 3,664,400	$ 7,328,800
City of Seattle - Public Utilities and City Light	Lower Duwamish Waterway Terminal 117 and Slip 4 Dredging	H	NWRO	King	$ 26,800,000		$ 21,800,000	$ -	$ -	$ -	$ -	$ -	$ 21,800,000	$ 10,900,000	$ 10,900,000	$ 21,800,000
King County	East Waterway to Match Port of Seattle	H	NWRO	King	$ 8,000,000		$ 8,000,000	$ -	$ -	$ -	$ -	$ -	$ 8,000,000	$ 4,000,000	$ 4,000,000	$ 8,000,000
King County	Combined Sewer Overflow Investigation and Cleanup (Brandon, Chelan, Denny Way, King and Lander CSOs).	L	NWRO	King	$ 2,800,000		$ 13,600,000	$ 13,586,400	$ -	$ -	$ -	$ -	$ 27,186,400	$ 13,593,200	$ 13,593,200	$ 27,186,400
King County	Lower Duwamish Waterway Riverwide Cleanup	H	NWRO	King	$ 120,000,000			$ 11,275,100	$ 11,684,100	$ 12,108,200	$ 12,548,100	$ 104,033,800	$ 151,649,300	$ 75,824,650	$ 75,824,650	$ 151,649,300

Remedial Action Grants - Ten-Year Estimate of Funding Needs by County and Grantee

This table represents the ten year funding needs for known projects eligible for Remedial Action Grants (RAGs) and a placeholder for potential unknown projects. Also, included are the funding needs for Voluntary Cleanups (VCPs) and Integrated Planning Grants (IPGs), Site Hazard Assessments (SHAs), and Ecology grant administration costs.
Project costs rounded to nearest $100s.

Inflation Factors	1.00	1.13	1.17	1.21	1.25	1.30				
	2010 1761 Report Information Project Costs with Inflation									
Grantee	Project	TCP Rank	Region	County	Total Estimated Project Cost 2012	Total Project Costs Requested 2013-15	Total Project Costs Requested 2015-17	Total Project Costs Requested 2017-19	Total Project Costs Requested 2019-21	Total Project Costs Requested 2021-23	Future Biennia Costs (Past 2021-23)	Total	State	Local	Total
King County Airport	North Boeing Field/Georgetown Steamplant (KC Airport)	H	NWRO	King	$ 4,200,000		$ 4,735,500	$ -	$ -	$ -	$ -	$ 4,735,500	$ 2,367,750	$ 2,367,750	$ 4,735,500
Port of Seattle	Chevron Seattle Terminal 4097 (T108)	M	NWRO	King	$ 20,600,000	$ -	$ 14,657,600	$ 8,178,900	$ 726,500	$ -	$ -	$ 23,563,000	$ 11,781,500	$ 11,781,500	$ 23,563,000
Port of Seattle	Cleanup - Lower Duwamish Waterway	H	NWRO	King	$ 541,089,000	$ 22,600,000	$ 20,069,600	$ 16,100,700	$ 88,777,100	$ 148,663,600	$ 319,958,500	$ 616,159,500	$ 308,079,750	$ 308,079,750	$ 616,159,500
Port of Seattle	East Waterway	H	NWRO	King	$ 99,000,000	$ -	$ 16,912,600	$ 52,578,500	$ 36,324,500	$ 11,293,300		$ 117,108,900	$ 58,554,450	$ 58,554,450	$ 117,108,900
Port of Seattle	Lower Duwamish Waterway Terminal 117	H	NWRO	King	$ 27,050,000	$ 26,200,000	$ 958,400	$ -	$ -	$ -	$ -	$ 27,158,400	$ 13,579,200	$ 13,579,200	$ 27,158,400
Port of Seattle	Lora Lake Apartments	H	NWRO	King	$ 16,000,000	$ 16,000,000	$ -	$ -	$ -	$ -	$ -	$ 16,000,000	$ 8,000,000	$ 8,000,000	$ 16,000,000
Port of Seattle	Terminal 30	H	NWRO	King	$ 1,331,400	$ 1,331,400	$ 38,700	$ -	$ -	$ -	$ -	$ 1,370,100	$ 685,050	$ 685,050	$ 1,370,100
Port of Seattle	Terminal 91	H	NWRO	King	$ 9,110,000	$ 9,110,000	$ -	$ -	$ -	$ -	$ -	$ 9,110,000	$ 4,555,000	$ 4,555,000	$ 9,110,000
Port of Seattle	Terminal 115N	H	NWRO	King	$ 5,200,000	$ 1,200,000	$ 2,255,000	$ 2,336,800	$ -	$ -	$ -	$ 5,791,800	$ 2,895,900	$ 2,895,900	$ 5,791,800
Seattle City Light	North Boeing Field/Georgetown Steamplant	H	NWRO	King	$ 1,500,000	$ -	$ 1,691,300	$ -	$ -	$ -	$ -	$ 1,691,300	$ 845,650	$ 845,650	$ 1,691,300
Seattle Public Unitlities	North Boeing Field/Georgetown Steamplant	H	NWRO	King	$ 1,500,000	$ -	$ 1,691,300	$ -	$ -	$ -	$ -	$ 1,691,300	$ 845,650	$ 845,650	$ 1,691,300
Kitsap County	Hansville Landfill	H	NWRO	Kitsap	$ 753,000	$ 503,000	$ 281,900	$ -	$ -	$ -	$ -	$ 784,900	$ 392,450	$ 392,450	$ 784,900
Kitsap County	Olalla Landfill	H	NWRO	Kitsap	$ 275,800	$ 275,800	$ -	$ -	$ -	$ -	$ -	$ 275,800	$ 137,900	$ 137,900	$ 275,800
Mason County	Mason County Wood Recyclers	L	SWRO	Mason	$ 2,466,400	$ -	$ 1,094,900	$ 1,660,300	$ 89,900	$ -	$ -	$ 2,845,100	$ 1,422,550	$ 1,422,550	$ 2,845,100
Port of Ilwaco	Lyles Cannery	L	SWRO	Pacific	$ 1,082,700	$ -	$ 243,100	$ 799,200	$ 221,600	$ -	$ -	$ 1,263,900	$ 631,950	$ 631,950	$ 1,263,900
City of Tacoma	19th & D (BNSF Oil Pipeline)	L	SWRO	Pierce	$ 832,400	$ -	$ 938,500		$ -	$ -	$ -	$ 938,500	$ 469,250	$ 469,250	$ 938,500
City of Tacoma	Dickman Mill	M	SWRO	Pierce	$ 7,083,700	$ -	$ 3,993,500	$ 4,138,400	$ -	$ -	$ -	$ 8,131,900	$ 4,065,950	$ 4,065,950	$ 8,131,900
City of Tacoma	Dock Street (4th - 11th)	H	SWRO	Pierce	$ 500,000	$ -	$ 563,800	$ -	$ -	$ -	$ -	$ 563,800	$ 281,900	$ 281,900	$ 563,800
City of Tacoma	Foss Waterway Site 9	H	SWRO	Pierce	$ 500,000	$ -	$ 563,800	$ -	$ -	$ -	$ -	$ 563,800	$ 281,900	$ 281,900	$ 563,800
Pierce County	Puget Creek Beach	M	SWRO	Pierce	$ 750,000	$ -	$ 845,600	$ -	$ -	$ -	$ -	$ 845,600	$ 422,800	$ 422,800	$ 845,600
Port of Tacoma	Arkema Manufacturing	H	SWRO	Pierce	$ 20,000,000	$ 2,000,000	$ 6,765,000	$ 9,347,300	$ 4,843,300	$ -	$ -	$ 22,955,600	$ 11,477,800	$ 11,477,800	$ 22,955,600
Port of Tacoma	Arkema Mound	H	SWRO	Pierce	$ 4,600,000	$ 4,600,000	$ -	$ -	$ -	$ -	$ -	$ 4,600,000	$ 2,300,000	$ 2,300,000	$ 4,600,000
Port of Tacoma	Dunlap Mound/Atofina Chemical 3009 Taylor Way log yard - 1219	H	SWRO	Pierce	$ 2,000,000	$ -	$ 2,255,000	$ -	$ -	$ -	$ -	$ 2,255,000	$ 1,127,500	$ 1,127,500	$ 2,255,000
Port of Tacoma	Early Business Center	M	SWRO	Pierce	$ 1,000,000	$ -	$ 563,800	$ 584,200	$ -	$ -	$ -	$ 1,148,000	$ 574,000	$ 574,000	$ 1,148,000
Port of Tacoma	Kaiser	H	SWRO	Pierce	$ 1,500,000	$ -	$ 563,800	$ 1,168,400	$ -	$ -	$ -	$ 1,732,200	$ 866,100	$ 866,100	$ 1,732,200
Port of Tacoma	Parcel 2/ American Fastfreight	H	SWRO	Pierce	$ 1,500,000	$ -	$ 845,600	$ 876,300	$ -	$ -	$ -	$ 1,721,900	$ 860,950	$ 860,950	$ 1,721,900
Port of Tacoma	Pier 24/25	H	SWRO	Pierce	$ 2,000,000	$ -	$ 1,127,500	$ 1,168,400	$ -	$ -	$ -	$ 2,295,900	$ 1,147,950	$ 1,147,950	$ 2,295,900
Port of Tacoma	Portac Removal Action - 1215	L	SWRO	Pierce	$ 2,721,000	$ -	$ 2,972,200	$ 84,900	$ -	$ -	$ -	$ 3,057,100	$ 1,528,550	$ 1,528,550	$ 3,057,100
Port of Tacoma	PRI Cleanup (Glenn Springs Holdings)	L	SWRO	Pierce	$ 2,123,000		$ 291,800	$ 2,139,600	$ -	$ -	$ -	$ 2,431,400	$ 1,215,700	$ 1,215,700	$ 2,431,400
Port of Tacoma	Prologis/Don Oline	L	SWRO	Pierce	$ 1,497,000		$ 115,000	$ 1,614,800	$ -	$ -	$ -	$ 1,729,800	$ 864,900	$ 864,900	$ 1,729,800

Remedial Action Grants - Ten-Year Estimate of Funding Needs by County and Grantee

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Port of Tacoma	US Gypsum Cleanup Investigation (Thermafiber LLC)	L	SWRO	Pierce	$ 208,100		$ 234,600		$ -	$ -	$ -	$ 234,600	$ 117,300	$ 117,300	$ 234,600
Port of Anacortes	Focus Fidalgo - Scott Paper, Shell Tank Farm, and Pier 2	H	LALC	Skagit	$ 3,500,000		$ 1,691,300	$ 2,336,800	$ -	$ -	$ -	$ 4,028,100	$ 2,014,050	$ 2,014,050	$ 4,028,100
Skagit County	Whitmarsh Landfill	H	LALC	Skagit	$ 5,384,700	$ -	$ 845,600	$ 4,831,000	$ 605,400	$ -	$ -	$ 6,282,000	$ 3,141,000	$ 3,141,000	$ 6,282,000
Port of Everett	Port Gardner Bay - Baywood, Mill A, West End, Ameron/Hulbert, Everett Shipyard	H	LALC	Snohomish	$ 29,292,500	$ -	$ 8,798,800	$ 3,905,700	$ 16,237,100	$ 9,590,700	$ 144,400	$ 38,676,700	$ 19,338,350	$ 19,338,350	$ 38,676,700
City of Cheney	Cheney Super Stop Lots 8 & 9	L	ERO	Spokane	$ 1,124,900	$ -	$ 316,500	$ 725,500	$ 179,100	$ 94,700	$ -	$ 1,315,800	$ 657,900	$ 657,900	$ 1,315,800
City of Olympia	Boulevard Nursery	L	SWRO	Thurston	$ 135,700	$ -	$ 153,000	$ -	$ -	$ -	$ -	$ 153,000	$ 76,500	$ 76,500	$ 153,000
City of Olympia	Columbia Street Parking Lot	L	SWRO	Thurston	$ 208,100	$ -	$ 234,600	$ -	$ -	$ -	$ -	$ 234,600	$ 117,300	$ 117,300	$ 234,600
City of Olympia	Former DOT Site	M	SWRO	Thurston	$ 1,966,200	$ -	$ 2,215,800	$ -	$ -	$ -	$ -	$ 2,215,800	$ 1,107,900	$ 1,107,900	$ 2,215,800
City of Olympia	Former Safeway/New City Hall	H	SWRO	Thurston	$ 50,000	$ -	$ 56,400	$ -	$ -	$ -	$ -	$ 56,400	$ 28,200	$ 28,200	$ 56,400
City of Olympia	Old Olympia Landfill	L	SWRO	Thurston	$ 323,500	$ -	$ 364,700	$ -	$ -	$ -	$ -	$ 364,700	$ 182,350	$ 182,350	$ 364,700
City of Olympia	Percival Landing	H	SWRO	Thurston	$ 400,000	$ -	$ 451,000	$ -	$ -	$ -	$ -	$ 451,000	$ 225,500	$ 225,500	$ 451,000
City of Olympia	West Bay Park	H	SWRO	Thurston	$ 600,000	$ -	$ 338,300	$ 350,500	$ -	$ -	$ -	$ 688,800	$ 344,400	$ 344,400	$ 688,800
Port of Olympia	East Bay Remediation	H	SWRO	Thurston	$ 500,000	$ -	$ 563,800	$ -	$ -	$ -	$ -	$ 563,800	$ 281,900	$ 281,900	$ 563,800
Port of Olympia	Marina Dredging	M	SWRO	Thurston	$ 12,500,000	$ -	$ 117,300	$ 11,528,100	$ 3,062,800	$ -	$ -	$ 14,708,200	$ 7,354,100	$ 7,354,100	$ 14,708,200
Port of Olympia	Marine Terminal Dredging	M	SWRO	Thurston	$ 25,000,000	$ -	$ 5,637,500	$ 17,526,200	$ 6,054,100	$ -	$ -	$ 29,217,800	$ 14,608,900	$ 14,608,900	$ 29,217,800
Port of Olympia	Budd Inlet Sediments/Pilot Dredge	M	SWRO	Thurston	$ 4,000,000	$ 4,000,000	$ -	$ -	$ -	$ -	$ -	$ 4,000,000	$ 2,000,000	$ 2,000,000	$ 4,000,000
City of Walla Walla	Sudbury Landfill	H	ERO - W2R	Walla Walla	$ 4,748,200	$ 1,006,700	$ 3,086,100	$ 270,600	$ 290,600	$ 323,500	$ 357,600	$ 5,335,100	$ 4,001,330	$ 1,333,770	$ 5,335,100
City of Bellingham	Eldridge Municipal Landfill	H	NWRO	Whatcom	$ 500,000	$ -	$ 563,800	$ -	$ -	$ -	$ -	$ 563,800	$ 281,900	$ 281,900	$ 563,800
City of Bellingham	RG Haley	H	NWRO	Whatcom	$ 4,000,000	$ -	$ 4,510,000	$ -	$ -	$ -	$ -	$ 4,510,000	$ 2,255,000	$ 2,255,000	$ 4,510,000
City of Bellingham	S State Street Manufactured Gas Plant	H	NWRO	Whatcom	$ 2,150,000	$ -	$ 2,424,100	$ -	$ -	$ -	$ -	$ 2,424,100	$ 1,212,050	$ 1,212,050	$ 2,424,100
Port of Bellingham	Blaine Sediments	M	NWRO	Whatcom	$ 872,100	$ -	$ 625,000	$ 371,300	$ -	$ -	$ -	$ 996,300	$ 498,150	$ 498,150	$ 996,300
Port of Bellingham	Central Waterfront	H	NWRO	Whatcom	$ 3,061,400	$ -	$ 3,451,700	$ 406,900	$ -	$ -	$ -	$ 3,858,600	$ 1,929,300	$ 1,929,300	$ 3,858,600
Port of Bellingham	Cornwall Av Landfill	H	NWRO	Whatcom	$ 2,898,500	$ -	$ 3,268,100	$ -	$ -	$ -	$ -	$ 3,268,100	$ 1,634,050	$ 1,634,050	$ 3,268,100
Port of Bellingham	G-P West	H	NWRO	Whatcom	$ 11,255,400	$ -	$ 12,690,500	$ -	$ -	$ -	$ -	$ 12,690,500	$ 6,345,250	$ 6,345,250	$ 12,690,500
Port of Bellingham	Harris Ave Shipyard	H	NWRO	Whatcom	$ 1,787,800	$ -	$ 2,015,800	$ -	$ -	$ -	$ -	$ 2,015,800	$ 1,007,900	$ 1,007,900	$ 2,015,800

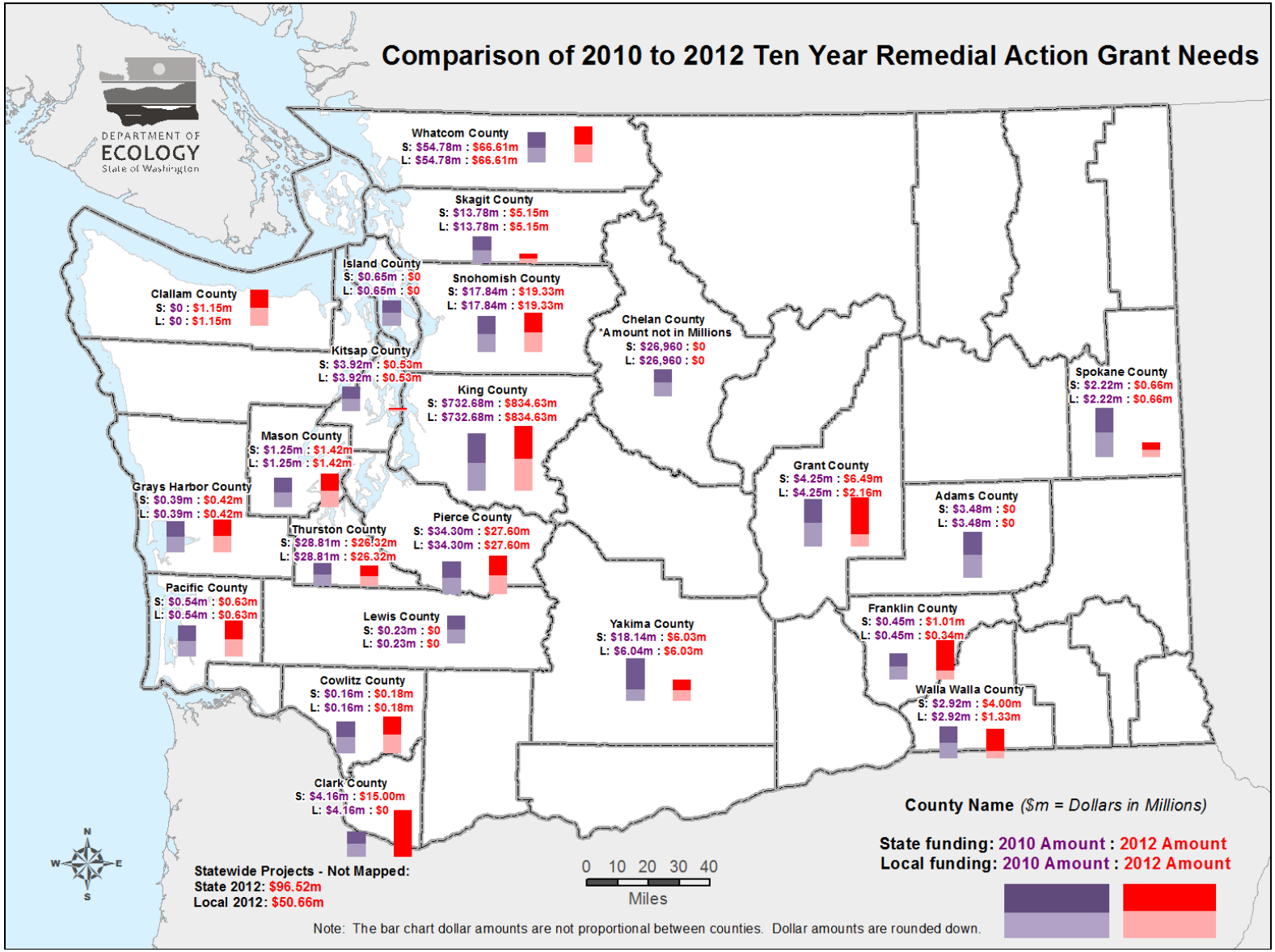
Remedial Action Grants - Ten-Year Estimate of Funding Needs by County and Grantee

This table represents the ten year funding needs for known projects eligible for Remedial Action Grants (RAGs) and a placeholder for potential unknown projects. Also, included are the funding needs for Voluntary Cleanups (VCPs) and Integrated Planning Grants (IPGs), Site Hazard Assessments (SHAs), and Ecology grant administration costs.
Project costs rounded to nearest $100s.

						Inflation Factors	1.00	1.13	1.17	1.21	1.25	1.30				
							2010 1761 Report Information Project Costs with Inflation									
Grantee	Project	TCP Rank	Region	County	Total Estimated Project Cost 2012		Total Project Costs Requested 2013-15	Total Project Costs Requested 2015-17	Total Project Costs Requested 2017-19	Total Project Costs Requested 2019-21	Total Project Costs Requested 2021-23	Future Biennia Costs (Past 2021-23)	Total	State	Local	Total
Port of Bellingham	I & J Waterway	H	NWRO	Whatcom	$ 1,345,000		$ 800,000	$ 1,014,800	$ -	$ -	$ -	$ -	$ 1,814,800	$ 907,400	$ 907,400	$ 1,814,800
Port of Bellingham	Marine Services NW	H	NWRO	Whatcom	$ 1,176,800		$ 1,000,000	$ 225,500	$ -	$ -	$ -	$ -	$ 1,225,500	$ 612,750	$ 612,750	$ 1,225,500
Port of Bellingham	Northwest Fuels	M	NWRO	Whatcom	$ 1,000,000		$ 1,000,000	$ -	$ -	$ -	$ -	$ -	$ 1,000,000	$ 500,000	$ 500,000	$ 1,000,000
Port of Bellingham	Other Port of Bellingham Sites	L	NWRO	Whatcom	$ 4,592,400		$ -	$ 1,790,000	$ 2,252,600	$ 606,100	$ 723,100		$ 5,371,800	$ 2,685,900	$ 2,685,900	$ 5,371,800
Port of Bellingham	Westman Marine	M	NWRO	Whatcom	$ 4,220,000		$ 4,000,000	$ 248,000	$ -	$ -	$ -	$ -	$ 4,248,000	$ 2,124,000	$ 2,124,000	$ 4,248,000
Port of Bellingham	Whatcom Waterway	H	NWRO	Whatcom	$ 63,095,000		$ -	$ 27,962,100	$ 36,209,000	$ 12,713,600	$ -	$ -	$ 76,884,700	$ 38,442,350	$ 38,442,350	$ 76,884,700
Port of Bellingham	Blaine Marina Tank Farm	H	NWRO	Whatcom	$ 3,000,000		$ 3,000,000	$ -	$ -	$ -	$ -	$ -	$ 3,000,000	$ 1,500,000	$ 1,500,000	$ 3,000,000
Port of Bellingham	Blaine Westman Sediment Site	H	NWRO	Whatcom	$ 4,500,000		$ -	$ 563,800	$ 1,168,400	$ 3,632,500	$ -	$ -	$ 5,364,700	$ 2,682,350	$ 2,682,350	$ 5,364,700
Port of Bellingham	RG Haley	H	NWRO	Whatcom	$ 4,000,000		$ 4,000,000	$ -	$ -	$ -	$ -	$ -	$ 4,000,000	$ 2,000,000	$ 2,000,000	$ 4,000,000
City of Sunnyside	Cream Wine/Carnation Site	H	CRO	Yakima	$ 800,000		$ 800,000	$ -	$ -	$ -	$ -	$ -	$ 800,000	$ 400,000	$ 400,000	$ 800,000
City of Yakima	Old Yakima Landfill	H	CRO	Yakima	$ 10,000,000		$ -	$ 11,275,100	$ -	$ -	$ -	$ -	$ 11,275,100	$ 5,637,550	$ 5,637,550	$ 11,275,100
Voluntary Cleanup and Integrated Planning Grants				Statewide	$ 21,185,900		$ 3,000,000	$ 3,382,500	$ 3,505,200	$ 3,632,500	$ 3,764,400	$ 3,901,300	$ 21,185,900	$ 21,185,900	$ -	$ 21,185,900
Site Health Assessments				Statewide	$ 21,185,900		$ 3,000,000	$ 3,382,500	$ 3,505,200	$ 3,632,500	$ 3,764,400	$ 3,901,300	$ 21,185,900	$ 21,185,900	$ -	$ 21,185,900
Ecology Grant Administration				Statewide	$ 3,485,600		$ 493,600	$ 556,500	$ 576,700	$ 597,600	$ 619,300	$ 641,900	$ 3,485,600	$ 3,485,600	$ -	$ 3,485,600
Placeholder for Additional Projects*				Statewide	$ 10,391,300		$ 10,391,300	$ -	$ -	$ -	$ -	$ -	$ 10,391,300	$ 5,195,650	$ 5,195,650	$ 10,391,300
Placeholder for Future Grant Needs**				Statewide	$ 75,000,000		$ -	$ 16,912,600	$ 17,526,200	$ 18,162,300	$ 18,822,200	$ 19,506,300	$ 90,929,600	$ 45,464,800	$ 45,464,800	$ 90,929,600
Total					$ 1,819,010,000		$ 232,533,600	$ 290,947,300	$ 293,275,800	$ 321,202,300	$ 330,372,800	$ 690,605,600	$ 2,158,937,400	$ 1,113,731,440	$ 1,045,205,960	$ 2,158,937,400
Estimated State Matching Cost Share**					$ 938,261,680		$ 128,601,950	$ 150,511,950	$ 150,718,180	$ 164,786,730	$ 169,498,180	$ 349,614,450	$ 1,113,731,440	$ 1,113,731,440	$ -	$ 1,113,731,440
Estimated Local Matching Cost Share**					$ 880,748,320		$ 103,931,650	$ 140,435,350	$ 142,557,620	$ 156,415,570	$ 160,874,620	$ 340,991,150	$ 1,045,205,960	$ -	$ 1,045,205,960	$ 1,045,205,960
Total					$ 1,819,010,000		$ 232,533,600	$ 290,947,300	$ 293,275,800	$ 321,202,300	$ 330,372,800	$ 690,605,600	$ 2,158,937,400	$ 1,113,731,440	$ 1,045,205,960	$ 2,158,937,400

*Placeholder funding for additional projects which could be supported by the Local Toxics Control Account projected revenue in the November 2012 forecast.
**Placeholder for future remedial action grant needs beyond the known projects. The placeholder amount assumes five new remedial action grants each biennium with an average cost of $3.0 million.

Map 1. Comparison of 2010 to 2012 Ten-Year Remedial Action Grant Needs



Public Participation Grants (PPGs) for Hazardous Site Cleanup

Background

RCW 70.105D requires one percent of the funds deposited into the Model Toxic Control Accounts be allocated for PPGs. PPGs are grants to citizens and nonprofit organizations impacted by a hazardous waste site cleanup or to implement waste reduction and recycling programs. The waste reduction recycling PPGs are discussed in the “toxic pollution prevention” chapter of this report. Hazardous site cleanup PPGs are used by communities to enhance public participation in cleanup decisions. Grant funds are often used to hire a consultant to review and comment on cleanup documents. Or, in cases like the Lower Duwamish, funds are used to translate cleanup documents into languages other than English. The grants require no matching funds and range from $60,000 to $120,000 each during a biennium.

Findings and Conclusions

Ecology anticipates that as the MTCA accounts grow, the one percent available for PPGs will incrementally grow.

Western and Eastern Washington Clean Sites Initiative Program

Background

There are properties in Washington contaminated with hazardous wastes that have been abandoned or have owners unwilling or unable to pay for site investigation and cleanup. Without cleanup, these sites pose threats to public health, the environment, groundwater, and fish and wildlife resources. The Clean Sites Initiative (CSI) supports cleaning up orphaned or abandoned contaminated sites, using a "worst-first" approach.

Ecology has historically funded the CSI Program from its operating budget appropriations, but proposed an expansion of the program by requesting capital funding for exclusive use in Eastern Washington. The Legislature provided $7.5 million in new capital funding in the 2011-13 biennial budget for this expansion. These new funds allowed Ecology to more effectively address cleanup needs of Central and Eastern Washington. Ecology continues to fund Western Washington cleanups through its operating budget appropriations.

Ecology expects new sites, more hazardous to human health and the environment, will be reported, and they will need to be moved up in priority for cleanup actions. Based on best available information, Ecology developed specific project lists and cost estimates for sites that could reasonably undergo cleanup actions over the next ten years. These project lists are comprised of known orphaned and abandoned sites with their ranking (high, medium, and low). (See Figures 5 and 6.)

In Washington, there are currently 11,586 sites that have been confirmed or suspected of having contamination. Over half (53 percent) of these sites have been cleaned up or reported cleaned up, and another 30 percent are in the process of being cleaned up. Of the remaining sites waiting to be cleaned up, approximately 400 are publicly-owned, and 1,515 are privately owned. Orphaned,

abandoned, and other eligible sites are a subset of the privately owned sites, and are primarily defined as sites where the owner is unwilling or unable to pay for the cleanup.

Findings

- Ecology estimates that nearly 500 of the 1,515 (about 30 percent) private sites waiting to begin cleanup actions are orphaned and abandoned, and eligible for state funding. The 500 sites are approximately four percent of all contaminated sites that have been reported to Ecology.
- Ecology site managers estimated costs for orphaned and abandoned sites. These estimated costs were inflated using the RACER cleanup inflation in future biennia.
- Currently, Ecology allocates its operating CSI resources to sites that urgently need action to protect the environment and public. Remediation at these sites often takes several biennia, which means Ecology may not be able to complete cleanup actions at all sites each biennium. These sites represent a mix of high-priority and other sites ready to proceed with cleanup actions.

Conclusions

- $45 million ($29.1 million for Eastern Washington, $15.9 million for Western Washington) is the estimated need to address all currently listed orphaned and abandoned sites statewide in this report.
- Lists include placeholders for potential new orphaned and abandoned sites in Western and Eastern Washington. New cleanup sites are reported to Ecology every year, and a portion of these new sites will be orphaned and abandoned and will need state funding for cleanup.
- Sites and cost estimates were developed based on a reasonable expectation of the work Ecology could do in ten years with projected resources. The following figures are the current ten-year project list for planned, orphaned, and abandoned site cleanups in Western and Eastern Washington.

Report Requirement: *Identify the projected remedial action needs for orphaned and abandoned and other cleanup sites that are eligible for funding from the State Toxics Control Account.*

As noted, estimating costs accurately for these sites is based largely on the degree of project definition. Most estimates will likely move up or down as actual remedial investigations get underway at the contaminated site. Ecology will continue to refine cost estimates for those sites that take several biennia to complete.

Figure 5. Western Washington Clean Sites Initiative Projects – Ten-Year Estimate of Funding Needs

This table represents the ten year funding needs for known orphaned and abandoned sites in Western Washington and a placeholder for potential unknown sites in future biennia.

				Inflation Factors	1.13	1.17	1.21	1.25	
					Project Costs with Inflation				
Project Name	Rank	Region	County	Ecology's 2013-15 Budget Request	Total Project Funding Needs 2015-17	Total Project Funding Needs 2017-19	Total Project Funding Needs 2019-21	Total Project Funding Needs 2021-23	Total
American Crossarm	High	SWRO	Lewis	$ 10,000	$ 11,300	$ 11,700	$ 12,100	$ 12,600	**$ 57,700**
Camp Bonneville	High	LALC	Clark	$ 25,000	$ 28,200	$ 29,200	$ 30,300	$ 31,400	**$ 144,100**
Caribou Realty	High	SWRO	Clark		$ 404,200	$ 504,000	$ -	$ -	**$ 908,200**
Frontier Hardchrome	High	SWRO	Clark	$ 30,000	$ 33,800	$ 35,000	$ 36,300	$ 37,600	**$ 172,700**
KC Shell	High	NWRO	King	$ 3,946,300	$ 4,089,400	$ -	$ -	$ -	**$ 8,035,700**
Lakewood Ponders	High	SWRO	Pierce	$ 22,000	$ 24,800	$ 25,700	$ 26,600	$ 27,600	**$ 126,700**
Squalicum Waterway Petroleum Cleanup	High	NWRO	Whatcom	$ -	$ 789,300	$ -	$ -	$ -	**$ 789,300**
Well 12A	High	LALC	Pierce	$ 120,000	$ 135,300	$ 140,200	$ 145,300	$ 150,600	**$ 691,400**
Malcolm Montague	Medium	SWRO	Clark	$ -	$ 352,000	$ 401,500	$ -	$ -	**$ 753,500**
Most Western Laundry	Medium	SWRO	Grays Harbor	$ 410,600	$ 504,000	$ -	$ -	$ -	**$ 914,600**
Park Laundry	Medium	SWRO	Clark	$ 352,000	$ 433,300	$ -	$ -	$ -	**$ 785,300**
Phillips Residential Property	Medium	SWRO	Thurston	$ -	$ 58,700	$ -	$ -	$ -	**$ 58,700**
Rule/EIS - MTCA/Sediment Mgmt Standards	Medium	HQ	Statewide	$ -	$ 225,500	$ -	$ -	$ -	**$ 225,500**
Placeholder for Future Cleanup Needs	Medium		Statewide	$ -	$ 424,000	$ 496,100	$ 600,300	$ 750,400	**$ 2,270,800**
Total				**$ 4,915,900**	**$ 7,513,800**	**$ 1,643,400**	**$ 850,900**	**$ 1,010,200**	**$ 15,934,200**

Figure 6. Eastern Washington Clean Sites Initiative Projects – Ten-Year Estimate of Funding Needs

This table represents the ten year funding needs for known orphaned and abandoned sites in Eastern Washington and a placeholder for potential unknown sites in future biennia.

					Inflation Factors				
					1.13	1.17	1.21	1.25	
					Project Costs with Inflation				
Project Name	Rank	Region	County	Ecology's 2013-15 Budget Request	Total Project Funding Needs 2015-17	Total Project Funding Needs 2017-19	Total Project Funding Needs 2019-21	Total Project Funding Needs 2021-23	Total
Airport Kwik Stop	High	ERO	Pend Oreille	$ -	$ 338,300	$ -	$ -	$ -	$ 338,300
Bonjorni	High	CRO	Kittitas	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000
Chewelah Grange UST #100319	High	ERO	Stevens	$ 75,000	$ -	$ -	$ -	$ -	$ 75,000
City of Yakima-old mill site/landfill	High	CRO	Yakima	$ 2,000,000	$ -	$ -	$ -	$ -	$ 2,000,000
Dryden Pit (WSFW)	High	CRO	Chelan	$ 500,000	$ -	$ -	$ -	$ -	$ 500,000
Fitzgerald Motors (Unregistered)	High	ERO	Spokane	$ 35,000	$ -	$ -	$ -	$ -	$ 35,000
Fort Spokane Store 619627	High	ERO	Lincoln	$ 70,000	$ -	$ -	$ -	$ -	$ 70,000
Frenchies	High	CRO	Yakima	$ 150,000	$ -	$ -	$ -	$ -	$ 150,000
Frontier Corner 100748	High	ERO	Grant	$ 60,000	$ -	$ -	$ -	$ -	$ 60,000
Gold Nugget	High	CRO	Yakima	$ 20,000	$ -	$ -	$ -	$ -	$ 20,000
Marcus Country Store 100546	High	ERO	Stevens	$ 40,000	$ -	$ -	$ -	$ -	$ 40,000
Marshall Landfill	High	ERO	Spokane	$ 8,500,000	$ -	$ -	$ -	$ -	$ 8,500,000
Meza Market	High	CRO	Yakima	$ 500,000	$ -	$ -	$ -	$ -	$ 500,000
Monte De Sion Church	High	CRO	Yakima	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000
Moxee City Shop	High	CRO	Yakima	$ 250,000	$ -	$ -	$ -	$ -	$ 250,000
Roby's	High	CRO	Yakima	$ 80,000	$ -	$ -	$ -	$ -	$ 80,000
~~Whitney Distributing~~[1]- Stubblefield Salvage Yard	High	ERO	Walla Walla	$ 500,000	$ -	$ -	$ -	$ -	$ 500,000
Yakima County-Cascades Natural Gas, Sunnyside	High	CRO	Yakima	$ 300,000	$ -	$ -	$ -	$ -	$ 300,000
City of Chelan	Medium	CRO	Chelan	$ -	$ 225,500	$ -	$ -	$ -	$ 225,500
City of Richland Perchloroethylene (PCE) Investigation	Medium	CRO	Benton	$ -	$ 225,500	$ -	$ -	$ -	$ 225,500
Columbus Square	Medium	CRO	Klickitat	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000
Headwaters Inn	Medium	CRO	Chelan	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000

Eastern Washington Clean Sites Initiative Projects - Ten-Year Estimate of Funding Needs

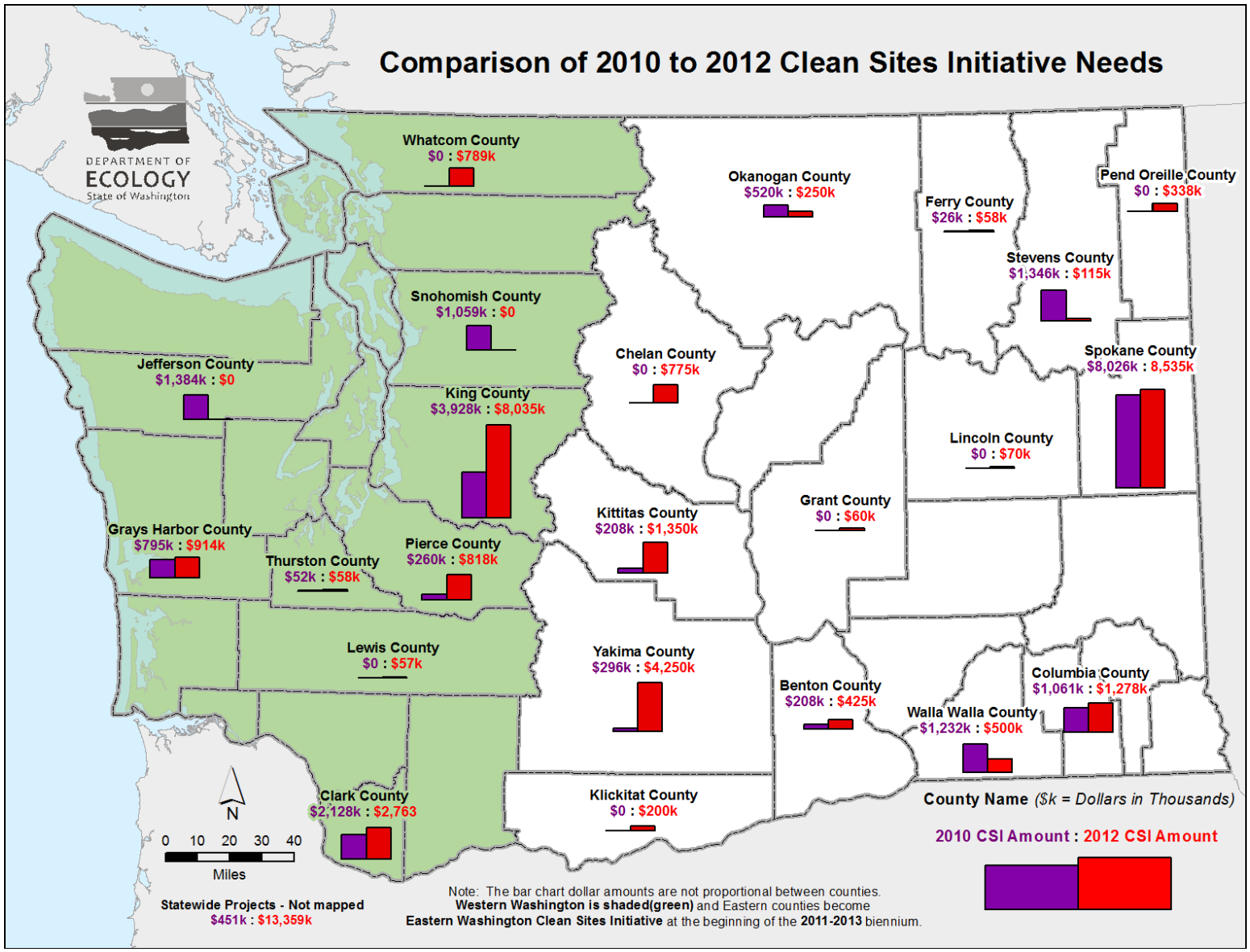
This table represents the ten year funding needs for known orphaned and abandoned sites in Eastern Washington and a placeholder for potential unknown sites in future biennia.

					Inflation Factors				
					1.13	1.17	1.21	1.25	
					Project Costs with Inflation				
Project Name	Rank	Region	County	Ecology's 2013-15 Budget Request	Total Project Funding Needs 2015-17	Total Project Funding Needs 2017-19	Total Project Funding Needs 2019-21	Total Project Funding Needs 2021-23	Total
HECLA Mining Assessment	Medium	CRO	Ferry	$ -	$ -	$ 58,400	$ -	$ -	$ 58,400
Kings Pacific Pride	Medium	CRO	Okanogan	$ 250,000	$ -	$ -	$ -	$ -	$ 250,000
L&L Exxon	Medium	CRO	Benton	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000
Shoemaker	Medium	CRO	Kittitas	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000
Bob's Auto Clinic	Low	CRO	Yakima	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000
Central Washington University	Low	CRO	Kittitas	$ 800,000	$ -	$ -	$ -	$ -	$ 800,000
City of Yakima	Low	CRO	Yakima	$ 500,000	$ -	$ -	$ -	$ -	$ 500,000
Pet Health Clinic	Low	CRO	Yakima	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000
Skyline Fluid Power Inc	Low	ERO	Columbia	$ -	$ -	$ 210,600	$ 1,067,500	$ -	$ 1,278,100
Wirts Service	Low	CRO	Kittitas	$ 300,000	$ -	$ -	$ -	$ -	$ 300,000
Placeholder for Future Cleanup Needs	Low		Statewide	$ -	$ 2,027,300	$ 2,368,700	$ 2,868,000	$ 3,598,800	$ 10,862,800
TOTAL				**$ 16,080,000**	**$ 2,816,600**	**$ 2,637,700**	**$ 3,935,500**	**$ 3,598,800**	**$ 29,068,600**

Notes:

1. The Whitney Distributing site has been sold and the new owners are responsible cleanup activities at the the site. A new site, the Stubblefield Salvage Yard has been added to the funding needs list for the 2013-15 biennium.
2. Ecology has added two new sites to the list; City Parcel ($170,000) and South Wilbur Petroleum Site ($50,000) which would be funded by Governor Gregoire's capital budget proposal.

Map 2. Comparison of 2010 to 2012 Clean Sites Initiative Needs



Safe Soils Program

Background

Industrial air emissions and pesticides used in farming have polluted large areas of soil with arsenic and lead. This type of pollution, called area-wide soil contamination, puts many of our communities at risk. Arsenic and lead are toxic metals that can be harmful to human health, and children are especially vulnerable.

Ecology is working with communities, local health departments, and other government agencies to reduce exposure to polluted soils in several parts of Washington State.

- The Tacoma Smelter Plume covers large areas of Pierce, King, and Thurston counties and puts thousands of children at risk. A 2005 law helped create a program that provided soil testing and resources for schools, childcare facilities, and other areas where children play.
- The Everett Smelter in Snohomish County was sold as residential and commercial land in the 1920s-1930s. Today, this 600-acre site is being cleaned up to protect the community from high levels of lead and arsenic.
- Former orchard lands can have soil pollution from past use of lead arsenate pesticides. Some of the largest affected areas are in Central Washington.

A statewide strategy was developed to address arsenic and lead soil contamination. Ecology developed a priority list and financing plan for childcare facilities and schools.

This biennium, arsenic and lead soil contamination in Western Washington continue to be financed through a settlement reached with American Smelting and Refining Company (Asarco). These Western Washington schools, childcare facilities, and other areas where children play will no longer have cleanups funded by the STCA. Soil contamination in Eastern Washington will continue to be funded through state funds, and those remaining schools are listed in Figure 7.

Findings

- Over 120 public schools located in Douglas, Chelan, Spokane, Yakima, and Okanogan counties have been sampled for lead and arsenic contamination.
- 39 schools have been identified as requiring further action. Over half of the schools have completed major cleanup. This work was primarily completed at elementary schools and only two major elementary school cleanups remain. The remaining schools (middle and high schools) will not need major cleanup, but will rely on protective measures to address the lead and arsenic contamination.

Conclusions

The Legislature provided $3.7 million in the 2011-13 capital budget to continue cleanup work at schools in Eastern and Central Washington. This funding will support cleanup at two remaining

elementary cleanups in the summer of 2014 and the remaining funds will be used to initiate protective measures at middle and high schools. Additional funding will be needed in the 2015-17 biennium to continue further protective measures at additional middle and high schools and complete the areawide work in Central Washington.

To ensure a successful cleanup, Ecology works with its partner schools to:

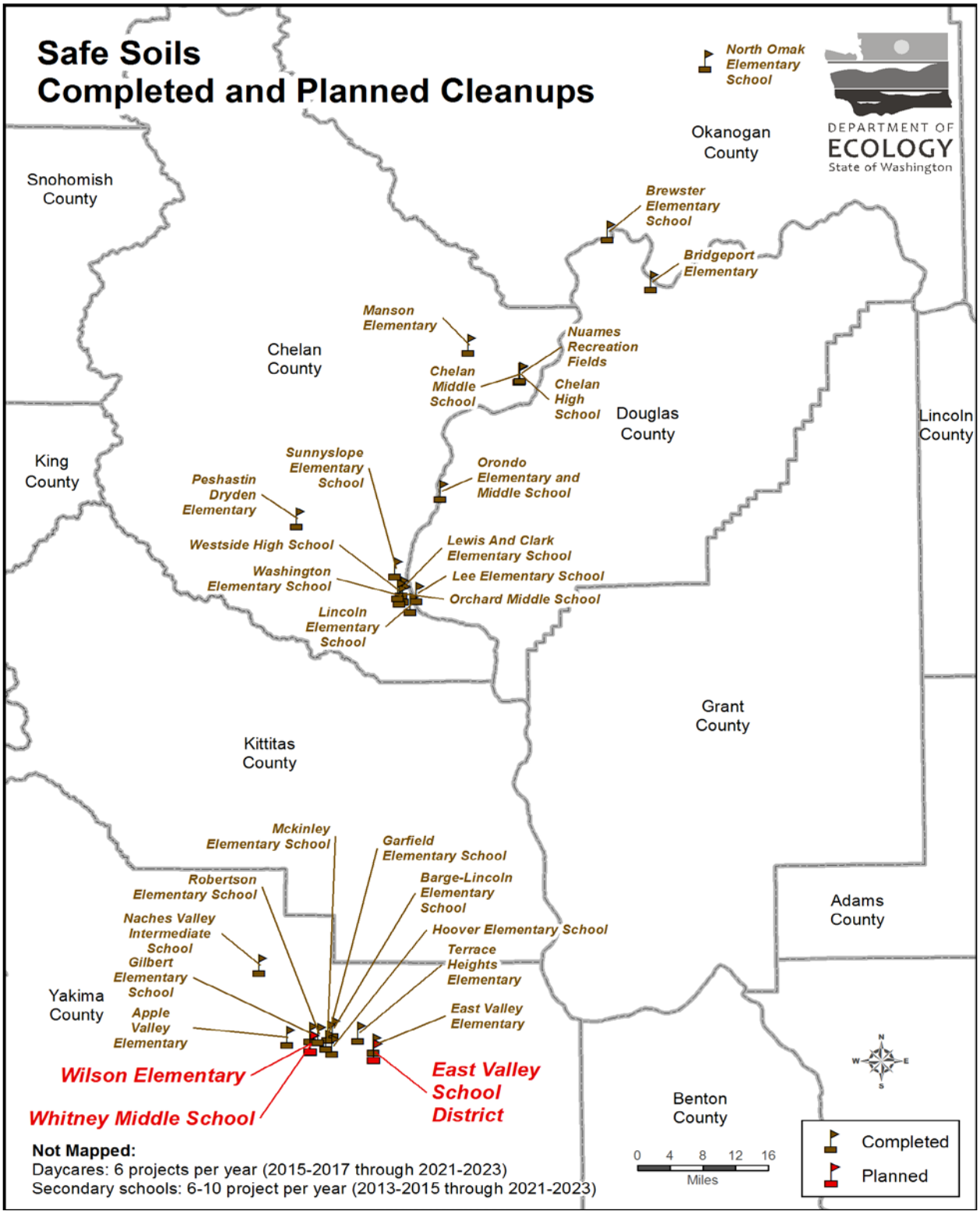
- Schedule cleanups to efficiently complete projects during times that minimize exposure.
- Accommodate the cleanup activities, like when schools move summer school classes.
- Provide schools scheduled for cleanups with precautionary measures to take until the cleanup actions occur.

Figure 7. Safe Soils – Ten-Year Estimate of Funding Needs

This table represents the ten year funding needs for known sites and a placeholder for future remediation at daycares, and other institutional controls at secondary schools.

					Inflation Factors				
					1.13	1.17	1.21	1.25	
					Project Costs with Inflation				
Project Name	Rank	Region	County	Ecology's 2013-15 Budget Request	Total Project Funding Needs 2015-17	Total Project Funding Needs 2017-19	Total Project Funding Needs 2019-21	Total Project Funding Needs 2021-23	Total
Wilson Elementary - Yakima School District	High	CRO	Yakima	$ -	$ 565,000	$ -	$ -	$ -	**$ 565,000**
Whitney Middle School - Yakima School District	High	CRO	Yakima	$ -	$ 565,000	$ -	$ -	$ -	**$ 565,000**
East Valley School District	High	CRO	Yakima	$ -	$ 1,130,000	$ -	$ -	$ -	**$ 1,130,000**
Daycares (6 projects per year)	Medium	CRO	Central Washington	$ -	$ 226,000	$ 234,000	$ 242,000	$ 250,000	**$ 952,000**
Other/Institutional Controls (6-10 projects/yr) - Secondary Schools	Low	CRO	Central Washington	$ -	$ 678,000	$ 351,000	$ -	$ -	**$ 1,029,000**
Total				**$ -**	**$ 3,164,000**	**$ 585,000**	**$ 242,000**	**$ 250,000**	**$ 4,241,000**

Map 3. Safe Soils Completed and Planned Cleanups



Clean Up Toxic Sites Puget Sound

Background

Ecology has been identifying and cleaning up contaminated sites in the Puget Sound area through MTCA for many years. As this work continues, new resources allow Ecology to focus additional efforts to clean up and restore bays within Puget Sound. Through the Puget Sound Initiative (PSI), Washington has committed the resources and funding for a healthier Puget Sound and surrounding communities. The PSI is a collaborative effort—by local, tribal, state, and federal governments, businesses, agricultural and environmental interests, and the public—to restore and protect Puget Sound. The PSI provides full funding to clean up and restore contaminated sites that impact Puget Sound when no other funding is available. This is different from the RAG program that provides funding matches to local governments to clean up their contaminated sites.

A leading source of pollution to the Sound is contaminated sites along its shorelines. Ecology identified contaminated sites within one-half mile of the Sound. In response to the PSI, and with increased funding, Ecology accelerated efforts to clean up and restore contaminated sites within identified priority bays. These areas are one of the cornerstones of Ecology's approach to protect and restore Puget Sound.

This bay-wide approach, in addition to site-specific cleanups, will result in larger areas of usable shoreline habitat for fish, wildlife, and people. Ecology negotiated numerous cleanup agreements to meet Puget Sound Initiative objectives. Figure 8 summarizes these cleanup project needs for the next ten years and ranks the sites within each project.

Findings

- Input from Ecology site managers and modeling under the RACER tool was used to estimate cleanup costs. Project costs range from $30,000 to $17.5 million per site cleanup, indicating variability in the size and nature of cleanups being conducted.
- The Legislature provided Ecology with $16.4 million in the 2011-13 capital budget to address cleanup of contaminated sites on Puget Sound. Remediation at these sites often takes several biennia, which means Ecology may not be able to complete cleanup actions at sites funded under the 2011-13 biennium. These sites represent a mix of high-priority and other sites ready to proceed with cleanup actions.

Conclusions

- $221.7 million is the estimated need to address Puget Sound sites. This estimate goes beyond a ten-year timeframe, and the current estimate will continue to be refined as sites move through the cleanup process.
- The project list represents sites where the state has full or partial cleanup responsibility.

Sites and cost estimates were developed based on a reasonable expectation of the work Ecology could do in ten years with projected resources. Figure 8 shows the current project list for Puget Sound contaminated site cleanup.

As noted, estimating costs accurately for these sites is based largely on the degree of project definition. Most estimates will likely move up or down as actual remedial investigations get underway at the contaminated site. Ecology will continue to refine cost estimates for those sites that take several biennia to complete.

Figure 8. Cleanup Toxic Sites Puget Sound (Puget Sound Initiative – PSI) – Ten-Year Estimate of Funding Needs

This table represents the ten year funding needs for known Puget Sound sites where the state has responsibility for cleanup.

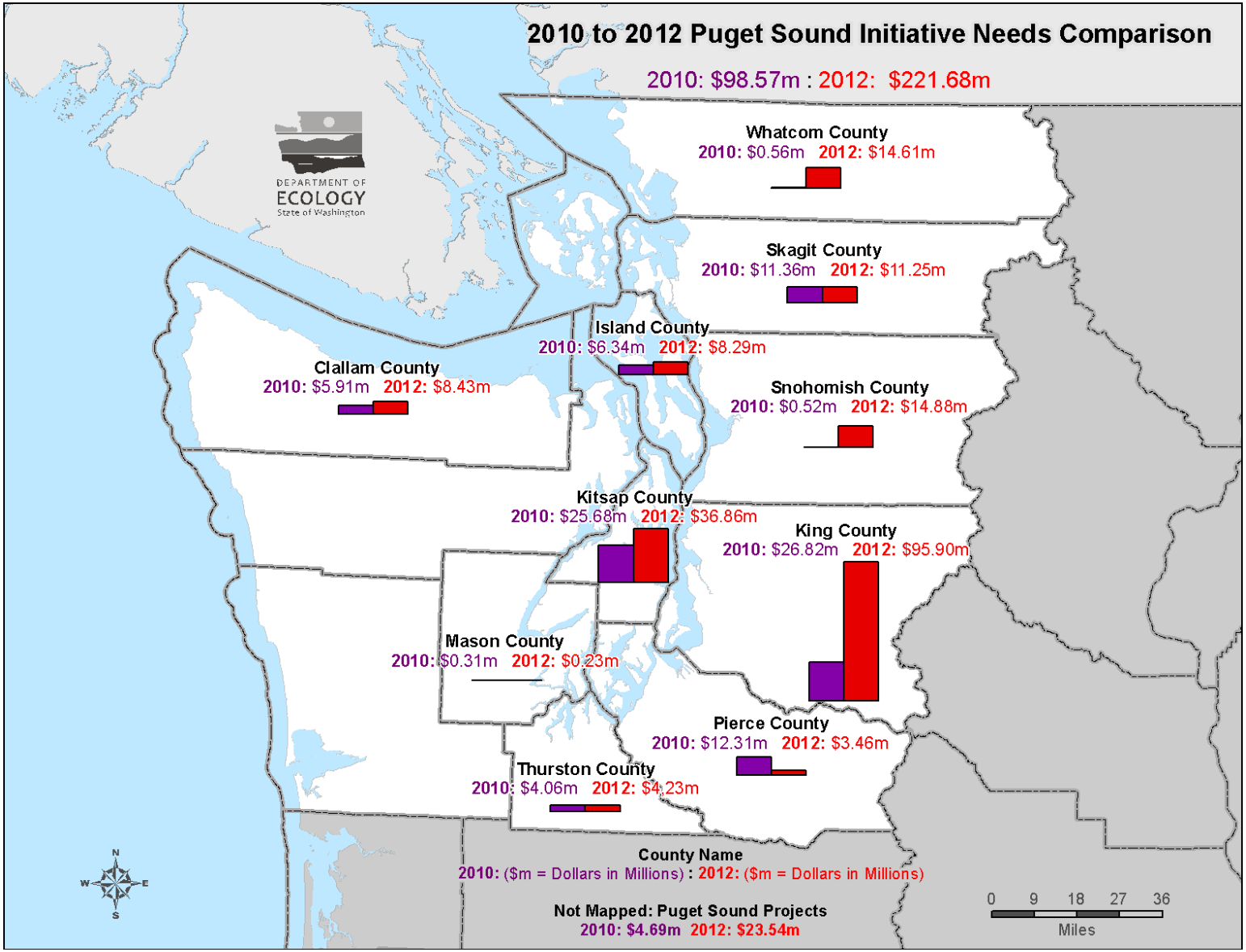
					Inflation Factors					
					1.13	1.17	1.21	1.25	1.30	
					Project Costs with Inflation					
Project Name	Rank	Region	County	Ecology's 2013-15 Budget Request	Total Project Funding Needs 2015-17	Total Project Funding Needs 2017-19	Total Project Funding Needs 2019-21	Total Project Funding Needs 2021-23	Total Project Funding Needs Future Biennia	Total
Aladdin Plating	High	SWRO	Pierce	$ 250,000	$ -	$ -	$ -	$ -	$ -	$ 250,000
American Memorial Park-Everett	High	NWRO	Snohomish	$ 3,133,900	$ -	$ -	$ -	$ -	$ -	$ 3,133,900
Bainbridge Island City Strawberry Plant	High	NWRO	Kitsap	$ 2,000,000	$ -	$ -	$ -	$ -	$ -	$ 2,000,000
Bellingham Bay -- Cleanup	High	NWRO	Whatcom	$ -	$ 2,255,000	$ 1,168,400	$ 1,210,800	$ 1,254,800	$ -	$ 5,889,000
Bellingham Bay Site - Habitat Restoration	High	NWRO	Whatcom	$ 3,000,000	$ 1,691,300	$ 1,752,600	$ -	$ -	$ -	$ 6,443,900
BP Oil Station, Bothell -11352	High	NWRO	King	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ 200,000
Bremerton Landfill aka Gorst Landfill	High	NWRO	Kitsap	$ -	$ 2,255,000	$ 1,752,600	$ -	$ -	$ -	$ 4,007,600
Cement Kiln Deposit Remedial Actions	High	NWRO	King	$ -	$ 2,255,000	$ 5,842,000	$ -	$ -	$ -	$ 8,097,000
Circle K Station 1461	High	NWRO	King	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ 500,000
Cornet Bay	High	NWRO	Island	$ 4,200,000	$ 1,465,800	$ 350,500	$ -	$ -	$ -	$ 6,016,300
Custom Plywood Dioxin Removal Interim Action-Final Phase	High	LALCS	Skagit	$ 2,000,000	$ -	$ -	$ -	$ -	$ -	$ 2,000,000
Elliott Bay Bicycles	High	NWRO	King		$ 1,691,300	$ 584,200	$ -	$ -	$ -	$ 2,275,500
Everett Lowland Port of Everett Remediation	High	NWRO	Snohomish	$ 10,000,000	$ -	$ -	$ -	$ -	$ -	$ 10,000,000
Fox Avenue Bank Remedial Action	High	NWRO	King	$ -	$ 1,127,500	$ 1,168,400	$ -	$ -	$ -	$ 2,295,900
Fox Avenue VOC Plume Remedial Action	High	NWRO	King	$ -	$ 563,800	$ 1,168,400	$ -	$ -	$ -	$ 1,732,200
Gas Works Park-Upland Remedial Investigations	High	NWRO	King	$ -	$ 2,818,800	$ 1,168,400	$ 605,400	$ -	$ -	$ 4,592,600
Guemes Channel	High	NWRO	Skagit	$ 6,500,000	$ -	$ -	$ -	$ -	$ -	$ 6,500,000
Herring House Park (former Seaboard Lumber Mill site	High	NWRO	King	$ -	$ 2,255,000	$ 3,505,200	$ 2,421,600	$ -	$ -	$ 8,181,800
Lilyblad	High	W2R	Pierce	$ 1,050,000	$ 550,000	$ -	$ -	$ -	$ -	$ 1,600,000
Lower Budd Inlet-Bay-wide Remedial Action	High	SWRO	Thurston	$ -	$ 377,400	$ 410,500	$ 147,800	$ -		$ 935,700
Lower Budd Inlet-Remedial Investigation	High	SWRO	Thurston	$ -	$ 383,600	$ -	$ -	$ -	$ -	$ 383,600
Lower Budd Inlet-West Bay Marina	High	SWRO	Thurston	$ -	$ 930,100	$ -	$ -	$ -	$ -	$ 930,100
Lower Duwamish Waterway Slivers upland cleanup	High	NWRO	King	$ 7,000,000	$ 3,382,500	$ -	$ -	$ -	$ -	$ 10,382,500
Lower Duwamish Waterway Source Control and Cleanup	High	NWRO	King	$ 3,700,000	$ 4,510,000	$ 4,673,600	$ 4,843,200	$ 5,019,200	$ 5,201,600	$ 27,947,600
Marine Criteria Update	High	I&P	Puget Sound	$ -	$ 176,000	$ 189,000	$ 405,900	$ -	$ -	$ 770,900
Mausoleum Property	High	NWRO	Snohomish	$ 1,078,000	$ -	$ -	$ -	$ -	$ -	$ 1,078,000
Park Restoration/Remediation	High	NWRO	King	$ -	$ 3,382,500	$ 2,336,800	$ 605,400	$ -	$ -	$ 6,324,700
Port Angeles Harbor	High	SWRO	Clallam	$ 850,000	$ -	$ -	$ -	$ -	$ -	$ 850,000
Port Angeles Municipal Landfill	High	W2R-SWRO	Clallam	$ 6,500,000	$ -	$ -	$ -	$ -	$ -	$ 6,500,000
Port Gamble Restoration Marine Resource Center Project	High	LALCS	Kitsap	$ 2,000,000	$ -	$ -	$ -	$ -	$ -	$ 2,000,000

Cleanup Toxic Sites Puget Sound (Puget Sound Initiative - PSI) - Ten-Year Estimate of Funding Needs

This table represents the ten year funding needs for known Puget Sound sites where the state has responsibility for cleanup.

					Inflation Factors					
					1.13	1.17	1.21	1.25	1.30	
					Project Costs with Inflation					
Project Name	Rank	Region	County	Ecology's 2013-15 Budget Request	Total Project Funding Needs 2015-17	Total Project Funding Needs 2017-19	Total Project Funding Needs 2019-21	Total Project Funding Needs 2021-23	Total Project Funding Needs Future Biennia	Total
Port Gardner-Cultural Resources	High	LALCS	Snohomish	$ 125,000	$ -	$ -	$ -	$ -	$ -	$ 125,000
Port of Anacortes/Fidalgo Bay-New Site Focused Sampling	High	LACS	Skagit	$ -	$ 253,700	$ -	$ -	$ -	$ -	$ 253,700
Port of Everett Lowland Remedial Action	High	NWRO	King	$ -	$ 5,637,500	$ 5,842,000	$ 6,054,000	$ -	$ -	$ 17,533,500
Puget Sound Initiative Technical & Scientific Support	High	I&P	Puget Sound	$ -	$ 1,173,200	$ 1,259,900	$ 1,353,100	$ 1,453,100	$ 1,560,600	$ 6,799,900
Puget Sound Public Involvement/Engagement Assistance	High	LACS	Puget Sound	$ -	$ 364,700	$ 391,700	$ 420,700	$ 439,200	$ -	$ 1,616,300
Reliable Steel	High	SWRO	Thurston	$ 400,000	$ 1,578,500	$ -	$ -	$ -	$ -	$ 1,978,500
RG Haley Remedial Action	High	NWRO	Whatcom	$ 2,279,600	$ -	$ -	$ -	$ -	$ -	$ 2,279,600
RONS Auto Wrecking	High	NWRO	Kitsap	$ -	$ 1,691,300	$ 584,200	$ -	$ -	$ -	$ 2,275,500
Spikes Hydraulic	High	SWRO	Mason	$ -	$ 234,600	$ -	$ -	$ -	$ -	$ 234,600
Tiki Car Wash	High	NWRO	King	$ 2,500,000	$ -	$ -	$ -	$ -	$ -	$ 2,500,000
Tribal Northwest Indian Fisheries	High	LACS	Puget Sound	$ -	$ 121,600	$ 130,600	$ 140,200	$ 150,600	$ 156,100	$ 699,100
Truck City Truck Stop	High	NWRO	Skagit	$ 2,500,000	$ -	$ -	$ -	$ -	$ -	$ 2,500,000
UNOCAL COUPEVILLE Bulk Plant	High	NWRO	Island	$ -	$ 1,691,300	$ 584,200	$ -	$ -	$ -	$ 2,275,500
UNOCAL Station 4388	High	NWRO	Kitsap	$ -	$ 1,691,300	$ 584,200	$ -	$ -	$ -	$ 2,275,500
USFWS PSI Assistance	High	LACS	Puget Sound	$ -	$ 112,800	$ 126,000	$ 135,300	$ 145,300	$ 156,100	$ 675,500
Well 12A Superfund Remedial Action 10% match	High	LACS	Pierce	$ 1,200,000	$ 406,800	$ -	$ -	$ -	$ -	$ 1,606,800
Wiggums Park-Everett Housing Authority	High	NWRO	Snohomish	$ 488,950	$ -	$ -	$ -	$ -	$ -	$ 488,950
Wiggums Park-City	High	NWRO	Snohomish	$ 50,050	$ -	$ -	$ -	$ -	$ -	$ 50,050
Wyckoff East Harbor	High	LALCS	Kitsap	$ 31,700	$ -	$ -	$ -	$ -	$ -	$ 31,700
Wyckoff Soil and Groundwater	High	LALCS	Kitsap	$ 150,800	$ -	$ -	$ -	$ -	$ -	$ 150,800
Wyckoff Treatment Plant	High	LALCS	Kitsap	$ 581,800	$ 2,818,800	$ 2,921,000	$ -	$ -	$ -	$ 6,321,600
Wyckoff/Eagle Harbor Superfund Remedial Action 10% match	High	LACS	Kitsap	$ -	$ 7,297,700	$ 6,528,400	$ 1,402,200	$ -	$ -	$ 15,228,300
Jacobsen Property	Medium	NWRO	King	$ 2,210,700	$ 1,127,500	$ -	$ -	$ -	$ -	$ 3,338,200
Port Angeles – Rayonier, Cleanup	Medium	SWRO	Clallam	$ -	$ 789,300	$ 292,100	$ -	$ -	$ -	$ 1,081,400
Lamberts Radiator Shop	Low	NWRO	Kitsap	$ -	$ 1,804,000	$ 584,200	$ 181,300	$ -	$ -	$ 2,569,500
Placeholder for Future Cleanup Needs			Puget Sound	$ -	$ 1,695,000	$ 1,983,150	$ 2,399,612	$ 2,999,514	$ 3,899,369	$ 12,976,645
Total				**$ 66,480,500**	**$ 62,560,200**	**$ 47,882,250**	**$ 22,326,512**	**$ 11,461,714**	**$ 10,973,769**	**$ 221,684,945**

Map 4. 2010 to 2012 Puget Sound Initiative Needs Comparison



Toxic Treatment, Storage, and Disposal (TSD) Cleanup Program

Background

Ecology issues TSD permits to facilities that treat, store, and/or dispose of hazardous wastes to ensure they are safely managed. The dangerous and toxic nature of wastes managed at these sites from current and historical uses increases the risk of fires, explosions, spills, and evacuations. Examples of materials include: oil, solvents, heavy metals, polychlorinated biphenyls (PCBs), pesticides, creosote, and dioxin.

Under the TSD permit, if contamination occurs at the facility, closure and corrective action are needed - which Ecology oversees. TSD cleanups deal with complex contamination problems and require 10-12 years to complete. Sixty facilities that operated over the past 20 years are contaminated and require some form of cleanup.

The property owner directly pays the cost of designing and implementing the selected method of cleanup. Ecology staff oversee the identification, feasibility study, planning, design, and construction of the cleanup project. Most of Ecology's costs (originally paid from the State Toxics Control Account) are recoverable from property owners.

Findings

- Cleanup completion is required at 36 medium- or high-priority sites because of their significance, as designated by the U.S. Environmental Protection Agency.
- The program aims to have 36 cleanups finished or in maintenance mode by 2020. Due to the complex problems at several sites, more time is required to determine a solution that also stops continued contamination as operations continue at the site.
- All of these sites, the majority of which are near Puget Sound, have documented soil and groundwater contamination, and potential or actual impact to surface waters.

Conclusions

- Actual construction or maintenance of the approved remedies requires substantial work beyond 2020.
- Ecology anticipates continuing the current level of cleanup funding over the next ten years will provide sufficient resources to complete work at all sites.
- Permitting resources will be required for as long as TSD facilities exist in Washington.

Ecology's ten-year TSD plan maintains staff and other resources to complete cleanup at the contaminated TSD sites listed in Figure 9.

Figure 9. Contaminated Treatment, Storage, and Disposal (TSD) Sites

Facility or Site	Priority (H/M)	County	Intended Use after Cleanup
Bay Zinc Company, Inc.	H	Yakima	Recycle or Transfer
Boeing – Everett	H	Snohomish	Other business use
Boeing – Renton	H	King	Other business use
Boeing A&M Developmental Center	H	King	Other business use
Cameron Yakima, Inc.	H	Yakima	Recycle or Transfer
CleanCare Corporation	H	Pierce	Other business use
ConocoPhillips Company, Ferndale Refinery	H	Whatcom	Remain TSD—own use only
Emerald Kalama Chemical, LLC (formerly Noveon Kalama, Inc.)	H	Cowlitz	Other business use
General Electric Aviation Division (aka General Electric Dawson Plant)	H	King	Other business use
International Paper, Longview	H	Cowlitz	Other business use
McFarland Cascade Pole and Lumber Company, Tacoma	H	Pierce	Other business use
Occidental Chemical Corporation (formerly Pioneer Americas Inc.)	H	Pierce	Other business use
Pacific Functional Fluids (formerly Lilyblad Petroleum, Inc.)	H	Pierce	Recycle or Transfer
Port of Seattle, Pier 91 (formerly PSC/Burlington Environmental Inc.)	H	King	Other business use
PSC/Burlington Environmental LLC – Georgetown	H	King	Recycle or Transfer
PSC/Burlington Environmental LLC – Tacoma	H	Pierce	Remain TSD
PSC/Burlington Environmental LLC – Washougal	H	Clark	Recycle or Transfer
Schwerin Concaves, Walla Walla	H	Walla Walla	Other business use
Shell OPUS Puget Sound Refinery	H	Skagit	Remain TSD—own use only
SSA Containers Inc. (formerly Reichhold Inc., Tacoma)	H	Pierce	Other business use
TOXGON Corporation Seattle	H	King	Other business use
US Army Headquarters I Corps & Fort Lewis	H	Pierce	Other use
Boeing – Auburn	M	King	Other business use
BP Cherry Point Refinery	M	Whatcom	Remain TSD—own use only
BSB Diversified Company, Inc.	M	King	Other business use
Columbia Gorge Aluminum	M	Klickitat	Other business use
Emerald Services, Inc. - Alexander Avenue	M	Pierce	Remain TSD
Fuel Processors	M	Cowlitz	Recycle or Transfer
Petroleum Reclaiming Services, Inc.	M	Pierce	Recycle or Transfer
PSC/Burlington Environmental LLC – Kent	M	King	Remain TSD
Safety Kleen Systems Inc. Auburn	M	King	Recycle or Transfer
Safety Kleen Systems Inc. Lynnwood	M	King	Recycle or Transfer
Tesoro Refining and Marketing Company	M	Skagit	Remain TSD—own use only
University of Washington - Tacoma Branch Campus	M	Pierce	Other business use
US Army Yakima Training Center, Bldg. T14	M	Yakima	Other use
Reynolds Aluminum Smelter, former site	L	Cowlitz	Bulk products terminal

Hanford Low Level Radioactive Waste

Background

Hazardous substances disposed in the commercial low level radioactive waste disposal facility (CLLRWDF) located on Hanford have been released to the environment, are being investigated, and will need to be remediated under MTCA. Ecology and the Washington Department of Health (WDOH) are working to coordinate investigation and remediation of hazardous substances to address toxic chemical hazards with the closure of filled trenches at the CLLRWDF, which will provide protection from radiological hazards. Ecology is responsible for regulating the hazardous substance releases, and WDOH is responsible for regulating the radiological hazards associated with the CLLRWDF and for the current facility license. Ecology costs to oversee MTCA activities will be recovered and deposited into the State Toxics Control Account.

The CLLRWDF has operated as a low level radioactive waste disposal site since 1965. It operates on 100 acres of land Washington State has leased from the federal government for 99 years. The land is sub-leased to the facility operator, US Ecology, Inc. Fourteen trenches (~ 40 acres) at the CLLRWDF have been filled and covered with soil to grade and are going to be closed. The facility continues to operate using additional trenches that have not been filled.

WDOH and Ecology completed an Environmental Impact Statement (EIS) in 2004 that included evaluation of CLLRWDF closure. We selected a preferred alternative of installating a GeoSynthetic cover over the filled trenches with subsequent “close-as-you-go” closure of future filled trenches in planned phases. In addition to the EIS, the following work has been completed under Capital Project 1997-2-012:

- Preliminary site investigations.
- Cover design development.
- MTCA feasibility study work performed by the CLLRWDF facility operator.
- Facility preparations for closing the filled trenches.

The remaining work within Capital Project 1997-2-012 includes:

- Completing the MTCA investigation.
- Selecting and initiating subsequent MTCA remedial actions.
- Installing the cover.

Findings

- Capital Project 1997-2-012 has supported reimbursing costs associated with closing the filled trenches for the CLLRWDF operator and WDOH since 1997. The Site Closure Account, established under RCW 43.200.080, is the fund source for Capital Project 1997-2-012.

- Ecology's MTCA oversight costs are not reimbursable to Ecology under RCW 43.200.080. Ecology's MTCA oversight costs will be billed to the CLLRWDF operator for cost recovery to the State Toxics Control Account.

Conclusions

Ecology has requested $534,000 and 2.0 FTEs to oversee the MTCA work in the 2013-15 biennium, and $264,000 and 1.0 FTE per biennium for 2015-17 through 2021-23 (State Toxics Control Account) to (1) oversee completing the CLLRWDF MTCA investigation; (2) select the required remedial actions; (3) issue the cleanup action plan (CAP); and (4) provide oversight of remediation actions. Operating the cleanup oversight at this level would provide resources to meet Ecology's obligations for MTCA oversight.

Oil and Hazardous Material Response and Cleanup

Background

The Spill Prevention, Preparedness, and Response (Spills) Program relies on funding from the State Toxics Control Account to pay costs for responding to, and cleaning up, oil and hazardous material spills. A rapid and aggressive response to spills protects human health, public safety, and our environment. Funds spent performing rapid responses and cleanup actions limit the spread of toxic substances and impacts to surface and groundwater. This early action often prevents extensive resource impacts and prevents sites from becoming long-term hazardous waste cleanup sites.

Ecology staff work with the responsible party and other government entities to manage a spill incident. Ecology responders immediately deploy to spills that impact or pose a threat to Washington's waters. Ecology also responds to releases of petroleum or other hazardous materials to soil and air—any related exposure threat to public health and safety.

Findings

During Fiscal Year 2012:

- Ecology's Spills Program responded to a total of 4,042 reported spills (drug labs, hazardous material, air releases, pesticides, mercury, etc.).
- Specific to oil spills, Ecology responders recovered 60,078 gallons of the reported 67,266 gallons of oil spilled (89 percent recovery rate) from 2,932 reported oil spills.
- Ecology responders contained and recovered an estimated 100,112 pounds of hazardous material (other than oil products) from the environment. In addition, more than 1 million pounds of heavy metal, asbestos, and PCB-contaminated wastes were removed and safely disposed from the Davy Crockett and Deep Sea vessels.

- Clandestine drug lab and dump site cleanup activities resulted in disposal of 100 highly toxic and corrosive compressed anhydrous ammonia cylinders, 14 ammonia generators, and 20 hydrochloric acid gas generators. This resulted in safe disposal of more than 4,800 pounds of compressed toxic and corrosive gas.

Conclusions

Over the next ten years, Ecology's STCA funding will ensure that:

- Oil spills, chemical spills, and methamphetamine labs are responded to and cleaned up rapidly to protect public health, natural resources, and property.
- Spill response capability is maintained 24 hours a day, seven days a week, throughout the state.
- All oil spills are responded to within 24 hours from the time they are reported.
- Approximately 3,800 annual spill reports will be managed.

Toxic Pollution Prevention – Ten-Year Financing Plan

Preventing and reducing generation of solid and hazardous waste and use of toxic chemicals, and preventing violations of federal air quality protects Washington's air, land, and water. Prevention is important because it avoids creating costly new cleanup sites, reduces health risks and costs, and saves money for local governments, businesses, and taxpayers.

Emerging Issues

- New opportunities to use innovative technology, products, or processes to decrease risks to human health and the environment from toxic contamination.
- Increasing business interest in prevention strategies, such as green chemistry, alternative assessments, and incorporating environmental considerations into lean manufacturing events.
- Increasing public concern about the risks of toxicity from chemicals in products.
- Increasing concern from businesses and local governments regarding reducing and recycling yard and food waste (green waste). When green waste is disposed of in landfills, it increases production of methane and liquids (liquids known as leachate). If not properly managed, methane and leachate can result in air and groundwater contamination.

  Composting helps prevent disposal of green waste, but has resulted in environmental problems elsewhere in the solid waste system. Because green waste makes up 27 percent of the solid waste stream, improving composting and finding other strategies to prevent disposal of green waste is a priority issue for solid waste prevention and management.
- Responding to business and health needs for preventative methods and tools to meet regulatory and permit levels.

Reduce Toxics Use and Prevent Hazardous Waste

Background

Key state laws direct Ecology to work on preventing solid waste and toxics. In fact, waste reduction is declared to be the top priority for managing waste in the Hazardous Waste Management Act (Chapter 70.105 RCW) and the Solid Waste Management Act (RCW 70.95). These priorities are referred to in the Model Toxics Control Act (MTCA) under the list of activities eligible for MTCA funding.

Washington's Waste Reduction Law (RCW 70.95C) also establishes several goals for reducing toxic chemical use. For example, it requires Ecology to provide assistance to all businesses that generate hazardous waste on how to reduce their chemical use and waste generation. It also requires approximately 600 businesses that are the largest generators of hazardous waste in our state to develop pollution prevention (P2) plans and report their chemical use information to

Ecology. Ecology has a goal of reducing toxic substances used to make products and services provided by Washington businesses.

In 2006, Ecology adopted procedural rules (WAC 173-333) to identify and recommend actions to reduce or phase out use of persistent, bioaccumulative and toxic chemicals (PBTs). The rules include a list of PBTs and require Ecology to develop a Chemical Action Plan (CAP) for PBTs before implementing actions to reduce use of these chemicals. PBTs are the "worst of the worst" chemicals, in that they are the most likely to become legacy contaminants that result in the need for cleanup actions, fish advisories, and water quality improvement projects (total maximum daily loads, TMDLs). Every CAP compiles comprehensive information about sources of the chemical in question, and involves a wide range of stakeholders in developing recommendations for reductions.

The 2008 Legislature required Ecology to evaluate P2 plan requirements currently in law and other prevention methods for their ability to help meet the goal of reducing use of toxic chemicals in the state by 50 percent by 2020. The Legislature directed Ecology to convene a balanced stakeholder group and report its findings and recommendations by the end of 2008 (Enacted Supplemental Operating Budget, ESHB 2687.SL, Section 302, Subsection 38). Findings and recommendations from this report are folded into the ten-year financing projections. *The Toxics Reduction Advisory Committee Findings and Recommendations Report* is Ecology publication 08-04-029 and can be found at https://fortress.wa.gov/ecy/publications/summarypages/0804029.html.

In 2008, the Legislature passed the Children's Safe Products Act (RCW.70.240) requiring Ecology to work with the Washington Department of Health to develop a list of chemicals of high concern for children. Manufacturers are required to report to Ecology on their use of these chemicals in children's products. Rules to implement the act were adopted in July 2011. Manufacturer reporting on use of toxic chemicals will help fill a critical data gap and allow Ecology to better focus where safer alternatives are needed.

Findings

- Prevention that focuses on eliminating toxic substances will protect Washington's water, soil, air, and citizens. It involves continuous improvements through design, technical, operational, and behavioral changes.
- Investing in prevention strategies will reduce the need to landfill waste and the number of future costly cleanup sites, or reduce the toxicity of contamination.
- While it is sometimes difficult for businesses to invest in reducing their use of toxic chemicals, those that do produce savings and other benefits.
- Chemical Actions Plans are an effective way to identify and reduce the worst of the worst chemicals. Funding to implement recommended actions is needed.
- Reducing toxic chemical use by creating and implementing a chemical action plan, one chemical at a time, is a time consuming process and cannot address health and environmental risks in a timely manner for all toxic chemicals Ecology is concerned

about. Ecology needs a more systematic approach to preventing the widespread use of toxic chemicals in commerce.

- More funding is needed to ensure compliance with product laws. More and more, Ecology finds that consumer products are a source of toxic chemicals into the environment. It has become necessary to purchase and test products to assure compliance with laws that ban or restrict the use of toxics in products. This is especially true for the Children's Safe Products Act.
- Businesses need better tools to make chemical use decisions.

Conclusions

Ecology will continue its current investment in prevention strategies. The table at the end of this section shows the estimated cost to address future needs. This ten-year financing plan builds capacity to prevent pollution by implementing the legally required state plan (Solid and Hazardous Waste Plan) recommendations to eliminate use of toxic substances and reduce generation of solid and hazardous wastes by:

- Providing technical assistance to Washington businesses and governments on reducing hazardous waste, solid wastes, energy costs, water consumption and chemical use, and on environmental sustainability. Ecology also provides assistance to help businesses make effective and safer chemical substitution choices. Assistance is provided through document review, on-site assistance, workshops, webinars, and other public forums.
- Implementing the *Green Chemistry Roadmap* recommendations (see the full roadmap at https://fortress.wa.gov/ecy/publications/SummaryPages/1204009.html). One of the recommendations is to work with colleges and universities to develop new green chemistry and engineering curricula that will help train chemists and engineers on the true costs and impacts of toxics use. The curricula will educate tomorrow's professionals about how and why to use safer alternatives instead of toxic chemicals such as lead, mercury, and other highly toxic chemicals.
- Increasing green product sales, particularly Washington-developed or manufactured products to citizens, businesses, and governments.
- Implementing producer responsibility and product stewardship programs, especially for hard to handle or discarded products containing toxic materials.
- Improving citizen, local government, and business access to and use of information about toxic chemicals in products, safer alternatives, and safe use and disposal methods. Reducing household use of toxic chemicals is one key to restoring and protecting Puget Sound and other water bodies, such as the Columbia River.
- Improving Ecology's understanding of toxics in products by research into chemical use and analysis of key toxics in products.
- Developing and implementing a Chemical Action Plan (CAP) for reducing the use of persistent, bioaccumulative, and toxic chemicals, similar to CAPs for mercury and lead.

- Implementing the 2008 Children's Safe Products Act and other laws limiting toxics in products, including product testing.
- Regulating toxic content in products, such as packaging and brake friction materials.
- Developing tools to guide assessment of alternatives to priority chemicals of concern as part of Ecology's effort to help companies make informed chemical substitution choices.
- Providing programs for the collection of hazardous materials, such as mercury switches.
- Supporting implementation of solid and hazardous waste management plans.
- Promoting beneficial use of green waste (yard waste, land clearing debris, and food waste).
- Working with other states on shared statutes or issues such as the Toxics in Packaging Clearinghouse or Interstate Chemicals Clearinghouse.
- Promoting efforts to update our nation's chemical management laws, such as the Federal Toxic Substances Control Act.
- Reducing data gaps and improving analysis of data collected on waste and toxic substances.
- Prioritizing chemicals of concern to Washington as a way to focus prevention strategies.
- Continuing to work with stakeholders to develop a more comprehensive, cost effective, and equitable approach to reducing the use and release of toxics in Washington. This work includes taking the next steps identified by the Toxics Reduction Strategy Workgroup in their white paper on *Toxics Policy Reform for Washington State* (http://www.ecy.wa.gov/toxics/docs/trs_ToxicsPolicyReformWA.pdf).

Toxic Pollution Prevention: Future Operating Needs beyond 2013-15

Includes adjustment for fiscal growth factors.

Biennium	2013-15	2015-17	2017-19	2019-21	2021-23	Total
Hazardous Waste & Toxics Reduction Program	$0	$1,306,000	$1,880,000	$1,964,000	$2,051,000	$7,201,000
Waste 2 Resources Program	$0	$2,094,000	$2,303,000	$2,406,000	$2,513,000	$9,316,000
TOTAL Future STCA	$0	$3,400,000	$4,183,000	$4,370,000	$4,564,000	$16,517,000

Grants to Local Governments and Citizens

Background

Another key aspect of prevention is financial assistance to local governments who are tasked with preventing and reducing solid and hazardous waste and to local citizens who are impacted by prevention and recycling programs. Waste reduction and recycling have been the highest priority of waste management since 1984, as established in RCW 70.95. It is also a key goal of Ecology's state solid and hazardous waste plan, Beyond Waste. Financial assistance is provided through Coordination Prevention Grants (CPGs) to local governments and Public Participation Grants (PPGs) to citizens and nonprofit organizations.

The CPG program supports essential local programs that implement local solid and hazardous waste plans. CPG funds are used by local governments to support both safe handling of solid and hazardous waste and to ensure that solid waste facilities are operated properly to meet regulatory requirements and protect human health and the environment. Grant projects also support local government prevention and waste reduction projects that reduce human exposure to toxins, and support material reuse through recycling and reuse programs.

PPGs are issued to citizens and nonprofit organizations to reduce and recycle solid and hazardous wastes. Examples of PPG recipients include the Washington Toxics Coalition (for developing pesticide free yard care programs) and the Port Townsend Marine Science Center (for recycling plastics from marine debris).

Findings

- Ecology is working with local governments to continue to focus on preventing hazardous and solid wastes from being disposed in solid waste landfills. Improper disposal of these wastes leads to future cleanup sites.
- In 2008, 40 percent of the grants supported recycling and prevention projects, and 60 percent were focused on safe handling activities.
- In 2012, 45 percent of the grants were for recycling and prevention projects, and 55 percent were being used for safe handling activities.
- Over the next ten years, Ecology and local governments would like to see the shift to 60 percent for projects supporting waste and toxics prevention activities. Ecology has made progress toward funding more prevention activities.
- Two of the largest portions of the solid waste stream are yard and food waste and construction and demolition debris (such as concrete and building materials). When disposed, both lead to the generation of methane gas and liquid waste. Ecology and local governments are working on strategies for better uses for these materials, rather than disposal in the landfill.
- Additional activities to reduce small-volume hazardous materials and wastes (known as moderate risk waste or MRW) would also be encouraged. Ecology encourages projects that go beyond safe handling and disposal to include reviewing how hazardous

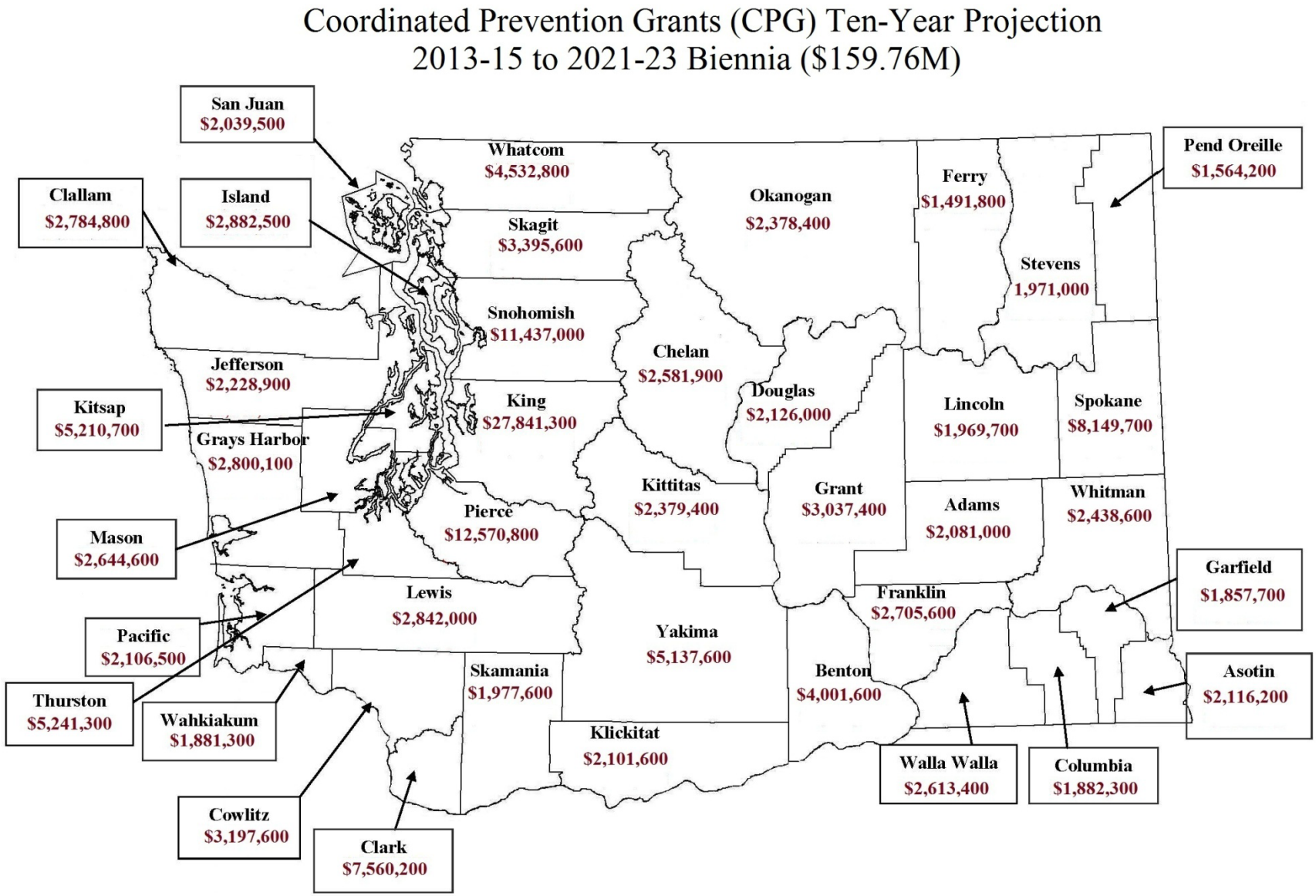
substances are regulated, optimizing reuse and recycling, and increasing the use of safer products and services.

- MTCA funding for safe handling and prevention is often the sole funding for many small and rural local governments. Ecology supports finding additional funding sources to assist local governments with waste prevention, toxics reduction, and safe handling. In the meantime, during these tough economic times, reliance on grant funding by local governments has increased. Without full funding for CPG programs, many local health departments would not have sufficient funding to conduct moderate risk waste collection programs, recycling, or solid waste enforcement activities. This could lead to illegal disposal and future cleanup sites.

Conclusions

- For CPG, Map 5 shows the ten-year estimated funding need by county for the 2013-15 through the 2021-23 biennium. Many local governments may not be able to take advantage of grants and programs offered through the MTCA accounts due to match requirements. While Ecology believes there needs to be a local investment in these programs, Ecology is exploring methods to provide relief to local governments, including reducing or eliminating match requirements.
- For PPGs, Ecology anticipates as the MTCA accounts increase, the amount of funding available will increase incrementally over the next ten years.

Map 5. Coordinated Prevention Grants (CPG) Ten-Year Projection, 2013-15 to 2021-23 Biennia



Preventing and Addressing Air Quality Nonattainment Areas

Background

Air pollution presents significant, widespread health risks to people. Federal law has acknowledged this by establishing health-based, national outdoor air quality standards for six pollutants:

1. Fine Particles
2. Ozone
3. Sulfur Dioxide
4. Nitrogen Dioxide
5. Lead
6. Carbon Monoxide

A violation of these federal air quality standards (nonattainment) imposes major limitations, requirements, economic consequences, and potential sanctions on the state and local community. These constraints are intended to encourage returning to air quality compliance quickly. The health, economic, and social consequences of violating these standards are substantial:

- Significant adverse health consequences associated with these pollutants place a high public health and health care cost burden on local communities.
- The federal Clean Air Act intentionally limits economic growth in violating communities to encourage them to return to compliance quickly and maintain clean air into the future.
- Businesses and industries located in violating areas face the strictest and most expensive pollution controls, and may face other limits or changes in operations and increased costs to reduce pollution.
- Violations affect business investment and growth decisions, because companies prefer not to grow or locate in nonattainment areas and may choose to move out of such areas.
- Local governments may need to take actions that reduce emissions, and residents may face changes in personal behaviors (such as the way they heat their homes or manage yard debris) and could each bear additional costs to implement changes to clean the air.
- Violations can affect individuals' decisions to move to, or out of, communities where air quality can harm their health.

Taken together, such impacts can affect the local government economy and tax base, and shift public money away from other vital community services. This detracts from a community's overall livability.

Findings

When a violation of the standards occurs, it is best to return community air quality conditions to compliance as quickly as possible.

It is far less burdensome and costly for communities to address an air pollution problem before it reaches the level of a federal violation:

- Before a violation of the standards occurs, strategies to reduce pollution can be flexible and voluntary. A formal violation designation brings "top-down" proscriptions and loss of local flexibility and choice.
- To prevent a violation, Ecology can:
    - Assess a community's air pollution risks.
    - Educate local elected officials, business and community leaders, and citizens about the health effects of air pollution, as well as the costs and consequences of violating federal standards.
    - Work with the community to identify and implement solutions that work effectively in and for that community.

Conclusions

- Ecology's goal is to assure that no communities in Washington violate national ambient air quality standards and, if they do, to clean them up as quickly as possible. Ecology continually evaluates air quality conditions in communities across the state, implements strategies to reduce overall pollution risks, and alerts policymakers when communities are vulnerable to violating a federal standard.
- Ecology received $1.28 million STCA funding in the 2011-13 biennium to address critical existing and anticipated nonattainment issues in the state. This includes a violation of standards in Pierce County and pollution concerns related to ozone and other criteria pollutants. That funding and work is ongoing.
- For the 2013-15 biennium, Ecology requested an additional $1.022 million (one-time) to conduct additional pollution prevention emphasis work in three communities vulnerable to violation of standards. In the 2015-17 biennium, Ecology will propose additional funding of $1.095 million from the STCA (ongoing), to address tougher ozone and fine particle standards expected to be adopted by the U.S. Environmental Protection Agency over the next five years.
- Governor Gregoire's 2013-15 biennial budget has proposed shifting funding for Ecology's "Prevent Unhealthy Air and Violations of Air Quality Standards" activity from General Fund-State (GF-S) to STCA on an ongoing basis ($5.13 million). Also, the Governor has supported a portion of Ecology's request to bolster this activity to support air quality cleanup and prevention efforts in Central Washington ($204,000). See the following table for details.

Air Quality Non-Attainment Areas: Future Operating Needs beyond 2013-15
Includes adjustment for fiscal growth factors.
*Biennial amounts remain constant because it is a fund shift.

Biennium	2013-15	2015-17	2017-19	2019-21	2021-23	Total
Ecology Request	$1,022,000	$1,095,000	$1,144,000	$1,195,000	$1,248,000	$5,704,000
Governor Gregoire Proposed GF-S Fund Shift to STCA*	$5,334,000	$5,334,000	$5,334,000	$5,334,000	$5,334,000	$26,670,000
TOTAL Future STCA	$6,356,000	$6,429,000	$6,478,000	$6,529,000	$6,582,000	$32,374,000

Toxic Diesel and Wood Smoke Emission Reduction

Background

Air quality in Washington has greatly improved since 1991, when the Legislature expanded air quality safeguards. But, hundreds of scientific studies now show that air pollution is harmful to public health at lower levels than previously believed. The U.S. Environmental Protection Agency, which is responsible for setting health-based national air quality standards for six "criteria pollutants," has responded to this new information by revising national air quality standards to be more protective of human health.

One of the pollutants of particular concern in Washington is fine particle pollution. Fine particle pollution, sometimes referred to as soot, is a product of combustion—most commonly from fires, engines, boilers, furnaces, and wood heating devices. Fine particle pollution is a concern in Washington because it is now known to cause significant adverse human health effects, including heart attacks, strokes, lung diseases, increased cancer risks, and premature death—even at levels below the national standard. In fact, Ecology estimates fine particle related diseases alone contribute to 1,100 deaths and close to $200 million in health care and societal costs of disease in Washington each year.

In addition to ongoing public health concerns, a number of areas in Washington are at risk of violating health-based national air quality standards for fine particles. Federal law requires communities that violate a health-based standard to bring down air pollution levels quickly. If a violation occurs, Ecology must identify all sources that contribute to each community's high pollution levels, and develop and implement strategies that will bring air quality back into compliance with federal law. Failure to meet the federal Clean Air Act requirements subjects the state and communities to severe economic consequences, as well as the negative public health consequences of continued exposure to toxic contaminants.

Findings

- Ecology has determined that soot from diesel engines is the greatest air toxic health threat in Washington. Fine particle pollution from smoke (including smoke from indoor heating) is ranked as the second greatest air toxic health threat.

- Communities in Washington experience the highest fine particle pollution measurements during the winter season in communities where many wood-burning heating devices are used.
- Implementing strategies that reduce the use of wood for heat, and replacing the dirtiest woodstoves with cleaner-burning devices, substantially reduces public exposures to harmful fine particles.
- Public exposure to diesel soot is worst in areas where many diesel engines operate in close proximity (such as ports, distribution centers, and rail yards), and in situations where vulnerable populations, such as children or the elderly, are exposed (such as on school buses or in school yards, near hospitals or at emergency/rescue scenes).
- Retrofitting the dirtiest diesel engines with improved exhaust controls, installing idle reduction technologies to reduce unnecessary engine use and emissions, and re-powering engines with alternative fuels can substantially reduce emissions and public health risk.
- The California Air Resources Board (CARB) has estimated that each dollar spent on reducing diesel emissions saves up to $8 in health care and societal costs.
- Diesel idle-reduction and retrofit projects, as well as woodstove replacement projects, help the economy by increasing sales of Washington-made products, and sustain high-paying heavy-equipment mechanic and construction jobs for installing replacement equipment.
- Preventing areas from violating national standards is less onerous and expensive than allowing areas to enter nonattainment.

Conclusions

Reducing toxic diesel and wood smoke emissions can reduce public health risks, reduce health care costs for citizens, businesses, and governments, and can help communities stay in compliance with national air quality standards. Ecology has successful, ongoing programs to help communities reduce emissions of these harmful pollutants.

Diesel Emissions

In the 2013-15 biennial budget, Ecology proposed a long-term funding strategy to address diesel emissions—approximately $27 million over ten years, with $5 million from the STCA in 2013-15. Projects will include continuing grants to local agencies for purchasing and installing technologies on public and private sector engines, and equipment to reduce diesel engine idling. This will reduce vulnerable population exposures to emissions of toxic pollutants, reduce greenhouse gases, save fuel costs for businesses and local governments, and preserve equipment life.

Other projects will reduce emissions where large numbers of engines work in close proximity in high-density/high population areas (e.g. ports, warehouses, distribution centers, rail yards, and major construction sites). It is in these situations that populations can be most heavily exposed to

harmful pollution levels. Both emission reduction and idle reduction technologies would be deployed.

To help local government fleets reduce diesel pollution in high density areas, any successful effort must address the large legacy fleet of older, dirtier, diesel engines. While the newest federal engine standards significantly reduce pollution, turn-over of the existing fleet of engines will take decades. In addition to local government grants, programs that combine both regulatory tools and financial incentives—for private operators to reduce idling, retrofit, or re-power engines, or purchase new equipment—are needed. Out-biennia funding is intended to complement regulatory initiatives by capitalizing programs to leverage private investment in emission reduction technologies.

Diesel Emissions Reduction: Future Operating Needs Beyond 2013-15

Includes adjustment for fiscal growth factors.

*Amounts for diesel and woodstove projects are eligible in either State or Local Toxics Control Accounts. A decision from which account to fund these projects will be made prior to each biennium based on projected fund balances in the accounts.

Biennium	2013-15	2015-17	2017-19	2019-21	2021-23	Total
FTEs	2.9	2.9	2.9	2.9	2.9	
TOTAL Future STCA*	$5,000,000	$5,223,000	$5,456,000	$5,699,000	$5,953,000	$27,331,000

Wood Smoke Emissions

In the 2013-15 biennial budget, Ecology proposed a long-term funding strategy to address wood smoke emissions—approximately $22 million over ten years, with $4 million from the STCA in 2013-15. Funds will be used to implement wood smoke reduction strategies in areas that do not comply with federal standards, as well as in other high exposure, high health risk communities.

Existing woodstove change-out programs have, for the most part, targeted homeowners that are high-volume wood users, low-income residents, and homes where burning wood is the only source of residential heat. These efforts will continue. But, many high wood-use, low-income homes are not owned by the resident, and decisions to change/improve heating methods are up to the landlord. New and different incentive programs that leverage private investment are necessary to address using wood for heat in rental and multi-family housing units.

Wood Smoke Emissions Reduction: Future Operating Needs Beyond 2013-15

Includes adjustment for fiscal growth factors.

*Amounts for diesel and woodstove projects are eligible in either State or Local Toxics Control Accounts. A decision from which account to fund these projects will be made prior to each biennium based on projected fund balances in the accounts.

Biennium	2013-15	2015-17	2017-19	2019-21	2021-23	Total
FTEs	0.5	0.5	0.5	0.5	0.5	
TOTAL Future STCA*	$4,000,000	$4,178,000	$4,364,000	$4,558,000	$4,761,000	$21,861,000

Hazardous and Solid Waste Management – Ten-Year Financing Plan

As Ecology moves toward reducing the amount and toxicity of waste, there are still wastes that need to be managed properly. Managing waste properly includes programs, activities, assistance, and grants. These are provided with the primary purpose of safely managing toxic substances and harmful wastes in the air, water, and soil to minimize or eliminate the impacts of discharges and emissions of pollutants. This includes permitting and compliance activities, developing and enforcing environmental standards, collecting and analyzing data, education, and technical assistance.

Also, with help from Ecology staff, local governments are required to plan for managing solid waste and moderate risk waste by preparing both local solid waste and hazardous waste plans and permits, and by conducting compliance activities at solid waste facilities, landfills, and recycling facilities.

Emerging Issues

- Reductions to EPA funding from Resource Conservation and Recovery Act (RCRA) grants could continue beyond Fiscal Year 2013.
- Keeping toxic waste out of stormwater, which protects salmon and bodies of water.
- As businesses manage through the great recession, cutbacks in environmental safety programs increase the levels of high risk violations, posing greater risk to human health and the environment.
- Reducing disposal of yard waste and food waste in landfills.
- Reducing the impact of compost facilities on the environment by developing new strategies to reuse and recycling yard and food wastes.
- Reduced funding to local governments and solid waste companies for the management and disposal of solid waste.

Coordinated Prevention Grants

Background

See the *Toxic Pollution Prevention* section above, *Grants to Local Governments and Citizens,* for background information on Coordinated Prevention Grants (CPGs).

Findings

- Ecology is making progress toward the state's goals to reduce the amount and toxicity of waste. But there are still wastes from households, businesses, industries, and governments that need to be properly managed. A key aspect of managing solid waste is providing grants to local governments through Coordinated Prevention Grants (CPGs).

- Local governments are required to plan for preventing and managing solid waste and moderate risk waste. The CPG program funds collecting hazardous waste from citizens and businesses that produce small quantities. CPG funds are also used in constructing and managing various solid waste handling and management facilities, including compost facilities and material recovery facilities.

Conclusions

- As discussed in the *Toxic Pollution Prevention* section of this report, the CPG Ten-Year Projection map (Map 5) compares the ten-year projected CPG funds needed for the 2013-15 biennium to the 2021-23 biennium for each county.
- Ecology and local governments are working together to shift the CPG funded programs from safe waste handling to funding more prevention activities. In 2008, 40 percent of the grants supported recycling and prevention projects, and 60 percent were focused on safe handling activities. In 2012, 45 percent of the grants were for recycling and prevention projects, and 55 percent were being used for safe handling activities.

Dangerous Waste Compliance and Local Source Control Specialists

Background

Mismanaging hazardous waste lets toxic chemicals into our water, soil, and air, and causes risks to human health. Ecology is authorized by the U.S. Environmental Protection Agency to implement state hazardous waste law in lieu of the Federal Resource Conservation and Recovery Act (RCRA).

State law RCW 70.105 designates Ecology as the sole agency with authority to implement and administer RCRA. This state law provides an integrated system to protect Washington from the effects of mismanaged hazardous wastes.

RCRA authorization requires inspection, enforcement, technical assistance, and regular reporting on RCRA activities and data. Ecology receives federal grants to fund a portion of the work required under RCRA.

The STCA is used to fund the required match to federal funds and fully fund state hazardous waste requirements—*per RCW 70.105D.070(1)(i) Note: State law refers to "dangerous" waste. Hazardous and dangerous wastes both include wastes that are toxic, corrosive, ignitable, reactive or persistent.*

A reported 506 million pounds of hazardous waste were generated in 2011 (most current data available) by 3,755 sites in Washington. Current hazardous waste inspections result in a 53 percent rate of finding a significant environmental threat.

Ecology's records show that facilities have more spills and other serious hazardous waste violations if not inspected every three years. During an economic downturn, businesses often cut back, and the first place they often cut is their environmental safety program. Ecology expects to find more spills and other environmental threats during tough economic times.

An estimated 65 million pounds of unreported hazardous waste are generated each year by approximately 65,000 sites. Generators of small quantities of hazardous waste are not required to report, so Ecology can only estimate the number of businesses and amount of waste.

The Local Source Control (LSC) Partnership between Ecology and local governments throughout Puget Sound and the Spokane area began in 2008. LSC specialists provide on-site technical assistance to businesses that produce smaller volumes of hazardous waste. LSC specialists have completed 10,000 site visits to small businesses in 25 jurisdictions, providing assistance on safe management and disposal of hazardous waste, and on reducing use of toxic chemicals. Some local jurisdictions outside of the Puget Sound and Spokane areas have expressed interest in joining the LSC Partnership.

Findings

- The 2011-13 budget increased compliance staff but not sufficiently to inspect each regulated generator once every three years. Ecology is streamlining inspection processes as identified in a 2012 Lean event, which will add inspection capacity from current resources. Due to business growth in Washington, Ecology anticipates the need to increase compliance resources in the future to further reduce the chance of finding a significant environmental threat during an inspection.
- Expanding the LSC Partnership beyond Puget Sound and Spokane will reduce the volume of hazardous waste from small businesses. Concentrating LSC opportunities in geographical or other water basins, such as the Columbia River Basin, would coordinate efforts for more effective results.

Conclusions

The following table reflects Ecology's ten-year financing plan to build capacity to make sure that hazardous waste is safely managed by:

- Ensuring facilities handling solid and hazardous waste are in compliance with environmental laws and regulations.
- Increasing capacity to inspect, at least once every three years, businesses that produce large amounts of hazardous waste.
- Providing local governments across the state with positions to inspect the large number of businesses that produce smaller volumes of hazardous waste.

These positions also provide pollution prevention and multi-media technical assistance. Potential new partners would include the Columbia River Basin, Eastern Washington areas, and additional needs in the Puget Sound region.

Hazardous Waste Management: Future Operating Needs Beyond 2013-15
Includes adjustment for fiscal growth factors.

Biennium	2013-15	2015-17	2017-19	2019-21	2021-23	Total
FTEs	0.0	2.0	2.0	2.0	2.0	
STCA: Hazardous Waste and Toxics Reduction Program	$0	$627,000	$655,000	$684,000	$714,000	$2,680,000
LTCA: Hazardous Waste and Toxics Reduction Program	$0	$2,300,000	$2,402,000	$2,509,000	$2,621,000	$9,832,000
TOTAL Future STCA & LTCA	$0	$2,927,000	$3,057,000	$3,193,000	$3,335,000	$12,512,000

Water Quality Standards, Stormwater Technical Support, and Providing Stormwater Financial Assistance

Background

The mission of Ecology's Water Quality Program is to protect and restore Washington's waters. Federal law requires states to identify sources of pollution in waters that fail to meet state water quality standards, and to develop Water Quality Improvement Reports to address those pollutants.

For over two decades, MTCA funds have been invested in activities that help protect Washington's water from toxic contaminants. Ecology's ten-year financing plan for water quality focuses on:

- Developing and implementing water quality standards for toxics.
- Providing technical support to stormwater permits for industrial and construction facilities.
- Providing financial assistance efficiently and effectively to water quality projects with the highest benefit of the prevention of toxics to human health and the environment.

Findings

Toxic pollution is a growing concern threatening water quality, and chief among them is stormwater. Stormwater is rain and snow melt that runs off surfaces such as rooftops, paved streets, highways, and parking lots. As water runs off these surfaces, it can pick up pollution like oil, fertilizers, pesticides, soil, trash, and animal waste. Untreated stormwater can make water and shellfish unsafe for humans and other animals, and can harm fish and wildlife habitat.

The Federal Clean Water Act (CWA) and state law require that approximately 3,000 businesses (1,000 industrial and 2,000 construction) and 150 local governments have National Pollutant Discharge Elimination System (NPDES) permits for the stormwater they discharge.

Conclusions

Water Quality Standards & Stormwater Technical Support

Over the years, staff have provided technical support and expertise to stakeholders to identify and uphold water quality standards for toxic substances. Ecology is committed to developing and maintaining tools for permit holders and others to use to provide a compliance pathway for industry and local governments. Activities include:

- Developing and implementing water quality standards.
- Developing and providing technical guidance and assistance to the regulated community.
- Providing engineering support for developing Best Management Practices for stormwater.
- Supporting formal enforcement of permit conditions.
- Monitoring and evaluating compliance with permits.

Ecology anticipates the level of support for these activities will remain constant. Approximately $3.9 million (STCA) and 15.0 FTE are invested in stormwater permit and water quality standard activities.

Capital Stormwater Retrofit and Low Impact Development

Many existing stormwater conveyances and facilities across the state are old and provide poor treatment, release untreated stormwater directly to surface water, or do not meet current standards or emerging practices. The cost estimates to retrofit local governments' existing stormwater systems are extremely high. Local governments need financial assistance to:

- Provide adequate treatment of stormwater discharge from failing and non-functioning stormwater conveyances and facilities.
- Incorporate the best available science, technology, and practices.
- Meet National Pollutant Discharge Elimination Systems (NPDES) Phase I and II Municipal Stormwater permit requirements.
- Planning and designing stormwater retrofit or low impact development (LID) projects.
- Implementing stormwater retrofit or LID projects.

Over the past few biennia, Ecology received capital stormwater appropriations from the LTCA and STCA to provide funding to eligible applicants, through a competitive grant process, for stormwater construction or design/construction projects. These stormwater projects help local governments finance capital stormwater improvement projects that manage water pollution and improve natural hydrologic function and stormwater flow control in Washington State.

Cities, towns, counties, and ports covered by one of the Municipal Stormwater NPDES permits are eligible to apply for funding. During the 2011-13 biennium, Ecology provided funding for

118 projects statewide, totaling over $66 million dollars. These projects represent a significant investment in stormwater control, treatment, and management. Long-term funding strategies include:

- Requesting implementation of an ongoing stormwater financial assistance program that will be added into Ecology's integrated funding process with other major water quality funding programs.
- Centennial Clean Water grants.
- State Revolving Fund loans.
- Non-point 319 grants.

Starting in the 2015-17 biennium and beyond, Ecology would establish an ongoing statewide stormwater infrastructure grant program.

Stormwater: Future Capital Needs Beyond 2013-15

Includes adjustment for fiscal growth factors.

Biennium	2013-15	2015-17	2017-19	2019-21	2021-23	Total
FTEs	0.0	8.4	8.4	8.4	8.4	
TOTAL Future LTCA	$0	$50,000,000	$52,228,000	$54,555,000	$56,985,000	$213,768,000

Municipal Stormwater Capacity Grant Program

Over the past several biennia, Ecology has received appropriations from the LTCA and STCA to provide funding to local governments covered by the Phase I and Phase II Municipal Stormwater Permits. The purpose of the municipal stormwater capacity grant program is to provide funding to cities, towns, and counties covered by the NPDES Phase I and II Municipal Stormwater permits, for municipal stormwater programs, including:

- Implementing permit requirements.
- Purchasing equipment and personal services contracts to directly support implementing permit requirements.

Funds also help local governments hire staff to address stormwater problems in their communities and improve stormwater research, data management, and monitoring. Part of the municipal stormwater capacity grant program has also been to fund directed grants for stormwater projects of regional or statewide significance. These directed grants fund projects or activities that address stormwater problems or issues of importance to local governments, including:

- An Eastern Washington manual for low impact development.
- A collaborative public education campaign for stormwater.
- Regional stormwater monitoring initiatives.
- The Washington Stormwater Center.

Carry-forward level (CFL) funding for the local government capacity grants has been $8.9 million per biennium, and has been a critical funding element for local governments. Ecology is proposing to temporarily increase funding to local governments and directed grants for projects of regional or statewide significance for the 2013-15 and 2015-17 biennia to help local governments meet the new permit requirements. This will allow Ecology to double the capacity grants to local governments.

Stormwater: Future Operating Needs Beyond 2013-15

Includes adjustment for fiscal growth factors.

Biennium	2013-15	2015-17	2017-19	2019-21	2021-23	Total
FTEs (CFL)	1.5	1.5	1.5	1.5	1.5	
LTCA (CFL)	$8,900,000	$8,900,000	$8,900,000	$8,900,000	$8,900,000	$44,500,000
FTEs (New)	1.8	1.8	0.0	0.0	0.0	
LTCA (New)	$10,000,000	$10,446,000	$0	$0	$0	$20,446,000
TOTAL Future LTCA	$18,900,000	$19,346,000	$8,900,000	$8,900,000	$8,900,000	$64,946,000

Monitoring and Scientific Support for All MTCA Investments

Environmental Assessment Program

Background

The Environmental Assessment Program (EAP) conducts monitoring programs and designs scientific studies to measure the quality of water, sediments, and fish tissue in marine and fresh waters across the state. A portion of this work is funded by STCA with the majority funded by other state and federal sources.

The STCA-funded work supports activities in multiple sections of this report, including:

- The *Toxic Cleanup* section:
  - Western and Eastern Washington Clean Sites Initiative Program.
  - Safe Soils Program.
  - Puget Sound Cleanups.
- The *Toxic Pollution Prevention* section:
  - Reduce Toxics Use and Prevent Hazardous Waste.

Annual work plans for EAP staff are developed in consultation with other Ecology programs—primarily the Toxics Cleanup Program, Waste 2 Resources Program, and Water Quality Program. These discussions prioritize the projects and sites EAP staff will work on during the upcoming year.

Findings

- Ecology programs often identify the need for support above EAP's ongoing internal resources. In some cases, the program (e.g., Toxics Cleanup Program, Nuclear Waste Program) can provide one-time funding to EAP for staff to work on these projects.
- In other cases, additional resources are not available, and existing EAP staff and resources must be prioritized to the highest needs.

Conclusions

EAP has a core level of $7.55 million per biennium of STCA funding to support MTCA-eligible work.

- The Toxics Cleanup Program may provide additional funding to EAP beyond the core level of support for activities, such as identifying potential cleanup sites or monitoring cleanup effectiveness. Potential increases during the upcoming ten-year period are included in the *Western and Eastern Washington Clean Sites Initiative Program* and *Clean Up Toxic Sites Puget Sound* sections of this report.

- Additional resources may also be needed for sampling persistent, bioaccumulative, and toxic chemicals (PBTs) in support of chemical action plans, toxics in consumer products, and other emerging contaminants in the environment. Potential increases during the upcoming ten-year period are included in the *Reduce Toxics Use and Prevent Hazardous Waste* section of this report.

Time-Bound Investments of MTCA, Directed by the Legislature

Shoreline Master Program Grants

Background

Ecology is working with local governments across the state to update local Shoreline Master Programs (SMPs). Updated shoreline regulations are vital tools for protecting freshwater and marine shorelines throughout the state. They set standards for shoreline development, protect important habitats, and identify places best suited for restoration.

Based on a negotiated legal settlement, RCW 90.58, the Shoreline Management Act (SMA), was amended by the Legislature in 2003. The amendment requires all 257 local governments with shorelines to comprehensively update their shoreline regulations between 2005 and 2014 (and with the extra year allowed by the statute, the final end date for updates is December 2015). The Legislature also required the state to provide "reasonable and adequate" funding to local governments for the updates.

Findings

- Updated SMPs improve protection of shorelines throughout the state and provide predictability for landowners. Shoreline regulations help prevent toxins from entering state waters. For example, vegetated buffers required for new developments help reduce toxic inputs to state waters. SMPs also set forth a plan for restoring degraded shorelines.
- Between July 1, 2003, and March 1, 2013, 204 cities and counties have received funding for their comprehensive SMP updates: 74 are complete and approved by the state; 15 are locally adopted and under state review; and another 115 are underway. An additional 55 jurisdictions are scheduled to receive funding in the 2013-15 biennium.
- Since 2003, $26 million in state funding has been appropriated for SMP updates. Of those funds, $15 million has come from the General Fund-State (GF-S) and $10.5 million has come from LTCA. For the 2013-15 biennium, Ecology has requested $2.3 million (LTCA). In addition to the $4.5 million (LTCA) base, this will enable 38 jurisdictions to complete their updates, and the remaining 55 jurisdictions on the schedule (14 counties and 41 cities) to begin their updates (they will finish by December 2015, in the 2015-17 biennium). The budget request also would provide $556,000 (STCA) for Ecology staffing to provide technical support.

Conclusions

- Ecology’s 2013-15 budget request will ensure local governments continue to receive the funding they need to update their shoreline regulations consistent with the schedule adopted by the Legislature.
- $1 million of the requested state funds will provide match for the state’s federal Coastal Zone Management grant from NOAA, leveraging an additional $1 million in federal funding for the 2013-15 biennium.

- RCW 90.58.080 requires local shoreline plans and regulations be updated according to a prescribed schedule. Without the 2013-15 SMP funds, 91 jurisdictions (counties and cities) would not have the resources to complete their SMP and would be out of compliance with the statutory schedule.
- A legal settlement agreement in 2003 commits the Governor's Office and the settlement parties (a diverse array of stakeholders and local governments) to *"…support projected future funding …required to complete implementation statewide based on current estimates, sufficient to meet the schedule…"*

Figure 10. Shoreline Master Program Grants – Ten-Year Estimate of Funding Needs

Shoreline Master Program Costs by Biennium

Actual costs for 11-13 and Projections for 13-15 and 15-17

	Total Grant	2011-2013 Biennium	2013-2015 Biennium *(projected)*	2015-2017 Biennium *(projected)*
Grants Awarded in 11-13 Biennium or earlier				
Arlington, City of	$ 90,156.00	$ 20,300		
Bainbridge Island, City of	$ 210,000.00	$ 50,784		
Beaux Arts Village, Town of	$ 48,000.00	$ 16,000		
Benton, City of	$ 125,000.00	$ 125,000		
Benton, County	$ 250,000.00	$ 200,000	*$ 50,000*	
Black Diamond, City of	$ 70,000.00	$ 20,000		
Bonney Lake, city of	$ 65,423.10	$ 15,000		
Bothell, City of	$ 131,843.86	$ 25,000		
Bremerton, City of	$ 200,000.00	$ 51,331		
Brier, City of	$ 28,768.51	$ 6,000		
Buckley, City of	$ 84,500.00	$ 28,501		
Bucoda, Town of (+Tenino)	$ 160,000.01	$ 32,000		
Burien, City of	$ 6,000.00	$ 6,000		
Burlington, City of	$ 80,000.00	$ 40,000		
Camas, City of (Vancouver)	$ -	$ -	$ -	
Carnation, City of	$ 74,931.57	$ 16,000		
Cashmere, City of	$ 4,000.00	$ 4,000		
Castle Rock, City of (Cowlitz Co)	$ -	$ -	$ -	
Centralia, City of (Lewis Co)	$ -	$ -	$ -	
Chehalis, City of (Lewis Co)	$ -	$ -	$ -	
Chelan, City of	$ 4,000.00	$ 4,000		
Clallam County	$ 549,986.06	$ 100,000		
Clark County (Vancouver)	$ -	$ -		
Cle Elum, City of (Kittitas County)	$ -	$ -	$ -	
Concrete, Town of	$ 48,333.78	$ 30,000		
Coulee City (Grant County)	$ -	$ -	$ -	
Cowlitz County (+ 4 cities)	$ 743,900.00	$ 595,120	*$ 148,780*	
DuPont, City of	$ 83,806.71	$ 15,000		
Duvall, City of	$ 73,672.99	$ 19,980		
Eatonville, Town of	$ 77,784.06	$ 18,983		
Electric City (Grant County)	$ -	$ -	$ -	
Ellensburg, City of (Kittitas County)	$ -	$ -	$ -	
Entiat, City of	$ 4,000.00	$ 4,000		
Fife, City of	$ 52,932.94	$ 26,000		
Forks, City of	$ 34,333.33	$ 13,333		
Friday Harbor, Town of	$ 117,000.00	$ 79,800		
Gold Bar, City of	$ 53,000.00	$ 12,000		
Grand Coulee, City of (Grant County)	$ -	$ -	$ -	
Granite Falls, City of	$ 40,000.00	$ 16,412		
Grant County (+6 cities)	$ 675,000.00	$ 555,000	*$ 120,000*	
Hamilton, City of (incl in Skagit County)	$ -	$ -		
Hunts Point, Town of	$ 59,731.00	$ 20,000		
Index, Town of	$ 19,935.05	$ 10,200		
Island County	$ 450,000.00	$ 270,000		
Jefferson County	$ 20,000.00	$ 20,000		
Kalama, City of (Cowlitz Co)	$ -	$ -	$ -	
Kelso, City of (Cowlitz Co)	$ -	$ -	$ -	
Kitsap County	$ 731,600.00	$ 160,006		
Kittitas County (+3 cities)	$ 690,000.00	$ 552,000	*$ 138,000*	

Shoreline Master Program Costs by Biennium

Actual costs for 11-13 and Projections for 13-15 and 15-17

	Total Grant	2011-2013 Biennium	2013-2015 Biennium *(projected)*	2015-2017 Biennium *(projected)*
Krupp, City of (Grant County)	$ -	$ -	*$ -*	
La Center, City of (Vancouver)	$ -	$ -		
La Conner, Town of	$ 58,424.41	$ 45,000		
Lakewood, City of	$ 110,992.17	$ 31,000		
Langley, City of	$ 50,214.50	$ 33,000		
Latah, City of (incl in Rockford)	$ -	$ -	*$ -*	
Leavenworth, City of	$ 4,000.00	$ 4,000		
Lewis County (+4 cities)	$ 780,000.00	$ 624,000	*$ 156,000*	
Liberty Lake, City of	$ 50,000.00	$ 50,000		
Longview, City of	$ 125,000.00	$ 100,000	*$ 25,000*	
Lyman, City of (incl in Skagit County)	$ -	$ -		
Maple Valley	$ 10,000.00	$ 10,000		
Mason County	$ 695,950.70	$ 436,000		
Medina, City of	$ 124,998.02	$ 25,000		
Millwood, City of	$ 50,000.00	$ 50,000		
Milton, City of	$ 53,442.00	$ 23,077		
Morton, City of (Lewis Co)	$ -	$ -	*$ -*	
Mountlake Terrace, City of	$ 43,000.00	$ 3,000		
Napavine, City of	$ 40,000.00	$ 32,000	*$ 8,000*	
Nooksack, City of	$ 40,000.00	$ 8,000		
Normandy Park, City of	$ 49,516.41	$ 22,250		
North Bend, City of	$ 75,000.00	$ 15,300		
North Bonneville, City of	$ 94,923	$ 94,923		
Oak Harbor, City of	$ 129,000	$ 75,471		
Olympia, City of	$ 12,000	$ 12,000		
Pe Ell, Town of	$ 40,000	$ 32,000	*$ 8,000*	
Pend Oreille County	$ 412,000	$ 28,000		
Port Angeles, City of	$ 200,000	$ 40,000		
Port Orchard, City of	$ 135,202	$ 20,000		
Poulsbo, City of	$ 98,016	$ 20,000		
Prosser, City of	$ 125,000	$ 100,000	*$ 25,000*	
Richland, City of	$ 125,000	$ 68,000	*$ 57,000*	
Ridgefield, City of (Vancouver)	$ -	$ -		
Rockford, Town of (+Latah and Waverly)	$ 120,000	$ 108,000	*$ 12,000*	
Roy, City of	$ 40,000	$ 8,000		
Ruston, Town of	$ 40,000	$ 5,000		
San Juan County	$ 823,800	$ 647,539		
Sedro-Woolley, City of	$ 40,000	$ 24,000		
Sequim, City of	$ 36,869	$ 7,500		
Shelton, City of	$ 122,899	$ 75,000		
Shoreline, City of	$ 5,000	$ 5,000		
Skagit County (+Hamilton and Lyman)	$ 737,727	$ 488,000		
Skamania County	$ 200,000	$ 160,000	*$ 40,000*	
Skykomish, Town of	$ 45,000	$ 5,000		
Snohomish, City of	$ 124,966	$ 25,000		
Snoqualmie, City of	$ 10,000	$ 10,000		
Soap Lake, City of (Grant County)	$ -	$ -	*$ -*	
South Cle Elum, City of (Kittitas County)	$ -	$ -	*$ -*	
South Prairie, Town of	$ 44,928	$ 13,000		
Spokane Valley, City of	$ 125,000	$ 118,710	*$ 6,290*	

Shoreline Master Program Costs by Biennium

Actual costs for 11-13 and Projections for 13-15 and 15-17

	Total Grant	2011-2013 Biennium	2013-2015 Biennium *(projected)*	2015-2017 Biennium *(projected)*
Stanwood, City of	$ 44,878	$ 15,000		
Steilacoom, Town of	$ 75,000	$ 10,368		
Stevenson, City of	$ 60,000	$ 50,000	*$ 10,000*	
Sumas, City of	$ 50,000	$ 11,000		
Sumner, City of	$ 84,930	$ 24,930		
Tenino (in Bucoda grant)	$ -	$ -		
Thurston County	$ 40,000	$ 40,000		
Toledo, City of	$ 40,000	$ 32,000	*$ 8,000*	
University Place, City of	$ 134,520	$ 54,520		
Vader, City of	$ 40,000	$ 32,000	*$ 8,000*	
Vancouver, City of (+ Clark Co. & 4 Cities)	$ 1,183,161	$ 179,000		
Washougal, City of (Vancouver)	$ -	$ -	*$ -*	
Waverly, City of (incl in Rockford)	$ -	$ -	*$ -*	
Wenatchee, City of	$ 4,000	$ 4,000		
West Richland, City of	$ 85,000	$ 85,000		
Wilkeson, Town of	$ 42,300	$ 10,300		
Wilson Creek, City of (Grant County)	$ -	$ -	*$ -*	
Winlock, City of (Lewis Co)	$ -	$ -	*$ -*	
Woodland, City of (Cowlitz Co)	$ -	$ -	*$ -*	
Woodway, Town of	$ 52,995	$ 15,125		
Yakima, City of	$ 50,000	$ 44,000	*$ 6,000*	
Yarrow Point, Town of	$ 60,000	$ 20,000		
Subtotal		**$ 7,506,764**	***$ 826,070***	***$ -***
Grants to be Awarded in 13-15 Biennium				
Adams County			*$ 200,000*	*$ 50,000*
Asotin			*$ 40,000*	*$ 10,000*
Asotin County			*$ 200,000*	*$ 50,000*
Clarkston			*$ 40,000*	*$ 10,000*
Columbia County			*$ 200,000*	*$ 50,000*
Dayton			*$ 40,000*	*$ 10,000*
Starbuck			*$ 28,000*	*$ 7,000*
Ferry County			*$ 200,000*	*$ 50,000*
Republic			*$ 40,000*	*$ 10,000*
Franklin County			*$ 200,000*	*$ 50,000*
Pasco			*$ 100,000*	*$ 25,000*
Garfield County			*$ 200,000*	*$ 50,000*
Aberdeen			*$ 100,000*	*$ 25,000*
Cosmopolis			*$ 40,000*	*$ 10,000*
Elma			*$ 40,000*	*$ 10,000*
Grays Harbor County			*$ 320,000*	*$ 80,000*
Hoquiam			*$ 100,000*	*$ 25,000*
Montesano			*$ 100,000*	*$ 25,000*
Ocean Shores			*$ 100,000*	*$ 25,000*
Westport			*$ 100,000*	*$ 25,000*
Klickitat County			*$ 200,000*	*$ 50,000*
Bingen			*$ 40,000*	*$ 10,000*
Goldendale			*$ 40,000*	*$ 10,000*
White Salmon			*$ 40,000*	*$ 10,000*

Shoreline Master Program Costs by Biennium

Actual costs for 11-13 and Projections for 13-15 and 15-17

	Total Grant	2011-2013 Biennium	2013-2015 Biennium *(projected)*	2015-2017 Biennium *(projected)*
Lincoln County			$ 200,000	$ 50,000
Odessa			$ 40,000	$ 10,000
Sprague			$ 40,000	$ 10,000
Okanogan County (county previously funded)				
Conconully			$ 40,000	$ 10,000
Coulee Dam			$ 40,000	$ 10,000
Elmer City			$ 40,000	$ 10,000
Riverside			$ 40,000	$ 10,000
Pacific County			$ 200,000	$ 50,000
Illwaco			$ 40,000	$ 10,000
Long Beach			$ 100,000	$ 25,000
Raymond			$ 100,000	$ 25,000
South Bend			$ 100,000	$ 25,000
Pend Oreille County (county previously funded)				
Newport			$ 40,000	$ 10,000
Stevens County			$ 320,000	$ 80,000
Kettle Falls			$ 40,000	$ 10,000
Marcus			$ 28,000	$ 7,000
Northport			$ 100,000	$ 25,000
Wahkiakum County			$ 200,000	$ 50,000
Cathlamet			$ 40,000	$ 10,000
Walla Walla County			$ 200,000	$ 50,000
Prescott			$ 40,000	$ 10,000
Waitsburg			$ 100,000	$ 25,000
Walla Walla			$ 100,000	$ 25,000
Whitman County			$ 200,000	$ 50,000
Albion			$ 40,000	$ 10,000
Colfax			$ 28,000	$ 7,000
Malden			$ 40,000	$ 10,000
Palouse			$ 40,000	$ 10,000
Pullman			$ 40,000	$ 10,000
Rosalia			$ 28,000	$ 7,000
Tekoa			$ 28,000	$ 7,000
Contingency (~10%)			$ 633,930	134000
Total		**$ 7,506,764**	**$ 6,800,000**	**$ 1,469,000**

NOTE: the funding level needed for the 2015-2017 biennium .
may be higher depending on final negotiated grant agreements
in 2013-2015

Appendix A: House Bill 1761 (2007 Regular Session) – In Its Entirety

CERTIFICATION OF ENROLLMENT

SUBSTITUTE HOUSE BILL 1761

Chapter 446, Laws of 2007

60th Legislature
2007 Regular Session

HAZARDOUS WASTE CLEANUP

EFFECTIVE DATE: 07/22/07

Passed by the House April 14, 2007
Yeas 93 Nays 0

FRANK CHOPP

Speaker of the House of Representatives

Passed by the Senate April 10, 2007
Yeas 48 Nays 0

BRAD OWEN

President of the Senate

Approved May 11, 2007, 11:27 a.m.

CHRISTINE GREGOIRE

Governor of the State of Washington

CERTIFICATE

I, Richard Nafziger, Chief Clerk of the House of Representatives of the State of Washington, do hereby certify that the attached is **SUBSTITUTE HOUSE BILL 1761** as passed by the House of Representatives and the Senate on the dates hereon set forth.

RICHARD NAFZIGER

Chief Clerk

FILED

May 11, 2007

Secretary of State
State of Washington

SUBSTITUTE HOUSE BILL 1761

AS AMENDED BY THE SENATE

Passed Legislature - 2007 Regular Session

State of Washington 60th Legislature 2007 Regular Session

By House Committee on Capital Budget (originally sponsored by Representatives Linville, Hunter, Priest, Hunt, B. Sullivan, Upthegrove, Kessler, Sump, Hankins, Jarrett, Fromhold, Appleton, Rolfes, Darneille, Campbell, Conway, Green, O'Brien, Schual-Berke, Simpson, Ormsby and Chase)

READ FIRST TIME 3/5/07.

AN ACT Relating to expediting the cleanup of hazardous waste and creating incentives for Puget Sound cleanups; and amending RCW 70.105D.030 and 70.105D.070.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

Sec. 1. RCW 70.105D.030 and 2002 c 288 s 3 are each amended to read as follows:

(1) The department may exercise the following powers in addition to any other powers granted by law:

(a) Investigate, provide for investigating, or require potentially liable persons to investigate any releases or threatened releases of hazardous substances, including but not limited to inspecting, sampling, or testing to determine the nature or extent of any release or threatened release. If there is a reasonable basis to believe that a release or threatened release of a hazardous substance may exist, the department's authorized employees, agents, or contractors may enter upon any property and conduct investigations. The department shall give reasonable notice before entering property unless an emergency prevents such notice. The department may by subpoena require the

attendance or testimony of witnesses and the production of documents or other information that the department deems necessary;

(b) Conduct, provide for conducting, or require potentially liable persons to conduct remedial actions (including investigations under (a) of this subsection) to remedy releases or threatened releases of hazardous substances. In carrying out such powers, the department's authorized employees, agents, or contractors may enter upon property. The department shall give reasonable notice before entering property unless an emergency prevents such notice. In conducting, providing for, or requiring remedial action, the department shall give preference to permanent solutions to the maximum extent practicable and shall provide for or require adequate monitoring to ensure the effectiveness of the remedial action;

(c) Indemnify contractors retained by the department for carrying out investigations and remedial actions, but not for any contractor's reckless or wilful misconduct;

(d) Carry out all state programs authorized under the federal cleanup law and the federal resource, conservation, and recovery act, 42 U.S.C. Sec. 6901 et seq., as amended;

(e) Classify substances as hazardous substances for purposes of RCW 70.105D.020(7) and classify substances and products as hazardous substances for purposes of RCW 82.21.020(1);

(f) Issue orders or enter into consent decrees or agreed orders that include, or issue written opinions under (i) of this subsection that may be conditioned upon, deed restrictions where necessary to protect human health and the environment from a release or threatened release of a hazardous substance from a facility. Prior to establishing a deed restriction under this subsection, the department shall notify and seek comment from a city or county department with land use planning authority for real property subject to a deed restriction;

(g) Enforce the application of permanent and effective institutional controls that are necessary for a remedial action to be protective of human health and the environment and the notification requirements established in RCW 70.105D.110, and impose penalties for violations of that section consistent with RCW 70.105D.050;

(h) Require holders to conduct remedial actions necessary to abate

an imminent or substantial endangerment pursuant to RCW 70.105D.020(12)(b)(ii)(C);

(i) Provide informal advice and assistance to persons regarding the administrative and technical requirements of this chapter. This may include site-specific advice to persons who are conducting or otherwise interested in independent remedial actions. Any such advice or assistance shall be advisory only, and shall not be binding on the department. As a part of providing this advice and assistance for independent remedial actions, the department may prepare written opinions regarding whether the independent remedial actions or proposals for those actions meet the substantive requirements of this chapter or whether the department believes further remedial action is necessary at the facility. The department may collect, from persons requesting advice and assistance, the costs incurred by the department in providing such advice and assistance; however, the department shall, where appropriate, waive collection of costs in order to provide an appropriate level of technical assistance in support of public participation. The state, the department, and officers and employees of the state are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing, or failing to provide, informal advice and assistance; and

(j) Take any other actions necessary to carry out the provisions of this chapter, including the power to adopt rules under chapter 34.05 RCW.

(2) The department shall immediately implement all provisions of this chapter to the maximum extent practicable, including investigative and remedial actions where appropriate. The department shall adopt, and thereafter enforce, rules under chapter 34.05 RCW to:

(a) Provide for public participation, including at least (i) public notice of the development of investigative plans or remedial plans for releases or threatened releases and (ii) concurrent public notice of all compliance orders, agreed orders, enforcement orders, or notices of violation;

(b) Establish a hazard ranking system for hazardous waste sites;

(c) Provide for requiring the reporting by an owner or operator of releases of hazardous substances to the environment that may be a threat to human health or the environment within ninety days of

discovery, including such exemptions from reporting as the department deems appropriate, however this requirement shall not modify any existing requirements provided for under other laws;

(d) Establish reasonable deadlines not to exceed ninety days for initiating an investigation of a hazardous waste site after the department receives notice or otherwise receives information that the site may pose a threat to human health or the environment and other reasonable deadlines for remedying releases or threatened releases at the site;

(e) Publish and periodically update minimum cleanup standards for remedial actions at least as stringent as the cleanup standards under section 121 of the federal cleanup law, 42 U.S.C. Sec. 9621, and at least as stringent as all applicable state and federal laws, including health-based standards under state and federal law; and

(f) Apply industrial clean-up standards at industrial properties. Rules adopted under this subsection shall ensure that industrial properties cleaned up to industrial standards cannot be converted to nonindustrial uses without approval from the department. The department may require that a property cleaned up to industrial standards is cleaned up to a more stringent applicable standard as a condition of conversion to a nonindustrial use. Industrial clean-up standards may not be applied to industrial properties where hazardous substances remaining at the property after remedial action pose a threat to human health or the environment in adjacent nonindustrial areas.

(3) To achieve and protect the state's long-term ecological health, the department shall prioritize sufficient funding to clean up hazardous waste sites and prevent the creation of future hazards due to improper disposal of toxic wastes, and create financing tools to clean up large-scale hazardous waste sites requiring multiyear commitments. To effectively monitor toxic accounts expenditures, the department shall develop a comprehensive ten-year financing report that identifies long-term remedial action project costs, tracks expenses, and projects future needs.

(4) Before ((~~November 1st~~)) December 20th of each even-numbered year, the department shall ((~~develop, with public notice and hearing, and submit to~~)):

(a) Develop a comprehensive ten-year financing report in coordination with all local governments with clean-up responsibilities that identifies the projected biennial hazardous waste site remedial action needs that are eligible for funding from the local toxics control account;

(b) Work with local governments to develop working capital reserves to be incorporated in the ten-year financing report;

(c) Identify the projected remedial action needs for orphaned, abandoned, and other clean-up sites that are eligible for funding from the state toxics control account;

(d) Project the remedial action need, cost, revenue, and any recommended working capital reserve estimate to the next biennium's long-term remedial action needs from both the local toxics control account and the state toxics control account, and submit this information to the ((~~ways and means and~~)) appropriate standing fiscal and environmental committees of the senate and house of representatives ((~~a ranked list of projects and expenditures recommended for appropriation from both the state and local toxics control accounts. The department shall also~~)). This submittal must also include a ranked list of such remedial action projects for both accounts; and

(e) Provide the legislature and the public each year with an accounting of the department's activities supported by appropriations from the state and local toxics control accounts, including a list of known hazardous waste sites and their hazard rankings, actions taken and planned at each site, how the department is meeting its ((~~top two~~)) waste management priorities under RCW 70.105.150, and all funds expended under this chapter.

((~~(4)~~)) (5) The department shall establish a scientific advisory board to render advice to the department with respect to the hazard ranking system, cleanup standards, remedial actions, deadlines for remedial actions, monitoring, the classification of substances as hazardous substances for purposes of RCW 70.105D.020(7) and the classification of substances or products as hazardous substances for purposes of RCW 82.21.020(1). The board shall consist of five independent members to serve staggered three-year terms. No members may be employees of the department. Members shall be reimbursed for travel expenses as provided in RCW 43.03.050 and 43.03.060.

((~~(5)~~)) (6) The department shall establish a program to identify potential hazardous waste sites and to encourage persons to provide information about hazardous waste sites.

Sec. 2. RCW 70.105D.070 and 2005 c 488 s 926 are each amended to read as follows:

(1) The state toxics control account and the local toxics control account are hereby created in the state treasury.

(2) The following moneys shall be deposited into the state toxics control account: (a) Those revenues which are raised by the tax imposed under RCW 82.21.030 and which are attributable to that portion of the rate equal to thirty-three one-hundredths of one percent; (b) the costs of remedial actions recovered under this chapter or chapter 70.105A RCW; (c) penalties collected or recovered under this chapter; and (d) any other money appropriated or transferred to the account by the legislature. Moneys in the account may be used only to carry out the purposes of this chapter, including but not limited to the following activities:

(i) The state's responsibility for hazardous waste planning, management, regulation, enforcement, technical assistance, and public education required under chapter 70.105 RCW;

(ii) The state's responsibility for solid waste planning, management, regulation, enforcement, technical assistance, and public education required under chapter 70.95 RCW;

(iii) The hazardous waste cleanup program required under this chapter;

(iv) State matching funds required under the federal cleanup law;

(v) Financial assistance for local programs in accordance with chapters 70.95, 70.95C, 70.95I, and 70.105 RCW;

(vi) State government programs for the safe reduction, recycling, or disposal of hazardous wastes from households, small businesses, and agriculture;

(vii) Hazardous materials emergency response training;

(viii) Water and environmental health protection and monitoring programs;

(ix) Programs authorized under chapter 70.146 RCW;

(x) A public participation program, including regional citizen advisory committees;

(xi) Public funding to assist potentially liable persons to pay for the costs of remedial action in compliance with cleanup standards under RCW 70.105D.030(2)(e) but only when the amount and terms of such funding are established under a settlement agreement under RCW 70.105D.040(4) and when the director has found that the funding will achieve both (A) a substantially more expeditious or enhanced cleanup than would otherwise occur, and (B) the prevention or mitigation of unfair economic hardship; and

(xii) Development and demonstration of alternative management technologies designed to carry out the ((~~top two~~)) hazardous waste management priorities of RCW 70.105.150.

(3) The following moneys shall be deposited into the local toxics control account: Those revenues which are raised by the tax imposed under RCW 82.21.030 and which are attributable to that portion of the rate equal to thirty-seven one-hundredths of one percent.

(a) Moneys deposited in the local toxics control account shall be used by the department for grants or loans to local governments for the following purposes in descending order of priority: (i) Remedial actions; (ii) hazardous waste plans and programs under chapter 70.105 RCW; (iii) solid waste plans and programs under chapters 70.95, 70.95C, 70.95I, and 70.105 RCW; (iv) funds for a program to assist in the assessment and cleanup of sites of methamphetamine production, but not to be used for the initial containment of such sites, consistent with the responsibilities and intent of RCW 69.50.511; and (v) cleanup and disposal of hazardous substances from abandoned or derelict vessels that pose a threat to human health or the environment. For purposes of this subsection (3)(a)(v), "abandoned or derelict vessels" means vessels that have little or no value and either have no identified owner or have an identified owner lacking financial resources to clean up and dispose of the vessel. Funds for plans and programs shall be allocated consistent with the priorities and matching requirements established in chapters 70.105, 70.95C, 70.95I, and 70.95 RCW. During the 1999-2001 fiscal biennium, moneys in the account may also be used for the following activities: Conducting a study of whether dioxins occur in fertilizers, soil amendments, and soils; reviewing applications for registration of fertilizers; and conducting a study of plant uptake of metals. During the 2005-2007 fiscal biennium, the legislature may transfer from the local toxics control account to the

state toxics control account such amounts as specified in the omnibus capital budget bill. During the 2005-2007 fiscal biennium, moneys in the account may also be used for grants to local governments to retrofit public sector diesel equipment and for storm water planning and implementation activities.

(b) Funds may also be appropriated to the department of health to implement programs to reduce testing requirements under the federal safe drinking water act for public water systems. The department of health shall reimburse the account from fees assessed under RCW 70.119A.115 by June 30, 1995.

(c) To expedite cleanups throughout the state, the department shall partner with local communities and liable parties for cleanups. The department is authorized to use the following additional strategies in order to ensure a healthful environment for future generations:

(i) The director may alter grant-matching requirements to create incentives for local governments to expedite cleanups when one of the following conditions exists:

(A) Funding would prevent or mitigate unfair economic hardship imposed by the clean-up liability;

(B) Funding would create new substantial economic development, public recreational, or habitat restoration opportunities that would not otherwise occur; or

(C) Funding would create an opportunity for acquisition and redevelopment of vacant, orphaned, or abandoned property under RCW 70.105D.040(5) that would not otherwise occur;

(ii) The use of outside contracts to conduct necessary studies;

(iii) The purchase of remedial action cost-cap insurance, when necessary to expedite multiparty clean-up efforts.

(4) Except for unanticipated receipts under RCW 43.79.260 through 43.79.282, moneys in the state and local toxics control accounts may be spent only after appropriation by statute.

(5) One percent of the moneys deposited into the state and local toxics control accounts shall be allocated only for public participation grants to persons who may be adversely affected by a release or threatened release of a hazardous substance and to not-for-profit public interest organizations. The primary purpose of these grants is to facilitate the participation by persons and organizations in the investigation and remedying of releases or threatened releases

of hazardous substances and to implement the state's solid and hazardous waste management priorities. However, during the 1999-2001 fiscal biennium, funding may not be granted to entities engaged in lobbying activities, and applicants may not be awarded grants if their cumulative grant awards under this section exceed two hundred thousand dollars. No grant may exceed sixty thousand dollars. Grants may be renewed annually. Moneys appropriated for public participation from either account which are not expended at the close of any biennium shall revert to the state toxics control account.

(6) No moneys deposited into either the state or local toxics control account may be used for solid waste incinerator feasibility studies, construction, maintenance, or operation.

(7) The department shall adopt rules for grant or loan issuance and performance.

(8) During the 2005-2007 fiscal biennium, the legislature may transfer from the state toxics control account to the water quality account such amounts as reflect the excess fund balance of the fund.

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